FAMILY CONTROL AND GROUPING : POSSIBLE EXPROPRIATION VIA DIVIDENDS

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Abstract

Despite the prevalence and economic importance of the family-owned firms and group-affiliated firms in north America, Western Europe and East-Asia, little attention, if any, has been given to these types of organizations in finance. Using parametric and non parametric tests on a sample of Canadian listed firms, this paper provided empirical evidence of sharp contrast in financial features and policies between family grouping and their individually counterparts. Firms surveyed exhibit evidence that family-owned firms and group-affiliated firms are prone to engage in expropriation of minority shareholders in a very sophisticated and implicit ways.

Keywords: Family-owned firms, Group-affiliated firms, Expropriation, Dividends.

Résumé

Malgré l'importance économique et la prolifération de la propriété familiale et du groupement d'entreprises (conglomérats) en Amérique du nord, en Europe de l'ouest et en Asie de l'est, la recherche en finance a accordé une place limitée à ce domaine. En ayant recours à des tests paramétriques et non paramétriques appliqués sur un échantillon d'entreprises Canadiennes, cette étude montre que ces deux types d'organisation ont des caractéristiques et des politiques financières différentes des entreprises non familiales. Les résultats montrent également une tendance quasi évidente de l'expropriation des actionnaires minoritaires dans ces types d'organisation.

Mots Clés : Famille, Groupe, Expropriation, Dividendes.

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1. INTRODUCTION

A series of studies have supported the contention that the family business is the predominant form of business organization in western word today. Ward and Aronoff (1990) explains that the first generation of family businesses is the result of the rapid economic growth and development in the post word war II era. Daily and Dollinger (1992) argue that the late reprivatization is partially responsible of the prevalence of this form of organization. Yeh and *al* (1998) show that 76% of listed companies in Taiwan are under family control. Claessen and *al* (1999) surveyed 2980 publicly traded corporations in 9 east-Asian countries and found that, except in Japan, the majority of these corporations were controlled by families (the concentration ratio is 67.2% in Malaysia and 71.5% in Hong Kong). According to Dyer (1986), 175 firms of the fortune 500 firms are controlled by families in US. If we consider all the range of family businesses from the smallest local stores to the largest multinational corporations, 90% of all businesses in US including corporations, partnerships and sole proprietorships, are family controlled. They produce half of GNP and employ half of the US' s work force (Becker and Tillman (1978), Dyer (1986)). In Canada, Gadhoum and Lang (2000) found that family control occupy the pinnacle of corporate landscape. It is quite common for Canadian listed firms to be owned, controlled, managed and financed within family' s domain. It was documented in this study that 56.16% of 1121 Canadian listed firms are controlled by families.

Despite the prevalence and economic importance, beyond expectation, of the family-owned firms (e.g. Ayala family in Philippines, Li Ka-shing family in Hong Kong, Kyuk Ho Shin Family in Korea, Agnelli family in Italy, Wang family in Taiwan, Molson family in Canada, etc.), researchers, mainly in the field of finance, have largely neglected the study of family owned businesses. The only exception is performance investigation for this type of organization. Some studies already found that owner-operated firms outperform their professionally managed

counterparts (Radice (1971), Williamson (1981), Demsetz (1983), Daily and Thompson (1994), Yeh and Shu (2000)). However, we are seldom provided with a thoughtful analysis and predictions of financial policies for the family-owned firms, that what motivates this study.

Social scientists hypothesized three reasons for the lack of scientific investigation of families (Daily and Dollinger 1992). First, researchers have for the most part willingly accepted the idea initially presented by Berle and Means (1932) that the control of businesses eventually rests in the hand of professionally managers, not families. Second, it is difficult to study both family and business systems simultaneously because each belong to a different scientific research. Third, there is a widespread belief that work and family exist as distinct, self-contained systems. The most important of these three reasons for failure to study the field of family business, and its related groups, is the assumptions provided by Berle and Means (1932). They argued that control of large (American) firms had shifted from owners to professionals. Furthermore, this new professional class owned no important blocks of the stocks in the corporation and often are motivated by different interests than the owners of the firm, namely, the shareholders.

Besides, several studies show that the controlling families have power over firms significantly in excess of their cash-flow rights primarily through the use of pyramids, cross-holdings and interlocking directorate (La Porta and *al* : 1999, Claessen, Djankov, Lang : 1999, Gadhoum and Lang : 2000). These approaches to lever their control strongly motivate family firms to syndicate a group of listed and unlisted firms. Each firm is juridically independent from the others while all were unified by means of mutual shareholding to ensure a solid base of control. Family businesses are strongly motivated to engage in hierarchical grouping, may be in order to increase its debt capacity and also to balance other contingent losses. The pyramidal structure allows the dominating investor, usually the founder, his ascendants or his successors, who are on the head of the holding company to exert control with a limited amount of capital. Several authors such as Mok, Lam and Cheung (1992) documented that the improvement of stock return is the main motivation of group constitution. Other authors such as Faccio and Lang (2000), Gadhoum and Lang (2000) show some potential of expropriation within group. The controlling family possesses an option to hoist its wealth at the expense of other minority shareholders in this type of organization. Family grouping is a more complex configuration than an individual family business, and whatever its

virtues and vices, their proliferation affects one nation economy and society in significant ways and deserves as much attention from financial academicians and may be from capital market regulators as much as family firms.

Based upon the above arguments regarding the lack of research for family firms and group affiliated firms, this paper examined the extent to which these two types of organization differ across some selected financial features and dividend payments from their professionally managed counterparts. These choices are motivated by the need to partially characterize family-owned and family grouping organizations and to cautiously investigate any indirect expropriation potential within these types of organizations.

Agency theory can provide the explanatory framework to investigate the hypothesized relationships and may build a model for understanding the difference of functioning between family and non-family businesses (similarly between group affiliated and non-group affiliated firms). The reasoning behind this theory is that the alignment of ownership with control produces advantages for the family firms over non-family firms. In fact, costs borne by firm when control and ownership are separate are less pronounced in family firms because there is less diversity of interests between managers and owners, less opportunism and less moral hazard.

We expect different behaviours between family and non-family firms which are largely attributable to the different management styles and motivations of founders or their successors versus professional managers (Dyer : 1986). Professional managers, because of their training, are characterized by a unique set of values and beliefs and often do not behave in the same manner as the owner of a firm (Schein 1968). Professional managers adopt a utilitarian contract expecting tangible assets and monetary rewards for their efforts. Their careerist sentiment toward large size firms and short term horizon plans make them less likely to be loyal (Alcorn : 1982). However, the owner who maintains a personal stake in the success of the firm focused strategic vision, high motivation to build firm value and reduced prospects for opportunistic behaviour. Another noticeable difference between the two organizations is the extent to which decision making is centralized. Family-owned firms are generally characterized by centralized decision making process. In that, one or few individuals tied by blood or marriage dominate the decision making

process. Even if non-family members are given senior management positions, it was proven that they demonstrated the very structural family characteristics such as trust and loyalty. This pattern may be explained by the owner' s desire for overarching control (Daily and Dollinger 1992).

The owners in family business often have their personal wealth concentrated in the business. Their insistence on overarching control may be a primary contributor to an expropriation process of minority shareholders. Therefore, the most significant agency problem in these firms is the conflict of interests between non-family members and the controlling shareholders most usually family members. As argued by Shleifer and Vishny (1997) that "large owners gain nearly full control of the corporation, they prefer to generate private benefits of control that are not shared by minority shareholders". Especially, important possibilities for expropriation arise when the corporation is affiliated to a group controlled by the same shareholder (Faccio, Lang and Young : 2000).

In Canada corporate activity is undertaken by conglomerates that is formed by interrelated firms that collectively own controlling blocks of each others' stocks, and ownership is usually concentrated in hands of family such as : the Irvings, the Molsons, the Brofmans, the Sobeys, the Demarais, etc (in Appendix II, we present some cases of ownership structures for selected family grouping). However this is not an exception, large groups around the world tend to be controlled in majority by families (La Porta and *al* : 1999). In order to solidify their dominance in firms, the controlling family lever control through pyramidal and cross-shareholdings (Faccio and Lang : 2000). Consequently, important and wealthy families are usually and frequently organized in groups.

Corporate wealth can then be expropriated by the insiders who set unfair terms for intra-group sales of goods and services and transfers of assets and control stakes, by family management succession and family management appointments. The insider who controls the conglomerate might enrich himself at the expense of the atomistic shareholders in all the firms affiliated to the group. On the other hand, expropriation is enhanced in Canada by the use of dual class shares, mainly in family firms, therefore family interests may be enlarged at the expense of minority (outside family) shareholders (Gadhoum and Lang (2000)).

There are different mechanisms of expropriation. Dividend payments are one of them (Faccio and Lang : 2000). In fact, dividends play a basic role in containing insider expropriation because they remove corporate wealth from insider control. If profits are not distributed to shareholders, they may be diverted by the insiders for personal use or committed to unprofitable projects that provide private benefits for insiders. Therefore, outside shareholders have a preference for dividends over retained earnings (La Porta, Lopez-de-Silanes, Shleifer and Vishny : 1999). In fact, most small-shareholders do not buy shares with an eye to control, but rather in order to receive dividends and capital gains. They are easily manipulated by the large shareholders and top managers.

It is worth noting that different dividend theories are proposed in the literature. According to the authors, dividend policy could be either residual or without importance (neutral) at least in a perfect capital market. Others, by relaxing some hypotheses within signalling theory or agency theory, have shown that dividend payments are relevant. In that, Bhattacharya (1979), Miller and Rock (1985) as well as John and Williams (1985), by relaxing the hypothesis of symmetric information, have shown the non-neutrality of dividend policy. The latter is used to convey credible private information to the market. In fact, the dividend, as a signal, allows investors to better outline the firm's prospects and on the other hand to evaluate the firm to its proper value. Within the context of Modigliani and Miller's analysis (1961), we could say that the market's reaction to dividend announcements is not due to the dividend in itself, but rather to its informative value. Besides, because dividend payments drive immediate and future outlays, they prove the existence of sufficient firm liquidity. The increase of the dividend signals the existence not only of high current cash flows, but also the growth potential that management anticipates and which is necessary for the preservation of those payments.

Authors, such as Easterbrook (1984) and Rozeff (1982), have shown the non-neutrality of dividend policy within the framework of the agency theory. They show that dividend payments subject the managers to the control of the capital market for external financing in the case where they have falsely signalled their firm's prospects. By requiring the firm to go more often to the capital market, dividend payments could provide for monitoring. Alternatively, Jensen (1986) argues that the dividend payments can reduce the manager's propensity to waste the free cash flows either by consuming excessive professional advantages or by dissipating them in investments which exceed

the optimum. Consequently, dividend payments reduce the agency costs which explain the positive market reaction to dividend announcements.

According to our interpretation, these theories did not make predictions for the dividend policy of a family control grouping where the ownership is concentrated. These theories assume the widely dispersion of equity ownership[1]. Our principal interest in this analysis is to investigate if the traditional theoretical approaches toward understanding dividend policy remain valid if one takes into account the type of organization (family versus non-family) and the ownership structure[2]. It is important to discover for our purpose if the family dynamics and the differences in management style and motivation of owners versus non-owners cause any contrast in dividend payments between family and non-family firms and could be explained by the differences in ownership structure, other things equal. In keeping with the previous points, it may be interesting to investigate whether the family control and group affiliation affect dividend payments. Our principal concern is to investigate the expropriation opportunities via dividend policy within the family control grouping.

The remainder of this paper is organized as follows. Section 2 describes the research objectives and sustain the hypothesis. Data construction and methodology are presented in section 3. Section 4 discusses the empirical results. Final concluding remarks were given in section 5.

2. RESEARCH OBJECTIVES AND HYPOTHESIS

[1] Capital needs for large firms as well as the small ones with high growth potential force them to resort to a large number of shareholders, which can explain the widely dispersion of their ownership. Besides, in a capital market as described by the CAPM (Capital Asset Pricing Model), the shareholders hold parts of a risk free portfolio and of the market portfolio. It follows that firm ownership would be dispersed: we would not observe any large shareholders, their investments would be spread in vast mutual funds. According to the CAPM, concentration signifies an imperfect diversified portfolio and is therefore inefficient. No one would accept this, unless there was an additional compensation.

[2] Ownership structure corresponds to the distribution of equities among shareholders. In the empirical part we restricted the term to the rights to vote in order to take into account stocks with multiple voting rights which accentuate the separation between ownership and control. Concentrated ownership corresponds to a situation where the proportion of shares (votes) held by the large shareholders is high. It is the antonym of widely dispersed ownership.

