

Preventive anti-takeover defenses: evidence from the French market for corporate control

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Version: January 2006

Abstract

Considering the French market for corporate control specificities, this paper examines the existence of preventive anti-takeover defenses and their efficiency in France during the 1989-1998 period. Based on a sample of 162 firms, results show that preventive defenses linked to the board and ownership structure have the most deterrent effect on *ex ante* takeover likelihood. Moreover only those based on voting rights may help the manager to protect her human capital *ex post*. In both cases, we observe a positive influence of performance variables suggesting that the French market for corporate control is mostly driven by a rent-seeking behaviour.

Keywords: Anti-takeover defenses; Governance; Target; Board structure; Ownership structure.

JEL classification: G32; G34

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^b I am grateful to Philippe Desbrières and Bruno Versaavel for their helpful comments on earlier drafts. All remaining errors are my own.

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1. Introduction

Anti-takeover defenses are contingent upon the national legal framework in which takeovers take place. This observation means that legal and institutional rules are structuring the nature and activity of takeovers on financial markets. So, if the market rules of a particular country do not provide enough legal active anti-takeovers defenses¹, how do managers² protect themselves? Does it mean they cannot thwart any attack coming from the takeover market? Are they really less protected than takeover targets in more legally structured countries?

The goal of this empirical study is to investigate the impact of the lack of preventive anti-takeover defenses on public firms. Ownership and capital structures, board of directors and dividend policy are considered. Other studies (e.g., La Porta et al., 1998) have stressed the link between the national legal framework and the firm structuring. The key relationship is between the quality of enforcement of national legal rules and the concentration of ownership. Their results show that common law countries generally have the best protection of investors and French civil law countries the worst. Therefore, one should observe greater concentration of ownership in France than in the United States. In this paper, the quality of law enforcement is not in question. We pay attention to the range of available means which may lead managers to look for preventive mechanisms and consequently impact the board of directors, ownership or the information given to the financial market. The basic difference between the two approaches is that La Porta et al. (2000) focus on investor protection as a starting point whereas we keep the manager as the core of corporate governance system of the firm. So, in this article, much interest is put on the balance of power between corporate governance mechanisms and the discretionary power of the top manager.

¹ It means during and after the takeover bid announcement.

² The expression « manager » is referring to the CEO of the firm.

In this regard, focusing on the French case, two related issues are addressed. The first concerns the bringing out of preventive anti-takeover defenses and their relationship with the takeover likelihood. Since French managers do not have real legal active defenses during the takeover period, we define as “preventive defenses” the different strategies the manager can previously work out in the corporate governance framework. All strategies that managers can lead *ex ante* in order to neutralize disciplinary forces like the board of directors, the shareholders control and the financial market are seen as preventive defenses against the takeover risk. One argument is that the limitation of active anti-takeover defenses should be a good thing in order not to systematically reduce the operation interest for the bidder. Nevertheless, the use and the range of such defense mechanisms are often linked with the breadth and depth of the financial market (e.g., Franks and Mayer, 1990). Great Britain has got a greater range of defense mechanisms available on financial markets than Germany or Italy for example, and correlatively a broader and more active market for corporate control. France is more permissive than the latter but the use of anti-takeover defenses is linked to very restrictive conditions.

The main insight of this study lays in the notion of “social interest” which is very pregnant in the French legal context³. This element defined with difficulty in corporate law means that the firm has its own interest transcending associates, stockholders, salaried employees, customers and suppliers ones. As a consequence, this implies a very conditioned use of the anti-takeover defenses during the takeover bid period, and thus creates differences with other national legal frameworks on financial markets. For example, the next anti-takeover defenses, authorized in the United States are forbidden in France for reasons linked to the “social interest” notion: assets acquisitions and divestitures. They change the firm’s asset structure and can be used to defend against a takeover bid. Such tactics include divesting an asset that the bidder wants (*crown jewels options*) or buying assets that the bidder does not want. Each of these actions makes the target less attractive to the bidding firm, and reduces the price the bidder is willing to pay for the target. These defenses are forbidden in France, because management decisions on assets cannot be taken during the takeover bid period. Moreover, such transactions can easily be considered as opposed to the aim of the firm and they cannot be justified by super-dividends for example.

³ See French general rules of The Commission des Opérations de Bourses (COB) and the Conseil des Marchés Financiers (CMF). Both have been recently gathered in a new institution called Autorité des Marchés Financiers (AMF).

The second major issue addressed in this paper concerns the effectiveness of the different preventive anti-takeover defenses in the French legal context. Is there a relationship between the existence of preventive mechanisms of defense and the operation outcome? Indeed, if these defenses are effective, they should make the target manager keep her job after the takeover bid announcement. This question is a matter of importance in France since most operations are often seen as friendly takeovers. A first insight may be given by Morck et al. (1988) explaining that management teams with very high ownership have close to a veto power over the outcome of the bid, and that therefore the only acquisitions with high management ownership that we observe are friendly. Moreover, the fact is that the operation's disciplinary character is usually linked to the negative response of the board of directors, the use of active anti-takeover defenses or still the existence of a second bidder. In the French context, these indicators are very uncommon and unsuitable. So, as developed by Martin and McConnell (1991) in their study linking corporate performance, corporate takeover and management turnover, we consider that a takeover is classified as disciplinary if there is turnover of the target manager shortly after the takeover. Considering this point and the fact that there are few active defenses in France, we then investigate the link between preventive anti-takeover mechanisms, as alternative defenses, and the *ex post* removal of the target manager.

Previous related empirical research on takeover targets provides evidence on two main broad fields. First, much work has been done on the link between target financial characteristics and takeover likelihood. Insisting on the empirical methodology and the statistical bias, Palepu (1986) shows financial models do not predict takeover targets accurately. In contrast, Hasbrouck (1985) finds evidence that non-financial target firms are characterized by a low "Q" (market value of assets / replacement cost of assets). Billett (1996) also shows that, due to a coinsurance potential meaning wealth transfers from bidder and target equityholders to target debtholder, the likelihood of being acquired decreases as the amount of relatively risky outstanding debt increases. The second main issue concerns the relation between ownership structure and the takeover likelihood. Many studies have been done showing different results. Focused on target managerial ownership, Mikkelsen and Partch (1989) document that firms with low ownership by managers are more likely to be targets of a control event, but they are not more likely to experience a takeover attempt that leads to a successful change in control. The first idea is corroborated by Song and Walkling (1993) who find that targets have lower managerial ownership than either their counterparts or randomly selected nontargets. In

the same way, Duggal and Millar (1994) show that institutional investors play a role in determining takeover likelihood, but this role is not a homogeneous one because it depends on the institutional investor category defined by the authors. This last paper also points out the positive relation between low target insider ownership and the number of active anti-takeover defenses (Kabir et al., 1997; Boyle et al., 1998), providing results consistent with insider entrenchment. Few studies mix the different dimensions analysing the board composition, the ownership structure and the financial variables. Ambrose and Megginson (1992) mainly find that the probability of receiving a takeover bid is positively related to tangible assets, and negatively related to net change in institutional holdings. Moreover blank-check preferred stock authorizations are the only common takeover defense significantly (negatively) correlated with acquisition likelihood. Relative to a control sample, Shivdasani's (1993) findings show that outside directors in hostile targets have lower ownership stakes and that ownership by blockholders unaffiliated (affiliated) with management raises (decreases) the likelihood of a hostile takeover attempt. The results suggest that the board of directors and hostile takeovers are substitute mechanisms and that unaffiliated blockholdings and hostile takeovers are complementary mechanisms for corporate control.

Our empirical study provides additional evidence on takeover targets stressing the interaction between the takeover likelihood probability and preventive anti-takeover defenses. We bring out different preventive anti-takeover defenses thanks to two fruitful financial notions: entrenchment and asymmetrical information. Within a corporate governance framework, the analysis identifies internal (organizationally based) and external (market-based) control mechanism (Walsh and Seward, 1990; Jensen, 1993) which can be neutralised on the long term by the manager. The underlying hypothesis supposes that managers are looking for a long term protection of their human specific capital especially by avoiding the market for corporate control discipline.

Using a sample of 162 firms (a subsample of 81 successful tender offers and a subsample of 81 matched non-target firms) on the French market for the 1989-1998 period, we first check for differences between targets and nontargets thanks to an univariate analysis. We find that, concerning the board of directors and the ownership structure, target managers are less protected than nontarget managers. Targets have statistically significant outside-dominated boards and the turnover of directors is less important than in the control sample. We also find that target firms present more "opened" ownership structures with more independent blockholders (unaffiliated to the top

management), less stockholder agreements and more institutional investors. Obviously, these findings indicate that the ownership structure of target firms can be modified rapidly with more ease than in the case of nontarget firms. On the dividend policy, we observe that targets have a smaller dividend in value than firms in the control sample during the three years prior to the takeover. As the latter are size-controlled, we can say that future target firms send poorer signals to the financial market than nontarget firms’.

Concerning the likelihood for targets to be taken over, we find strong relations with the board of directors and the ownership structure. Indeed, outside directors at the board reinforce the takeover occurrence probability. On the other hand, firms with institutional directors on the board are less likely to undergo a change in control than firms where they are not present. Moreover, a large turnover of the board of directors can be perceived as a preventive defense since there is a negative relation with the takeover probability. Correlatively, even if the manager has a weaker control on the ownership structure, she can use statutory rules on threshold crossings that help with monitoring blockholder irruptions. Indeed, firms with unaffiliated blockholders and especially with institutional investors have a greater likelihood to be taken over. In contrast, we find no evidence that the signals sent to the financial market through the dividend policy or the capital structure facilitate or deter takeover attempts or control changes.

Finally, we find no real support for pointing out a relation between preventive anti-takeover defenses and the board directors, the dividend policy or the capital structure to explain the *ex post* top manager removal. The main strong result is illustrated by a negative relation between the target manager removal following the takeover and the preventive defenses on voting rights that can be activated during the takeover bid period. This evidence provides a more accurate comprehension of the strategic role of the limited- and double-voting stocks which can help management to keep control. These mechanisms which are a deviation from the normal one share/one vote rule are often observed in France and represent an effective “last chance” anti-takeover defense for management to protect their human capital.

