ARE CANADIAN CLOSELY-HELD FIRMS PERCEIVED TO REPORT LOW QUALITY ACCOUNTING INFORMATION? EMPIRICAL EVIDENCE

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Abstract

The objective of this study is to provide empirical evidence as to how corporate ownership structure in Canada affects earnings informativeness, as measured by the earnings-return relationship. Like those in many countries around the world, Canadian publicly traded companies are characterized by both concentrated ownership and divergence between voting rights and cash-flow rights. Like those in many other countries, their main agency problem resides in the conflict between large controlling blockholders and minority shareholders. These large dominant shareholders, with their imposing block of voting rights, are likely to influence accounting-information reporting. In this paper, we test whether large dominant shareholders are perceived to report low quality earnings. We show that earnings informativeness depends directly on the ownership structure of publicly traded firms. Furthermore, we show that investors perceive reported earnings as least credible when a controlling blockholder has both the power and impetus to expropriate minority shareholders, which suggests a non-monotonic relationship between earnings informativeness and ownership structure.

Keywords: earnings informativeness, agency costs, ownership concentration, voting and cash-flow rights divergence

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1. Introduction

Publicly traded companies are under stronger and stronger pressures to adopt healthy governance practices and thus increase the transparency of their management. These pressures are not without their link to the phenomenon commonly called globalization and, even more specifically, to the lightning growth of capital markets all around the world (Megginson, 2000). In this context, the quality of financial and non-financial information disclosed by corporations seems to play a leading role. This paper is aimed at verifying whether the ownership structure of publicly traded companies has any effect on the quality of reported accounting information. More specifically, this study focuses on the link between corporate ownership structure and the informativeness of earnings, as measured by the earnings-return relationship.

In most countries -except in the US and a few other developed countries- publicly traded firms are often controlled by large shareholders, typically a founder (or his immediate family) who also participates in firm management, either as director and/or officer (La Porta, Lopez-de-Silanes and Schleifer, 1999; Claessens, Djankov and Fan, 2000; Faccio and Lang, 2002; Lins, 2003). Furthermore, these large dominant shareholders frequently own control rights that are well in excess of their cash-flow rights. This deviation from the "one share/one vote" rule, which is usually achieved through pyramid structures or the use of shares with multiple voting rights, tends to separate the dominant shareholder's voting rights from his cash-flow rights. This raises numerous concerns with respect to macro- and microeconomic efficiency. At the macro level, Morck, Wolfenzon, and Yeung (2005) argue that, when large blockholders dominate the

ownership structure of firms and when the separation between voting and cash-flow rights is generalised in an economy, the result may be inefficient capital allocation, reduced investment in innovation, and retarded economic growth. At the more micro level, concentrated ownership coupled with a separation between voting and cash-flow rights will tend to entrench the dominant shareholder. Entrenchment becomes problematic when the control of voting rights is concentrated in the hands of the dominant shareholder but cash-flow rights are diffused among a great number of small shareholders. In this context, the risk that minority shareholders might be expropriated by the dominant shareholder becomes a growing cause for concern (Bebchuck, Kraakman and Triantis, 2000)[1].

In this framework, we hypothesize that agency conflicts associated with ownership concentration and the divergence between voting rights and cash-flow rights will negatively affect the quality of the accounting information reported. To the extent that the entrenched dominant shareholder has enough power to influence the decision-making process, including accounting reporting policies, we argue that investors will suspect that the earnings reported by these companies are being manipulated to mask dysfunctional and opportunistic behaviour on the part of the dominant shareholder. This will undermine the credibility of reported earnings and, therefore, the informativeness of those earnings.

This paper builds on previous studies in at least two ways. First, Jung and Kwon (2002), Fan and Wong (2002), and Yeo, Tan, Ho and Chen (2002) provide some evidence on the relationship between corporate ownership structure and the informativeness of accounting earnings, as measured by the earnings-return relationship. However, these papers focus exclusively on the Asian context— a context where corporate governance in general and legal protections granted to investors in particular are weak (La Porta, Lopez-de-Silanez, Shleifer and Vishny, 1998). Warfield, Wild and Wild (1995) and Francis, Schipper and Vincent (2005) provide evidence from U.S. capital markets but ownership concentration and the deviation to the one share – one vote are not prevalent in the U.S.