2.1 Research objectives

The first objective of this paper is to have some understanding of selected financial features of family and group affiliated firms. Secondly, this paper examines whether the family control and group affiliation configuration influence the firm dividend decisions, and especially if the content of these decisions depend on the degree of the ownership concentration. Dividend literature devotes enormous efforts in examining motivations for cash distribution. No study emphasized the dividend payment that pertains to family control grouping. As Khan and Rocha (1982), we argue that not only the ownership structure but also the type of organization are critical variables affecting organizational financial policies. McEarchern (1976) already noticed that owner-operated firms outperform their professionally managed counterparts. Yeh and Shu (2000) show the ornamenting motive of family control grouping to engage in the year-end earning management. Along the same line of thoughts, we intend to investigate if family firms pay more or less dividends than their professionally counterparts.

More specifically, we have two principal objectives : (1) to characterize family and group affiliated businesses, and (2) to investigate the family ownership and group affiliation impact on dividend policy, as revealed in the level and frequency of changes in the regular cash dividend payments.

For objective (1), we characterized family and group affiliated firms by investigating these variables : the size, the ratio of research and development over sales, the number of analysts that follow a given firm, the systematic and business risk, the agency costs, the free cash-flows, the number of shareholders, a dummy variable for dual class-shares, the volume of transaction, the number of directors and managers and the industry to which the firm belongs.

For objective (2), we argue that the ownership concentration, in family business, by creating stronger links between management and shareholders, reduces conflicts of interest and asymmetry of information. Furthermore, we stipulate that if the concentration increases, the need to signal the situation of the firm by frequently varying the regular dividend is reduced. Consequently, we expect family businesses to pay less dividends. According to the expropriation hypothesis, family members benefit from on the job-consumption and prefer more free cash-flows than paying

dividends in order to accumulate wealth for their descendents. Moreover, they are inclined to postpone tax payments.

For the group affiliated firms, however, we expect more cash payments within the constituents of the group as a way of expropriation of minority shareholders. Besides, because inter-firm dividends are not taxable in Canada[3], unlike capital gains, if the large shareholder is a firm, we must rather expect that increasing concentration implies an increase in dividend payments. Through this conjecture, we seek to verify the impact of article 112 of Canadian tax law on the behaviour of Canadian firms regarding dividend payments. We argue that the firms where the large shareholders are companies and not individuals pay higher dividends than similar firms not affiliated to a group even in the absence of agency costs and asymmetry of information which is in contradiction with the predictions of financial theory. The incentive of dividend payments is explained in this case by the recovery of taxation of dividends for the receiver. Consequently, we expect group affiliated firms to pay more dividends.

2.2 Hypothesis

For years, dividends have puzzled financial economists. Dividend policy is in fact complex. The concentration of ownership, the family status of the firm or its affiliation to a group cannot be the only explanatory variables of the dividend payment. Our objective is to find out if the integration of those considerations as independent variables in our dividend model can improve its explanatory power and the significance of its parameters.

To formulate our hypothesis testing, we based our reasoning on two theories : agency theory and signalling theory. These theories stipulate that by creating stronger links between family members who are usually managers and outside shareholders, the family ownership reduces the separation between ownership and control, hence the conflict of interests and agency costs are reduced. These

[3] It is provided for in the Quebec tax law, art. 738; equivalent to Canadian tax law, art. 112(1): "A corporation can deduct from its revenue for a given tax year the amount of all taxable dividends which it receives for this year from a Canadian corporation or from a corporation which it controls, which resides in Canada and which is not an investment corporation belonging to individuals who do not reside in Canada or a corporation which is tax exempt by virtue of the present party". The citation of the law is from Royer and Drew (1994, pp. 488-9).

supposed stronger links between shareholders and managers in family firms reduce the asymmetry of information. Consequently, the need to signal the situation of the firm by frequently varying the regular dividend is reduced. So dividend payments would be less desirable in a family business. Besides, it is reasonable to expect a more stable dividend policy in family than non-family business. According to agency and signalling theories, two opposing forces the decision to pay dividends :

i) The dividend payments will be required by shareholders in a family or a non-family firms in order to reduce agency costs. Further, it may be an attempt to signal higher future prospects to minority shareholders;

ii) The shareholders and especially outsiders will limit their dividend requests because of the transaction costs of external financing which would be generated.

Any firm seeks to minimise the sum of the two costs. Furthermore, the rate at which corporations pay dividends provides a perspective on insider expropriation because dividends transfer wealth from the controlling shareholder to all shareholders on a pro-rata basis. On the other hand, dividends will be required by shareholders in order to reduce agency costs or it may be an attempt to signal higher future prospects. Consequently, our hypothesis can be explicitly formulated as follows :

$H_{0,1}$: *Family (group affiliated) firms pay less (more) cash dividends than non-family (non-group affiliated) firms.*

$H_{0,2}$: *Dividends are more stable in family (group affiliated) firms than in non-family (non-group affiliated) firms.*

However, other competitive hypothesis not based on agency and signalling theories may be considered as candidates to explain and predict the dividend decisions within family business and group affiliated firms. Merely, the hypothesis of ownership structure neutrality, the fiscal effect hypothesis, the indirect monitoring hypothesis and the hypothesis of expropriating the debt holders stipulate the opposite of the two last hypotheses.

The neutrality of the ownership structure hypothesis, stipulate that, because of conflict of interests between the large and the small shareholders in family business, the large shareholders, usually the founder or his successors, are not considered a substitute signal to dividends. The atomistic uninvolved absentee shareholder needs to be assured that large shareholder in the family firm does not privately benefit from his position.

The expropriation of debt holders hypothesis, indicates that, the conflict of interests between shareholders and debt holders are more serious in family firms, where ownership concentration is high. Hence, large shareholders may prefer more dividends in order to disrupt the priority of debt holders on firm' s income stream.

The indirect monitoring hypothesis states that large shareholders may not monitor management decisions themselves, but rather would force an increase in dividends so that family firms not managed by a member of a family would be forced to go outside to raise investment funds and thereby subject themselves to capital market monitoring. This argument is particularly plausible when considering the Bronfmans or the Molsons families in Canada who control huge holdings and cannot be on the boards of all their companies.

Finally, the fiscal effect hypothesis stipulates that, because interfirm dividends are not taxable for the receiver according to the Canadian Income Tax Act (art. 112(1)), a large shareholder, when it is a firm and not an individual, and especially if that firm is ultimately controlled by a family, would favour dividends over the capital gains.

Before discussing our results, we describe our methodology and data construction in the following section.

3. DATA CONSTRUCTION AND METHODOLOGY

3.1. DATA

There is no viable electronic database on ownership of Canadian firms. Data on the identity and on size of holdings of the five largest shareholders was collected manually. Six hundred Canadian firms were randomly selected from a databank named *Stock-Guide.* The following were eliminated : 21 foreign firms, 18 firms which had priced only preferential shares and 5 mutual funds. Of the 556 remaining firms, information which pertained to the identity and percentage of voting rights held by the five largest shareholders was obtained from 3 sources : 1) *The Financial Post* (FP), "Survey of Industrials" and "Survey of Mines and Energy Resources," 1989, 1990, 1991; 2) *Stock-Guide* (where information is collected from proxy circulars), under the heading "Corporate Profile," 1989, 1990, 1991; 3) *Intercorporate Ownership in Canada* (LP) from Statistics Canada, 1989 and 1991.

The information was processed in two stages. In the first stage an observation was kept if the three information sources concurred with both the principal shareholder's identity and the size of each block of shares that he owns or controls. In each case where the sources had contradictory information on the identity or the size of the block, the observation was treated in a second stage. The objective in this second stage was to reconcile disagreements among information sources through additional research. The procedure was to reverse the process while checking whether the shareholder participated in the firm. The three sources of verification were LP, FP, and the proper sources of the "contradictory" blockholder.

After the second stage, the number of observations that satisfied the sample criteria was 338 for the year 1989, 365 for 1990, and 348 for 1991. The percentage of rejection corresponds respectively to 40, 35 and 37, with the average equal to 37.

3.2. Measurement and method

As it is often difficult to ascertain the threshold of stock concentration necessary to expropriate, this study treats effective control as a continuous function of stock concentration rather than separating the measure into a nominal variable. Ownership concentration (COC), is measured by the sum of the voting rights held by the five largest shareholders.

$$COC = \sum_{i=1}^{5} \alpha_i \quad (1)$$

with α_i = the voting rights of the shareholder, i. Other measures of the concentration such as the Herfindahl measure, the entropy or Gini indices are either less useful or impossible to use when one considers the empirical data used.

Besides we use three categories of variables to deal with discrepancies throughout firms' dividends : governance firm structure variables, corporate decision-making variables and firm payout policy variables. More specifically, the independent variables are related to the agency costs, information asymmetry, the ownership structure, and other firm's features we consider influential to the firm's dividend payment :

i) Agency costs : According to Easterbrook (1984) and Rozeff (1982), the dividend payments are part of the firm's optimum monitoring package and serve to reduce agency costs. According to Jensen (1986), firms with substantial free cash flows possibly such as family owned firms, will have a tendency to have high agency costs. In fact, the free cash flows can be used to the discretion of the managers. They can waste them by using them for professional advantages (on the job-consumption) or by self-aggrandising (over-investing them by accepting negative net present value projects), so that the size of the firm is increased and in the same stroke, their power. Our model therefore predicts that if the free cash flows increase, the managers will be urged by the shareholders to pay more dividends. The free cash flows are defined as net operating income on an after-tax basis, corrected for the change in working capital, less depreciation, regular and preferred shares dividend payments; all the while accounting for financial activities such as the new issues and the repayment of the debt which comes to term in at less than a year. All of this is divided by

total assets so as to control for the size effect. The necessary information is gathered from the Stock-Guide database over the 1987-1991 period. Variable is referred by "CFL".

ii) Information asymmetry : If, despite the dissipate costs of dividends such as adverse personal taxes and transaction costs of external financing, the firms persist to pay dividends because they are reducing the presumed information disequilibrium between managers and shareholders by conveying credible private information to the market [Bhattacharya (1979), John and Williams (1985) and Miller and Rock (1985)]. In fact, the dividend payments require the managers to go to the capital market more frequently. It is assumed that cash dividends are accompanied by raising capital to finance existing and future investments. Since it is likely that the funds suppliers will not supply the funds unless the managers disclose the uses intended for the funds, large shareholders, in family firms, who do not effectively monitor the business, may gain new information about management intentions. Our model anticipates a positive relationship between information asymmetry and dividends. Many theoretical studies, such as that of Glosten and Milgrom (1985), explain the existence of a positive relationship between the level of information asymmetry and the bid-ask spread. Given that the estimation of the latter is costly[4] and that many studies have shown the existence of a strong negative correlation between the spread and the volume of transactions[5], we will use the volume as a substitute for the former. Our model anticipates a negative relationship between the dividend payments and the volume since the dividend payments reduce the bid-ask spread and therefore increase the volume. The information regarding the volume is gathered from the Stock-Guide database over the 1987-1991 period. "VOL" refers to this measure.

iii) Size effect : Zéghal (1979) showed that firms produce as much information (in addition to their financial statements) as they are large and that this information benefits a better and a larger diffusion than those smaller firms. If this information is competitive with that conveyed by the

[4] The use of the bid-ask spread assumes data collection on the daily selling and buying prices, during the research period for all the sample (1875 days x 477 enterprises): % spread = [bid - ask / 0,5 (ask + bid)]. To the best of our knowledge, this information is not computerised for the research period in Canada.