The remainder of the paper is organized as follows. In section 2, we provide a description of the different preventive anti-takeover defenses the manager can use within a corporate governance framework. The tender offer and control samples and the procedure used for collecting data are presented in section 3. Section 4 gives the results of the univariate analysis and examines the relation

between takeover occurrence probability and the preventive anti-takeover defenses. Section 5 describes the effectiveness of these defenses relatively to the manager removal. Section 6 contains a discussion of the results and concluding comments.

2. Preventive anti-takeover defenses identification

Depending on the financial market law, limited actions are authorized on the market for corporate control concerning public firms in a French context. Only normal management decisions can be taken during the takeover bid period (See COB and CMF rules). Consequently, operations on assets (acquisitions/divestitures) in order to deter bidders are strictly forbidden. Empirical observation confirms that this statement is the same concerning actions on the authorized capital of the firm which induce the dilution of capital or the strengthening of the relative stake of the firm. New equity issues or recapitalizations are forbidden during the takeover bid period because such actions are not considered as normal management decisions. Except for a vote during the previous shareholders' ordinary meeting, these defenses are seen as following a financial interest only and not the social interest of the firm. As a consequence, it is extremely uncommon to observe buybacks or equity issues from the target during the takeover bid period. In the same way, targeted repurchases, popularly called *greenmail*, can be used in the United States as a takeover defense by offering an inducement to a bidder to cease the offer and sell its shares back to the issuing firm at a profit. The American legal framework also allows targets to use mechanisms such as the "*pacman defense*". It consists in launching a counter-bid on the first bidder by the target. Here again, the French legal context prevents targets from using these last two defense mechanisms⁴. These anti-takeover defenses are not usable in France. First, the underlying motivations of the target are considered different from the aim of the firm. Second, there are technical limits because the French corporate law prohibits any cross holdings between two firms if one has more than 10% of the other. Similarly, concerning the *greenmail* defense, it turns out useless in the French context since firms cannot possess more than 10% of their own capital.

⁴ The "*pacman defense*" has occurred one time only in France. It has been authorized by the CMF (Conseil des Marchés Financiers) concerning the operation Total Fina (bidder) against Elf Aquitaine (target) in 1999.

As there are no real active anti-takeover defenses in the French context, we consider that preventive anti-takeover defenses may be developed by managers within a corporate governance framework. Shleifer and Vishny (1997) define corporate governance as follows: it “deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”. Here, the “ways” refer to the different control mechanisms aimed at monitoring the manager activity. As a result of ownership and control separation associated with the general problem of agency (Jensen and Meckling, 1976), these mechanisms make sure that the manager acts according to the owners’ interest rather than her own interest.

Consequently, assuming that the top manager maximizes her job tenure and that she can make rational anticipations, the hypothesis is that she is going to neutralize the different control mechanisms on the long term in order to protect herself from takeovers. In order to identify these control mechanisms, we use the traditional dichotomy presenting internal and external mechanisms (Jensen, 1993; Walsh and Seward, 1990). On the one hand, we distinguish the board of directors as the main internal control mechanism and on the other hand the annual meeting of shareholders, the financial market (within which the financial intermediaries) and the market for corporate control as external control mechanisms. Valuing their position, many executives work to ensure their own job security. Toward that end, they may have no choice but to tamper with the board’s ability to monitor and control their performance. In the same way, they can try to influence ownership structure thanks to statutory disposals. These help the manager to control firm’s self-ownership, salaries’ ownership or also external blockholders irruptions. Concerning the financial market, because takeovers may be seen as a discipline for managers who have poor performances (Hasbrouck, 1985; Jensen, 1986; Martin and McConnell, 1991), the latter may have to send good news to the market through capital and dividend policies in order to protect themselves.

We shall now develop the different hypotheses relative to the neutralization of internal and external control mechanisms of the target firm. Concerning the internal control mechanisms, the analysis is focused on the board of directors. In order to tamper the board’s ability to monitor the top manager, the latter is in favour of internal board members⁵ (Mayers et al., 1997) and prefer non-institutional and non-financial ones (Fama and Jensen, 1983) to avoid any accurate expertise from the

⁵ In contrast to internal, the ‘outside’ nature of board members is defined as a board director with no direct or indirect link with the firm or the group the firm’s in. Objectively, she should not be a salaried person, a shareholder or a financial or commercial partner.

board. Moreover, a high and regular turnover of board members (Shivdasani and Yermack, 1999; Paquerot, 1997), or even an important size of the board (Yermack, 1996) can help the manager with a better information control and an alteration of performance assessment by the board.

Actions on the external control mechanisms may also be observed. The influence on the ownership structure is multiple. First, an important management ownership (Song and Walkling, 1993), or an ownership concentration thanks to limited- or double-voting stocks⁶ (Desbrieres, 1997) are strategies viewed as a deterrent for takeovers. In the first case, it results in the alignment of manager and stockholder goals, reducing incentives to consume excess perquisites because managers bear a higher fraction of the cost of poor decisions (Jensen and Meckling, 1976). In the second case, this induces a voting rights distortion. The ownership size and the identity of the investors may also play an important role in the takeover likelihood. Indeed, the less large blockholders can be observed (Shivdasani, 1993, and more precisely for institutional investors Duggal and Millar, 1994), the more the target manager has a discretionary power on the global firm management. Chang and Mayers (1992) also show through ESOP that employee stock ownership can help managers to strengthen their relative ownership in the firm. The function is to achieve control of the firm for blocking purposes when managerial vote control is low, or to reduce managerial stock ownership without relinquishing control. All these different strategies may be seen as basic entrenchment mechanisms, but in a world without active defense during the takeover bid period, they can also be seen as preventive anti-takeover defenses which help managers to run the firm without abusive takeovers.

Controlling or delaying the firm's internal information may be important if managers and financial markets do not have the same temporal horizon. This control depends on the asymmetrical information between both and its main vectors are the capital and dividend policies. Concerning the financial choices of the manager, debt is a deterrent in many respects. First, if we refer to the free cash flow hypothesis of Jensen (1986), the role of debt may be beneficial in motivating organizational efficiency. Until the point at which firm value is maximized - the point where the marginal costs of debt just offset the marginal benefits (optimal debt/equity ratio) - debt has a positive control function. Because debt bonds managers to pay out cash flow, they have less incentive to suboptimally invest. In this case, there is no real interest in launching a takeover since the leverage cannot be increased. In a

⁶ Doubled-voting stocks are often given in French companies for stockholders who hold their stocks for more than two, three or four years mainly. It is a statutory disposal aimed at fostering stockholders' fidelity.

different way, Billett (1996) also shows that the coinsurance potential of firm's debt can be a deterrent for a takeover. Other things being equal, this coinsurance potential is linked to the debt risk and the relative debt/equity ratio. Finally, considering an entrenched manager, Zwiebel (1996) presents a model for which, in each period, managers voluntarily set debt to restrict themselves. It serves as a voluntary commitment to sufficient dynamic efficiency by management in order to prevent a takeover from an ever-present raider. Nevertheless, this kind of entrenchment is reduced by bankruptcy, which in turn affects the likelihood of management replacement. Through bankruptcy anticipation, debt enables the future retention of managers to depend on current as well as anticipated future investments. We conclude that for a long term strategy, a higher level of debt (than the sector average for example) may be interpreted as an anti-takeover strategy.

Lastly, an active dividend policy can also serve the manager in preventing any takeover attempt. The results of Dickerson and al. (1998) underline that higher dividend payments are associated with a significantly lower conditional probability of takeover. Moreover, on a large panel of UK public companies they suggest that firms that wish to avoid takeovers would be better off distributing the marginal £1 of earnings in dividends rather than investing it in the company. Such results highlight the effective role of dividends in controlling part of the takeover risk coming from the financial market. As a consequence, a dividend policy supporting high dividends distribution should be included in the panel of preventive anti-takeover defenses.

3. Data description and sample selection

3.1. Sample selection

The sample of tender offers was collected from a printout of all tender offers supplied by the annual statistics of the Société des Bourses Françaises for the 1989-1998 period. This period was chosen because of its important takeover activity. Since the liberalization of financial markets in the late eighties in France, the number of tender offers has significantly increased: 101 tender offers for the 1980-1988 period and 349 tender offers for the 1989-1998 period. The information access facility was also an important factor because no real historical data bases exist in France, especially concerning the tender offers. In order to create an homogeneous sample, tender offers included in this

study must meet the following sampling criteria. First, they should follow the “normal” procedure (as opposed to the “simplified” procedure, as called in the French context) meaning that the bidder has less than 50% of the target capital (180 on the 1989-1998 period). This procedure guarantees that we are analysing control motivations and not group logics focused on subsidiaries. Then, targets must be listed on the French stock market (Premier and Second Marché) and moreover they should not be banks or regulated firms. This criterion eliminates companies whose leverage or asset structure are drastically different from typical industrial firms, and also firms whose capital is often dominated by the relative participation of the state. Even if we were interested in both completed and failed tender offers, only the first ones remain in the sample since there are very few operations concerning the latter on the French market. In the same way, we can mention that both hostile and friendly tender offers were considered because in this study we are interested in motivation and non-motivation relative to anti-takeover defenses for launching an acquisition attempt⁷. Moreover, we eliminate observations in which data on the target are unavailable from the proxy statements. This especially concerns tender offers on the over-the-counter market on which firms are not compelled to follow the same information requirements.