In this paper, we provide empirical evidence as to how corporate ownership structure affects the earnings informativeness of Canadian firms. Like those in Asia, Canadian companies are characterized by concentrated ownership and divergence between cash-flow rights and voting rights. But, unlike those in Asian countries, Canada's regulations and legal system (laws and enforcement of laws) offer good protection for investors (La Porta et al., 1998), suggesting that the expropriation of minority shareholders by large dominant shareholders could perhaps be more difficult in Canada than in other parts of the world. Indeed, an interesting research question emerges: Whether, in an institutional setting where laws are protective of outside investors, dominant shareholders are perceived to report low-quality earnings. Although Gabrielsen, Gramlich, and Plenborg (2002) provide evidence from the Danish context (where legal protections for investors are stronger than in Asia), these authors do not explicitly assess the impact of the separation between voting and cash-flow rights on the information content of earnings, nor do they analyse firms' ultimate ownership effects.

Second, this study expands on previous studies, in that it tests a non-monotonic linear relationship between earnings informativeness and corporate ownership structure. Several papers (Morck, Shleifer, and Vishny, 1988; Holderness, Kroszner, and Sheehan, 1999, among others) show that the relationship between ownership concentration and agency costs, as reflected in firm value, takes a curvilinear form. This literature suggests that agency costs reach their highest level when the dominant shareholder has both the power and the incentives to expropriate the other shareholders. Morck et al. (1988), for instance, show that American firms with managerial ownership of 5% to 25% have weaker performance. Based on this literature, we examine the relations between ownership concentration, divergence between voting rights and cash-flow rights, and the informativeness of reported earnings according to two dimensions: (1) the varying degree of power allowing dominant shareholders to expropriate and (2) their incentive to expropriate. We hypothesize that the accounting information reported to investors is least credible when dominant shareholders have at their disposal the power and the incentive to expropriate minority shareholders.

Our analysis uses data for 412 of the largest publicly traded controlled corporations in Canada. From regression techniques, we see that our empirical evidence is broadly consistent with our predictions. We provide several statistically significant results. We show that as the voting rights of the dominant shareholder increase and therefore raise the agency costs associated with his entrenchment, earnings informativeness decreases. We also find that the greater the gap between voting and cash-flow rights, the lower the quality of the

[1] Recent empirical studies report that the concentrated control (voting rights) and the separation between voting rights and cash-flow rights negatively affect the firm's value and operating performance (see for instance, Claessens, Djankov, Fan and Lang, 2002; Mitton, 2002; Lins, 2003, Baek, Kang and Park, 2004; Bozec and Laurin, 2004). These results suggest that ownership concentration and divergence between voting and cash-flow rights create high agency costs.

earnings reported to investors. However, we find that this negative relation between ownership concentration; separation between voting and cash-flow rights; and earnings informativeness is even more pronounced when the dominant shareholder has effective control (more than 5% of voting rights) but less than 25% of the cash-flow rights. Accordingly, these results suggest that the relationship between corporate ownership structure and earnings quality is non-monotonic. Finally, managerial ownership (inside dominant shareholder) is associated with lower earnings informativeness, and Canadian firms controlled by families, as opposed to those controlled by institutions or widely held ownership, are perceived to report lower quality-earnings. Overall, our results suggest that the informativeness of earnings is directly dependent on corporate ownership structure.

The remainder of this paper proceeds as follows. In section 2, we present the theoretical framework as well as the empirical evidence on the relations between ownership concentration, agency costs, and the informativeness of reported earnings. In section 3, we develop our research hypotheses and discuss the methodology. Results and concluding remarks follow in Sections 4 and 5 respectively.

2. Ownership concentration, agency costs, and the informativeness of earnings

2.1. Ownership concentration and agency costs

The separation of ownership from control exposes firms, whether large or small, to agency problems (Shleifer and Vishny, 1997). In their seminal study, Berle and Means (1932) argue that the diffusion of firm ownership across a large number of shareholders creates a conflict of interest between the managers and these numerous investors. When ownership is dispersed, small investors are not economically motivated to monitor the behaviour of the managers. In this situation, the managers may be able to pursue their own objectives.