[5] Easley and O'Hara (1987) and mostly Howe and Lin (1992) showed that the dividend payments convey information which reduces the bid-ask spread. This is normal since the spread is fixed by the market maker in function of: (1) the costs of holding the stocks (opportunity costs and fundamental risks); (2) the costs of portfolio processing and management; and (3) the information costs (the risk of compromise if investors are better informed).

dividends, the signalling efficiency of the latter diminishes. Given the signalling costs, we can expect a negative relationship between size and dividend payments. However, it is usually assumed that the large firms tend to have high free cash flows and weak growth. Hence, it is sustainable that rational shareholders request high dividends from large films in order to lessen the agency costs. Thus, we can also hypothesize a positive relationship between the size and dividend payments. In summary, it is difficult to anticipate the sign of the relationship. Many measures of firm size are suggested in empirical studies. We use the average of the total assets over the 1987-1991 period. The information is gathered from the Stock-Guide database. However, we tested for the multicollinearity and find that the size, the insider stake and the transaction volume are multicollinear. We regressed the size on these variables and report a new variable into the regressions equations "RES", which is the residuals of the regressions of the size on the other variables.

iv) Past growth : According to the pecking order theory, we can expect firms to pay less dividends if they experienced past growth. This conjecture supports the view that the growth entails higher investment expenditures and may influence dividend payments because external financing is costly (Myers and Majluf : 1984). The implicit relationship between the dividend policy and the investment policy is confirmed by Higgins (1972) and Rozeff (1982). Our model anticipates a negative relationship between the past growth and dividend payments. Empirical studies used several ways to measure growth. As Gonedes (1978) and Rozeff (1982), we use the average of the historical sales growth ("CRC", hereafter) for the 1987-1991 period. The information is gathered in from Stock-Guide database.

v) Potential growth : For reasons evoked in the preceding paragraph, prudent managers will retain a greater proportion of the cash flows of the firm if they anticipate an expansion so as to avoid external financing with its attendant costs. Hence, our model predicts a negative relationship between the anticipated growth and the dividend payments. Rozeff used Value Line's forecast of the growth of sale revenues as a measure of the management's expectations of growth. According to Thomadakis (1977), the latter should be an evaluation specific to the market. On this basis and according to Lang and Litzenberger (1989), we measure the expected growth following a practical

version of the Tobin's Q ratio ("QRM", hereafter)[6]. QRM is the average of the market value over the book value of equity over the 1987-1991 period. The information is gathered from the Stock-Guide database.

Consequently, the multiple OLS regression equation we tested can be formulated as follows :

$$NDV_i = b_o + \overset{(+/-)}{b_1} COC_i + \overset{(+)}{b_2} CFL_i + \overset{(-)}{b_3} VOL_i + \overset{(-)}{b_4} CRC_i + \overset{(-)}{b_5} QRM_i + \overset{(+/-)}{b_6} RES_i + E_i \qquad (2)$$

where i is the enterprise index and E_i is the error term.

Currently, there is no agreement on what constitutes an appropriate indicator of dividend policy. Several researchers have suggested using multiple indicators. We define dividends as total cash dividends paid to common shareholders. The rate at which dividends are paid shall be measured by nine different indicators (see Appendix I). The diversity of measures of the dividend rate should help insulate our overall conclusions from biases in individual measures that might arise from accounting practices and manipulations by controlling shareholders. The use of different averages (3, 5, 10 years) allow to smooth out noise and transitory factors. We run correlation analysis between these variables, results are reported in Appendix I. Results show that these variables are generally significantly correlated. According to the correlation coefficients and other results of regressions not reported here, we report only the DSM (the dividend/share from Stock-Guide databank) and D10 (the ten years dividend/book-value from Compustat) dividend variables for our analysis.

Additionally, the difference in dividend policy may be related to the importance of concentrated leadership and decision-making control. In that, in owner-controlled firms, the major shareholder has more effect on the decision process. In contrast, in large firms, the separation and diffusion of

[6] If QRM > 1, this may mean that the market offers a prime which is determined according to its perception of the firm's growth potential. When QRM < 1, this may mean that the market diminishes the firm's value by an amount equal to the net present value of the perceived decline.

decision management and decision control limit the power of individual decision agents to expropriate the interests of minority shareholders (Fama and Jensen 1983). We infer, that in family business, expropriation (via dividend and other mechanisms) of residual claimants is more pronounced than in the professionally managed firms. Obviously, this conclusion is valid within group-affiliated firms with large shareholders. To control for these effects, we use interaction variables for family and group-affiliated firms separately. We also use other variables to control for risk and industry distribution[7].

Concerning the family and group classification, there is no agreement in the literature on what is a family. One commonly used definition considers a family as a business in which the members of a family have legal control over ownership. For the purpose of this study, we preferred to focus on very big families (FML) and groups (GRP) according to statistics-Canada in order to make it more obvious to document what we need to document. All other configurations will be called non-family (NFML) and non-group affiliated (NGRP) firms. The variables FML and GRP are dummy variables. Besides, in order to capture every subtle detail, we introduced a new classification : strong family affiliated firms (SFML) versus weak family affiliated firms (WFML) with FML = SFML if $BL1 > 30\%$ and FML = WFML if $BL1 \leq 30\%$. We did the same classification for strong group affiliated firms (SGRP) versus weak group affiliated firms (WGRP).

Regarding the second hypothesis, we use a logit model to investigate whether family' s stake and group affiliation affect dividend stability. To give more light on the impact of ownership structure on dividend stability, we use a logit model to examine the direction of dividend changes (cuts and rises).

Our hypothesis predict a positive relationship between ownership concentration and stability (STB, hereafter) of the dividend policy. To measure stability, we have taken, for each firm, the quarterly dividends for ten years (1982-1991) from the Laval data file. There is a change in the level of dividends in the following case :

[7] Details are in table 1.

$$\text{if } \Delta NDV_{i,t} = NDV_{i,t} - NDV_{i,t-1} \neq 0 \text{ then } CHG_{i,t} = 1 \text{ et } STB_{i,t} = 0 \tag{3}$$

where $NDV_{i\,t}$ symbolises a yearly dividend which is the sum of the quarterly dividends after we have taken into account all possible splits of stocks and CHG is a dummy variable which indicates the presence of a dividend change. The model to test is the following :

$$E(STB_{it}=1 \mid COC_i, VAC_i) = P(STB_{it}) = b_{0t} + b_{1t}\,COC_i + \sum_{K=1}^{K} b_{kt}\,VAC_k \tag{4}$$

where k is the number of control variables (VAC, hereafter)[8], E(.) is the operator of mathematical expectations and P (STB_{it}) is a latent variable which indicates the probability with which we observe dividend stability for the firm i in the period t, given the values of the independent variables. $P(STB_{it})$ is a bounded variable belonging to the interval [0,1], which is not the case of the independent variables. The transformation of this response variable to [$P(STB_{it})$ / 1-$P(STB_{it})$] allows the elimination of the superior limit (P (.) = 1) and the transformation of the latter to log [$P(STB_{it})$ / 1-$P(STB_{it})$] allows the elimination of the inferior limit (P (.) = 0). In keeping with these transformations and when the model is repeated (N_i -1) times, it can be formulated in the following way[9] :

$$\log\left(\frac{P(STB_i)}{1-P(STB_i)}\right) = b_0 + b_1 COCi + \sum_{K=1}^{K} b_k\,VAC_{ki} \tag{5}$$

[8] As in the last section, we introduce interaction effect.

[9] Model 5 is simply a logit model. We chose a logit model since, contrary to $P(STB_{it})$, the logarithm of the transformed variable is linearly related to the independent variables. Besides, no constraints on the latter are imposed, contrary to Burr's transformation which requires non-negativity of the independent variables or that of Gompertz which requires a symmetrical distribution. Finally, as Aldrich and Nelson (1986) show, the estimators of the logit model differ with that of the probit model (normal transformation) by a proportionality factor (approximately by 1.8).

i = firm index; j = 1, ..., (N_i - 1) which corresponds to a repetitive index; VAC_k are the k control variables and P symbolizes the probability. The ß parameters are estimated according to the maximum likelihood method (MLM, hereafter). What interests us in model (5), is $P(STB_i)$. After certain algebraic manipulations, we can show that :

$$P(STB_i)=\frac{\exp(b_{0+}\ b_1 COC_i+\sum_{K}^{K} b_k VAC_{ik})}{1+\exp(b_0+b_1 COC_i+\sum_{K=1}^{K} b_k VAC_{ik})} \qquad (6)$$

where exp (.) is the exponential operator.

Subsequently, we have refined the analysis by studying the direction of dividend changes. For this, in a first step, we calculated the number of rises and the number of cuts of dividends during the test period (10 years). In a second step, we standardize the latter by the number of years of survival of the firm (N_i) within the research period. The variables rises of dividends (HAU) and cuts of dividends (BAI) are dummy variables and are so defined :

$$\text{If } \Delta NDV_{i,t} > 0 \text{ then } HAU_{i,t} = 1;$$

$$\text{If } \Delta NDV_{i,t} < 0 \text{ then } BAI_{i,t} = 1 \qquad (7)$$

For the same reasons used to test the stability (model 5), we use the multivariate logit model with repetitions but conditional to change[10]. The parameters are estimated following the MLM.

[10] It is more precise to estimate the probability of the dividend rises or cuts from the case where there are dividend changes. Otherwise, we underestimate the probability of the realisation of these events. This reasoning is inspired from Baye's theory.

$$Logit\left[P\left(HAU_{ij}/CHG_i\right)\right]=\log\left[\frac{P\left(HAU_{i,j}/CHG_i\right)}{1-P\left(HAU_{i,j}/CHG_i\right)}\right]=b_0+b_1COC_i+\sum_{k=1}^{k}b_kVAC_{ik} \quad (8)$$

$$Logit\left[P\left(BAI_{ij}/CHG_i\right)\right]=\log\left[\frac{P\left(BAI_{i,j}/CHG_i\right)}{1-P\left(BAI_{i,j}/CHG_i\right)}\right]=b_0+b_1COC_i+\sum_{k=1}^{k}b_kVAC_{ik} \quad (9)$$

4. EMPIRICAL RESULTS

4.1 Descriptive statistics

Table 1 (Panel A and Panel B) present the basic information for the whole sample regarding the intensity and identity of ownership in Canada. Table 1 shows that the concentration of ownership is high in Canada. The five largest shareholders own around 55 percent of all the voting rights. Data not reported here show a 96% significant correlation between ownership and voting rights. Besides 11% of the companies of our sample use dual or multiple class shares. The voting rights as the ownership rights are stable over the time.

[Table 1 goes about here]

The largest shareholder own on average more than 43% of the voting rights making him very powerful. Indeed the second largest shareholder owns on average around 8% of the voting rights. The second largest shareholder cannot exercise any power on the principal shareholder. The ratio BLC2/BLC1 is about 19% on average which make the expropriation of minority shareholders by the principal shareholder quite possible. In fact, the second largest shareholder cannot effectively and inexpensively monitor and influence the first largest shareholder. The principal shareholder is

in 81% of cases a firm and not an individual. We can also notice through table 1 (Panel B) that the principal shareholder is almost in all cases an insider (CEO, chairman, honorary chairman or a key executive officer). Panel B shows that state control in this sample as well as financial institutions control are very small.

Our main empirical investigation was motivated by the question whether family-owned (group affiliated) firms have different ownership structure, payout policies and other financial characteristics from non-family (non-affiliated) firms? Therefore we performed a test of difference of means for some selected variables. Results are summarized in table 2[11].

[Table 2 goes about here]

Table 2 shows that, on average, concentration within family firms is about 68.42% and it is about 52.56% in non-family firms, and that the major shareholder owns 53.11% of the voting rights in family firms, however the major shareholder owns only 40.49 of the voting rights in the non-family business. On the other hand, concentration for group affiliated firms is about 62.48% where it is about 52.07% for non-group affiliated firms. The major shareholder's voting rights is 51.96% in group affiliated firms and 41.17% in non-group affiliated firms. These features show that ownership in Canada is highly concentrated and this large shareholding is, as expected, more obvious for family and group affiliated firms.

On the other hand, the stake of insider in family firms is 63.7%, and 37.4% for non-family firms. However, it is lower for group affiliated firms, and equals 48.14% and is the lowest for the non-group affiliated firms. The proportion of non voting shares and multiple voting shares is highest in family firms (27% and 18% respectively, however it is equal to 9% for non-family business and group affiliated firms).We can infer that controlling families use different means to overarch their control within their business : they own a large part of the control over cash flow rights, they seem to point their relatives into management position as we captured by the variable BLI, and they use non voting shares and multiple voting shares to entrench their control and may

[11] Variables were classified into three classes (panel A: ownership indicators, panel B: financial features and panel C: dividend measures).

eventually expropriate minority shareholders. Other data not reported here (see Gadhoum and Lang : 2000) show that most Canadian family firms use pyramidal structure and cross-holdings (Appendix II present some cases of family controlling groups as illustration). Table 2 also shows that the number of shares is significantly less important in family-owned firms than their counterparts.

Table 2 (Panel B) shows that family firms are smaller than their counterparts which is consistent with previous empirical studies (Faccio and Lang : 2000, Claessens and *al* : 2000). Family firms do not show any statistical significant differences in agency costs and do not seem to have more or less free cash flows than their counterparts according to our sample and to our proxy measures. They do not seem to have more senior managers or more directors on their boards than their counterparts. However, they seem to be less risk averse and their expenditures on research and development are significantly more important than their counterparts which confirms the results of Daily and Dollinger (1992) who found that family-owned firms have more vision and are less aggressive. They are obviously less pointed by financial analysts than their counterparts which show some inefficiency in the financial analyst's market. Most of these conclusions apply for group and non-group affiliated firms.

