

Concentration of voting rights and board resistance to takeover bids

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Abstract

In this paper, we test the hypothesis that the probability of the target's board of directors resisting a takeover bid can be explained by two factors, transaction-specific variables and distribution of voting rights. Our study is conducted in Canada where the distribution of ownership and especially voting rights is more concentrated than in the United States.

We find first that some transaction-specific variables are relevant. The past performance of the target, the premium and prior negotiations are negatively associated with the probability of resistance by the managers. Competing bids cause it to increase, but their effect is felt through their interaction with the premium. Given our specific information on prior negotiations, we interpret their effect as unambiguous evidence of risk-reducing behavior on the part of the board.

The distribution of voting rights is also relevant: blocks of shares held by the directors are associated with an increase in the probability of resistance. This may be seen as evidence of managerial entrenchment. We document the degree to which these findings differ from those in the United States and seek to explain these differences.

Our proxies for board composition are not statistically significant.

JEL classification: G34

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1. Introduction

Takeovers are one of the mechanisms designed by the capital market to control conflicts of interests between the managers and the shareholders. By extending an offer, the bidder is signalling his belief – to be assessed by the market – that the target's managers need to be disciplined (in a hostile takeover) or that corporate resources could be allocated more efficiently (for instance, by exploiting economies of scale or unused tax deductions). Analysis of the proposed transfer of control by the board of directors and its subsequent recommendation to the shareholders is one important determinant of the final outcome. In this paper, we examine the board's decision to recommend that the shareholders reject (contested offers) or accept (uncontested offers) the bid.

Most of the empirical propositions in this area have been generated in the United States. Do they apply also to countries, such as Canada, where the distribution of property rights is more concentrated? We propose to throw some light on this question.

Rao and Lee-Sing (1995) compare 766 Canadian to 3000 American firms and find important dissimilarities with respect to the distribution of ownership. Approximately 23% of the Canadian companies are classified as widely held (no shareholder owns more than 20% of the voting shares), as opposed to 40% in the U.S. The Canadian insiders own a larger proportion of the firms they manage (21%) than their American counterparts (10%). The mean number of investors holding more than 10% of the voting shares is about twice as large in Canada (1.03) as in the United States (0.54). However, the American institutional holders own more voting shares on average (53%) than the Canadian ones (38%). Furthermore, the distribution of voting rights is even more concentrated than the distribution of ownership because of the use of restricted voting shares. In 1986, common stock with limited voting rights represented approximately 10% of the market value of the securities listed on the Toronto Stock Exchange.¹ We deal with the distribution of voting rights rather than that of ownership, hence the title of this paper. In this environment, the functions allocated to the board might differ from those in the USA² and the response to takeover threats might differ.

Notwithstanding those differences, as we shall observe below, board composition and size appear to be quite similar in the two countries, with two exceptions. The level of the directors' remuneration is lower in Canada and the CEO is less frequently also the chairperson of the board in Canada (34%) than in the U.S. (59%).

We test the hypothesis that the decision of a board of directors to oppose a

¹ Jog and Riding (1986). See also Smith and Amoako-Adu (1992).

² For practitioners' views on this, see Leighton and Thain (1990, 1991).

takeover bid can be explained by two factors: ³ some transaction-specific variables and the distribution of voting rights of the target company. Each factor is represented by a subset of proxies. In particular, the distribution of voting rights may be estimated directly or through its effects on the composition of the board, which we also discuss. We draw on the literature available in the United States about takeovers, ⁴ distribution of ownership ⁵ and board composition ⁶ to analyze Canadian data.

We find that transaction-specific variables and the distribution of voting rights explain the board's reaction. With respect to the first factor, competing bids interacting with the premium are associated with an increase in the probability of resistance, while the premium, efficiency of the target and prior negotiations with its managers are associated with a decrease. With regard to the second factor, our results suggest that voting rights held by the directors (both insiders and outsiders) are significantly and positively associated with the probability of resistance. The opposite behavior has been reported in previous studies. ⁷ Board composition *per se* does not appear to contribute to the explanation of the board's decision. Again, this is at variance with some previous research results.

The paper is organized as follows. In Section 2, we discuss the model. Sources of data are presented in Section 3 and a specification analysis in Section 4. A multivariate logit analysis is conducted in Section 5, while conclusions make up Section 6.

2. The model

As in Stulz (1988), we assume throughout that a takeover bid can hurt the managers but not the shareholders. This is consistent with the Grossman and Hart (1988) model, based on the assumption that the total value of a firm is made up of two elements: the present value of the cash flows accruing to all the security holders and 'private benefits of control' which accrue to the incumbent managers

³ These factors have received some attention in the literature, either jointly (Walkling and Long, 1984; Demsetz and Lehn, 1985; Morck et al., 1988a,b; Cotter and Zenner, 1994), or separately (Brickley and James, 1987).

⁴ See Walkling and Long (1984), Hasbrouck (1985), Brickley and James (1987), Morck et al. (1988a,b), Stulz (1988), Grossman and Hart (1988), Martin and McConnell (1991), Servaes (1991), Jennings and Mazzeo (1993), Shivdasani (1993) and St-Pierre (1994).

⁵ See Demsetz and Lehn (1985), Holderness and Sheehan (1988), Bergstrom and Rydqvist (1990), McConnell and Servaes (1990), Zeckhauser and Pound (1990) and Kaplan and Reishus (1990).

⁶ Baysinger and Butler (1985), Mace (1986), Leighton and Thain (1990), Rosenstein and Wyatt (1990), Weisbach (1988) and D'Aveni and Kesner (1993).

⁷ Song and Walkling (1993), Mikkelsen and Partch (1989), Cotter and Zenner (1994) and Cotter et al. (1994).

and, eventually, the bidder. That second element includes marginal benefits derived from control of the target, such as the monetary equivalent of remuneration and perquisites in excess of amounts available in alternative employments. A conflict of interests arises because the premium over the current market price of the target shares may appear to be sufficient compensation to all the stockholders but the managers. The latter take into account their share of the private benefits, an additional opportunity cost of the transaction. The smaller their equity ownership, the smaller their share of the premium and the more likely an excess of their opportunity cost over whatever amount they may expect to receive. This effect is amplified when the percentage of equity held by the agents is smaller than their percentage of voting rights owned through shares with superior voting rights. Finally, it has been shown empirically that the turnover of managers increases significantly in the wake of takeovers,⁸ thereby increasing the risk as perceived by these agents.

A takeover is a risky proposition for the managers and the directors. Should we assume that corporate governance mechanisms work perfectly, shareholders' and managers' interests would be perfectly correlated and their decision models would coincide. There would be no need to take into account variables that affect managers' wealth exclusively. But, as shown by Walkling and Long (1984), St-Pierre (1990) and Cotter and Zenner (1994), the assumption bears testing and variables representing the managers' risks and opportunities have to be controlled.

2.1. Transaction-specific variables

2.1.1. Shareholders' interests

Assuming that the managers and directors maximize the shareholders' wealth, the size of the premium should play a significant role in their decision. The larger the premium, the less plausible the hypothesis that the bid is not in the shareholders' interest and the smaller the probability that the managers will wage an unsuccessful campaign against it.