- TABLE 1 -

The final sample consists of 81 successful tender offers announced between 1989 and 1998 (See Table 1). In order to test our hypotheses, a matched case-control methodology is used. Due to the narrowness of the French market, the control sample is not randomly chosen. Each target firm was matched by industry with a control (non-target) firm. The industry matching process is based on at least two-digit NAF codes (equivalent to SIC codes). Moreover, control firms should have been listed on the French market for at least three years before the takeover announcement date and should not have been taken over during the last three years. Adding a size-control would have been too restrictive, many targets would then not have a paired firm in the control subsample. So, thanks to the previous criterion, nontarget firms are then chosen as soon as they match the alphabetical stock exchange listing. Finally, we obtain a control sample of 81 industry- and temporally-matched nontarget firms during the 1989-1998 period.

⁷ *Ex ante*, an acquisition attempt is usually classified hostile if the initial bid was rejected or not acknowledged by the target board.

3.2. Data description

The sample is screened to only include the tender offers which have been recorded by the Commission des Opérations de Bourses (COB, equivalent to the SEC) and for which a proxy statement is available. As there are no data bases on board and ownership structures of firms in France, we manually collected the different data.

Our information mainly comes from company accounts of the target firms and from the proxy statements. Accounting information relative to financial structure essentially comes from initial proxy statement for targets. For the nontarget firms, we find this information in the annual reports and the Banque de France data base when missing⁸. Concerning dividends specifically, we collected them in the annual statistics published by the French stock exchange. Board and ownership structures' data were more difficult to find, especially for the control sample. In addition to the different sources mentioned, we used the DAFSA yearbook and held some telephone interviews with company representatives.

The different variables of this study are computed during the civil year before the tender offer announcement. Moreover, any calculated variable is determined thanks to data collected for each of the years beginning three years to one year before the tender offer announcement. Nevertheless, some additional precisions must be given concerning variable definitions. First, outside directors of the board are not current or past employees of the firm and they do not have any ascendant or descendant tie with the target firm. This means that they should not have significant participation in the target capital or in the target subsidiaries. In addition, the target manager should also not have any stock ownership or board seat in the firm within which the target board member is working. The institutional investor notion gathers the usual cases found in the sample, that is: insurance companies, banks, mutual funds, public pension funds, brokerage firms. When looking at the board of directors, banks are considered separately because they are more likely to collude due to current or potential business relations with them. Nevertheless, in the whole sample, banks are little represented on target boards. The turnover of board members is calculated as the mean renewal frequency of the board (departure/arrival of directors) over the three years preceding the takeover

⁸ In France, all companies are compelled to communicate their annual accounts to the Banque de France.

announcement. The size is simply given by the number of directors at the board the year before the tender offer.

Some precisions must also be given on the ownership structure. Institutional investors are here considered as a whole. Indeed, we suppose that each subcategory, acting as investor, has common interest with each other. Independent blockholders (excluding institutional investors) are considered as soon as they have at least 5% of the target capital. They should have neither any ownership in target subsidiaries nor any seat on the board of directors. The other blockholders are supposed to be influenced by managers who are likely to exercise some degree of voting control, or whose interests are aligned with those of management. In this case, we are taking into account the direct or indirect (through trusts, employee retirement plans) potential deterrent role of employee stockholding when occurring a takeover. Anti-takeover strategies disconnecting ownership and voting rights have been considered through a dummy variable with the value 1 if the firm has limited- or double-voting stocks, 0 if it does not (the variable is called “voting rights”). Stockholder agreements are recorded by the COB. Similarly, we give the value 1 if there is at least one in the target, 0 otherwise. We also control the ownership structure thanks to an additional indicator which is a concentration index relative to the ownership of the first five biggest stockholders. Major differences on these variables would then indicate obvious specificities concerning the ownership structure of targets.

The hypothesis relative to the model of Zwiebel (1996) leads us to examine different financial variables. These are all focused on different aspects of the target leverage. We consider different ratios linking the whole debt, the long-term debt and equity. Correlatively, we need to know about the market perception of future investment opportunities of the targets. Indeed, too much debt might prevent the manager from investing in good projects and therefore might spoil the growth capacity. Because low growth may signal poor performance (Thompson, 1997), takeovers act to discipline poorly performing managers. So, we use the valuation ratio to capture this *ex ante* performance (market value of equity / book value of equity). This ratio (a raw Tobin’s Q type measure) is used as a proxy for growth opportunities. Firms with higher market-to-book ratios have more of their value derived from future growth opportunities than firms with lower market-to-book ratios. Concerning the signalling hypothesis through dividends, we use two variables. The first one is the value of dividends the year before the takeover announcement, and the second one is the dividend

progression over the three years prior to the takeover announcement. The second variable comes from the prediction that a decrease in dividends might be punished by a takeover (Dickerson et al., 1998).

As factors different from preventive anti-takeover defenses might be captured in this study and could be stressed as potential alternative explanations for takeover probability, we lay out control variables. We estimate logit regressions with the takeover likelihood and target manager *ex post* removal as the dependant variables and the board composition, the ownership and financial structures as explanatory variables. In each of these regressions, we include five other control variables that can influence takeover probability or target manager *ex post* removal regardless of the explanatory variables. These are mainly focused on profitability and size of the firm and also on specificities relative to the top manager. First, we control for profitability and risk because profitability is often found having a negative effect on the takeover probability (Franks and Mayer, 1996). Correlatively, a firm with a high profitability and a non-adjusted risk may be seen as a good investment opportunity on the market. Profitability is appreciated thanks to the net income/equity ratio (ROE) the year prior to the takeover announcement. Risk is calculated as the standard deviation of the return recorded over the three years before the announcement. Firm size is another important control variable because it is often objected that targets are smaller than their sector's standard (Ambrose and Megginson, 1992; Mikkelsen and Partch, 1989; Palepu, 1986). The argument lays in the fact that larger firms are less likely to be taken over since their size prevents predators from raising funds required to launch a bid. We calculate size as the natural logarithm of equity market value. The market value of equity is equal to the number of common shares outstanding on the last trading day of the year before the tender offer announcement. Second, we examine the age and the tenure of the manager. Indeed, top manager nearing the normal retirement age are more likely to retire early, or may otherwise voluntarily leave the firm as the result of a takeover. So, we determine the age of the manager during the year prior to the tender offer. In addition, we compute manager tenure as the number of uninterrupted years on the board of directors during the year prior to the tender offer. This last variable helps us to control the entrenchment hypothesis.

4. Results

Section 4.1 reports descriptive statistics on board composition, ownership and financial structures for the sample of target firms and control sample of nontarget firms. The multivariate analysis of tender offer likelihood and the interpretation of these results are discussed in section 4.2. To check the efficiency of the anti-takeover defenses from the manager viewpoint protecting her human capital, other logit regressions are conducted in section 4.3.

4.1. Univariate analysis

Table 2 reports descriptive statistics for the 162 firms in our sample, and compares the subsample of 81 target firms of tender offers to an industry- and temporally-matched control subsample of 81 nontarget firms. We employ the *t*-statistic using unequal variances to test for differences in sample means and Wilcoxon Z for differences in sample medians. A first glance tells us that main differences come from the board composition and the ownership structure.

Statistics on the board composition are reported in the first block of variables, Table 2. First, target firms present two times more outside directors than nontarget firms in the control sample (respectively 40,9% and 20,4%). Both *t*-tests and Wilcoxon tests indicate that this difference is highly significant. While the proportion of financial directors (banks essentially) is 4,3% for targets and only 2,2% for nontargets, the difference is not statistically significant. Comparatively the proportion of institutional investors in the board is slightly the same for target and nontarget firms (respectively 1,8% and 1,4%). Finally, relatively to board characteristics, nontargets experience a higher turnover of their board than targets and the difference is statistically significant (*p*-value of 0,006). Correlatively, we observe that the board size is quite similar for both target and nontarget firms (respectively 8,9 and 9,3 directors). Compared to other studies based on samples of American firms, our results are not so different. Working on a sample of 122 targets over the 1988-1992 period, Cotter et al. (1997) find an average (median) board size of 8,8 (8,0) directors. For a group of 452 randomly chosen firms between 1984 and 1991, Yermack (1996) reports mean and median board size of 12,25 and 12 directors, respectively. Thus, target boards have a greater percentage of outside directors and a lower turnover of directors than nontargets.

- TABLE 2 -

The second block of variables, Table 2, reports ownership structure characteristics. While equity ownership by the board is 8,3% for targets and 10,9% for nontargets, the difference between the two subsamples is not statistically significant. Comparatively to other studies based on samples of American firms, our findings are quite similar.

For a global sample of 440 firms drawn from S&P 500 index, Booth and Deli (1996) find a mean board ownership of 7,3%. Shivdasani (1993) finds 12,19% for a control group of nontargets, but 4,33% for a sample of hostile takeover targets that is lower than our result. Ownership by independent blockholders, on the other hand, is significantly higher in targets. With a mean stake of 19,4%, independent blockholders in target firms own over 200% more equity than their counterparts in nontarget firms. Institutional ownership is also significantly higher in targets since the mean ownership of institutional investors is over three times more important in targets than in nontargets (4,4% and 1.2%, respectively, with a p -value of 0,012). Thus, relatively to institutional investors, the difference between targets and nontargets is more symptomatic when considered as investors than as board members. Finally, the differences in mean and median for the dummy variable expressing presence of limited- or double-voting stocks are found marginally significant. The mean values of the other target ownership variables tend to be insignificantly different from the control sample. Thus, independent blockholders and institutional investors are more present in target ownership structures than in nontarget ones. Furthermore, nontargets present more securities differing from the one share/one vote rule.

The third and fourth blocks, Table 2 report statistics on financial and control variables. We do not find significant differences in the financial variables between target and nontarget subsamples. Only the difference in mean for dividends is marginally significant, nontargets presenting a higher dividend than targets. When looking at control variables, we see that this last observation is not due to firm size since the difference in size for target and nontarget subsamples is not statistically significant. Nevertheless, targets experience a higher risk than nontargets with a risk of 14,1% over the last three years compared to the 6,3% of risk for the nontargets of the control sample (statistically significant with a p -value of 0,049). Finally, the average tenure of target managers is shorter than the one of nontarget managers. The target firms present a mean (median) manager tenure of 6,9 (4,2) years

compared to 17,3 (9,6) years for the nontarget firms. These differences in mean and median are statistically significant with a p -value of 0,001. Thus, target firms experience a higher financial risk and present a manager with a shorter tenure than nontarget firms.