Table 2 (Panel C) show that, at the univariate level, dividend payments are not significantly different for the family firms than their counterparts. Same results apply for special dividends and debt. However, we notice that group affiliated firms pay somehow more dividends (normal and special) than the non-group affiliated firms. We will explain more these results latter the multivariate level.

In order to be able to capture some subtle behaviour within families, we distinguished the strong family owned firms from the weakly owned ones, and a test of difference of means was performed to investigate eventual differences among the three categories (the strong family- owned firms, the weakly family owned firms and the non-family-owned firms). Results are presented in Table 3. They confirm that concentration in strongly family-owned firms is higher than concentration either in weakly family-owned or non-family-owned firms. This concentration is about 72.68% for strong family owned firms, and the managers, directors and CEO stake of voting rights (BLI) is

68.56%. This indicates that management and ownership are congruent especially in strong family firms. Panel A (table 3) shows also that the proportion of multiple voting shares and non-voting shares are the highest within the strongly family controlled business. Panel B (table 3) infers that size is the lowest for strongly family firms and that risk is the lowest within this firm category. This result confirms a previous study of Daily and Dollinger (1992). For almost all the other variables, results are similar to those of table 2.

[Table 3 goes about here]

We did the same investigation for the group affiliated firms (strong-affiliated group firms, weak-affiliated group firms and non-affiliated group firms). Results are summarized in table 4. We note that concentration and insiders stake are higher in the strong-affiliated group firms.

[Table 4 goes about here]

Table 4 shows that concentration in strong affiliated group firms is 67.65% and that the managers, directors and CEO voting rights are 54.19%, indicating higher concentration in strong- affiliated group firms and higher insider management participation. The proportions of non- voting shares and multiple voting shares are higher within the strong-affiliated group firms. From Panel B (table 4), we infer that the size is the highest within the strong-affiliated group firms, and that this category is riskier (*beta*) than the non-group affiliated firms but not as much as the weak-affiliated group firms. From Panel C (table 4) the same conclusion were reached than previous tables.

The next empirical investigation was motivated by the following question : do family-owned firms (group affiliated firms) belong to specific industries? Consequently, we examined the industries in which family-owned firms are omnipresent. Table 5 summarized the results for family-owned firms distribution over the industries and show that family firms are not randomly or uniformly distributed among industries. Table 5 shows that group-affiliated firms are mainly concentrated in the Resource-Intensive Manufacturing (Petroleum Refining), Finance and Insurance Services, Wholesale Services, and Construction industries with respective frequencies of 15.15%, 15.15%, 15.15% and 9.09%. Whereas, family-owned firms are concentrated into four major industries :

Technology-Intensive Manufacturing (Communication Equipment), Resource-Intensive Manufacturing (Food and Products), Industrial Products, and Wholesale Services, with respective frequencies of 18.92%, 18.92%, 13.51% and 18.92%.

According to these findings, we can say that there are preferred and evicted industries for family firms and for group affiliated firms, a hypothesis that needs some more exploration. Thereby, we investigated what determines the attraction of a family to preferred industries. For this reason we used a dummy variable that takes one (1) if the industry is preferred (industries 17, 18, 23 and 24 in table 5) and zero (0) otherwise. Then, we compared the companies' features throughout the two classes of industries (1 and 0). Results are presented in Panel B in table 5 and show that family-owned firms are concentrated in the industries with higher R&D expenses on sales (RDE) and with lower risk (BET). These features characterize the industry complexity and the higher barrier entry showing that family firms tend to keep out competitors in order to enhance their business and voting control. For the group-affiliated firms' distribution over industries, we used an analogous method. Results (Panel B, table 5) show that group-affiliated firms are omnipresent in the industries with higher risk (BET,VGP), where financial analysts number concerned by the firm are higher (NAF), and research and development expenditures are higher. We can infer that families and group affiliated firms prefer less riskier industries and those with more agressive and prospective strategies.

[Table 5 goes about here]

4.2 OLS regression results and discussion ($H_{0,1}$)

The first hypothesis and main empirical motivation of this study are to investigate whether family-owned firms use dividend policy to expropriate minority shareholders. Regressions on nine different dependent variables (measuring the dividend payout, as described in the precedent section) were examined separately. The results of D10 and DSM only are reported here. We distinguished for these two dependent variables, three models (see table 6 and table 7). The regressions were performed on the global family sample, the reduced *only-family* sub-sample and *non-family* sub-sample and similarly for the group-affiliated firms. In a second step, we applied the

same investigation but with the interaction effects with the family and group affiliation respectively. Results are summarized in table 8.

[Tables 6 and table 7 go about here]

Results in tables 6 and 7 for the three models are merely the same. The coefficients of the ownership concentration (COC), major shareholder's voting rights (BL1) and the managers, directors and CEO stake (BLI)[12] are positive and significant for the global regression which is also the case for family and group affiliated firms. The expropriation of minority shareholders by family senior management via dividends is not necessarily confirmed here by our data. Moreover, the last column of table 6 shows that group-affiliated firms pay more dividends in Canada which confirms our fiscal effect hypothesis. An internal capital market within the constituents of the group is a plausible interpretation of these results.

The volume effect (VOL) and the size effect (RES) on dividend payments are positive and significant. The free cash-flows effect is negative and significant. These results are similar for the global family and for the global group samples.

These results show that Canadian corporations which are affiliated to groups or which are family owned exhibit a significantly positive relationship between dividend measures and ownership stakes. The controlling shareholders in family firms even when they have a large ownership stake pay more dividends. On a first glance, we tend to infirm the hypothesis of expropriation via dividends. But when we analyse these results jointly with those of groups, it is reasonable to think that the expropriation is effective otherwise through intra-group cash-flows distribution. It is hard to infer from these results if in the Canadian capital market, minority shareholders enjoy or not lower protection (we will examine this matter latter in the paper).

To give more lights on the effects of shareholders on dividend payments, and in order to overcome the small size sample of family owned firms, we introduced the interaction effects (with family and

[12] These variables were introduced separately into the regressions.

group affiliation separately) into the model 1 (where the ownership variable is BL1). Results for model 2 and 3 are not reported here. The other results are reported in table 8.

[Table 8 goes about here]

We can infer from table 8 that, for the family regressions, the only positive and significant interaction variable for the family sample is the free cash-flows into the DSM regression whereas no significant interaction effect exists into the D10 regression. The results are quite the same for the group sample. This finding (positive and significant coefficients of the FCFL and GCFL interaction variables) is consistent with the hypothesis that family firms pay more dividends when they have abundant free cash flows. This can be explained by the competitive hypothesis described in the precedent section, and by the fact that the Canadian market anticipate the expropriation effect and imposes to the family firms higher dividend payout to reduce this effect.

For corporations affiliated to a group, the only significant (and negative) interaction effect is with the free cash-flows variable, but the coefficient of the binary group affiliation variable is not significant and the coefficient of the free cash-flows itself is positive and significant. This reinforces that the Canadian capital market anticipates the potential of expropriation within group-affiliated corporations by requiring higher dividend rates.

In the next section, we investigate the impact of firm status and ownership concentration on dividend stability.

4.3 Stability of dividend policy ($H_{0,2}$)

Table 9 displays the results of logit regressions testing our second hypothesis. The tests were performed to observe the probability to maintain stable the dividend payments using the maximum likelihood estimates. The estimation was performed for three models for the family and group samples separately. Results show a negative and significant relationship between stability in dividend payments and ownership concentration (COC), major shareholder's voting rights (BL1) and managers, directors and CEO control stake (BLI) in the corporation for family and group

affiliated firms. We note, however, that there is no significant interaction effects for the group affiliated firms, whereas for the family firms the interaction between family and volume is negatively significant, the interaction between free cash-flow and family ownership is positive and significant, and the interaction between family ownership and insider control and family ownership and concentration are both negative and significant. The interaction effect is not significant with the major shareholder's voting rights. These results show that the major shareholder in family business induces more frequent dividend changes, perhaps in function of his financial needs.

[Table 9 goes about here]

On the other hand, the results for the group logit regressions show that the only presence of a principal shareholder, no matter how much stake he has in the company and no matter who is he, induces more frequent changes in cash distribution. This may be consistent with Wooldrige (1982) results, that dividend change contains information about future earnings, and that the market should react to the unexpected or surprise element in dividend change. Furthermore, the large shareholder within a group may request frequent changes of dividends, also depending on the financial needs of the constituents of the group either to avoid tax payment making most of the constituents converge to zero taxable gains or to allow movements of capital funds within the group making the functioning of the latter as an internal capital market.

4.4 Dividend rises and cuts in family owned and group affiliated firms

Table 10 summarizes the results of logit regressions of our explanatory variable on the probabilities to observe a dividend rise (equations 2 to 4) and on the probability to observe a dividend cut (equations 5 and 6). The parameters were estimated using the maximum likelihood approach. The regressions were performed on the family and group samples separately. The results show a significant influence from the principal shareholder on the decisions to rise or to cut dividend payments, for both samples (family and group). These results concord with those of the

precedent section, and suggest that the largest shareholder has a preference for dividend changes depending on his financial needs. Our data do not show a unique direction of change. This may confirm to which degree the largest shareholder in family and group affiliated firms use his discretion to pay more or less dividends depending on his personal or business needs no matter what the minority owners favour. This is a very indirect confirmation of expropriation.

The interaction effects of the family with ownership concentration, and insider control (managers, directors, and CEO stake), volume of transaction are significant, indicating that dividend decision changes is monopolized by the major shareholders in the family business, suggesting an expropriation of the minority shareholders. Interaction results for group sample are not significant.

[Table 10 goes about here]

The principal shareholder which is in most cases a firm doesn't care about stability or growth over time of dividend payments which is not the case of individual shareholders. Besides, this finding suggest a possible complex cash-flows exchanges between companies having cross-holdings, reciprocal holdings or pyramidal holdings. We can imagine an internal capital market within groups. The cash-flows may depend also on the fiscal status of a company at a given year (positive or negative earnings) which influence the rise or cut of dividends. To sum up, these results show that the largest shareholder exert influence on dividend payments no matter what are the expectations of minority shareholders.

5. CONCLUSION

We showed that a number of environmental changes increased, in some rather profound ways, our collective awareness and sensitivity to family business issues. Several well documented studies have shown that family dynamics have influenced the behaviour of the firm. The differences in styles and motivations that may exist between the founder or his successors and descendents and the professional managers explain the differences in behaviours between family-owned firms and non-family-owned firms.

Despite the prevalence of family business, we are seldom provided with a thoughtful analysis and predictions of their financial policies. The economic importance of the family-owned firms throughout the word and the small attention paid until recently by financial academicians to this type of organization motivated this investigation. Besides, most important controlling families in Canada and many other countries in western Europe and east-Asia countries ensure a solid base of control primarily though pyramidal structure, cross-holdings and interlocking directorate. The motivation of the sophisticated equity linkages among firms is to conceive business groups. We also investigated family grouping and group affiliated firms.

The two objectives of this paper are, first, to characterize the two previous types of organizations. Secondly, we emphasized dividend payments that pertain to family-owned and group affiliated firms in order to investigate if they are prone to engage in expropriation of non-family shareholders who are usually the minority uninvolved absentee owners.

We showed that Canadian family-owned firms are smaller, more risk averse and more long term oriented than their counterparts. They own a large part of the control over cash-flows rights. The number of shares and the volume of transaction are less important in family-owned firms than their counterparts. They seem to point their relatives into management position. We also evidenced that they favour less complex industries in order to maintain their control and avoid entrenchment of professionally managers. They extensively use multiple voting shares to lever their control. Almost same conclusions can be reached for group-affiliated firms except for size.

Our results show no clearly obvious and direct evidence of expropriation via dividends for family-owned firms. Family-owned firms pay no less dividends than their individually listed counterparts especially when free cash-flows are high. We believe that Canadian capital market anticipates the expropriation effect and imposes to the family firms higher dividends to reduce this effect. However, there is evidence that the largest shareholder induces frequent dividend changes in family firms. He uses his discretion to pay more or less dividends depending on his personal or business needs, no matter what are the expectations or preferences of the minority shareholders.

On the other hand, the correlation between dividend payments and the affiliation to a group is significantly positive. Furthermore, the largest shareholder within a group may request frequent changes of dividends also depending on the financial needs of the constituents of the group either to avoid tax payments making most of the constituents converge to zero taxable gains or to allow movements of funds within the group making the functioning of the latter as an internal capital market, may be to the only interest of the controlling (family) ultimate owner.