In a perfectly competitive market, the size of the premium might be revealing the value of the target to the bidder. But the market for corporate control is a regulated⁹ one, and the offer itself is leaking valuable information to the competitors. Furthermore, in the Canadian jurisdiction we are about to examine, as

⁸ See, for instance, Martin and McConnell (1991).

⁹ The main instruments for regulating corporate conduct are the courts and the securities commissions. According to Daniels and MacIntosh (1991, p. 897) the latter have less circumscribed powers in Canada than in the United States. Although they are creatures of the Provinces, at least the largest ones (Quebec and Ontario) consult together over policies. In connection with the regulation pertaining to takeover bids, the discussion in Jarrell and Bradley (1980) generally applies to Canada. Sectn. 3.1 of Bradley et al. (1988) can also be read as an accurate summary of the current Canadian regulations of cash tender offers. However, it does not apply to so-called exempt offers, which are seen as private transactions. See Éditeur Officiel du Québec (1988).

well as in some American States, the offer has to remain open for at least 21 days. Given competing bids, the initial bidder will have at least that long a delay after their occurrence to improve on its own offer. In this context, any premium is not necessarily final and will not necessarily be accepted by the board, even though the goal of the latter may be to maximize shareholders' wealth. In other words, a board of directors may reject a premium either for its own reasons or because it believes the current one does not maximize the shareholders' wealth. In the first case, the size of the premium and the probability of resistance will be unrelated, in the second one, they will be inversely related. The statistical results might become blurred under a mixture of those two effects. We also expect the bidder to set the premium at a level such that the probability of competing bids is minimized. We now turn to that second control variable and its interaction with the premium.¹⁰

Assuming that the first bid has not been invited or initiated by the managers, we hypothesize that the probability of resistance increases with the probability of forthcoming competing bids, which may come from two sources. They may represent an exogenous response by the market to the signal emitted by the initial bidder or they may result from managers' action, who use them as a technique of resistance.¹¹ In the first case, the managers deciding to recommend acceptance or rejection already know the terms of the initial offer and can reliably assess the probability that a competing bid is forthcoming. The higher this probability, the higher the probability that they recommend resistance, either to have the initial or a second bidder increase the premium. In the second case, the search for a second bid is initiated by managers who are opposed to a specific bidder, not to a transfer of control per se. In the latter instance, the manoeuvre would be counter-productive as an increase in the number of bids increases the probability that one of them will be accepted by the shareholders. Therefore, the managers have to be opposed to a specific bidder perceived as hostile to them or not offering the maximum premium to the shareholders. The probability that they contest increases with the probability that they find an ally (a white knight) who is more friendly, or willing to raise the price. Similarly, the bidder will adjust the premium if he expects competition.

To summarize, we suggest that multiple bids are always beneficial to the shareholders: the larger the number of options, the better. But they can hurt the managers who oppose any transfer of control or who have preferences for one of the bids, which they may have invited or extended themselves. Therefore, we conclude that, overall, their possible occurrence increases the probability that managers resist a prior bid. The target managers' expectation of a competing bid

¹⁰ For a previous discussion, see Jennings and Mazzeo (1993) and Walkling and Edmister (1985).

¹¹ This is generally the first defence mechanism announced by the target's managers. If the managers were responsible for or favorable to the first bid, they would use the more efficient methods, especially under concentrated ownership, of private transactions or statutory mergers. These methods are less likely to provoke competing bids.

leads directly to an increase in the probability of resistance while the bidder's expectation is to be felt through an increase in the premium. In this instance, the two variables should interact.

Finally, the reaction to competing bids cannot be used directly to discriminate between the hypotheses that managers maximize their own or the shareholders' utility because they may be used either to increase the premium or to select a bidder more friendly to management. However, second and subsequent bids may provide some information in this regard. As the number of bids increases, the premiums should also rise and the managers' resistance should decrease, provided it is motivated by the sole objective of maximizing the shareholders' wealth. If, on the average, it does not, we may suspect that some managers are contesting for their own reasons.

The remuneration package of the directors, especially the inside ones (i.e. directors who are also employees), is likely to affect their behavior. Most companies use common shares, options and other types of remuneration tied to the market value of equity in order to minimize agency costs. We label 'variable remuneration' compensation whose value is tied to that of common equity and 'fixed remuneration' the remaining components. If a manager were to be paid entirely with common shares, an increasing proportion of his personal portfolio would be invested in his employer and he would behave more and more as a shareholder, even though his proportion of outstanding shares might be small. Therefore, given our initial assumption, he would be less and less likely to oppose a takeover offer because the latter would imply an increase in his personal wealth and, possibly, a more diversified portfolio. The larger the 'equity portion' in the managers' remuneration, the smaller the probability that they will oppose the offer.

The preceding view, however, is overly simple, for two reasons. First, the cumulative effect of variable remuneration is to increase managerial ownership (to be discussed in Section 2.2), which may, at some relatively high levels, allow managerial entrenchment. If managerial ownership induces entrenchment and is positively correlated with variable remuneration, then the relationship between the probability of resistance and the latter may be nonmonotonic, and, at some levels, positive rather than negative. Thus, in firms characterized by concentrated managerial ownership, the role of the compensation package may be different from what is expected under diffuse ownership.

One can see the bidder's past financial performance as an indicator of the value of the target's shares which remain outstanding after the takeover. The probability is non-negligible that some of the seller's shares will remain outstanding because the bidder is required by law to acquire the same proportion of the securities tendered by each seller. This applies to both cash and exchange offers. The better the performance of the bidder, the higher the expected value of these remaining shares. (A higher price for those shares implies a larger 'blended premium', as discussed in Bradley et al. (1988)). Therefore, it is in the shareholders' interest

that the bidder's financial performance be as good as possible. If the managers are maximizing shareholders' utility, the relationship between the bidder's performance and the probability of resistance will be negative. But this effect may be too small to be detectable. As a skeptical investor can always sell his shares, he will avoid any expected price drop exceeding transaction costs and the opportunity cost of paying the capital gains tax sooner than planned.

2.1.2. Managers' interests

For the managers, the risks involved in a transfer of control hinges upon the success they had in managing the target. Some empirical results suggest that a manager is more likely to have his services retained by the new owner when the performance of his firm is good relative to that of the industry.¹² The takeover is less likely to be disciplinary. As the risk run by the managers is smaller, the probability that they will resist is also smaller.

The level of diversification of the bidding firm could be a proxy for the risk taken by the target's managers.¹³ A well-diversified firm is more likely to be making a portfolio investment and to leave the operations of the target undisturbed. Alternatively, a takeover by a bidder in the same line of business is more threatening to the target's managers. This suggests that the motives for the takeover are relevant. A bid designed to create a conglomerate or extended by one (a management holding company, according to Statistics Canada's definition) or by a firm pursuing vertical integration should be seen as less risky by the target's managers. We call that variable 'bidder's diversification' and expect it to be negatively related to the probability of resistance.

At the time an offer is made, the bidder has often been accumulating shares of the target for some time. The probability of the offer being accepted increases with the number of votes he already controls, and so do the managers' risks involved in opposing the transaction. Therefore, the probability that the board will resist decreases as the number of shares already held by the bidder increases. In the extreme case where the bidder already owns more than 50% of the votes or is simply making a cleanup offer, there is no point in resisting the bid. Admittedly, this case does not teach us much about board behavior.