4.2. Effectiveness of preventive defenses relatively to takeover probability

In this section, we use logistic regressions to estimate the joint impact of board composition, ownership and financial structures on the probability of an acquisition attempt through a tender offer. The first three blocks of variables proxy the different preventive anti-takeover defenses. Control variables relating to the target manager and to financial characteristics of the target firm are also included. To assure that our results are not driven by model specification errors, we investigate whether collinearity affects our results. So, we examine correlation coefficients among independent variables. While these coefficients are generally not large, the correlation of 0,594 between board size and firm size and the correlation of -0,930 between return on equity and total debt on equity are exceptions. The latter can have been easily anticipated so, when using financial variables, return on equity has been excluded from the regressions. In order to verify the impact of the former we have estimated our results excluding these variables, and obtain results similar to those reported.

The first three columns of Table 3 contain the logit regression models including the blocks of variables corresponding to the different sets of preventive anti-takeover strategies. The last column presents a more exploratory regression since we use the log likelihood and the goodness of fit to generate an optimal regression. Based on a forward stepwise method, variables are picked up for improving the regression goodness of fit without taking into account any preliminary hypothesis. In this case, considering a global lack of defense as the key of understanding, the aim is to strongly underline what kind of preventive strategy may explain the takeover probability in the French context.

To determine our different model specifications, we first have taken into consideration the idea of Jensen (1993) considering the failure of internal control system, and jointly, the arguments linked to ownership and financial structures developed by Shleifer and Vishny (1997). Consequently, we initially run three regressions each of these using one different block of independent variables: board composition, ownership structure and financial structure. Results observed show that only the regression based on board composition variables can lead to a statistically significant model (Model

1). Both of the two other basic models are not significant and are not presented here. This implies that strategies solely linked to ownership or financial structures are meaningless concerning takeover likelihood.

Several important results are presented in Table 3. First, we can note that the four models are highly significant with p -values inferior to 0,001. The last model (the exploratory one) is the less significant with a chi-square value of 46.39, but this inferior explanatory power can be explained by the little number of variables which are nonetheless all significant.

In Model 1, the regression is focused on board composition. The coefficient on outside directors is positive and highly statistically significant (p -value=0,000). Consistent with the past studies, outside directors increase the likelihood of a takeover. Through their examination of wealth effects surrounding outside director appointments, Rosenstein and Wyatt (1990) report that outside directors are chosen in the interest of shareholders. So, it is consistent with the argument that in case of takeover the outside directors on target board can more easily convince shareholders of the offer interest. The negative coefficient on institutional directors is a quite more striking result. This result is inconsistent with our hypothesis relative to preventive anti-takeover defenses developed by the manager on the board of directors. We have separately classified institutional and financial directors, but they are also generally considered as outside directors. The fact that the greater the number of institutional directors on the target board the less the takeover likelihood may imply that the institutional representatives do not have the same comportment as soon as they are on the board. We did not statistically check the ownership of the institutional directors but it is generally small. Fama (1980) stresses the fact that greater incentives for outside directors to monitor are actually provided by the market for outside directorships. Nevertheless, in the French context, this finding often reveals a phenomenon of a reciprocal board seat exchange between the target manager and the institutional representative (interlocking directorships). In the classification of Byrd and Hickman (1992) these institutional directors can be seen as “affiliated outside directors”. We can observe that the coefficient on board turnover is marginally significant and negative. This is in line with the idea that the manager may use the renewal of directors as an anticipatory defense creating a greater informational asymmetry between her and the directors. The coefficients on financial directors and board size are insignificant in this first model.

- TABLE 3 -

Regressions 2 and 3 present additional blocks of preventive anti-takeover variables relative to ownership structure and financial structure. The aim is to verify if preventive anti-takeover defenses linked to the neutralization of external control mechanisms help to specify a global preventive strategy of the manager. We first notice that these two models 2 and 3 are highly significant but still more significant than the first one (respectively a chi-square of 62,26 and 67,37), giving some support to the global determination of a takeover likelihood not only focused on the breakdown of internal control mechanisms.

Previous variables relative to board structure are still significant, but the significance on board turnover is reinforced (p -value = 0,023 in Model 2 and p -value = 0,010 in Model 3). The negative and significant coefficients on this variable suggest that the renewal of board directors can efficiently be used as a preventive anti-takeover defense. In their study Shivdasani and Yermack (1999) show that the manager has a great involvement in the selection of new directors especially through nominating committees. They find that when the manager serves on the nominating committee or no nominating committee exists, firms appoint fewer independent outside directors and more “gray” outsiders with conflicts of interest. Their results point out a mechanism used by managers to reduce the pressure from active monitoring which is consistent with ours. Monitoring by the board is crucial for performance assessments and a high turnover may alter its efficiency by creating a high informational asymmetry between the board members and the manager.

The second block relative to ownership variables presents the main types of investors and three other specifications (concentration index, ownership distortion thanks the observation of the one share/one vote rule and stockholder agreements). The negative coefficient on manager ownership is significant in Model 2 and Model 3 (p -value= 0,054) and is consistent with our analysis considering a high management ownership as a preventive anti-takeover defense. Moreover this result is in line with the study of Song and Walkling (1993). They find that targets are associated with significantly smaller levels of managerial ownership than nontargets. This is true both in comparison to the industry-matched nontargets and to randomly chosen nontargets. Their results remain after controlling for firm size and other financial and ownership characteristics. The positive coefficient on both the

independent blockholders and the institutional investors are consistent with the view that they make the takeover occurrence easier. These results are quite similar to previous studies. Shivdasani (1993) presents the same result showing that ownership by blockholders unaffiliated with management raises and that by affiliated blockholders decreases the likelihood of a hostile takeover attempt. Correlatively, Duggal and Millar (1994) address the question of whether institutional investors enhance or reduce efficiency in the market for corporate control. Identifying different kinds of institutional investors, they show that the probability of a successful takeover rises with the ownership of both “pressure-sensitive” and “pressure-resistant” investors. The negative relation between salaried employees and takeover likelihood observed in both Model 2 and 3 is consistent with the view that an important salaried employee’s shareholding can be a useful mechanism to prevent takeover occurrence. Chaplinsky and Niehaus (1994) findings tend to support this view in their study on the role of employee stock ownership plans (ESOPs) in takeover contests. Comparing the takeover incidence for targets with and without ESOPs, their results provide strong evidence that ESOPs do have an important deterrent effect. Moreover, the manager is also able to develop informal relationships (promotion promises for example) with employees in order to strengthen ties and fidelity if employee stock ownership is not managed within a trust. This kind of relation is quite important in the French context since the employee stock ownership plans cannot be launched in a discretionary manner by the target manager and the trust manager is besides not necessarily appointed by the firm manager as in the United States. The other results on ownership variables suggest that there is no real impact of ownership concentration mechanisms on takeover likelihood allowing for an identification of preventive anti-takeover defenses.

The variables linked to the financial structure and dividends in Model 3 are globally statistically not significant, except for the progression of the ratio long term debt on equity over the three years preceding the tender offer announcement. This coefficient suggests a positive relation between the progression of this ratio in percentage and takeover likelihood which is not consistent with our hypothesis relative to preventive anti-takeover defenses. In this regard, the progression of long term debt / equity ratio should be a deterrent for takeover occurrence due to the greater risk of default. Nevertheless, a high progression of this ratio can also be explained by a higher number of investment opportunities for the target firms during the period before the takeover announcement.

This argument may explain more growth opportunities and consequently the fact that these firms seem to be more attractive.

The coefficient estimates of control variables are quite steady across the different regressions. Two control variables appear significant and capture some of the explanatory power of the logistic regressions. First, the valuation ratio which is a rough estimate of the Tobin Q indicates a positive relation with takeover likelihood. The most common interpretation is that firms with a ratio superior to 1 have more future investment opportunities and this is consistent with the findings on the long term debt/equity ratio. So, it seems that the forecasted target firm performance previous to the takeover is not neutral for the bidder. More controversial, even if small, is the highly significant negative coefficient found on manager tenure across the three regressions. Indeed, the entrenchment hypothesis suggests that entrenched managers should have longer tenure and that the market for corporate control, through takeovers, should replace them in the end because they are no more efficient for the management of their firm assets. This result is consistent with the univariate analysis presenting a significant difference in means between targets (6,9 years) and nontargets (17,3 years) with a difference of more than ten years. Nevertheless, if the managers of the nontarget subsample may be seen as “entrenched managers” they should correlatively offer a fair return on the assets to the shareholders otherwise their tenure would not last so long in comparison to the performance of their peers on the market. This is consistent with the view of Castanias and Helfat (1992, p.180) : “If outsider may use the market for corporate control to pursue managers’ earned rents, however, efficient rent-generating managers may use anti-takeover devices to protect their future rent-generating ability within the firm or golden parachutes to guarantee themselves payment of earned managerial rents”. As a consequence, thanks these different results we see that managers may use preventive anti-takeover defenses in order to develop high return on a long term horizon.

Model 4 is an exploratory one since it is based on a forward stepwise method within which variables are picked up for improving the regression global goodness of fit. The results observed give a confirmation of the previous findings. This regression puts board variables forward with highly significant results on outside directors, institutional directors and turnover. Concerning ownership and financial structure variables, only the positive coefficient on independent blockholders is significant (p -value = 0,024). The other variables are not statistically different from zero at least at the 10% significance level. This result confirms the finding observed in the univariate analysis concerning the

difference in means on independent blockholders. Representing individuals or firm participations, independent blockholders have a positive influence on takeover likelihood and through statutory disposals managers may limit their stock ownership if they want to successfully ward off a takeover. Consistent with the previous models, manager tenure is statistically significant and may be explained within the analysis framework developed by Castanias and Helfat (1992).