Overall, and although the results might be insufficient to illustrate expropriation of minority shareholders by family-owned firms, when we jointly analyse the results of family and group affiliated firms and the tendency of family-owned firms to monopolize multiple voting shares, all together with the option the controlling family-owner have to rise or cut dividends give some support to the expropriation hypothesis.

Nevertheless, more research is required to isolate the private benefits extracted by the controlling family with a large sample of families and a better definition of the latter. We also need a better definition, at the conceptual level, of the different mechanisms of expropriation. Finally, one of the key implications of this study is to create a reasonable doubt that family-owned firms, not enough studied in finance, have idiosyncratic financial features and policies that deserve the attention of corporate governance academicians and professionals. The implications in terms of regulation in capital markets, especially, for business grouping is potentially important area of investigation.

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Table 1 : Canadian ownership description

Panel A : Descriptive statistics of the level of ownership concentration						
Variable	N [b]	Mean	Median	Standard-deviation	Minimum	Maximum
COC 89 [a]	338	55,71	56,25	23,67	0	100
COC90	365	54,52	56,5	25,05	0	100
COC 91	348	54,21	55,75	24,44	0	100
BL1 89	338	43,39	42,75	24,11	0	100
BL1 90	365	43,58	42,9	24,68	0	100
BL1 91	348	43,2	43,8	23,96	0	100
BL2 89	338	8,48	4,51	9,92	0	42,3
BL2 90	365	8	3,3	9,94	0	45,7
BL2 91	348	8,16	2,05	10,29	0	46,3
BL3 89	338	2,87	0	6,1	0	33,6
BL3 90	365	2,29	0	5,47	0	33,3
BL3 91	348	1,92	0	4,91	0	33,3
BL4 89	338	0,64	0	2,88	0	23,3
BL4 90	365	0,51	0	2,43	0	18,6
BL4 91	348	0,61	0	2,65	0	18
BL5 89	338	0,33	0	2,9	0	12,2
BL5 90	365	0,13	0	1,1	0	12,2
BL5 91	348	0,31	0	2,66	0	17,6
Panel B : Descriptive statistics by shareholder's identity						
Variable	N	Mean	Median	Standard-Deviation	Minimum	Maximum
BLI 89 [c]	337	41,61	46,1	30,06	0	100
BLI 90	364	40,54	42,5	31,26	0	100
BLI 91	347	39,64	43,6	30,58	0	100
BLE 89	337	14,13	0	23,09	0	87,6
BLE 90	364	14,02	0	23,32	0	92,3
BLE 91	347	14,6	0	23,39	0	95,5
INV 89	337	0,37	0	3,18	0	42,8
INV 90	364	0,21	0	1,82	0	20,7
INV 91	347	0,32	0	2,69	0	30,2
INF 89	337	0,87	0	3,89	0	33,9
INF 90	364	1,39	0	4,78	0	33,9
INF 91	347	1,95	0	6,6	0	47,6
AUI 89	337	11,44	0	22,07	0	87,6
AUI 90	364	11,12	0	22,28	0	91,8
AUI 91	347	10,82	0	21,64	0	95,5
GOV 89	337	1,25	0	6,42	0	63
GOV 90	364	1,13	0	5,52	0	57
GOV 91	347	1,14	0	5,43	0	42,3

a COC = the fraction of voting rights held by the five largest shareholders. BL1 = the fraction of voting rights held by the 1st large shareholder.

b The number of observations which respect our sampling criteria may vary from one observation to another.

c The fraction of voting rights held by the insiders (BLI), by external shareholders (BLE), by individuals (INV), by financial institutions (INF), by companies (AUI) and by governmental institutions (GOV).

Table 2 : Mean comparison tests

Panel A									
Variables	Definition	Family data				Group data			
		FML (n=37)	**NFML (n=440)**	**t**	**Prob**	**GRP (n=66)**	**NGRP (n=298)**	**t**	**Prob**
COC	Concentration	68,42	52,56	-3,99	0,0001	62,48	52,07	-3,14	0,0018
BL1	Major shareholder' s voting rights	53,11	40,49	-3,17	0,0016	51,96	41,17	-3,34	0,0009
BLI	Manager, directors, and CEO' s V.R[13]	63,7	37,4	-7,06	0,0001	48,14	37,71	-2,55	0,011
HFM	Herfindahl' s measure	3673,97	2411,59	-3,48	0,0005	3410,31	2500,64	-3,03	0,0026
NAC	Shareholders' number	1869	15069,26	2,61	0,011	11609,27	17877,5	0,72	0,4739
SUB	Subaltern Shares (1,0)	0,27	0,09	-2,33	0,0246	0,13	0,11	-0,55	0,5776
MUL	Multiple voting shares (1,0)	0,18	0,09	-1,46	0,1511	0,06	0,1	1,27	0,2045
LEV	Voting leverage	2,06	1,4	-0,64	0,5205	1,63	1,42	-0,36	0,7124
VOL	Transaction volume	2802,8	8313,91	3,58	0,0005	9476,08	9072,57	-0,13	0,8941
Panel B									
TAL	Size	419400,64	1980574,25	2,81	0,0052	2493376,82	2193096,9	-0,33	0,7388
RDE	R&D on sales	1.4282	0.9467	-2.01	0.0454	2.2102	2.21025	0.00	1.00
NAF	Financial analysts number	7,52	9,98	2,15	0,0391	10,72	9,79	-0,71	0,4777
VES	Variation of the EPS	19,09	44,68	2,42	0,0174	52,01	34,79	-0,68	0,4965
BET	Beta	-1,54	-0,74	1,3	0,198	-0,12	-0,87	-3,37	0,0009
VGP	Gross profit variation	12,31	21,44	4,11	0,0001	23,29	21,14	-0,47	0,6344
CMM	Modigliani & Miller' s F.C measure	-27388,4	-26492,04	0,07	0,9432	-67130,27	-19923,53	1,68	0,095
CFL	Lehn & Poulsen F.C measure	3555,17	5280,59	0,17	0,8619	-6056,68	10690,26	0,78	0,4365
AGC	Agency costs	1,5	1,09	-0,1	0,9152	3,83	-0,18	-2,29	0,0225
NDI	Directors number	9,62	9,36	-0,43	0,6655	12,66	9,14	-5,47	0,0001
NMA	Managers number	5,08	4,93	-0,18	0,8539	6,64	4,9	-2,54	0,0112
Panel C									
D10	Average 10-year dividend	0,02	0,04	2,13	0,0346	0,07	0,03	-1,61	0,1127
DY5	5-year dividend yield	2,07	2,16	0,21	0,8277	3,75	1,91	-1,69	0,0953
DL3[a]	3-year dividend/share	0,49	0,34	-0,52	0,607	0,67	0,31	-2,04	0,0454
DC3[b]	3-year dividend/share	0,53	0,41	-0,37	0,7116	0,64	0,39	-1,48	0,143
DCD	10- year dividend/share	0,47	0,37	-0,41	0,6794	0,49	0,38	-0,99	0,3187
DP5	Five year dividend payout	5,95	19,48	1,14	0,2609	32,93	15,45	-2,19	0,0316
DPM	Dividend payout (average)	-2,73	20,59	1,2	0,2371	45	12,3	-2,92	0,0045
DSM	Dividend/share (Stock-Guide)	0,37	0,3	-0,3	0,7616	0,73	0,26	-2,14	0,0359
DYM	Dividend yield (average)	2,11	2,54	0,75	0,45	4,93	2,01	-1,62	0,1091
HAU	Dividend increase	298,75	292,13	-0,08	0,9321	154,16	293,18	2,69	0,008
BAI	Dividend decrease	297,89	291,81	-0,07	0,9378	152,19	293,2	2,73	0,0073
SPF	Special dividend frequency	297,1	290,74	-0,08	0,9349	151,54	291,77	2,71	0,0076
SPM	Special dividend amount	297,11	290,71	-0,08	0,9345	151,43	291,73	2,71	0,0076
DTR	Debt Stock-Guide	0,25	0,28	0,73	0,4605	0,31	0,27	-1,42	0,1555

[13] V.R=Voting Rights.
[a] gathered from « Ruban Laval ».
[b] gathered from Compustat.

Table 3 : Mean comparison tests (family stake control)

Panel A					
	FML=1 (n=37)		FML=0 (n=440)		
Variables	**SFML (n=31)**	**WFML (n=6)**	**NFML (n=440)**	**F**	**Prob**
COC	72,68	46,42	52,56	11,32	0,0001
BL1	59.6	22.36	40.49	11.61	0.0001
BLI	68,56	38,57	37,4	17,38	0,0001
HFM	4186,39	1026,46	2411,59	11,96	0,0001
NAC	1869		15069,26	0,25	0,6157
SUB	0,29	0,16	0,09	5,97	0,0028
MUL	0,22	0	0,09	3,27	0,391
LEV	2,27	1	1,4	1,09	0,3381
VOL	3178,19	863,44	8313,91	1,36	0,2575
Panel B					
	SFML	**WFML**	**NFML**	**F**	**Prob**
TAL	495479,30	39007,37	1980574,26	0,41	0,6637
RDE	1,59	3,03	2,05	0,41	0,6658
NAF	7,52	7.27	9,98	1,89	0,1704
VES	19,09	19.21	44,68	1,02	0,3149
BET	-1,61	-1,19	-0,74	1,79	0,1689
VGP	12,46	11,54	21,44	2,02	0,1344
CMM	-32376,79	-2446,5	-26492,04	0,09	0,9104
CFL	4415,61	-747	5280,59	0,01	0,9891
AGC	4,14	-11,71	1,09	1,33	0,2654
NDI	9,9	8,16	9,36	0,37	0,6877
NMA	5,12	4,83	4,93	0,03	0,9737
Panel C					
	SFML	**WFML**	**NFML**	**F**	**Prob**
D10	0,02	0,03	0,04	0,36	0,7011
DY5	1,81	3,35	2,16	0,34	0,7124
DL3	0,5	0,4	0,34	0,46	0,6312
DC3	0,6	0,06	0,41	0,83	0,4375
DCD	0,53	0,16	0,37	1,01	0,3666
DP5	1,34	28,99	19,48	2,62	0,0739
DPM	-9,79	32,55	20,59	3,42	0,0338
DSM	0,41	0,16	0,3	0,32	0,725
DYM	1,89	3,2	2,54	0,17	0,8459
HAU	259,83	499,83	292,13	0,71	0,4937
BAI	258,8	499,83	291,81	0,71	0,4924
SPF	257,87	499,83	290,74	0,72	0,4896
SPM	257,89	499,75	290,71	0,71	0,4898
DTR	0,25	0,29	0,28	0,35	0,7058

Table 4 : Mean comparison tests (group stake control)

Panel A					
	GRP=1 (n=66)		GRP=0 (n=298)		
Variables	**SGRP (n=55)**	**WGRP (n=11)**	**NGRP**	**F**	**Prob**
COC	67,65	36,61	52,07	12,9	0,0001
BLI	54,19	17,94	37,71	10,29	0,0001
HFM	3943,83	742,71	2500,64	15,04	0,0001
FLO	0,62	0,39	0,5	6,28	0,0021
NAC	8504,37	19889	17877,5	0,2	0,8215
SUB	0,16	0	0,11	1,35	0,2612
MUL	0,07	0	0,1	0,88	0,4168
LEV	1,76	1	1,42	0,33	0,7205
VOL	8157,35	16069,72	9072,57	0,59	0,5559
Panel B					
	SGRP	**WGRP**	**NGRP**	**F**	**Prob**
GRP	1	1	0	99999,99	0,0001
TAL	2569848,42	2118666,02	2193096,91	0,02	0,9758
RDE	0,74	3,38	2,08	3,71	0,0254
NAF	10,58	12,12	9,79	0,33	0,7203
VES	55,04	21,01	34,79	0,63	0,5336
BET	-0,18	0,16	-0,87	2,62	0,0746
VGP	25	14,69	21,14	0,78	0,46
CMM	-60635,55	-99603,9	-19923,53	2,31	0,1003
CFL	-4233,87	-15170,75	10690,26	0,64	0,5254
AGC	3,71	4,4	-0,18	0,8	0,4522
NDI	12,76	12,1	9,14	13,73	0,0001
NMA	6,83	5,6	4,9	3,51	0,031
Panel C					
	SGRP	**WGRP**	**NGRP**	**F**	**Prob**
D10	0,08	0,05	0,03	4,25	0,0154
DY5	3,47	5,07	1,91	5,08	0,0067
DL3	0,67	0,68	0,31	4,35	0,0138
DC3	0,65	0,55	0,39	1,77	0,1725
DCD	0,43	0,77	0,38	1,45	0,2377
DP5	31,97	37,64	15,45	3,68	0,0263
DPM	45,64	41,89	12,3	6	0,0028
DSM	0,66	1,08	0,266	7,67	0,0006
DYM	4,47	7,17	2,01	5,37	0,0051
HAU	130,01	274,9	293,18	3,21	0,0413
BAI	127,96	273,36	293,2	3,28	0,0388
SPF	127,36	272,45	291,77	3,25	0,0399
SPM	127,23	272,45	291,73	3,25	0,0398
DTR	0,32	0,29	0,27	1,08	0,3398