Finally, one has to take into account the existence of prior or preliminary negotiations with some components of the target. In fact, several authors assume that the takeover is hostile whenever formal negotiations with the board did not take place.¹⁴ But this assumption leaves unanswered three important questions: with whom did the bidder negotiate? about what? and, what was the outcome?

The bidder may have been negotiating with the target's managers or with some large shareholders. In the latter case, the offer is not necessarily perceived as

¹² Martin and McConnell (1991) and Morck et al. (1988a).

¹³ D'Aveni and Kesner (1993) and Shivdasani (1993).

¹⁴ See, for instance, Morck et al. (1989).

friendly by the directors and top officers of the target. The discussions may have to do either with the terms of the offer or with the future working conditions of the target's executives. Again, in the former case, they are not necessarily friendly to the managers. Although the mere existence of formal negotiations is often used as an indicator of friendliness, when they break off, a friendly transaction may turn hostile. Yet, in many studies it would still be classified as friendly. This suggests that the dummy variable prior negotiations, which is used as a dependent or independent variable in many studies, carries much noise. It can be reduced, but not entirely eliminated, by specifying that we are dealing with negotiations with the managers and about their working conditions.¹⁵

In this paper, the variable preliminary negotiations refers specifically to the managers' future employment opportunities with the target and should signal a lower probability of resistance by the inside members of the board.

To summarize, our transaction-specific factor can be written:

$$\begin{aligned} &\text{Transaction - specific factor} \\ &= T[\text{Bid premium, Managers' remuneration package, Bidder's efficiency,} \\ &\quad \text{Competing bids, Target's efficiency, Bidder's diversification,} \\ &\quad \text{Percentage of votes held by bidder, Preliminary negotiations}]. \end{aligned} \quad (1)$$

2.2. *Distribution of voting rights*

Recent research on the structure of ownership has focused on the role of controlling shareholders seen as monitors of complex organizations¹⁶ and corporations with large firm-specific risks¹⁷. As such, they are value-increasing. We draw a distinction between inside and outside blocks, besides that already owned by the bidder.

Outside blockholders are the important shareholders, including institutional investors, not having access to private benefits captured by the managers but only to the cash flows accruing to all the owners.

On the one hand, following Leighton and Thain (1990), we expect large shareholders to tend to relegate the directors to an advisory role. The latter are not likely to oppose a transfer of control the important shareholders consider acceptable. On the other hand, a rational bidder will not incur the cost of extending an offer unless he feels large blockholders have acquiesced to it. Therefore, given a bid, the larger the outside blocks, the smaller the probability of resistance by the board.

The role of inside blocks, or managerial ownership, is expected to be different. It has been suggested that the functional relationship between managerial owner-

¹⁵ As we shall see shortly, we have access to this specific information. See also St-Pierre (1994).

¹⁶ Zeckhauser and Pound (1990).

¹⁷ Demsetz and Lehn (1985).

ship and market valuation of the firm's assets is nonmonotonic.¹⁸ At some relatively high level, entrenchment may set in, causing the value of the firm to the outside security holders to decrease. There may be at least two reasons for this. First, by holding a substantial proportion of the voting rights, the managers are sending a signal to the capital market that they are in a position to successfully oppose a takeover, thereby causing the expected premium to increase but the probability of an offer to decrease. Second, the managers may become able to extract larger private benefits from the company and the opportunity cost of tendering their shares is higher for them than for the outside shareholders, especially when shares with superior voting rights provide them with a higher proportion of voting rights than of equity claims, thereby increasing the probability that they oppose the takeover.

Some authors make a distinction between vote and equity ownership (e.g. Mikkelsen and Partch, 1989; Song and Walkling, 1993), while others do not mention it. Equity ownership is relevant when one is concerned exclusively with the wealth effects of a transaction. Voting rights are relevant to the analysis of the distribution of power between the shareholders, the managers and the directors.

2.2.1. Board composition

If board composition, as represented by the ratio of outside to inside directors, was a perfect proxy for the distribution of voting rights there would be no need to take it into account specifically. There exists some evidence that blockholdings are reflected in the composition of Canadian boards.¹⁹ But there also exist reasons to assert that outside directors are not perfect substitutes for large shareholders as suggested by the empirical evidence in Brickley and James (1987).

First, the Canadian corporations are subject to some admittedly weak legal constraints. The Business Corporations Act requires that a company should have at least two outside directors if its securities are to be distributed to the public.²⁰ Furthermore, as many companies belong to larger groups, they have to make room on their boards for group representatives. Second, and more important, as the distribution of voting rights is more concentrated in Canada than in the United States, one would also expect board composition to reflect the influence of the important shareholders. Yet, they appear to be quite similar. Such similarities may be more apparent than real and represent adaptation to concentrated ownership by

¹⁸ Hermalin and Weisbach (1991) suggest that the function reaches a maximum at the surprisingly low level of 1% of managerial ownership. In McConnell and Servaes (1990), the maximum is reached in the range 37%–49%, while in Morck et al. (1988b), it increases up to 5% and decreases between 5% and 25%.

¹⁹ Gagnon and St-Pierre (1995).

²⁰ Canada (1985, sectn. 97). The rules are more stringent in regulated industries. For instance, the Federal Insurance Companies Act states that inside directors should not represent more than 15 percent of the board. Teolis (1992, sectn. 172).

redefining the outside directors' function and emphasizing the executive and instrumental, as opposed to the monitoring, functions. This analysis suggests that board composition may provide information that is not redundant and also suggests a classification for directors.

We distinguish between inside and outside directors: inside directors are employees of the target corporation or of one of its affiliates, as well as former employees. Following Shivdasani (1993), we draw a distinction between subsets of outside directors. Some of them may be described as affiliated with management²¹ because they have family or business ties with the managers. We include legal and financial advisers, auditors and other consultants in that group. Group outside directors are those holding directorships in other corporations of the same group and represent a large shareholder. Their role is assumed to be similar to that of independent directors. The remaining unqualified outside directors are assumed to be truly independent and exclusively concerned with the monitoring role of the board and we call them independent directors. In the rest of the paper, the insiders include both the inside and affiliated outside directors, the outsiders include the group and independent directors.

We expect the probability of resistance to be inversely related with the ratio of outsiders to insiders²² because the former have a smaller proportion of their human and financial capital at risk in the change of control.

The sheer proportion of seats held by the outsiders is not necessarily a perfect proxy for their influence on the board. The advice of professional directors, who run the additional risk of not being²³ invited to other boards because of an unsatisfactory performance, may carry disproportionate weight with the target's managers. We have gathered information on the number of additional directorships held by the members of the board.