Aimed at revealing the preventive anti-takeover devices in the French context, the findings clearly point out the primary role of strategies linked to the board structure. They can especially be developed through the number of outside directors, institutional directors and the turnover of directors on the board. Fewer and more marginal results are observed concerning the ownership and financial structures. It is essentially by an increase of her participation (her interests are closely aligned with those of shareholders) and by allowing a growing participation of the employees that the manager may develop strategies to protect herself from the market for corporate control.

4.3. Effectiveness relatively to manager removal probability

Controlling for the manager self-interest in protecting her human capital, we estimate logit models where the dependent variable is the removal probability of the target top manager subsequent to the takeover. The second hypothesis tested here is that the removal probability of the manager increases with the lack of preventive anti-takeover defenses. We first notice that the statistical signification of the different regressions is not as good as the one observed on takeover likelihood (p -values range from 0,027 to 0,161). The small size of samples is essentially due to a lack of information after the takeover completion since many target firms are no more listed. The results of the regressions are shown in Table 4. The first one focuses on internal control mechanisms (board), the second and the third ones on external control mechanisms (ownership and financial structures). Two other regressions have been run, one with the ownership and control variables only, and another one with the global set of variables. In both cases, the models are not significant due to a lack of relation in the first case and a model over-determination in the second case.

Even after having controlled for size through the univariate analysis, the findings of Model 1 point out a marginal influence of the firm size on the probability of target manager removal. Coefficients on firm size and board size are both statistically significant with respectively a p -value of

0,024 and 0,065. Now we have already seen through the correlation matrix of independent variables that the correlation of 0,594 between board size and firm size is significant. Interestingly, the two relations with the removal probability are reversed. Considering the post-takeover situation, the positive coefficient observed on the board size suggests that a great number of directors on the target board may be unfavourable to the manager. Actually, it may have been precisely perceived as an entrenchment strategy developed before the takeover occurrence. In contrast, the negative coefficient on firm size suggests that the biggest the company, the smallest the probability of removal for the target manager after a takeover. There is not much evidence in the previous literature concerning this result. One possible explanation in the French context is that tender offers launched on big companies may often begin through a takeover process and end within a merger operation. In this case, the bidder is not able to pay cash and may prefer a friendly operation. This explains why the target manager may remain after the takeover process.

- TABLE 4 -

The statistically significant coefficient observed on manager tenure through the different regressions is quite consistent with the entrenchment hypothesis. This hypothesis suggests that the target manager protected against the takeover market by different deterrent devices has got a longer tenure than her peers and may be a privileged target for hostile takeovers. Two alternative arguments may then be considered: either the target manager is running the assets of the firm in a bad manner and there is an expected return in removing her, or the target manager runs the firm well and there is an interest for the bidder in capturing the managerial rents. We have to look further at the results in order to support the correction of the managerial failure argument developed by Jensen (1993) or the rent-seeking comportment one closely linked to the Castanias and Helfat (1992) view.

Model 2 and Model 3 are dedicated to the strategies of external control mechanisms neutralization. When looking at their statistical significance level, Model 2 appears as the best one. Among the ownership structure variables, we observe that only the variables expressing the ownership structure “geography” are statistically significant regardless of stockholders’ identity. First, the marginally significant positive coefficient on the concentration index (p -value=0,090) stresses the fact the more the ownership structure is concentrated, the greater the probability of removal for the

target manager. We can jointly point out the similar result on the stockholder agreements variable with a significant positive coefficient. These findings indicate that a homogeneous and concentrated ownership structure may make easier the target manager removal in case of takeover. One basic inference is that the observed *ex ante* concentration may be interpreted by the market, and especially by the bidder, as an entrenchment strategy. So, as soon as the “dominant coalition” is defeated during a takeover period in a closely held company, there is more chance the target manager to be removed. The negative coefficient on voting rights is also statistically significant (p -value=0,054). This result is quite consistent with previous studies (Ambrose and Megginson, 1992) indicating that such takeover defenses on voting rights (dual-class recapitalizations, warrants) have a real negative impact on takeover probability. In the French context, modifications on voting rights are within the firm statutory disposals explaining so why this defense may be defined as a preventive one. In reality, this device may be seen as a “last chance” defense for the target manager who can have some bargaining power during takeover period with few stocks giving access to many voting rights. If necessary, thanks to previous shareholder agreements, such a mechanism may end up with a trade-off between the bidder and the target manager allowing the right completion of the operation conditioned by the preserving of her job.

The significant coefficients observed on the dividend variable in Model 2 and 3 (with respectively a p -value of 0,010 and 0,059) are not directly consistent with our hypotheses focused on takeover probability (See Dickerson et al., 1998). Actually, the rationale behind takeover occurrence probability and target manager removal probability may be slightly different. Modifying financial ratios and dividends comes back to send signals to the financial market. In these circumstances, high dividends may be interpreted as a positive signal on the future of the firm. Now we correlatively observe that the dividend presents a positive coefficient meaning that *ex ante* good performance increases the *ex post* removal probability for the target manager. This result is not consistent with the study of Martin and Mc Connell (1991) who find that the takeover targets in which the top manager is replaced are performing significantly worse before the operation than the targets in which the top manager remains in place following the takeover. Nevertheless, our findings are confirmed by the positive and statistically significant coefficients on the market-to-book valuation ratio in Model 2 and 3 (with respectively a p -value of 0,073 and 0,075). These different results on the external control mechanisms suggest that despite the capacity of the manager to protect her human capital on the long

term, takeover operations may be launched on well-performing firms in order to capture the managerial rents developed by more efficient managers. These findings on the target manager removal probability tend therefore to support the superiority of Castanias and Helfat (1992) rent-seeking view over the managerial failure view within the French context. Except the use of voting rights allowing a bargaining power to the target manager during the takeover period, the preventive anti-takeover defenses have finally a weak influence on the target manager removal after the takeover completion.

In order to check the quality of these two last models, we have run two other regressions which are not presented here. Taking into account the strong correlation between the return on equity and total debt / equity variables, we have swapped them. So, we obtain two new models, Model 2' and Model 3', run with the return on equity variable and without the total debt /equity variable. If the results do not really change for the statistical significance of variables taken individually, they are quite different for the global models. Actually, Model 2' and Model 3' improve their global statistical significance reaching respectively the 1% and 5% levels. This observation points out that the *ex ante* return may have some great importance for the future of the target manager. Nevertheless, this result is not surprising since the return on equity may be explained as the result of the interaction of different variables. As a consequence, we keep the initial models corresponding to the hypotheses put forward.

5. Conclusion

The French takeover market is often viewed as being not a very active one with only friendly operations for the most part. In order to control for the real function of this market, this paper examines whether anti-takeover defenses exist on this market and whether observed takeover operations are due to a lack of these defenses. First legal considerations lead to the conclusion that the French legal framework authorizes very few active defenses (usable during the takeover period) in comparison to the United States. Alternatively, preventive anti-takeover defenses are then identified as defense strategies within the corporate governance framework. They essentially consist in strategies developed by the firm manager aimed at neutralizing the internal and external control mechanisms (board of directors, ownership and financial structures).

Our primary focus has been on the relation between preventive anti-takeover defenses and the takeover probability. First, board composition and structure have a significant impact on takeover likelihood. Strategies developed by the manager that consist in reducing the number of outside and financial directors or increasing the turnover of the board members may be considered as efficient preventive anti-takeover defenses. These findings may be associated with the manager tenure which has a negative influence on takeover likelihood and suggests an entrenchment strategy. Quite striking is the result observed on institutional directors whose increasing number on the board has a negative impact on takeover likelihood. It is interesting to notice that institutionals do not have the same behaviour whether they are directors or investors. Considering the takeover occurrence, we can assume they may easily impose a long term view when sitting as directors. Second, strategies that may be developed towards external control mechanisms have no real impact on takeover likelihood. Nevertheless, when jointly considered with the control variables, the result on the long term debt / equity ratio progression supports the view that targets in the French context are preferably well-performing firms prior to the takeover announcement.

The secondary concern in this article has been on the effectiveness of preventive anti-takeover strategies relatively to the *ex post* target manager removal. In a general way, preventive anti-takeover defenses have little influence on what happens during and after the takeover period. Nevertheless, consistent with the previous studies, we find that strategies on voting rights may be effective after the takeover announcement. Interestingly, as for takeover likelihood, the findings on financial structure (dividends) and control variables (market-to-book ratio) still suggest that perception of good performance prior to the takeover announcement increases the target manager removal likelihood.

If preventive anti-takeover strategies are found effective, especially at the board level, the findings of this study show that in the French context they cannot be necessarily interpreted as a breakdown of the internal control mechanisms. Through the different parts of the analysis, results on financial and control variables suggest that target firms are generally well-performing prior to the takeover operation. Finally, this view supports the idea of Castanias and Helfat (1992) suggesting that efficient rent-generating managers who are well-running their firm may use anti-takeover devices to protect their future rent-generating ability. Further research has yet to be done in this way, especially by controlling for the effective role of the institutional both as directors and investors and also with

more precision for the bidder toeholds prior to the takeover. Thus, due to the legal structure and firms specificities, our results give a picture of the French market for corporate control which is consistent with the *a priori* “friendly” appearance of French takeovers. Nevertheless, considering the *ex ante* economic performance variables of targets prior to the takeovers, this study also tends to support that this market for corporate control is not performing as a disciplinary device of last resort.