Table 5 : Firm's industry distribution and features

Panel A: Firms' (family and group affiliated) Industry distribution									
Number	**Industry**	**FML (n=37)**		**NFML (n=439)**		**GRP (n=66)**		**NGRP (n=298)**	
		Frequency	Percent	frequency	Percent	frequency	Percent	frequency	Percent
11	Mines	1	2,7	25	5,69	5	7,58	15	5,03
12	Métaux précieux	0	0	45	10,25	3	4,55	28	9,4
13	Pétrole et gaz	2	5,41	76	17,31	10	15,15	51	17,11
14	Distribution pétrolgaz	0	0	4	0,91	0	0	4	1,34
15	Produits de forêts	3	8,11	17	3,87	4	6,06	12	4,03
16	Produits d'alimentation	0	0	16	3,64	1	1,52	9	3,02
17	Produits industriels	5	13,51	34	7,74	0	0	33	11,07
18	Produits de consom	7	18,92	30	6,83	1	1,52	25	8,39
19	Technologie	2	5,41	23	5,24	0	0	19	6,38
20	Construction	2	5,41	17	3,87	6	9,09	11	3,69
21	Transport	0	0	8	1,82	1	1,52	4	1,34
22	services publics	0	0	11	2,51	3	4,55	8	2,68
23	Produits gros détail	7	18,92	36	8,2	10	15,15	25	8,39
24	Câble et communication	7	18,92	14	3,19	3	4,55	14	4,7
25	Finance et assurance	0	0	38	8,66	10	15,15	23	7,72
26	Compagnies de gestion	0	0	29	6,61	8	12,12	11	3,69
27	Consultation	1	2,7	16	3,64	1	1,52	6	2,01

Panel B : Firms (family and group-affiliated) selected features						
Variables	**FML**			**GRP**		
	FML	**NFML**	**t**	**GRP**	**NGRP**	**t**
RDE	1,42	0,94	0,0454	1,01	6,47	0,0001
NAF	7,84	9,21	0,1738	9,13	6,56	0,0319
BET	-1,94	-0,71	0,4928	0,22	0,15	0,7771
BET	-1,99	-0,61	0,0001	0,22	0,15	0,0019
VES	27,06	26,25	0,93303	24,48	32,61	0,5866
VGP	8,89	10,95	0,5356	27,99	5,02	0,0279

Table 6 : Regressions results (D10)

Variables	D10				
	Model 1				
	Family			Group	
	Global (n=228)	FML (n=205)	NFML (n=22)	GRP (n=153)	NGRP (n=46)
INTERCEPT	0.78 (0.0001)	1.06 (0.0285)	0.75 (0.0001)	0.14 (0.7506)	0.47 (0.0058)
BL1	0.01 (0.0001)	-0.003 (0.6114)	0.01 (0.0001)	0.009 (0.1129)	0.01 (0.0001)
VOL	6.34 (0.0029)	4.09 (0.8711)	6.31 (0.004)	5.24 (0.3658)	9.41 (0.0001)
QRM	-0.007 (0.076)	0.17 (0.3439)	-0.007 (0.0688)	0.24 (0.0617)	0.09 (0.0216)
CFL	-0.99 (0.0343)	2.36 (0.3794)	-0.94 (0.0503)	-0.94 (0.1525)	-1.48 (0.0601)
RES	0.23 (0.0001)	0.14 (0.1725)	0.22 (0.0001)	0.38 (0.0002)	0.2 (0.0001)
CRC	-0.003 (0.0089)	0.01 (0.129)	-0.004 (0.0049)	-0.01 (0.1089)	-0.005 (0.0006)
R-square	0,3024	0.4795	0,3139	0.4152	0,2568
Adj R-sq	0,2836	0.2843	0,2932	0.3275	0,2265
Model 2					
INTERCEPT	1.11 (0.0001)	1.2 (0.0457)	1.11 (0.0001)	0.35 (0.3693)	0.93 (0.0001)
BLI	0.0044 (0.0177)	-0.004 (0.5203)	0.005 (0.0106)	0.005 (0.1903)	0.003 (0.1351)
VOL	4.65 (0.0325)	7.08 (0.7874)	4.39 (0.0501)	3.68 (0.5152)	6.63 (0.008)
QRM	-0.005 (0.1904)	0.15 (0.3823)	-0.005 (0.1947)	0.28 (0.0362)	0.07 (0.0689)
CFL	-1.04 (0.0343)	2.3 (0.3655)	-1.02 (0.0438)	-1.1 (0.1007)	-1.14 (0.1675)
RES	0.23 (0.0001)	0.16 (0.1275)	0.22 (0.0001)	0.036 (0.0004)	0.17 (0.0002)
CRC	-0.003 (0.0105)	0.01 (0.1365)	-0.004 (0.0055)	-0.01 (0.1165)	-0.005 (0.0013)
R-square	0.2434	0.4847	0.2468	0.4033	0.17
Adj R-sq	0.2229	0.2915	0.224	0.3138	0.1362
Model 3					
INTERCEPT	0.78 (0.0001)	0.82 (0.2291)	0.76 (0.0001)	0.27 (0.6222)	0.55 (0.0025)
COC	0.009 (0.0001)	0.0006 (0.9421)	0.01 (0.0001)	0.005 (0.4031)	0.009 (0.0008)
VOL	6.49 (0.0032)	-1.95 (0.9391)	6.37 (0.0052)	4.7 (0.4488)	8.91 (0.0005)
QRM	-0.006 (0.1048)	0.19 (0.2858)	-0.006 (0.0982)	0.26 (0.0499)	0.07 (0.0647)
CFL	-0.96 (0.0439)	1.7 (0.5081)	-0.93 (0.06)	-0.97 (0.1525)	-1.21 (0.1325)
RES	0.22 (0.0001)	0.14 (0.1761)	0.22 (0.0001)	0.038 (0.0002)	0.18 (0.0001)
CRC	-0.003 (0.0087)	0.01 (0.1496)	0.004 (0.0051)	-0.02 (0.0925)	-0.005 (0.001)
R-square	0.2775	0.471	0.282	0.3878	0.2198
Adj R-sq	0.258	0.2726	0.2603	0.296	0.188

Tableau 7 : Regressions results (DSM)

Variables	DSM				
	Model 1				
	Family			Group	
	Global (n=228)	FML (n=205)	NFML (n=22)	GRP (n=153)	NGRP (n=46)
INTERCEPT	0.08 (0.0113)	0.1 (0.2617)	0.08 (0.0095)	0.23 (0.2596)	0.08 (0.0135)
BL1	0.002 (0.0001)	0.0007 (0.5698)	0.002 (0.0001)	0.002 (0.3595)	0.002 (0.0003)
VOL	2.87 (0.0001)	2.19 (0.7182)	2.98 (0.0001)	2.3 (0.4381)	2.78 (0.0001)
QRM	-0.0003 (0.6701)	0.03 (0.4207)	-0.0003 (0.6558)	-0.05 (0.4009	0.003 (0.2103)
CFL	0.2 (0.1956)	6.21 (0.0001)	0.04 (0.773)	-0.07 (0.8082)	0.74 (0.0026)
RES	0.08 (0.0001)	0.06 (0.0033)	0.08 (0.0001)	0.09 (0.0119)	0.07 (0.0001)
CRC	-0.0007 (0.0249)	0.0003 (0.8694)	-0.0007 (0.0288)	-0.006 (0.1303)	-0.001 (0.004)
R-square	0.2855	0.85	0.2873	0.2417	0.3276
Adj R-sq	0.2738	0.8179	0.2745	0.1525	0.3105
Model 2					
INTERCEPT	0.14 (0.0001)	0.02 (0.7866)	0.15 (0.0001)	0.33 (0.0571)	0.17 (0.0001)
BLI	0.001 (0.0135)	0.001 (0.2144)	0.001 (0.0312)	0.001 (0.6197)	0.0005 (0.346)
VOL	2.6 (0.0005)	0.69 (0.9086)	2.68 (0.0003)	1.8 (0.536)	2.23 (0.0019)
QRM	-0.0003 (0.6977)	0.03 (0.3461)	-0.0003 (0.6754)	-0.04 (0.4577)	0.002 (0.2767)
CFL	0.21 (0.1946)	6.12 (0.0001)	0.04 (0.7774)	-0.09 (0.7684)	0.82 (0.0011)
RES	0.08 (0.0001)	0.06 (0.0034)	0.08 (0.0001)	0.09 (0.0171)	0.07 (0.0001)
CRC	-0.0007 (0.0217)	0.0003 (0.8475)	-0.0007 (0.0246)	-0.007 (0.0977)	-0.001 (0.0044)
R-square	0.2623	0.8565	0.2636	0.2327	0.2913
Adj R-sq	0.2503	0.8258	0.2503	0.1425	0.2733
Model 3					
INTERCEPT	0.07 (0.0671)	0.07 (0.5041)	0.07 (0.065)	0.26 (0.3034)	0.1 (0.012)
COC	0.002 (0.0008)	0.0009 (0.5602)	0.002 (0.0015)	0.001 (0.5865)	0.001 (0.0179)
VOL	3.02 (0.0001)	2.33 (0.6974)	3.12 (0.0001)	2.3 (0.466)	2.66 (0.0003)
QRM	-0.0003 (0.6737)	0.03 (0.4239)	-0.0004 (0.656)	-0.05 (0.4171)	0.002 (0.2376)
CFL	0.21 (0.1737)	6.24 (0.0001)	0.05 (0.7352)	-0.07 (0.8143)	0.81 (0.0012)
RES	0.08 (0.0001)	0.05 (0.0046)	0.08 (0.0001)	0.09 (0.0113)	0.07 (0.0001)
CRC	-0.0007 (0.0281)	0.0002 (0.8973)	-0.000 7(0.0342	-0.006 (0.1348)	-0.001 (0.005)
R-square	0.2732	0.8501	0.2763	0.2335	0.3054
Adj R-sq	0.2614	0.818	0.2632	0.1433	0.2877

Table 8 : Regressions results with interaction effect

Panel A: Interaction with family				
	DSM (n=374)		D10 (n=228)	
Variables	**Parameter**	**t**	**Parameter**	**t**
INTERCEPT	0.08	0.0078	0.52	0.0001
BL1	0.002	0.0001	0.01	0.0001
VOL	2.98	0.0001	9.07	0.0001
QRM	-0.0003	0.6474	-0.004	0.2148
CFL	0.04	0.7672	-0.94	0.0469
RES	0.08	0.0001	0.22	0.0001
CRC	-0.0007	0.0249	-0.004	0.0043
FML	0.01	0.9272	0.39	0.5047
FBL1	-0.001	0.4436	-0.01	0.0783
FVOL	-0.78	0.9372	-3.21	0.9184
FQRM	0.03	0.6158	0.17	0.4259
FCFL	6.16	0.0001	3.31	0.3232
FRES	-0.02	0.5197	-0.08	0.5366
FCRC	0.001	0.7468	0.01	0.1059
R-square	0.356		0.325	
Adj R-sq	0.333		0.284	
Panel B: Interaction with group affiliation				
	DSM (n=300)		D10 (n=200)	
Variables	**Parameter**	**t**	**Parameter**	**t**
INTERCEPT	0.08	0.0364	0.4723	0.0061
BL1	0.002	0.002	0.0126	0.0001
VOL	2.78	0.0009	9.4146	0.0002
QRM	0.003	0.2899	0.0906	0.0226
CFL	0.74	0.0106	-1.4887	0.0621
RES	0.07	0.0001	0.2037	0.0001
CRC	-0.001	0.0148	-0.00564	0.0006
GRP	0.15	0.2893	-0.3308	0.4731
GBL1	0.0002	0.9083	-0.00338	0.5885
GVOL	-0.47	0.8204	-4.1707	0.4918
GQRM	-0.05	0.1741	0.1570	0.2309
GCFL	-0.82	0.0219	0.5422	0.5925
GRES	0.02	0.385	0.1768	0.0737
GCRC	-0.005	0.0623	-0.01348	0.2380
R-square	0.335		0.3170	
Adj R-sq	0.305		0.270	