Thus, our second factor:

$$\begin{aligned} \text{Distribution of voting rights} = D[\text{Inside blocks; Outside blocks;} \\ \text{Ratio of outsiders to insiders on board}]. \end{aligned} \quad (2)$$

To summarize, the probability of resistance by the board could be explained by the following functional relationship:

$$\begin{aligned} \text{Pr}[\text{Resistance by the board}] \\ = R[\text{Bid premium, Managers' remuneration package, Bidder's efficiency,} \\ \text{Competing bids, Target's efficiency, Bidder's diversification,} \\ \text{Percentage of votes held by bidder, Preliminary negotiations,} \\ \text{Inside blocks, Outside blocks, Ratio of outsiders to insiders on board}]. \end{aligned} \quad (3)$$

²¹ This concept is already embedded in laws, such as the Insurance Companies Act (Teolis, 1992).

²² D'Aveni and Kesner (1993) start with the opposite premise.

²³ See Cotter et al. (1994) and Cotter and Zenner (1994).

Table 1
United States empirical results ^a

Study ^b	MP N = 240 1973–83	WL N = 95 1972–77	CZ N = 132 1988–91	JM N = 647 1979–88	CSZ N = 140 1988–91	DK N = 80 1984–86
Variable						
Bid premium		+	±	– *	±	– *
Percentage cash offer				– *		
Conglomerate created by takeover		+				+ * ⁱ
Bidder is foreign		+				
Effect on directors' wealth		– *				
Golden parachutes			+			
Target size	+		+ * ^c		+	+
Number of analysts monitoring target				+ *		
Prior ownership – bidder		– *	– * ^d	± ^e	– *	– * ^h
Competing bids				^f		
Institutional block ownership			+			+
Affiliated block ownership	–				±	
Unaffiliated block ownership	+				–	
Outside directors' ownership					–	
Inside directors' ownership					– *	
Ownership of managers and directors	– * ^j		– *			
Outside dominated board					+ * ^g	
Inside dominated board						– *
Additional outside directorship					–	– *
Exposure to lawsuits					– *	
Voting method	+					
Family dominance of board						– *
Target's rate of return						+ *
Leverage	+					
Proportion of lawyers on board						+ *

^a The table shows the observed signs of the determinants of the probability that the targets' managers will oppose a takeover bid. A (+) sign suggests that the probability of resistance increases with the variable, a (–) sign, the opposite and a (±) an unstable estimate. An asterisk (*) points to a statistically significant result

^b MP: Mikkelsen and Parth (1989); WL: Walkling and Long (1984); CZ: Cotter and Zenner (1994); JM: Jennings and Mazzeo (1993); CSZ: Cotter et al. (1994); DK: D'Aveni and Kesner (1993).

^c Not significant when inside ownership is taken into account.

^d Significant when inside ownership is taken into account.

^e Bidders with majority interest in the target are excluded. Prior ownership by bidder is represented by two variables: a binary variable taking a value of 1 if the bidder had a prior ownership position in the target and the fraction of the target owned by the bidder before the offer. The binary variable has a positive and the continuous one a negative sign.

^f Taken into account through its effect on the premium, estimated through a simultaneous equations system.

^g Outside directors constitute more than 60% of the board.

^h Bidders with prior majority ownership are excluded.

ⁱ Variable defined as target and bidder being in the same industry.

^j Takes into account vote rather than equity ownership.

With respect to the probability of resistance by the board, we expect all the regression coefficients to be affected by negative signs (indicating a decrease in the probability), except for competing bids and inside blocks, which should be positive, and bidder's efficiency which is indeterminate.

2.3. Empirical studies

In Table 1 we summarize the empirical studies, conducted in the United States, of the reaction of the board to a takeover bid. Surprisingly, only two studies have found the premium to be a significant variable, with the appropriate negative sign. Only one of them, by Jennings and Mazzeo (1993), takes competing bids into account. Finally, the distribution of ownership and the composition of the board have been examined in the most recent studies.

We predict that the premium and prior ownership by the bidder variables will be negatively related to the probability of resistance. Such results have already been observed in the United States. On the other hand, we expect directors' ownership to be positively and the proportion of outsiders on the board to be negatively related to that probability. Table 1 shows that opposite results have already been reported in the USA.

3. The data

The Bulletin de statistiques of the Commission des valeurs mobilières du Québec (hereafter QSC) and its files²⁴ were searched, to yield a list of 587 takeover bids and exchange offers for the period 1978–91. We dropped targets (396) with a market value smaller than one million Canadian dollars or classified as foreign, for which complete information was not available,²⁵ exchange offers (42) and bids by foreign and unlisted bidders (37). There remained 88 targets involved in 112 cash and taxable offers.²⁶ Then, the proxy circular for the annual meeting preceding the date of the offer was examined to ascertain whether each director is an employee or former employee of the company or its affiliates, the number of voting rights he and his family own or control, the board committees of which he is a member and his tenure. The *Directory of Directors* (Financial Post, b) and *Who's Who* (Kofmel, ed.) provided information on his other directorships. *Inter-corporate Ownership* (Statistics Canada) was used to determine whether the other corporations involved were part of the same group.

²⁴ Containing reports filed under QSC regulation [V-1.1, r.1] reproduced in St Pierre (1990).

²⁵ De facto, all firms 'going private' are thereby removed from the sample.

²⁶ We avoid the problem of dealing simultaneously with taxable and nontaxable transactions (for differences see Thornton (1993)) or interpreting the signal in the means of payment (Brown and Ryngaert, 1991).

4. Specification analysis

In this section, we present descriptive statistics of our observations, and define the proxies to be used in the multivariate analysis.

We note first, in Table 2, that 35 out of 112 offers (31.2%) are rejected. Of the remaining 77, 47 entail the acquisition of more than 50% of the outstanding voting rights.

In Table 3, target firms are classified as being involved in a contested or uncontested offer. The former occur when the board decides to resist, i.e. not to tender the shares under the directors' control. Alternatively, we assume that if the directors decide to turn in their own shares they are implicitly recommending to the other shareholders to do the same.

Had we decided to use as our criterion the directors' collective recommendation as reported to the QSC, the classification of the transactions would have been identical whenever they made a formal recommendation. Our procedure allows us to conserve observations where no explicit recommendation was offered. (The managers sometimes avoid making a formal recommendation, claiming conflict of interests).

Targets involved in contested and uncontested offers do not appear to differ significantly in terms of their financial characteristics: absolute size, working capital, debt and dividend policy. None of the differences between the standard

Table 2
Frequency distributions of voting rights acquired in takeover bids and owned after takeover (1978–1991)

% of voting rights of target	Acquired in takeover bid (N = 112)			Owned after takeover bid (N = 112)		
	No.	%	% cumul.	No.	%	% cumul.
0	35 *	31.25	31.25	15 * *	13.39	13.39
0 to 10 incl.	2	1.79	33.04	8	7.14	20.53
10 to 20	6	5.36	38.39	5	4.46	25.00
20 to 30	11	9.82	48.21	3	2.68	27.68
30 to 40	7	6.25	54.46	7	6.25	33.93
40 to 50	4	3.57	58.04	3	2.68	36.60
50 to 60	4	3.57	61.61	6	5.36	41.96
60 to 70	5	4.46	66.07	7	6.25	48.21
70 to 80	2	1.79	67.86	0	0.00	48.21
80 to 90	7	6.25	74.11	3	2.68	50.89
90 to 100	29	25.89	100.00	55	49.11	100.00
	112	100.00		112	100.00	
Mean (%)		44.20			62.10	
Standard deviation		40.30			40.09	

* Rejected offers.