Ownership concentration is often proposed as a solution to circumvent this problem arising from widely dispersed ownership. Proponents of agency theory argue that increasing managers' stake in ownership is likely to align their interests with those of shareholders (Jensen and Meckling, 1976). Stock and stock-option based compensation, for instance, ties the manager's wealth to firm value and therefore acts as a powerful tool to align his interests with those of shareholders (Murphy, 1999). Furthermore, the concentration of ownership rights in the hands of a dominant shareholder is also proposed as a solution favouring the proper alignment of managerial interests (Shleifer and Vishny, 1986). Not only are shareholders with large ownership stakes economically motivated to collect information and monitor managers, they are also most likely to have the resources and the power to discipline managers (Shleifer and Vishny, 1997; Burkart, Gromb and Panunzi, 1997).

However, recent empirical evidence has shown that the Berle-and-Means model of a firm with widely dispersed ownership does not reflect the reality in most countries. In a ground breaking study, La Porta et al. (1999) show that in countries outside the United States and the United Kingdom, firm ownership tends to be concentrated in the hands of dominant shareholders, most often wealthy families who also participate in firm management. For these firms, the potential for conflict of interest still exists. However, the conflict will not arise between managers and shareholders but will instead pit the dominant shareholder, who controls the firm's assets, against minority shareholders, who run the risk of expropriation.

Minority shareholders run the risk of expropriation for several reasons. The first is the irreversible entrenchment of a manager who is also a dominant shareholder (Morck et al. 1988). An entrenched manager cannot be displaced even if his performance is deemed unsatisfactory (Daniels and Halpern, 1996). If this manager is also a dominant shareholder, he will be in a position to block every attempt at a hostile takeover (Stulz, 1988). In this case, expropriation takes the form of agency costs which negatively affect firm value. Besides managerial entrenchment, concentration of ownership could have other adverse effects. Generally speaking, large blockholders can often impose their personal preferences even when they run contrary to those of minority shareholders (Shleifer and Vishny, 1997). Suboptimal investment decisions, such as over-expansion through mergers and acquisitions, are often cited as examples of decisions which alter the value of minority holdings (Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000).

The adverse effects of concentrated ownership on firm value are somehow mitigated when the dominant shareholder's cash-flow rights are proportional to his voting rights. In this case, any decisions altering firm value would also threaten the dominant shareholder's wealth. However, La Porta et al. (1999) report that dominant shareholders often establish control over a firm despite their modest cash-flow rights. Bebchuck et al. (2000) explain how shares with multiple voting rights; pyramidal ownership structures; and cross-ownership can be used to obtain control over voting rights that is well

in excess of cash-flow rights—what the authors called "controlling minority structures." The separation between voting and cash-flow rights which ensues will exacerbate the potential for conflict of interest between the large dominant shareholder and minority shareholders. As a result of this separation, the dominant shareholder remains entrenched and can use his control to extract corporate resources. However, even as the dominant shareholder's cash-flow rights decrease, he will enjoy all the private benefits of control, while internalizing only a small fraction of the negative impact of decisions on firm value.

Overall, the literature tends to agree that, for minority shareholders, concentrated ownership with a separation of voting and cash-flow rights is the worst of both worlds. This literature suggests that separating voting rights from cash-flow rights can create agency costs greater than those associated with a large dominant shareholder who also has a sizeable share of cash-flow rights. These arguments are clearly supported empirically where legal protections for investors are weak, as in Asia for example (Claessens et al., 2002; Mitton, 2002; Baek et al., 2004). In the Canadian context—where the risks of expropriation are lower than in Asia—Bozec, and Laurin (2004) note that only under certain conditions does the separation between cash-flow rights and voting rights seem to have a negative effect on the performance of Canadian firms.

2.2. Ownership concentration and the informativeness of earnings

The concentration of ownership in the hands of a dominant shareholder influences disclosure policies while also affecting agency costs. When a dominant shareholder controls a large block of voting rights, he can use his power to dictate the rules governing the production of accounting information and reporting policies. Thus, when a dominant shareholder has effective control of a firm and when there is a large separation between his voting and cash-flow rights, we argue that capital markets will pay less attention to reported earnings. Investors will suspect the dominant shareholder of manipulating the accounting information, either to mask decisions aimed at expropriating minority shareholders or to avoid attracting attention to the company's management. In this context, investors expect that the earnings reported will *not* truly reflect the firm's financial position; this entails a loss of confidence and, consequently, lowers the credibility of the accounting information disclosed.