Table 9 : Logit regressions of explanatory variables on the probability to not change the dividend

Panel A : Logit regressions of explanatory variables on the probability to not change the dividend payments with the maximum likelihood estimates (family interaction)						
	Model 1 (n=271)		**Model 2 (n=271)**		**Model 3 (n=271)**	
Variables	**Parameter**	X^2	**Parameter**	X^2	**Parameter**	X^2
INTERCEPT	0.9203	0.0001	0.7706	0.0001	0.7739	0.0001
BL1	-0.0116	0.0001				
BLI			-0.00951	0.0001		
COC					-0.0067	0.0111
VOL	-22.085	0.0001	-21.0914	0.0001	-20.9321	0.0001
CRC	0.0155	0.0001	0.0156	0.0001	0.0154	0.0001
CFL	1.5841	0.0013	1.5843	0.0012	1.5194	0.0019
QRM	0.0196	0.2692	0.0191	0.2424	0.0201	0.2648
RES	-0.5034	0.0001	-0.5165	0.0001	-0.5055	0.001
FML	-0.6417	0.2779	2.5110	0.0091	1.7998	0.0573
FBL1	0.0030	0.7694				
FBLI			-0.0446	0.0015		
FCOC					-0.0325	0.0110
FVOL	45.2129	0.5512	205.6	0.0183	140.5	0.0919
FCRC	0.0107	0.5160	0.0186	0.3101	0.0169	0.3475
FCFL	50.4080	0.1654	77.5967	0.0395	71.5893	0.0601
FQRM	-0.1935	0.4869	-0.3809	0.2728	-0.3462	0.2882
FRES	-0.2758	0.1636	-0.5241	0.0169	-0.4017	0.0539
Concordant : PC	0.750		.755		.747	
Panel B : Logit regressions of explanatory variables on the probability to not change the dividend payments with the maximum likelihood estimates (group interaction)						
	Model 1 (n=222)		**Model 2 (n=222)**		**Model 3 (n=222)**	
Variables	**Parameter**	X^2	**Parameter**	X^2	**Parameter**	X^2
INTERCEPT	0.99	0.0001	0.71	0.0001	0.78	0.0001
BL1	-0.01	0.0001				
BLI			-0.009	0.0001		
COC					-0.008	0.0085
VOL	-20.59	0.0001	-17.72	0.0001	-18.02	0.0001
CRC	0.01	0.0001	0.01	0.0001	0.01	0.0001
CFL	1.71	0.0061	1.59	0.0095	1.5	0.0144
QRM	-0.05	0.1853	-0.06	0.1485	-0.05	0.188
RES	-0.53	0.0001	-0.54	0.0001	-0.51	0.0001
GRP	-0.2	0.6483	0.63	0.1143	0.27	0.6053
GBL1	0.01	0.0795				
GBLI			-0.004	0.444		
GCOC					0.001	0.8356
GVOL	-5.24	0.4928	-9.58	0.1954	-9.64	0.228
GCRC	0.01	0.1124	0.01	0.2136	0.01	0.1304
GCFL	-0.16	0.8863	0.57	0.6094	0.21	0.8513
GQRM	-0.09	0.479	-0.12	0.356	-0.08	0.5383
GRES	0.04	0.6639	0.1	0.324	0.02	0.8034
Concordant : PC	0.744		0.744		0.738	

Table 10 : Logit regressions of explanatory variables on the probabilities to rise dividend payments

Panel A : Logit regressions of explanatory variables on the probabilities to rise dividend payments with the maximum likelihood estimates (family interaction).						
	Model 1 (n=278)		**Model 2 (n=278)**		**Model 3 (n=278)**	
Variables	**Parameter**	X^2	**Parameter**	X^2	**Parameter**	X^2
INTERCEPT	-1.4218	0.0001	-1.2651	0.0001	-1.3135	0.0001
BL1	0.0103	0.0001				
BLI			0.00787	0.0001		
COC					0.00638	0.0144
VOL	24.3415	0.0001	23.5361	0.0001	23.8135	0.0001
CRC	-0.0115	0.0001	-0.0117	0.0001	-0.0115	0.002
CFL	-1.3414	0.003	-1.3614	0.0025	-1.3170	0.0035
QRM	-0.0203	0.3813	-0.0193	0.3538	-0.0210	0.3780
RES	0.4277	0.0001	0.4368	0.0001	0.4305	0.0001
FML	-0.7527	0.2510	-3.4882	0.0009	-3.1208	0.0042
FBL1	0.00922	0.3709				
FBLI			0.0452	0.0015		
FCOC					0.0388	0.0055
FVOL	-81.7743	0.2377	-227.1	0.0051	-181.1	0.0204
FCRC	-0.0111	0.4789	-0.0245	0.1641	-0.0203	0.2400
FCFL	10.1174	0.7470	-29.8390	0.3387	-20.0566	0.5213
FQRM	0.8011	0.0051	1.0332	0.0011	0.9819	0.0018
FRES	0.3802	0.0544	0.551	0.0086	0.4498	0.251
Concordant : PC	.734		.737		.733	
Panel B : Logit regressions of explanatory variables on the probabilities to rise dividend payments with the maximum likelihood estimates (group interaction).						
	Model 1 (n=229)		**Model 2 (n=229)**		**Model 3 (n=229)**	
Variables	**Parameter**	X^2	**Parameter**	X^2	**Parameter**	X^2
INTERCEPT	-1.4068	0.0001	-1.1689	0.0001	-1.1876	0.0001
BL1	0.0108	0.0005				
BLI			0.00659	0.0038		
COC					0.00505	0.0924
VOL	24.6324	0.0001	22.8942	0.0001	22.7457	0.0001
CRC	-0.0132	0.0004	-0.0140	0.0002	-0.0135	0.0004
CFL	-1.6273	0.0056	-1.5742	0.0072	-1.4956	0.0104
QRM	0.0503	0.2674	0.0537	.2372	0.0511	0.2613
RES	0.4459	0.0001	0.4468	0.0001	0.4279	0.0001
GRP	-0.7162	0.1301	-1.2582	0.0049	-1.4324	0.0105
GBL1	0.00215	0.7508				
GBLI			0.0116	0.0367		
GCOC					0.0137	0.0620
GVOL	0.6982	0.9119	2.8305	0.6480	6.0679	0.3638
GCRC	0.00207	0.8560	0.00483	0.6755	0.00292	0.8019
GCFL	0.0555	0.9582	-0.5474	0.6059	-0.3835	0.7215
GQRM	0.1528	0.2492	0.2218	0.0978	0.1354	0.3054
GRES	0.0459	0.6572	0.00457	0.9662	0.0730	0.4810
Concordant : PC	.729		.731		.729	

Appendix I

Panel A : Spearman Correlation Coefficients									
	D10	DY5	DL3	DC3	DCD	DP5	DPM	DSM	DYM
D10	1.00	0.78 (0.0001)	0.74 (0.0001)	0.73 (0.0001)	0.75 (0.0001)	0.54 (0.0001)	0.51 (0.0001)	0.75 (0.0001)	0.75 (0.0001)
DY5		1.00	0.89 (0.0001)	0.88 (0.0001)	0.86 (0.0001)	0.63 (0.0001)	0.51 (0.0001)	0.93 (0.0001)	0.97 (0.0001)
DL3			1.00	0.97 (0.0001)	0.90 (0.0001)	0.60 (0.0001)	0.55 (0.0001)	0.96 (0.0001)	0.90 (0.0001)
DC3				1.00	0.92 (0.0001)	0.60 (0.0001)	0.55 (0.0001)	0.98 (0.0001)	0.89 (0.0001)
DCD					1.00	0.54 (0.0001)	0.45 (0.0001)	0.90 (0.0001)	0.81 (0.0001)
DP5						1.00	0.86 (0.0001)	0.64 (0.0001)	0.62 (0.0001)
DPM							1.00	0.58 (0.0001)	0.53 (0.0001)
DSM								1.00	0.95 (0.0001)
DYM									1.00

Panel B : Pearson Correlation Coefficients									
	D10	DY5	DL3	DC3	DCD	DP5	DPM	DSM	DYM
D10	1.00								
DY5	0.42 (0.0001)	1.00							
DL3	0.25 (0.001)	0.56 (0.0001)	1.00						
DC3	0.27 (0.0001)	0.73 (0.0001)	0.92 (0.0001)	1.00					
DCD	0.23 (0.0001)	0.49 (0.0001)	0.76 (0.0001)	0.86 (0.0001)	1.00				
DP5	0.17 (0.0043)	0.29 (0.0001)	0.15 (0.0044)	0.25 (0.0001)	0.17 (0.0039)	1.00			
DPM	0.15 (0.0104)	0.24 (0.0001)	0.18 (0.0010)	0.20 (0.0010)	0.08 (0.1959)	0.89 (0.0001)	1.00		
DSM	0.33 (0.0001)	0.75 (0.0001)	0.83 (0.0001)	0.97 (0.0001)	0.77 (0.0001)	0.27 (0.0001)	0.22 (0.0001)	1.00	
DYM	0.37 (0.0001)	0.97 (0.0001)	0.52 (0.0001)	0.71 (0.0001)	0.42 (0.0001)	0.24 (0.0001)	0.21 (0.0001)	0.73 (0.0001)	1.00

D10: The ten years dividend/book-value Stock-Guide

DY5: The five years dividend yield (div/market-value)

DC3: The three years dividend/share average

DCD: The ten years dividend/share

DP5: The five years dividend payout

DPM: The dividend payout average (DPM)

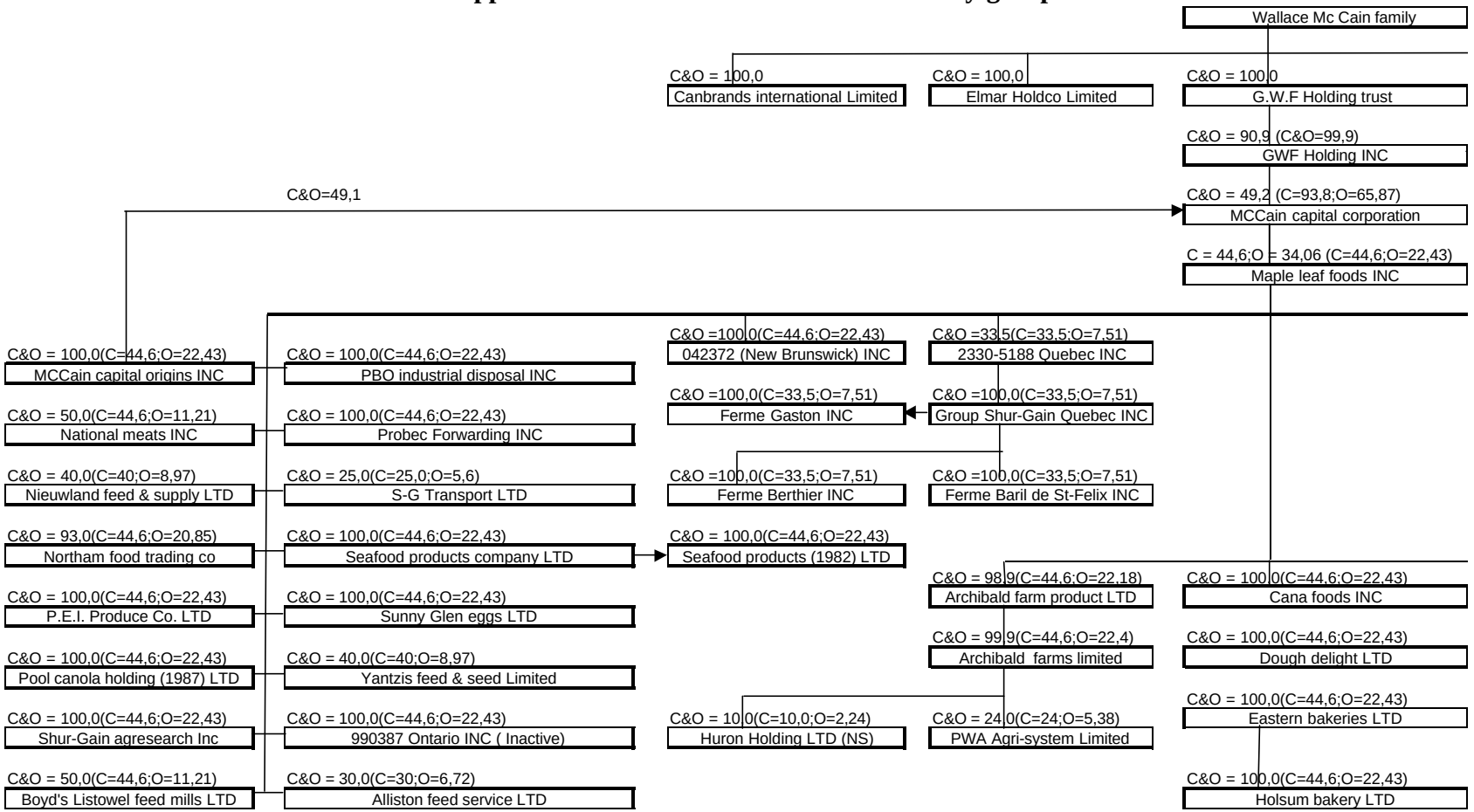
DYM: The dividend yield average (DYM)

DSM: The dividend/share Stock-Guide

DL3: The three years dividend/share average

The data for the first four variables was gathered from Compustat, the data for the second four variables was gathered collected from "Stock-Guide", and the data for the last variable was gathered from "Ruban Laval".