* * Rejected offers for bidders not owning shares of target before takeover bid.

Table 3
Size, some financial ratios and distribution of voting rights of target companies, by reaction of the board of directors

	Contested offers (N = 30)			Uncontested offers (N = 58)			Wilcoxon test		Median test	
	Mean	Median		Mean	Median	Z	Prob.	Z	Prob.	
Size (in billion \$ ₉₂)										
Total assets ^a	2.045	0.260		0.8080	0.249	0.114	0.909	0.000	0.999	
Sales ^a	0.774	0.222		0.530	0.202	0.238	0.812	0.000	0.999	
Financial ratios										
Working capital ^a	9.035	1.707		2.481	1.617	0.502	0.616	0.000	0.999	
Debt to assets ^a	0.553	0.598		0.566	0.572	0.026	0.979	0.894	0.371	
Dividend to book value of common equity ^{a,b}	0.282	0.240		0.128	0.004	2.307	0.021	1.342	0.180	
Market to book value of equity ^c	1.416	1.269		1.677	1.486	0.960	0.337	0.894	0.371	
Tobin's Q proxy ^{c,d}	1.092	1.085		1.206	1.076	0.731	0.465	0.447	0.655	
Excess relative return on assets ^{c,e}	1.595	0.010		1.410	0.171	0.704	0.481	1.342	0.180	
Directors' remuneration										
Value of securities (in million \$ ₉₂) [VS] ^{a,f}	40.362	2.485		59.259	3.212	0.348	0.728	0.000	0.999	
Fixed remuneration (in million \$ ₉₂) [FR] ^{a,g}	2.005	1.663		1.806	1.363	0.161	0.872	0.526	0.599	
Remuneration ratio [VS/FR]	11.419	1.919		27.890	2.518	0.436	0.663	0.447	0.655	

^a As reported in the last annual report or proxy statement before the tender offer or Financial Post, a.

^b The ratio of dividends to the cumulative value of earnings (i.e. the book value of equity up to capital stock, a constant) carries less noise than the ratio of dividends to current earnings (i.e. the payout ratio).

^c Mean value for the two years preceding the tender offer.

^d Tobin's Q proxy: ratio of book value of total assets plus difference between book and market values of common equity to book value of tangible assets.

^e Excess relative return on assets: ratio of return on assets of the firm minus the return on assets of its industry to the absolute return on assets of its industry. The absolute value of the industry return is used as the denominator in order to have the negative sign as an indicator of firm performance inferior to the industry's even when the latter is negative. Industry is defined to include all firms with the same SIC classification as reported in Standard and Poor's Compustat Services (1989).

^f Market value of the shares and of options that may be exercised owned by the managers and their relatives.

^g Salary + bonus + directors' fees + deferred compensation such as fringe benefits and the firm's contributions to management saving plans + other compensation such as financial benefits from interest-free loans to managers.

measures of performance (ratio of market to book value of equity, Tobin's Q or the rate of return on assets in excess of the industry's) is statistically significant.

The last panel of Table 3 provides aggregate data on the managers' remuneration. Variable remuneration is made up of shares and options and is therefore tied to the value of common shares, ignoring differences in voting rights. It is opposed to fixed remuneration, made of salaries, fees and cash bonus, as well as deferred compensation and interest-free loans. We note that this relative measure of remuneration is, under certain conditions, expected to be correlated with the RATIO variable used by Cotter and Zenner (1994). The numerator of RATIO is equal to that of our remuneration ratio when golden parachutes do not exist, which is true of our data up to 1986 (afterwards, there were a few of them²⁷). The denominator should be correlated with current salary. Therefore, our remuneration ratio may be seen as a proxy for the change in the managers' wealth due to the takeover, as proposed by Cotter and Zenner (1994).

In Table 3, as expected, the remuneration ratio is higher for uncontested than for contested offers. However, the difference between the distributions, skewed to the right, is not significant.

4.1. Transaction-specific variables

In Table 4, we present a univariate analysis of the proxies for the first factor, transaction-specific variables.

Competing bids are represented by a dummy variable set equal to 1 if another offer has been extended subsequently, 0 otherwise. We assume that the directors know, on the day they make their recommendation known to the shareholders and the QSC, if a competing bid is forthcoming or not. Table 4 suggests that the probability of resistance increases with the prospect of competing bids. The proxy for preliminary negotiations is also a dummy variable. We set the variable equal to 1 whenever it was reported to the QSC that negotiations about the managers' future working conditions had already taken place between the bidder and a representative of the target.²⁸ Uncontested offers are more frequently preceded by preliminary negotiations than the contested ones. Approaching the managers before making an offer to the shareholders seems to entail a reduced probability of resistance by the board.

Diversification transactions are represented by a dummy variable set equal to 0 if the target and the bidder are members of the same SIC industry, (as found in Statistics Canada), or equal to 1 otherwise. By exception, bids by management

²⁷ Golden parachutes are less necessary when managerial ownership is high. Therefore, we expect their number to be smaller in Canada than in the United States.

²⁸ Such information is provided in answer to a specific question by the QSC under Regulation [V1.1., r.1].

Table 4
Some transaction specific variables of tender offers, by reaction of the board of directors

Proportion with:	Contested (N = 41)		Uncontested (N = 71)		Chi-square test	
	Mean	Median	Mean	Median	χ^2	Prob.
Competing bids ^a	46.34		8.45		21.521	0.000
Preliminary negotiations with directors ^b	2.44		19.72		6.690	0.010
Diversification offers ^c	43.90		47.89		0.166	0.684
Successful offers ^d	34.15		88.73		36.047	0.000
	Contested (N = 41)		Uncontested (N = 71)		Wilcoxon test	
	Mean	Median	Mean	Median	Z	Prob.
Total assets of bidder (in billion \$ ₉₂) ^e	3.971	0.725	7.243	1.733	2.748	0.006
Ratio of total assets of bidder/total assets of target ^e	8.498	1.725	17.038	6.343	3.612	0.000
Bid Premium (%) ^f	29.92	28.29	37.31	36.81	1.081	0.280
						1.367
						0.172

^a Competing bids: Dummy variables: 0 if no competing offers are forthcoming, 1, otherwise; competing bids may be modified bids by the same bidder.

^b Preliminary negotiations with directors: Dummy variables: 1 if negotiations with target's managers about their future working conditions took place before announcement date, 0, otherwise.

^c Diversification offers: Dummy variables: 0 if target and bidder have same Standard Industrial Classification code (SIC, 3 digits, as reported by Statistics Canada) or have related activities, 1, otherwise.

^d Successful offers: Dummy variables: 1 if bidder acquires the deposited shares, 0, otherwise.

^e At the end of the financial year preceding the tender offer.

^f The premium is estimated as the relative difference between the market price of the shares 15 days before the announcement date and the offered price, minus the relative change in the market index during those 15 days.