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Tables

Table 1

Distribution of the 349 tender offers announced between 1989 and 1998. Since we are only interested in control motivations, we present in the second column the tender offers in which the bidder owns less than 50 percent of the target's shares prior to the tender offer. Indeed, in order to avoid noisy results, we do not take into account the other tender offers because they correspond to group logics including subsidiaries. The final sample of 81 tender offers for which we have complete date is in the last column.

| Year | Global number | Bidder initial participation is less than 50% | Final Sample |
|-----------|---------------|--|--------------|
| 1980-1988 | 101 | - | - |
| 1989 | 44 | 31 | 15 |
| 1990 | 34 | 18 | 7 |
| 1991 | 35 | 26 | 15 |
| 1992 | 57 | 17 | 9 |
| 1993 | 35 | 12 | 2 |
| 1994 | 24 | 12 | 4 |
| 1995 | 28 | 18 | 9 |
| 1996 | 34 | 15 | 7 |
| 1997 | 30 | 14 | 6 |
| 1998 | 28 | 17 | 7 |
| Total | 349 | 180 | 81 |

Table 2

Characteristics of tender offer targets sample and comparison of targets with a control sample of industry- and temporally-matched nontarget firms for the year preceding the takeover attempt. Characteristics provide information on board composition, ownership and financial structure of target firms. Control variables that may have some explicative power are also given. All tender offers occur between 1989 and 1998. The sample consists of 81 tender offers announced by the COB and 81 nontarget firms. Sample size may vary due to missing observations. *p*- values are in parentheses.

| Variables ^a | Nb | Units | Target Subsample | | Nontarget Subsample | | <i>t</i> -test and Wilcoxon Z for difference in: | |
|------------------------------|-----|-------------------------|------------------|--------------|---------------------|--------------|--|------------------------|
| | | | Mean Value | Median Value | Mean Value | Median Value | Mean ^c | Median |
| Outside directors | 162 | % | 40.940 | 42.850 | 20.455 | 18.180 | ***6.644 (0.000) | ***- 5.955 (0.000) |
| Financial directors | 162 | % | 4.330 | 0.000 | 2.2833 | 0.000 | 1.587 (0.114) | - 1.325 (0.185) |
| Institutional directors | 162 | % | 1.849 | 0.000 | 1.407 | 0.000 | 0.416 (0.678) | - 0.594 (0.553) |
| Board turnover | 118 | % 3 years ^b | 4.834 | 4.761 | 8.072 | 6.666 | ***- 2.775 (0.006) | ** -2.329 (0.020) |
| Board size | 162 | number of directors | 8.950 | 9.000 | 9.308 | 9.000 | - 0.719 (0.473) | - 0.552 (0.581) |
| Management | 162 | % | 8.354 | 0.000 | 10.981 | 0.000 | - 0.840 (0.402) | - 0.413 (0.680) |
| Independent blockholders | 162 | % | 19.419 | 2.990 | 6.250 | 0.000 | ***3.783 (0.000) | ***- 3.523 (0.000) |
| Institutional investors | 162 | % | 4.488 | 0.000 | 1.292 | 0.000 | **2.541 (0.012) | ***- 3.015 (0.003) |
| Salaried employees | 162 | % | 0.544 | 0.000 | 0.515 | 0.000 | 0.083 (0.934) | ** -2.089 (0.037) |
| Concentration index | 162 | % | 60.491 | 59.700 | 61.488 | 62.700 | - 0.222 (0.825) | - 0.222 (0.824) |
| Stockholder agreements | 162 | dummy | 0.140 | 0.000 | 0.250 | 0.000 | - 0.303 (0.763) | - 0.775 (0.438) |
| Voting rights | 162 | dummy | 0.660 | 1.000 | 0.680 | 1.000 | *- 1.805 (0.073) | *- 1.792 (0.073) |
| Total debt / equity | 162 | Ratio | 2.298 | 1.414 | 2.081 | 1.570 | 0.472 (0.637) | - 0.605 (0.545) |
| Long term debt / equity | 162 | % 3 years ^b | 97.045 | 10.893 | 150.87 | 23.255 | - 0.739 (0.461) | - 0.679 (0.497) |
| Long term debt / total debt | 162 | % | 44.418 | 44.821 | 42.633 | 43.544 | 0.494 (0.622) | - 0.169 (0.866) |
| Dividend | 162 | € | 2.481 | 1.676 | 3.253 | 2.629 | *- 1.807 (0.073) | - 1.805 (0.115) |
| Dividend progression | 162 | % 3 years ^b | 12.537 | 7.142 | 16.120 | 6.250 | - 0.359 (0.720) | - 1.021 (0.307) |
| Valuation ratio | 162 | ratio | 1.797 | 1.430 | 1.747 | 1.541 | 0.262 (0.794) | - 0.394 (0.694) |
| ROE | 162 | % | 4.170 | 9.752 | 6.949 | 12.044 | - 0.331 (0.741) | *- 1.653 (0.098) |
| σ (ROE) | 162 | % 3 years ^b | 14.169 | 5.040 | 6.376 | 2.940 | **1.982 (0.049) | *- 1.740 (0.082) |
| Log (market value of equity) | 162 | log(€ 10 ⁶) | 0.453 | 0.126 | 0.766 | 0.133 | - 1.592 (0.113) | - 1.021 (0.307) |
| Age of the manager | 136 | years | 56.945 | 57.232 | 57.898 | 57.813 | - 0.581 (0.562) | - 0.316 (0.752) |
| Manager tenure | 124 | years | 6.949 | 4.201 | 17.342 | 9.691 | ***- 3.346 (0.001) | *** - 4.027 (0.000) |

***, **, * denote statistical significance at the 1-percent, 5 -percent and 10-percent levels, respectively, in two-tailed tests.

^a The full definition of variables is in the text.

^b The variable is calculated as a mean percentage over the three years preceding the tender offer announcement.

^c The *t*-statistics are computed to test the null hypothesis that the mean values for the target and non-target subsamples are equal under the assumption of unequal variances.

Table 3

Logit regressions of tender offer likelihood using characteristics of board of directors, ownership and financial structures for sample of tender offer targets and control sample of industry- and temporally-matched nontarget firms. Control variables relative to the target and the target manager are also used. All tender offers occur between 1989 and 1998. The dependant variable is set equal to one if the observation belongs to the targets subsample and zero if the firm is from the control sample. Variables are measured as of the year preceding the takeover attempt. *p*-values are in parentheses.

Model: Tender offer likelihood = f(board characteristics, ownership structure, financial structure and control variables)

| Explanatory variables ^a | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|--------------------------------------|------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|
| | coeff | <i>p</i> -value | coeff | <i>p</i> -value | coeff | <i>p</i> -value | coeff | <i>p</i> -value |
| Intercept | 2.975 | 0.226 | 2.534 | 0.453 | 2.020 | 0.600 | -0.234 | 0.415 |
| Outside directors | *** 0.076 | 0.000 | *** 0.092 | 0.000 | *** 0.115 | 0.000 | *** 0.067 | 0.000 |
| Financial directors | 0.030 | 0.355 | 0.050 | 0.198 | 0.084 | 0.107 | | |
| Institutional directors | ** -0.102 | 0.030 | ** -0.139 | 0.031 | *** -0.356 | 0.008 | ** -0.144 | 0.047 |
| Board turnover ^b | * -0.091 | 0.076 | ** -0.157 | 0.023 | *** -0.217 | 0.010 | *** -0.135 | 0.010 |
| Board size | -0.021 | 0.848 | -0.065 | 0.624 | -0.060 | 0.703 | | |
| Management | | | * -0.036 | 0.095 | ** -0.054 | 0.033 | | |
| Independent blockholders | | | * 0.033 | 0.092 | * 0.036 | 0.076 | ** 0.037 | 0.024 |
| Institutional investors | | | 0.104 | 0.130 | * 0.138 | 0.076 | | |
| Salaried employees | | | * -0.241 | 0.098 | * -0.323 | 0.070 | | |
| Concentration index | | | -0.001 | 0.957 | 0.005 | 0.824 | | |
| Voting rights | | | 0.002 | 0.998 | -0.175 | 0.836 | | |
| Stockholder agreements | | | -0.110 | 0.903 | -0.248 | 0.823 | | |
| Total debt / equity | | | | | 0.001 | 0.979 | | |
| Long term debt / equity ^b | | | | | ** 0.005 | 0.035 | | |
| Long term debt / total debt | | | | | -0.005 | 0.805 | | |
| Dividend | | | | | -0.035 | 0.160 | | |
| Valuation ratio | ** 0.006 | 0.043 | ** 0.009 | 0.040 | ** 0.012 | 0.029 | | |
| ROE | 0.007 | 0.292 | 0.013 | 0.184 | | | | |
| Log (market value of equity) | -0.724 | 0.131 | -0.703 | 0.222 | -0.608 | 0.346 | | |
| Tenure of the manager | *** -0.001 | 0.006 | *** -0.001 | 0.013 | *** -0.001 | 0.004 | *** -0.000 | 0.010 |
| Number of observations | | 95 | | 94 | | 92 | | 92 |
| Number of targets | | 51 | | 50 | | 48 | | 48 |
| Likelihood ratio Index | | 82.743 | | 67.667 | | 59.993 | | 80.968 |
| Model Chi-Square | | 48.439 | | 62.262 | | 67.373 | | 46.398 |
| <i>p</i> -value | | 0.000 | | 0.000 | | 0.001 | | 0.000 |

***, **, * denote statistical significance at the 1-percent, 5 -percent and 10-percent levels, respectively, in two-tailed tests.

^a The full definition of variables is in the text.

^b The variable is calculated as a mean percentage over the three years preceding the tender offer announcement.

Table 4

Logit regressions of target manager *ex post* removal using characteristics of board of directors, ownership and financial structures for sample of tender offer targets and control sample of industry- and temporally-matched nontarget firms. Control variables relative to the target and the target manager are also used. All tender offers occur between 1989 and 1998. The dependant variable is set equal to one if the observation belongs to the targets subsample and zero if the firm is from the control sample. Variables are measured as of the year preceding the takeover attempt. *p*-values are in parentheses.