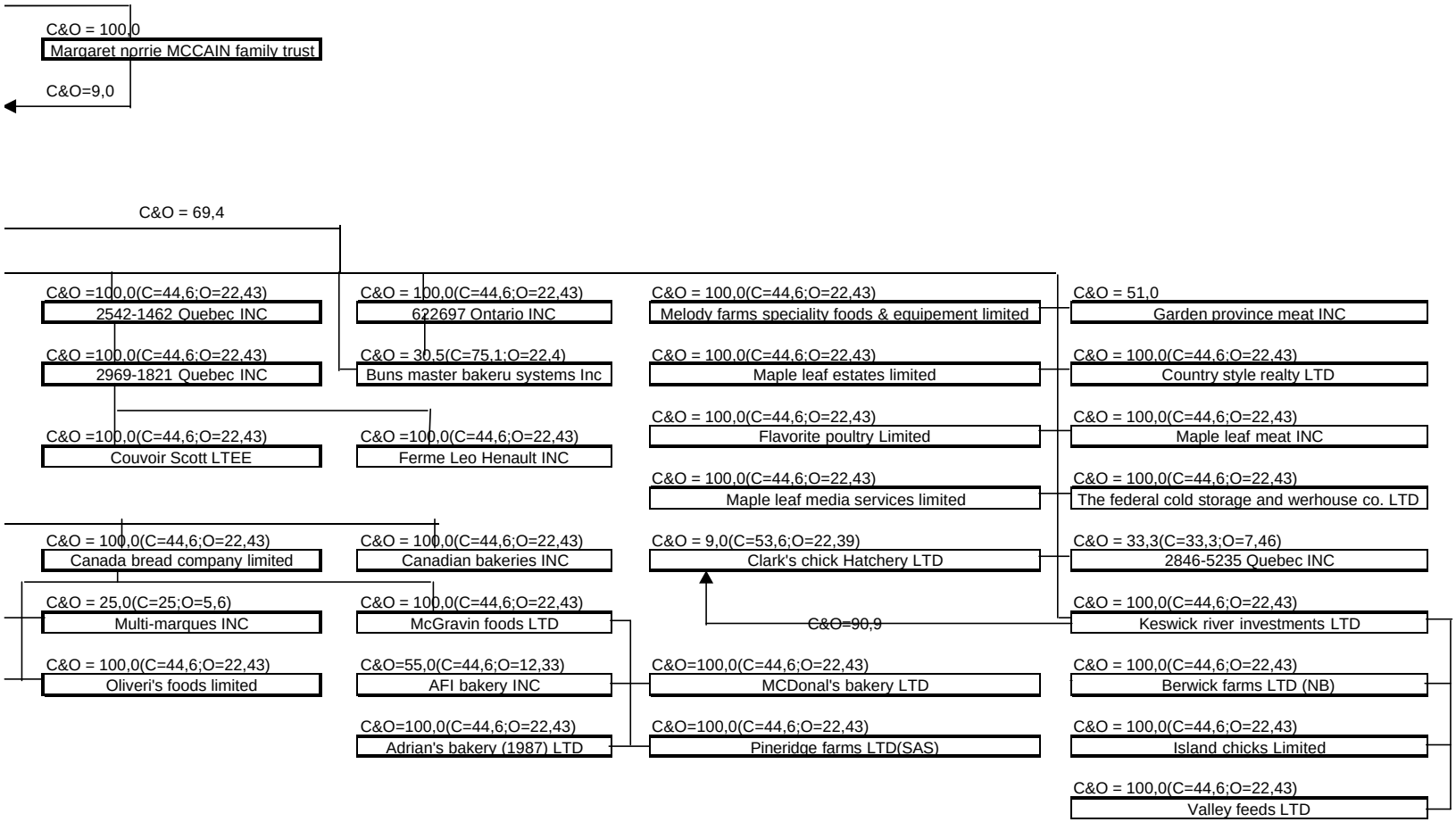
Appendix II .A : The Wallace McCain family group



(C = Control; O = Ownership; and numbers in parenthesis hold for indirect control and ownership)

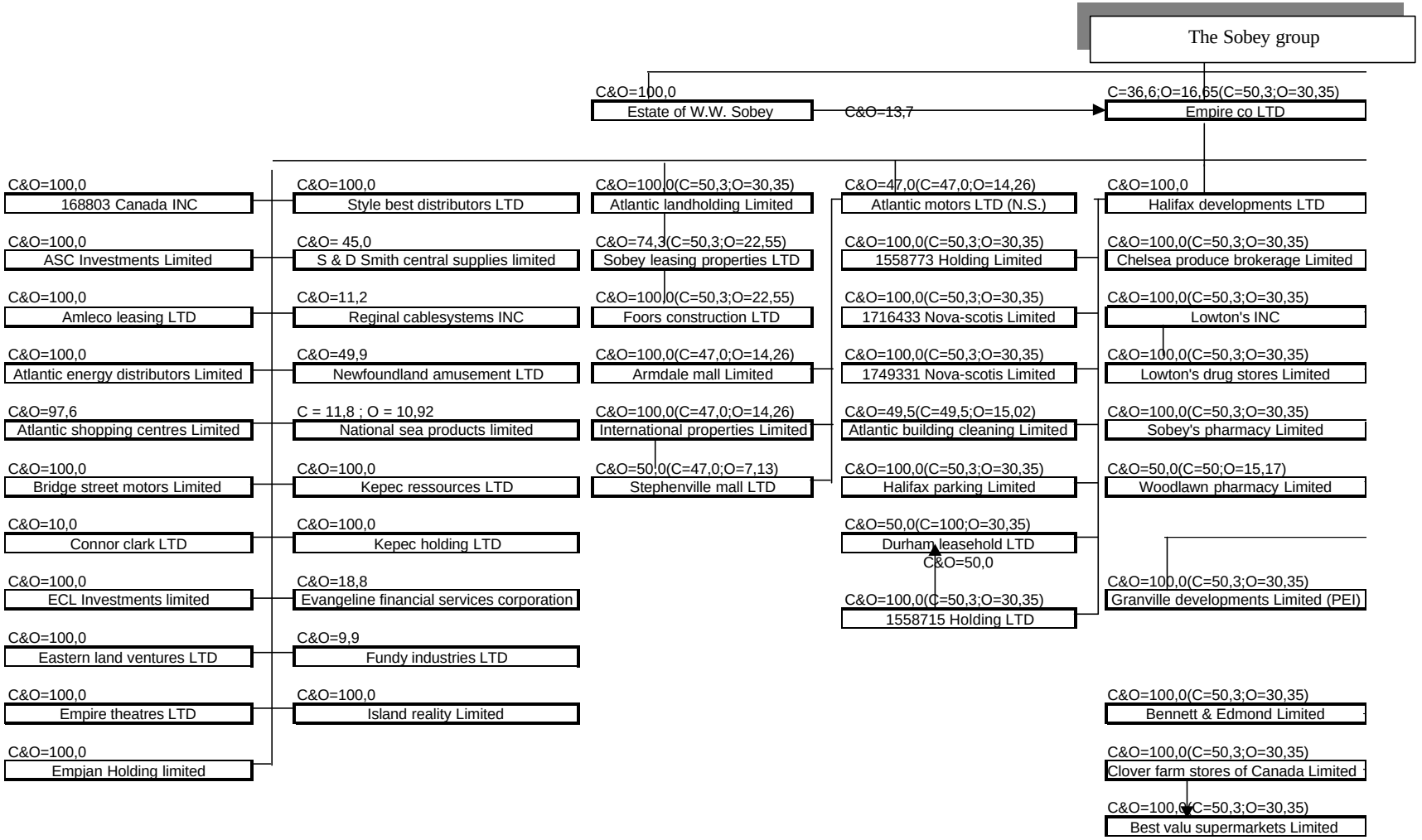
Wallace Mc Cain family group

Appendix II. A : The Wallace Mc Cain family group (continued)

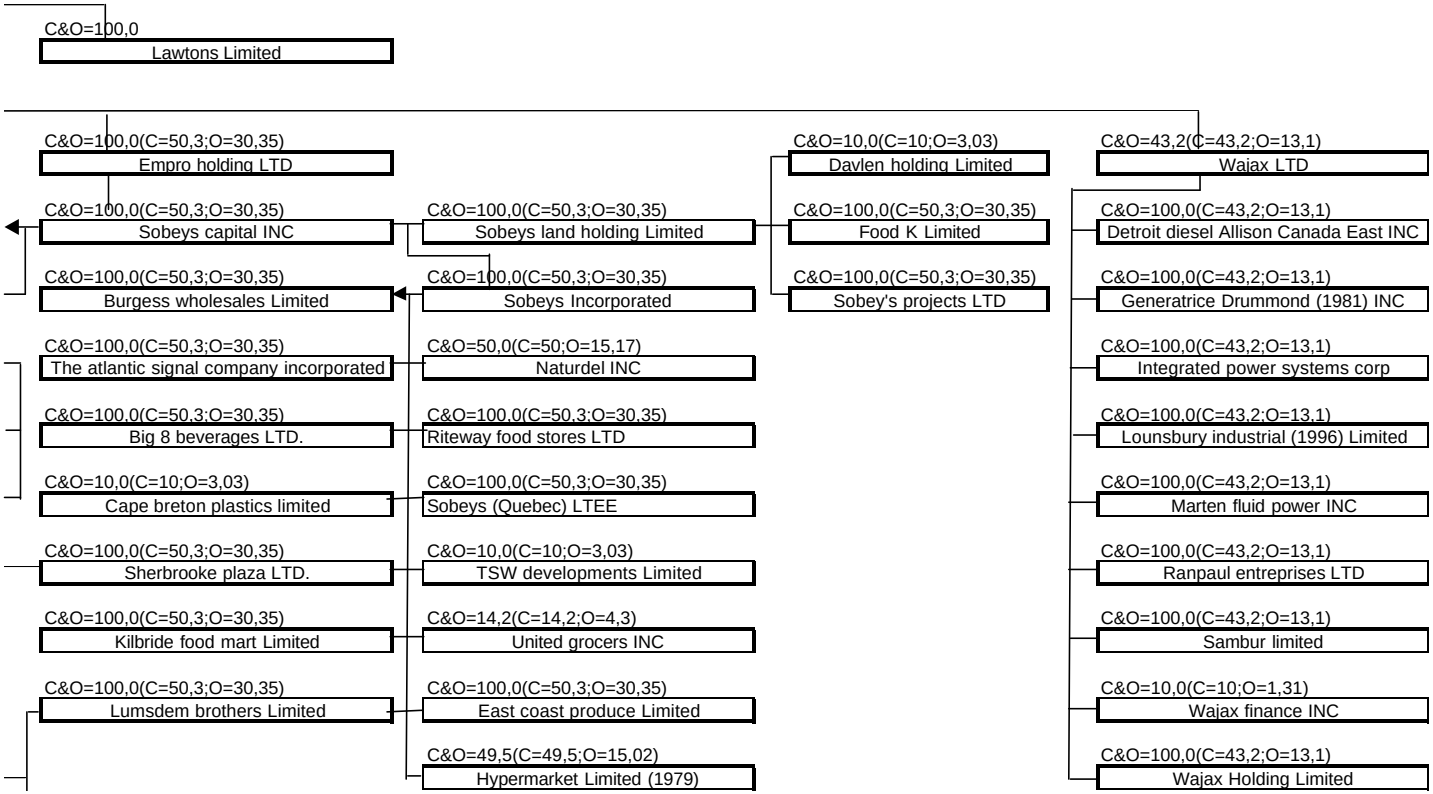


Appendix II. B : The Sobey family group

(C = Control; O = Ownership; and numbers in parenthesis



hold for indirect control and ownership)



Appendix II. B : The Sobey family group (continued)