Table 5
Distribution of voting rights of target, before takeover bid, by reaction of the board of directors

Percentage of voting rights held by:	Contested ($N = 30$)		Uncontested ($N = 58$)		Wilcoxon test		Median test	
	Mean	Median	Mean	Median	Z	Prob.	Z	Prob.
Bidder – all offers	10.10	0.00	25.56	5.50	1.843	0.065	1.342	0.180
Bidder – cleanup offers excluded ^a	6.39	0.00	8.89	0.00	0.141	0.888	0.197	0.844
Largest shareholder	16.35	5.57	16.46	0.00	0.581	0.562	1.217	0.224
Second largest shareholder	1.52	0.00	3.04	0.00	0.588	0.557	0.472	0.637
Third largest shareholder	0.51	0.00	0.39	0.00	0.646	0.518	0.683	0.495
Directors and top executives	20.23	3.39	17.75	1.47	1.254	0.210	0.894	0.371

^a Cleanup offers are defined as involving targets where the bidder already owns 50% or more of the voting rights. With cleanup offers excluded, the sample decreases from 30 to 28 observations for the contested offers, and from 58 to 42 for the uncontested offers.

Table 6
 Characteristics of the board of directors of targets according to their reaction to the offer

	Contested offers (<i>N</i> = 30)			Uncontested offers (<i>N</i> = 58)			Wilcoxon test		Median test	
	Mean	Median		Mean	Median		Z	Prob.	Z	Prob.
Composition of the board:										
Number of directors	9.93	9.00		9.55	9.00		0.244	0.808	0.142	0.887
% of inside directors ^a	31.30	28.57		37.22	33.33		1.106	0.269	1.189	0.234
% of affiliated outside directors ^b	15.90	15.48		10.61	9.55		2.428	0.015	2.858	0.004
% insiders	47.20	47.22		47.84	47.73		0.040	0.968	0.000	0.999
% of 'group' outside directors ^c	18.83	16.23		19.27	10.56		0.237	0.813	0.753	0.452
% of independent directors ^d	33.97	31.67		32.89	30.00		0.313	0.754	0.152	0.879
% outsiders	52.80	52.78		52.16	52.27		0.040	0.968	0.000	0.999
Number of outside directors who are CEO or Chairman of other corporations	3.53	3.00		3.43	3.00		0.267	0.790	0.628	0.530
Total number of directorships in other corporations ^e:										
Inside directors	8.60	5.50		8.29	5.50		0.371	0.711	0.000	0.999
Affiliated outside directors	5.50	2.50		3.74	0.00		1.116	0.265	0.894	0.371
Total insiders	14.10	7.50		12.03	8.50		0.489	0.625	0.295	0.768
'Group' outside directors	13.57	4.00		13.07	3.00		0.073	0.942	0.447	0.655
Independent directors	14.07	8.00		12.66	9.50		0.097	0.923	0.295	0.768
Total outsiders	27.63	22.00		25.72	21.00		0.057	0.954	0.142	0.887
Percentage of voting rights held by directors:										
Inside directors	11.41	0.56		12.72	0.72		0.639	0.523	0.000	0.999
Affiliated outside directors	1.13	0.02		0.11	0.00		1.450	0.147	1.789	0.074
Total insiders	12.54	0.62		12.83	0.72		0.687	0.492	0.000	0.999
'Group' outside directors	2.81	0.00		3.00	0.00		1.052	0.293	1.138	0.255
Independent directors	2.31	0.14		1.50	0.09		0.258	0.796	0.458	0.647
Total outsiders	5.13	0.33		4.50	0.14		0.796	0.426	0.894	0.371

holding companies and resource companies integrating vertically are attributed a code of 1. Diversification does not appear to be a good proxy for the risk run by the managers: contested and uncontested offers do not appear to differ in that respect.

The last line of the first panel of Table 4 does suggest that, in Canada as well as in the United States, the directors' recommendation carries weight with the shareholders: offers uncontested by the directors are more often successful with the shareholders. But note that we define as 'successful' a transaction through which the bidder acquires the tendered shares, whatever their number,²⁹ which may be less than desired. We observe that uncontested offers appear to be more often extended by bidders whose size, as measured by total assets, is large relative to that of the target.

Finally we computed the premium implicit in each one of the offers. The QSC requires all boards to report on the dates of the following events: (1) filing of report to the QSC, (2) announcing the bid to the press, (3) initiating negotiations between the bidder and the target's managers, (4) hiring an expert by the target to value itself. The earliest of those dates is deemed the announcement date. The premium is estimated as the relative difference between the market price of the shares 15 days earlier and the offered price, minus the relative change in the market index during those 15 days. We observe that the median and mean premiums for uncontested bids are larger than those for the contested offers, as expected, but the differences are not significant.

4.2. *Distribution of voting rights and board composition*

In Table 5, we focus on the shareownership of targets. Our statistics take into account shares with superior voting rights and weigh them accordingly.

First, we observe that bidders, on the average, own a non-negligible proportion of the target's voting rights before extending their offers. When that proportion

²⁹ Alternative definitions of success have been proposed (see Song and Walkling, 1993 and Walkling, 1985). We use the same criterion as Bradley et al. (1988) and Stulz et al. (1990). The specific result reported here does not appear to be sensitive to the definition used.

Notes to Table 6:

^a Inside directors: directors who are employees of the target corporation or one of its affiliates, as well as former employees.

^b Affiliated outside directors: outside directors who have business or family ties to the target (family members, lawyers, auditors, advisers and consultants).

^c 'Group' outside directors: directors who are also directors of affiliated corporations as indicated in Statistics Canada.

^d Independent directors: all other directors.

^e Total number of directorships: directorships in listed companies, privately-held and non-profit organizations that are affiliated or not with the target corporation.

Table 7
Logit regression of board's decision to accept or resist takeover bid (*P*-values are in parentheses) ^a

	Model 1 (<i>N</i> = 112)	Model 2 (<i>N</i> = 112)	Model 3 (<i>N</i> = 112)	Model 4 (<i>N</i> = 112)	Model 5 (<i>N</i> = 112)	Model 6 ^b (<i>N</i> = 93)
Intercept	-0.047 (0.969)	-0.001 (0.999)	1.002 (0.460)	0.282 (0.817)	0.454 (0.712)	0.794 (0.528)
Market/Book value of equity	-0.591 (0.129)	-0.834 (0.046)	-0.661 (0.098)	-0.661 (0.083)	-0.658 (0.088)	-0.720 (0.077)
Bid premium	-2.315 (0.059)	-2.082 (0.083)	-3.027 (0.027)	-2.722 (0.033)	-3.184 (0.019)	-3.138 (0.027)
Bid premium $\times$ Competing bids ^c	6.842 (0.046), 0.044	6.955 (0.044)	7.736 (0.029)	6.814 (0.061)	7.178 (0.055)	5.947 (0.095)
Ratio of variable to fixed managerial remuneration	-0.009 (0.254)	-0.011 (0.182)	-0.012 (0.186)	-0.012 (0.154)	-0.016 (0.104)	-0.015 (0.112)
Excess return on the assets of the bidder	-0.090 (0.456)	-0.035 (0.763)	-0.067 (0.573)	-0.105 (0.377)	-0.113 (0.345)	-0.074 (0.545)
Competing bids	-0.053 (0.926)	-0.087 (0.877)	-0.146 (0.800)	0.049 (0.934)	0.045 (0.940)	0.097 (0.867)
Preliminary negotiations on managerial working conditions	-1.418 (0.017)	-1.628 (0.011)	-1.506 (0.013)	-1.503 (0.011)	-1.533 (0.010)	-1.471 (0.012)
Diversification transaction	-0.092 (0.728)	-0.091 (0.733)	-0.166 (0.542)	-0.081 (0.761)	-0.089 (0.742)	-0.201 (0.479)
% voting rights held by the bidder before the offer						-1.462 (0.458)
% voting rights by the bidder (non cleanup offers < 50%) ^d	-1.085 (0.544)	-2.422 (0.186)	-1.798 (0.303)	-1.253 (0.467)	-1.247 (0.476)	
% voting rights by the bidder > 50% ^e	-6.554 (0.331)	-7.034 (0.284)	-5.040 (0.451)	-5.740 (0.398)	-5.362 (0.439)	
% of outsiders on board	-0.196	-0.077	-0.630	0.227	0.223	-0.058