Model: Manager removal = f(board characteristics, ownership structure, financial structure and control variables)

| Explanatory variables ^a | Model 1 | | Model 2 | | Model 3 | |
|--------------------------------------|-----------|-----------------|-----------|-----------------|---------|-----------------|
| | coeff | <i>p</i> -value | coeff | <i>p</i> -value | coeff | <i>p</i> -value |
| Intercept | 3.836 | 0.253 | 2.148 | 0.534 | 1.189 | 0.632 |
| Outside directors | 0.008 | 0.731 | | | | |
| Financial directors | 0.016 | 0.738 | | | | |
| Institutional directors | 0.045 | 0.620 | | | | |
| Board turnover ^b | -0.048 | 0.611 | | | | |
| Board size | * 0.409 | 0.065 | | | | |
| Management | | | -0.034 | 0.275 | | |
| Independent blockholders | | | -0.035 | 0.137 | | |
| Institutional investors | | | -0.169 | 0.129 | | |
| Salaried employees | | | -0.383 | 0.312 | | |
| Concentration index | | | * 0.049 | 0.090 | | |
| Voting rights | | | ** -2.502 | 0.036 | | |
| Stockholder agreements | | | * 3.194 | 0.090 | | |
| Total debt / equity | | | -0.001 | 0.718 | -0.001 | 0.292 |
| Long term debt / equity ^b | | | -0.003 | 0.246 | -0.002 | 0.301 |
| Long term debt / total debt | | | 0.040 | 0.102 | 0.008 | 0.608 |
| Dividend | | | *** 0.127 | 0.010 | * 0.049 | 0.059 |
| Valuation ratio | 0.007 | 0.159 | * 0.008 | 0.073 | * 0.006 | 0.075 |
| ROE | 0.019 | 0.329 | | | | |
| Log (market value of equity) | ** -1.671 | 0.024 | ** -1.424 | 0.038 | -0.620 | 0.180 |
| Manager tenure | * 0.001 | 0.071 | ** 0.001 | 0.022 | 0.001 | 0.213 |
| Number of observations | | 42 | | 48 | | 48 |
| Number of targets | | 20 | | 23 | | 23 |
| Likelihood ratio Index | | 44.312 | | 40.649 | | 55.932 |
| Model Chi-Square | | 13.817 | | 25.810 | | 10.527 |
| <i>p</i> -value | | 0.129 | | 0.027 | | 0.161 |

***, **, * denote statistical significance at the 1-percent, 5 -percent and 10-percent levels, respectively, in two-tailed tests.

^a The full definition of variables is in the text.

^b The variable is calculated as a mean percentage over the three years preceding the tender offer announcement.

Appendix

In this appendix we describe the data and computational procedures. As we have developed in the text, we worked on data coming from the ‘Commission des Opérations de Bourses’ (COB, equivalent to the SEC). The sample of targets is drawn from registered operations on the 1989-1998 period following the ‘normal proceedings’ (as called in the French stock exchange law). This rule means that the initial toehold of the firm launching the operation is less than 50% in the target. Hereafter is a general presentation of the different 81 takeovers used for the selection of the targets.

| | Specifications | Frequencies (%) | |
|------------------|--|---|---|
| Operation | Date | 1989 : 18 1990 : 9 1991 : 18 1992 : 11 1993 : 3 | 1994 : 5 1995 : 11 1996 : 9 1997 : 7 1998 : 9 |
| | Type | Tender offer : 69 Exchange : 31 | |
| Bidder | Initial toehold in the target (%) | 0 : 47]0 ;10] : 10 |]10 ;30] : 10]30 ;50] : 33 |
| | Conditions | Minimum : 37 Without condition : 63 | |
| | Overbid | Yes : 12 No : 88 | |
| Target | Market segment | First : 40 Second : 60 | |

Then, a matched case-control methodology is used. Due to the narrowness of the French market, the control sample is not randomly chosen. Each target firm was matched by industry with a control (non-target) firm. The industry matching process is based on at least two-digit NAF codes (equivalent to SIC codes). Moreover, control firms should have been listed on the French market for at least three years before the takeover announcement date and should not have been taken over during the last three years. Adding a size-control would have been too restrictive, many targets would then not have a paired firm in the control subsample. So, thanks to the previous criteria, nontarget firms are then chosen as soon as they match the alphabetical stock exchange listing. Finally, we obtain a control sample of 81 industry- and temporally-matched nontarget firms during the 1989-1998 period. We present hereafter the sample of targets with the paired “sister firms”.

| N | TARGET | PAIRED NONTARGET | N | TARGET | PAIRED NONTARGET |
|----|-----------------------------------|---------------------------|----|---------------------------------------|--------------------------|
| 1 | SOCIETE ALIMENTATION PROVENCE | PREDAULT PAUL | 42 | COMPTOIRS MODERNES | GUYENNE ET GASCOGNE |
| 2 | BISCUITS GARDEIL | BRIOCHE PASQUIER | 43 | NOUVELLES GALERIES REUNIES | CARREFOUR |
| 3 | SCHAEFFER | ERIDIA BEGHIN SAY | 44 | AU PRINTEMPS | ACCOR |
| 4 | AUSSEDAT REY | FRANC PAPIERS PEINTS | 45 | CONFORAMA | AU BON MARCHÉ |
| 5 | PAPETERIES DU LIMOUSIN | PAPETERIES CLAIREFONTAINE | 46 | MATRA HACHETTE | GROUPE ANDRE |
| 6 | NORD EST | EMIN LEYDIER | 47 | S.A.F.A.A. | MANUTAN |
| 7 | IMPRIMERIE BERGER LEVRAULT | EDITION BELFOND | 48 | S.T.M.B. | LOCAMION |
| 8 | HYDROCARBURES SAINT DENIS | ESSO SAF | 49 | ENTRTE ET MAGASINS. GENERAUX DE PARIS | DOCKS PETROLES AMBES |
| 9 | MINES DE LUCETTE | GIVAUDANT LAVIROTTE | 50 | SOGEPAG | GARAGES SOUTERRAINS METZ |
| 10 | C.F.P.I. | VIRBAC | 51 | FRANCAREP | FILIPACCHI MEDIAS |
| 11 | I.P.A. | LABO DOLISOS | 52 | COMIPHOS | THERMADOR |
| 12 | ROUSSEL UCLAF | AIR LIQUIDE | 53 | INITIATIVE ET FINANCE | REYDEL INDUSTRIES |
| 13 | HUTCHINSON | BOLLORE TECHNOLOGIES | 54 | I.F.D. | CENTENAIRE BLANZY |
| 14 | CIE DES CAOUTCHOUCS DE PADANG | SMOBY | 55 | GROUPE DE LA CITE | SCHNEIDER |
| 15 | PORCHER | POCHET | 56 | FINANCIERE MONCEY | SOFIDAV |
| 16 | POLIET | CARBONE LORRAINE | 57 | WORMS & CIE | SIACI |
| 17 | CIMENTS FRANCAIS | VICAT | 58 | TOUR EIFFEL | CONFLENDÉY |
| 18 | CARNAUDMETALBOX | SANOFI | 59 | MINES DE KALI SAINTE THERESE | CERUS |
| 19 | METAL DEPLOYE | FICHET BAUCHE | 60 | SOFCO | LUCIA |
| 20 | LEROY SOMER | ECIA | 61 | SEFIMEG | KLEPIERRE |
| 21 | DEFONTAINE | MESSIAN DURAND | 62 | RUCHE MERIDIONALE | ELYO |
| 22 | CONSTR. ELECTRIQUES DE NANCY | CEE | 63 | MORIA INFORMATIQUE | CAP GEMINI |
| 23 | T.R.T. | SAT | 64 | MARBEN | INGENICO |
| 24 | C.S.E.E. | BARPHONE | 65 | DATAID | COMPUTEL |
| 25 | COMPAGNIE DE NAVIGATION MIXTE CNM | THOMSON | 66 | CGI INFORMATIQUE | CONCEPT SA |
| 26 | TELEFLEX LIONEL DUPONT | LATECOERE | 67 | SLIGOS | STRAFOR FACOM |
| 27 | BERTRAND FAURE | LEGRAND | 68 | FRANDEV | LA REDOUTE |
| 28 | GUINTOLI | SGE | 69 | COMPAGNIE INDUSTRIELLE | CIE DE SAINT GOBAIN |
| 29 | CONSTR. METALLIQUES DE PROVENCE | COLAS | 70 | MAJOR | CALBERSON |
| 30 | SOCIETE AUXILIAIRE D'ENTREPRISES | JEAN LEVEBVRE | 71 | ARJOMARI-PRIOUX | LAFARGE COPEE |
| 31 | ORSAN | NISSAN France | 72 | EXOR | BONGRAIN |
| 32 | CHEVAL BLANC | SAFIC ALCAN | 73 | DELALANDE | GIFRER BARBEZAT |
| 33 | SOURCE PERRIER | PROMODES | 74 | FINANCIERE TRUFFAUT | CEGID |
| 34 | PORON | CREEKS | 75 | AGRICOLE DE LA CRAU | GASCOGNE |
| 35 | GUILLARD MUSIQUES | MB ELECTRONIC | 76 | MAUREL ET PROM | FORGES STEPHANOISES |
| 36 | ORIGNY DESVROISE | SAMSE | 77 | RALLYE | GTM |
| 37 | GERLAND | PRIMAGAZ | 78 | GUILBERT | SODICE EXPANSION |
| 38 | DAFSA | INSTALLUX | 79 | COMAREG | DAUPHIN |
| 39 | CASINO | LVMH | 80 | ECCO | SPIR COMMUNICATION |
| 40 | ECONOMATS DU CENTRE | BHV | 81 | UGC D.A. | GAUMONT |
| 41 | DOCKS DE FRANCE | DANONE | | | |

Concerning the computational procedures, we have used the SPSS software for the different parts of the empirical analysis. For the univariate analysis the different tests on means and medians have been done thanks the parametric and non-parametric tests provided. Before running the different logistic regressions explaining the takeover probability and the target removal probability we have checked for correlations between the different variables. We have then eliminated some of the variables present in the univariate analysis in order to avoid collinearity problems within the regressions. We provide in the next table the final correlation matrix between the different variables.