Previous studies provide some empirical evidence on the relationship between earnings informativeness and corporate ownership structure. When this relationship is analyzed over samples of American firms (i.e. samples that include a large proportion of firms with diffused ownership), Warfield et al. (1995) find that earnings are more informative as the ownership stake of the managers increases. These results are consistent with Jensen and Meckling's (1976) convergence-of-interests hypothesis. More recently, Francis et al. (2005) compare a sample of 205 U.S. dual-class firms with an undustry-matched sample of single class firms. They show that deviation to the one share – one vote rule, and not necessarily managerial ownership, adversely affects the earnings informativeness.

Other studies (Fan and Wong, 2002; Jung and Kwon, 2002; Yeo et al., 2002; Gabrielsen et al., 2002) have examined the same relationship on samples of non-US firms. These samples allow for an analysis of the possible influence of ownership concentration and separation between voting and cash-flow rights on earnings informativeness, a phenomenon which is not prevalent in the US. Fan and Wong (2002) for instance, examine this relationship on a sample of 977 companies in seven East Asian economies. These authors find that as the voting rights of the largest shareholder increase, the quality of reported earnings decreases, reflecting the agency costs associated with managerial entrenchment. Furthermore, Fan and Wong (2002) observe that as the divergence between voting and cash-flow rights increases, earnings become less and less informative. These results suggest that, when the voting rights of a dominant shareholder are well in excess of his cash-flow rights, the agency conflict between the dominant shareholder and minority shareholders is exacerbated.

3. Research hypotheses and data

3.1. Research hypotheses

The main objective of this study is to test whether the presence of an entrenched dominant shareholder has a negative impact on the quality of accounting information reported by Canadian firms. Broadly speaking, we expect that the greater the agency conflicts between the dominant shareholder and minority shareholders, the lower the credibility of earnings reported to investors.

Previous studies suggest that ownership concentration produces ambiguous effects on firm value. On one hand, concentrated ownership eliminates the misalignment of interests between managers and shareholders. On the other hand, concentrated ownership can create an entrenchment problem. Empirical studies show that agency costs reach their highest level when dominant shareholders have enough power to entrench themselves and to

extract private benefits of control without internalizing a significant fraction of the costs. For instance, Morck et al. (1988) show that firm value declines as managerial ownership increases between 5% and 25%, suggesting that the negative effect of managerial entrenchment dominates the positive effect of interest alignment.

Based on previous research, we hypothesize that the concentration of ownership in the hands of a dominant shareholder has the most pronounced negative impact on earnings informativeness when the dominant shareholder has the power and the incentives to expropriate. For a dominant shareholder to have the power to expropriate, we follow Morck et al. (1988) and set the control of voting rights threshold at 5%. For a dominant shareholder to have the incentive to expropriate, we follow the same authors in setting the stake in the cash-flow rights threshold at 25% or less. Our first research hypothesis reads as follows:

H_1: *There is a negative relationship between the concentration of voting rights and the informativeness of earnings. However, voting-rights concentration has the most pronounced negative impact on earnings informativeness when the dominant shareholder controls more than 5% of the voting rights but less than 25 % of the cash-flow rights.*

When ownership is concentrated but voting rights and cash-flow rights diverge, the dominant shareholder becomes entrenched despite his modest share of cash-flow rights. As argued, the agency conflicts between the dominant shareholder and minority shareholders are likely to grow more severe as the gap between voting rights and cash-flow rights widens. Again, based on this literature, we hypothesize that the degree of separation between voting and cash-flow rights, by increasing agency costs, adversely affects the quality of reported earnings. We expect, however, that this negative impact is more pronounced when the dominant shareholder has both the power and incentives to expropriate minority shareholders. Our second research hypothesis reads as follows:

H_2 *: The degree of separation between voting rights and cash-flow rights translates into negative effects on the informativeness of earnings. However, this negative impact is more pronounced when the dominant shareholder controls more than 5% of the voting rights but less than 25% of the cash-flow rights.*