Control ^f	(0.881)	(0.953)	(0.637)	(0.868)	(0.871)	(0.967)
Block _{20%} ^g	0.134 (0.679)					
BlockOut _{5%} held by outsiders ^h		–0.510 (0.110)				
BlockIn _{5%} held by insiders ⁱ			0.740 (0.093)			
BlockDir _{5%} held by all directors ^j				0.557 (0.099)		
Likelihood ratio statistic ^k	54.900	57.391	57.582	57.554	58.941	40.210
Likelihood ratio index ^l	0.354	0.370	0.371	0.371	0.380	0.312

^a The dependent variable is set equal to 0 if the directors have decided to turn in the shares they own (uncontested offers), 1 otherwise (contested offers).
^b Cleanup offers have been deleted.

^c For each observation, this variable is equal to the premium multiplied by the dummy variable indicating a forthcoming competing bid.

^d Piecewise linear variable = % of voting rights held by the bidder before the offer if smaller than 50%; = 50% otherwise.

^e Second segment of bidder's % of voting rights held before the offer = [% of voting rights – 50%], if greater than 50%; = 0 otherwise.

^f Control = 1 if Block_{20%} = 1 or BlockOut_{5%} = 1 or BlockIn_{5%} = 1; otherwise, Control = 0.

^g Block_{20%} = 1 if a shareholder other than directors or the bidder held more than 20% of the voting rights; otherwise, Block_{20%} = 0.

^h BlockOut_{5%} = 1 if outsiders held more than 5% of the voting rights; otherwise, BlockOut_{5%} = 0.

ⁱ BlockIn_{5%} = 1 if insiders held more than 5% of the voting rights; otherwise, BlockIn_{5%} = 0.

^j BlockDir_{5%} = 1 if all directors held more than 5% of the voting rights; otherwise, BlockDir_{5%} = 0.

^k Likelihood ratio statistic = 2 x (Log-likelihood ratio at zero – Log-likelihood ratio at convergence).

^l Likelihood ratio index = 1 – (Log-likelihood ratio at convergence / Log-likelihood ratio at zero).

exceeds 50%, the offer is deemed a cleanup offer and segregated. Although bidders are already large shareholders when making their offer, they are by no means the only ones. The mean holdings of the managers (directors and top officers) are close to 18% for uncontested offers and above 20% for the contested ones. The distributions are skewed to the right and the differences are not statistically significant. Note that five targets, having received six offers, have outstanding shares with superior voting rights. Had we computed the proportion of equity claims rather than voting rights owned by the directors, the means and medians would have been somewhat smaller. Because of that difference our data can be easily compared only to those based on vote rather than equity ownership. Song and Walkling (1993) and Mikkelsen and Partch (1989) meet that condition. Yet, their results are opposite to ours.³⁰

Table 6 provides a description of the composition of targets' boards. Our sample does not appear to be atypical, at least in terms of the number of directors or as compared to other Canadian or American data during the 1978–91 period.³¹

As expected, the inside and outside affiliated directors, the insiders, are associated with uncontested offers, but the differences are not significant. It has also been asserted that targets with "prestigious top management should be associated with resistance to a takeover bid".³² The competing hypothesis is that connections are so vital to a company that bidders treat prestigious directors as an asset of the target company, leading to friendly takeover talks. Assuming the number of directorships in other corporations is a good indicator of prestige, our results are consistent with neither hypothesis. The numbers of additional directorships held by the board members involved in contested and uncontested offers are not significantly different.

We conclude our univariate analysis by noting that our sample of contested and uncontested offers appears to be similar to Walkling and Long (1984)'s, despite the differences between the Canadian and American environments.³³ The remuneration ratios for both types of offers (Table 3) are almost equal to theirs. As in their sample, neither the financial characteristics (Table 3) nor the premiums

³⁰ However, as Song and Walkling (1993) found managerial ownership to be smaller for targets than for nontargets, we also compared our sample of targets to a control group of nontargets and found that the percentage of voting rights held by directors was the only significant difference between the two groups. The inside directors own more voting rights in nontargets, while the independent directors own a higher proportion in targets. The boards as a whole own more voting rights in nontargets. So, in terms of the probability of being a target and with respect to managerial voting rights, our results are similar to Song and Walkling's, but in terms of the probability of resistance they are not.

³¹ See, for instance, Benimadhu (1985). The proportions of insiders on the boards are identical (47%) and the mean numbers of directors are 9.3 in our sample and 10.3 in Benimadhu's. Rao and Lee-Sing (1995) report that their estimates of that number are 9.25 and 9.87 in Canada and the United States, respectively.

³² D'Aveni and Kesner (1993).

³³ We refer to their Tables 1, 3 and 4.

Table 8
Distribution of premiums and of contested and uncontested offers, according to the sequence of offers (number of observations)

	First offer		Subsequent offers	
	Contested ^a	Uncontested	Contested	Uncontested
Success ^b	27.72% (13)	37.59% (52)	43.79% (1)	42.96% (11)
Failure	31.44% (17)	22.82% (6)	28.82% (10)	42.28% (2)
Mean	29.83% (30)	36.07% (58)	30.18% (11)	42.85% (13)
Median	26.88% (30)	33.83% (58)	37.67% (11)	51.14% (13)

^a Contested = 1 if the board decides not to tender the shares under the directors' control; otherwise, the offer is uncontested.

^b Success = 1 if the bidder acquires the deposited shares; otherwise the offer is a failure.

(Table 4) are significantly different. Prior ownership by the bidders (Table 5) and success ratios for contested and uncontested offers (Table 8) are similar. These observations are consistent with the hypothesis that takeover bids are extended to similar companies in Canada and the United States. But this does not necessarily imply that resistance, given an offer, is explained by the same variables.

5. Multivariate analysis

A multivariate test of Eq. (3) using the logit model is conducted.

In Table 7, the dependent is a dummy variable set equal to 1 if the board has decided not to accept the offer for the shares the directors own (i.e. contested offers) and equal to 0 otherwise (i.e. uncontested offers). We concentrate on models 5 and 6, which are completely specified, while models 1 to 4 are used to assess the marginal effect of adding or modifying the ownership variables. The results are compared with those of Table 1, which pertain to the United States.

The proxies for most of the transaction-specific variables appear to be significant with the expected signs.