| | | Outsid direct | Financial directors | Institutionl directors | Concentrat index | Indepndt blockholds | Institutionl investors | Managemnt holdings | Salaried employees | Voting rights | Divids | Long term debt / total debt | Total debt / equity | Manager tenure | Valuation ratio | Board size | Stockholdr agreement | Long term debt / equity | ROE | Directors turnover | Firm size | |
|----------------------------|-----------------|---------------|---------------------|------------------------|------------------|---------------------|------------------------|--------------------|--------------------|----------------|-----------------|-----------------------------|---------------------|----------------------|-----------------|-----------------|----------------------|-------------------------|----------------------|---------------------|---------------------|---|
| Outside dr | Pearson Sign | 1 | 0.107 0.589 | 0.125 0.527 | -0.231 0.237 | -0.052 0.794 | -0.339 0.078 | 0.036 0.856 | 0.018 0.928 | 0.063 0.749 | -0.062 0.754 | 0.240 0.219 | 0.171 0.383 | -0.057 0.772 | -0.190 0.332 | 0.090 0.647 | -0.098 0.620 | -0.140 0.477 | -0.144 0.464 | -0.032 0.871 | -0.116 0.556 | |
| Financial dr | Pearson Sign | | 1 | 0.034 0.862 | 0.080 0.685 | 0.116 0.557 | -0.182 0.353 | 0.154 0.434 | -0.129 0.511 | 0.05 0.802 | 0.039 0.842 | -0.109 0.58 | 0.291 0.133 | -0.17 0.387 | 0.032 0.873 | -0.073 0.714 | -0.027 0.892 | -0.085 0.668 | -0.271 0.164 | (**) 0.499 0.007 | -0.226 0.247 | |
| Institutional dr | Pearson Sign | | | 1 | -0.201 0.305 | -0.106 0.590 | 0.385 0.043 | -0.12 0.543 | -0.073 0.711 | 0.141 0.475 | 0.263 0.177 | (**) 0.494 0.008 | -0.092 0.641 | -0.082 0.678 | -0.145 0.462 | 0.405 0.033 | -0.126 0.524 | 0.125 0.525 | 0.058 0.769 | -0.022 0.911 | 0.216 0.269 | |
| Concentration | Pearson Sign | | | | 1 | 0.194 0.323 | 0.083 0.676 | 0.232 0.235 | -0.232 0.235 | 0.265 0.173 | -0.158 0.421 | 0.183 0.351 | -0.044 0.826 | -0.058 0.770 | 0.160 0.417 | -0.198 0.313 | 0.045 0.818 | 0.418 0.027 | 0.003 0.987 | 0.187 0.340 | 0.065 0.742 | |
| Indepndant blockholders | Pearson Sign | | | | | 1 | -0.031 0.875 | -0.301 0.119 | -0.115 0.559 | -0.06 0.763 | -0.051 0.798 | 0.038 0.848 | 0.350 0.068 | 0.037 0.853 | 0.156 0.428 | 0.099 0.615 | 0.323 0.094 | -0.178 0.365 | -0.194 0.322 | 0.382 0.045 | -0.123 0.532 | |
| Institutional investors | Pearson Sign | | | | | | 1 | 0.017 0.933 | -0.062 0.753 | 0.237 0.226 | 0.174 0.375 | 0.086 0.663 | -0.135 0.493 | -0.066 0.737 | -0.185 0.384 | -0.171 0.311 | 0.199 0.226 | 0.226 0.247 | 0.092 0.642 | -0.119 0.546 | -0.084 0.672 | |
| Management holdings | Pearson Sign | | | | | | | 1 | -0.105 0.593 | 0.067 0.735 | -0.135 0.493 | -0.175 0.373 | -0.159 0.418 | 0.356 0.063 | 0.005 0.979 | -0.363 0.057 | 0.015 0.942 | -0.073 0.712 | 0.104 0.600 | -0.118 0.549 | -0.032 0.872 | |
| Salaried employees | Pearson Sign | | | | | | | | 1 | 0.142 0.471 | -0.240 0.219 | -0.134 0.496 | 0.070 0.722 | -0.176 0.369 | -0.050 0.801 | -0.012 0.953 | 0.353 0.065 | -0.082 0.677 | 0.022 0.912 | -0.224 0.252 | 0.114 0.562 | |
| Voting rights | Pearson Sign | | | | | | | | | 1 | 0.100 0.612 | 0.071 0.720 | 0.095 0.629 | (**) -0.525 0.004 | 0.048 0.810 | 0.087 0.658 | 0.243 0.212 | 0.120 0.543 | -0.137 0.486 | -0.233 0.234 | 0.045 0.819 | |
| Dividend | Pearson Sign | | | | | | | | | | 1 | 0.101 0.609 | -0.270 0.165 | -0.008 0.968 | -0.116 0.023 | 0.427 0.096 | -0.321 0.452 | 0.148 0.133 | 0.291 0.133 | 0.362 0.058 | 0.288 0.138 | |
| Long term debt / totl debt | Pearson Sign | | | | | | | | | | | 1 | -0.174 0.376 | -0.004 0.984 | 0.066 0.737 | 0.342 0.075 | -0.190 0.334 | 0.131 0.506 | 0.104 0.599 | 0.101 0.608 | 0.170 0.388 | |
| Total debt / equity | Pearson Sign | | | | | | | | | | | | 1 | -0.122 0.536 | 0.397 0.037 | -0.067 0.734 | 0.009 0.962 | -0.093 0.638 | (**) -0.930 0.000 | 0.007 0.970 | -0.186 0.343 | |
| Manager tenure | Pearson Sign | | | | | | | | | | | | | 1 | 0.239 0.220 | -0.161 0.414 | -0.119 0.546 | -0.043 0.827 | 0.154 0.433 | 0.043 0.827 | 0.180 0.359 | |
| Valuation ratio | Pearson Sign | | | | | | | | | | | | | | 1 | 0.006 0.976 | 0.004 0.982 | 0.233 0.232 | -0.317 0.100 | 0.011 0.954 | 0.299 0.123 | |
| Board size | Pearson Sign | | | | | | | | | | | | | | | 1 | -0.067 0.737 | -0.087 0.660 | 0.140 0.477 | 0.230 0.240 | (**) 0.594 0.001 | |
| Stockholder agreements | Pearson Sign | | | | | | | | | | | | | | | | 1 | -0.159 0.418 | 0.038 0.849 | -0.294 0.129 | 0.093 0.636 | |
| Long term debt / equity | Pearson Sign | | | | | | | | | | | | | | | | | 1 | 0.070 0.723 | -0.119 0.545 | 0.238 0.223 | |
| ROE | Pearson Sign | | | | | | | | | | | | | | | | | | 1 | 0.051 0.799 | 0.305 0.115 | |
| Directors turnover | Pearson Sign | | | | | | | | | | | | | | | | | | | 1 | -0.070 0.723 | |
| Firm size | Pearson Sign | | | | | | | | | | | | | | | | | | | | | 1 |

Finally, we provide here the two logistic regressions relative to the target manager removal probability that take into account the return on equity variable. As explained in the paper, when included in the regressions this control variable improves the global statistical significance of both models. Fundamentally, we have presented in the text the two models with the total debt / equity variable illustrating our hypotheses on debt (Zwiebel, 1996), nevertheless we present here these two other models (without this variable) to show that there is not a huge impact on the different variables taken individually. See the Table 4' for Model 2' and Model 3'. We have left the original Model 1.

Table 4'

Logit regressions of target manager *ex post* removal using characteristics of board of directors, ownership and financial structures for sample of tender offer targets and control sample of industry- and temporally-matched nontarget firms. Control variables relative to the target and the target manager are also used. All tender offers occur between 1989 and 1998. The dependant variable is set equal to one if the observation belongs to the targets subsample and zero if the firm is from the control sample. Variables are measured as of the year preceding the takeover attempt. *p*-values are in parentheses.

Model: Manager removal = f(board characteristics, ownership structure, financial structure and control variables)

| Explanatory variables ^a | Model 1 | | Model 2' | | Model 3' | |
|--------------------------------------|-----------|-----------------|-----------|-----------------|----------|-----------------|
| | coeff | <i>p</i> -value | coeff | <i>p</i> -value | coeff | <i>p</i> -value |
| Intercept | 3,836 | 0,253 | 1,907 | 0,645 | 1,294 | 0,641 |
| Outside directors | 0,008 | 0,731 | | | | |
| Financial directors | 0,016 | 0,738 | | | | |
| Institutional directors | 0,045 | 0,620 | | | | |
| Board turnover ^b | -0,048 | 0,611 | | | | |
| Board size | * 0,409 | 0,065 | | | | |
| Management | | | -0,038 | 0,264 | | |
| Independent blockholders | | | -0,032 | 0,188 | | |
| Institutional investors | | | -0,156 | 0,155 | | |
| Salaried employees | | | -0,369 | 0,311 | | |
| Concentration index | | | * 0,050 | 0,100 | | |
| Voting rights | | | ** -2,687 | 0,042 | | |
| Stockholder agreements | | | * 3,529 | 0,077 | | |
| Total debt / equity | | | | | | |
| Long term debt / equity ^b | | | 0,055 | 0,072 | 0,013 | 0,439 |
| Long term debt / total debt | | | -0,003 | 0,327 | -0,002 | 0,274 |
| Dividend | | | *** 0,137 | 0,010 | ** 0,050 | 0,062 |
| Valuation ratio | 0,007 | 0,159 | 0,008 | 0,113 | ** 0,008 | 0,040 |
| ROE | 0,019 | 0,329 | 0,061 | 0,295 | 0,033 | 0,219 |
| Log (market value of equity) | ** -1,671 | 0,024 | * -1,744 | 0,061 | -0,818 | 0,118 |
| Manager tenure | * 0,001 | 0,071 | ** 0,001 | 0,020 | 0,001 | 0,641 |
| Number of observations | | 42 | | 48 | | 48 |
| Number of targets | | 20 | | 23 | | 23 |
| Likelihood ratio Index | | 44,312 | | 36,326 | | 51,961 |
| Model Chi-Square | | 13,817 | | 30,133 | | 14,498 |
| <i>p</i> -value | | 0,129 | | 0,007 | | 0,043 |