The ratio of market to book value of the target's equity has a negative and statistically significant coefficient. It appears to be a proxy for the risk the bid entails for the managers: those who had good performance in the recent past are less likely to suggest resistance to the shareholders. This is consistent with the previous observation that the targets of hostile takeovers tend to have lower values for Tobin's Q than the targets involved in friendly transactions (Morck et al., 1988a, 1989).

The level of the premium and the probability of resistance are negatively

related. This result is consistent with the hypothesis that managers resist in order to have the premium increased. But, in turn, this suggests that resistance should decrease with successive offers, as the premium increases. Reading Table 8 in conjunction with Table 7, we note our data do not lend support to that proposition: opposition increases from 34,1% to 45,8% of the observations as we proceed from first to subsequent offers. We conclude that having the premium increased by the bidder is not likely to be the sole reason for opposing the initial bid.

The dummy variable competing bids is not significant *per se*. However, as our discussion suggests that the premium and the probability of competing bids are related, we introduced an interaction term, equal, for each observation, to the premium multiplied by the dummy variable for forthcoming competing bids. It is positive and significant, which implies that those two independent variables have opposite effects on the probability of resistance and that the impact of competing bids is felt through the premium. Our sample behaves as if the bidder had a reliable estimate of the subjective probability of a forthcoming bid. When the interaction term is withdrawn, the level of significance of the regression coefficient affecting the premium becomes unstable. The absence of this interaction term may explain why the ‘appropriate’ negative sign has not been found in all the studies.

The excess return on the bidder’s assets is not significant and therefore not a reliable indicator of the expected rate of return on the remaining outstanding shares of the target. This suggests that the possibility of transacting renders the variable irrelevant.

Conditional on a bid having already been made, preliminary negotiations tend to reduce the probability of resistance in a significant manner. That variable could be just another name for the hostile-friendly dichotomy. There are several reasons for selecting a different interpretation. First, the negotiations we are taking into account and which are required by the QSC to be reported are related to the top officers’ working conditions and not to the terms to be offered to the shareholders. Therefore, our definition of prior negotiations is not necessarily identical to the one used in other papers. Frequently, offers addressed directly to the shareholders without prior consultation with the board are used *ex post* to classify a bid as hostile. In our data, discussions with the top managers are known to the board *ex ante*. Empirically, if prior negotiations were a proxy for a friendly takeover, we would still expect the negative sign we observe, but the likelihood ratio index (pseudo- R^2) should be close to unity, as we would have the same variable on both sides of the regression equation. In fact, that index has a value smaller than 40%. When we drop preliminary negotiations as an explanatory variable, the intercept increases and becomes significant, the likelihood ratio statistic decreases, but the coefficients of the other variables are not greatly affected. We interpret this result as consistent with the hypothesis that the board has some leeway to reduce its own risk, and not consistent with the hypothesis that the preliminary negotiations variable is acting as a proxy for the hostile-friendly dichotomy.

The variable percentage of target's voting rights held by the bidder before the offer includes cleanup offers. We isolated the latter through a piecewise linear formulation. The first segment includes the bidder's percentage of ownership up to 50% and the cleanup offers are located on the second segment (models 1 to 5). Alternatively, we simply drop the 19 cleanup offers (model 6). Both techniques lead to the same result: the voting rights already owned by the bidder do not have a significant impact on the board's decision. This is unexpected, to the extent that it differs from behavior observed in the United States (see Table 1), where the negative signs for that variable have generally been found to be significant. In this sample, the bidder is facing other investors whose blocks may be comparable to his and who may find it worthwhile resisting through their representatives on the board at least until a higher premium is offered.

The distribution of voting rights is taken into account by enumerating the blocks held by the insiders and the outsiders on the board, at the 5% level, and the other large shareholders, besides the bidder, at the 20% level.

As in the studies listed in Table 1, the distribution of voting rights appears to be a significant factor. Yet, the results are different.

When all the blockholdings are lumped together, (as in model 1) the regression coefficient is not significant. When they are split up into holdings by nonmembers of the board (as in model 2) and members, lumping insiders and outsiders (as in models 5 and 6), one observes that they are of opposite signs. Surprisingly, given the literature, the proportion of voting rights held by all the members is associated with an increased probability of resistance. This result is consistent with three hypotheses. First, as the directors generally own shares with superior voting rights, their opportunity cost of the bid is higher than that of some remaining shareholders. They are offered to exchange control for a premium which they would receive in proportion to their (smaller) equity rather than their vote ownership. However, that hypothesis is not tenable. Our results are comparable to those of two studies³⁴ also taking into account voting rather than equity rights. Yet, they find a negative sign. Furthermore, we dropped the six observations involving firms with subordinate voting shares and estimated model 5 anew. The tenor of our results remained unchanged. Second, the relationship between firm value and managerial ownership has been shown to be non monotonic (see note 18), which suggests that managers owning a relatively important proportion of equity can expropriate the outside shareholders and are therefore more likely to resist a takeover bid. As shown in Tables 5 and 6, ownership of the Canadian directors represented in our sample may be large enough for most of them to be located in the range where resistance becomes profitable. In addition, we experimented with various nonlinear and piecewise linear transformations of the variables, but none appears to fit the

³⁴ Mikkelsen and Partch (1989) and Song and Walkling (1993).

data better than the simple form we are proposing. Third, when there exist large outside blocks, the bidder who actually extends a bid is likely to have consulted with their owners and ascertained that they would not reject the offer outright. Their acceptance may signal that at least some large shareholders are not satisfied with the board's current performance, increase the likelihood that the takeover is hostile and attract managers' resistance. This scenario is consistent with the proposition that, under concentrated ownership, the board's role is altered: it becomes concerned with decision implementation and control rather than with monitoring. The second and third hypotheses are both plausible, but not mutually exclusive.

None of the results for the proxies for board composition is significant. Thus, our results suggest that they are not good proxies for the distribution of voting rights, at least in the context of a takeover bid. This finding is consistent with the hypothesis that, given the distribution of voting rights, board composition is a redundant variable.

6. Summary and conclusions

In this study we have tested the hypothesis that the probability of resistance to a takeover by the target's board of directors can be explained by two factors, transaction-specific variables and the distribution of voting rights.

Several of the transaction-specific variables are statistically significant. Our data suggest that financial performance of the target, the premium and preliminary negotiations about the managers' working conditions are negatively related to the probability of resistance. Given the specific information we have used, we interpret the negative effect of prior negotiations as unambiguous evidence of risk-reducing behavior on the part of the board. The ratio of market to book value of the target's equity, a measure of its managers' performance also implies a smaller risk for the directors and top executives, but this is not necessarily at the shareholders' expense. The probability of competing bids also increases resistance by the managers. However, as its effect is felt through the premium, it cannot be interpreted as evidence of managerial entrenchment, but rather suggests bidders' foresight.

The distribution of voting rights is also significant: large blocks held by the directors are related to an increase in the probability of resistance and, therefore, may signal managerial entrenchment. The opposite behavior has been observed in studies conducted in the United States. This suggests that our results may be peculiar to economies where the distribution of voting rights is highly concentrated.

Board composition is not correlated with the probability of resistance. Again, this is at variance with the results of some previous studies.

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