3.2. Sample selection and ownership definitions

The starting point for the construction of our sample is the Stockguide database. We selected all publicly traded firms listed on Stock Exchange in Canada, with the exception of conglomerates and financial institutions. Of these 1,143 companies, we retained the largest 550 firms, based on the value of their assets. We then used each firm's 1999 proxy circular, available on the SEDAR website, to manually collect data on ownership. We imposed several restrictions: First, to maintain the Canadian nature of our sample, we excluded firms with headquarters outside of Canada (17 in all). Second, we eliminated firms for which the ownership structure had changed during 1999 (26 in all). Furthermore, we excluded those with incomplete data on ownership (20 in all). Finally, to the extent that our objective is to test whether ownership concentration with a separation between the dominant shareholder's control rights and cash-flow rights affects earnings informativeness, we eliminated 75 firms with dispersed ownership; therefore we retained only controlled corporations as part of our sample (i.e., firms where the dominant shareholder controls at least 5% of the voting rights). The final sample is comprised of 412 Canadian controlled corporations.

To compile data on ownership, we replicate the methodology of La Porta et al. (1999). In accordance with this methodology, when the immediate largest shareholder of a corporation is a corporate entity or a financial institution, we identify their owners and the owners of their owners, etc., in order to find the ultimate owner. To determine the degree of separation between voting and cash-flow rights, we use the largest ultimate shareholder's voting and cash-flow rights.

The cash-flow rights and voting rights of the largest ultimate (dominant) shareholder are measured as follows. Suppose that a publicly traded firm Z is controlled (50% of the voting rights) by a publicly traded firm X, which in turn is controlled (40% of the voting rights) by a family. In this case, the family would be identified as the largest ultimate shareholder of firm Z. The family is said to indirectly own 40% of the voting rights in Z (i.e., the weakest link in the chain of voting rights) and about 20% of the cash-flow rights in Z (i.e., the product of 40% and 50%). In this example, the measure of separation between voting and cash-flow rights takes the value of 0.5, which represents the ratio of cash-flow rights of the largest ultimate shareholder divided by their voting rights (ratio CFR/VR). This measure of separation is the same as that used by Fan and Wong (2002). This ratio will equal unity when there is no separation between voting and cash-flow rights. In contrast, the closer the ratio to zero, the greater the gap between the voting rights and cash-flow rights of the dominant shareholder.

3.3. Definition of variables

In order to measure earnings informativeness, we use the earnings-return relationship, where return — defined as annual stock return of firm i for 1999 (R_{it}) — is regressed on accounting earnings. More specifically, R_{it} is calculated as $(P_{it} – P_{it-1}+ D_{it}) / P_{it-1}$, where P_{it} represents the stock price of firm i at period t (12-month period beginning 3 months following the end of year t-1 and ending 3 months following year t) and D_{it} is the dividend of firm i at t. Earnings are estimated using the ratio of the net earnings at t over the market value of equity at the beginning of year t. The higher the magnitude of the earnings coefficient, the more informative the earnings to investors.

The earnings-return relationship is likely to be influenced by other factors that should be controlled. Based on previous studies, a number of control variables will be introduced in our analyses. Firm size (calculated as the log of total assets) is introduced to control for potential positive effects on the quantity and quality of the accounting information disclosed. Industry is also an important factor to consider, since stock returns, ownership structure, and reporting policies are likely to be industry specific (Demsetz and Lehn, 1985). We therefore include industry dummy variables in our analyses.

The debt, usually defined as the ratio of long-term debt over total assets, is introduced to control for the effects on accounting decisions. Highly leveraged firms are more likely to use earnings management. Finally, growth opportunities are likely to influence the earnings-return relationship. On the one hand, high growth companies may be more risky, which will lower the quality of the reported earnings. On the other hand, growth opportunities are likely to positively impact on firm valuation (Morck et al., 1988) and future earnings (Collins and Kothari, 1989). In order to control for these effects, we introduce the market-to-book ratio as a proxy for firm's growth opportunities.

4. Results

4.1. Descriptive statistics

Tables 1 and 2 provide selected descriptive statistics on Canadian controlled companies. More precisely, these two tables present statistics on financial data, ownership structure as well as Pearson correlations between the main variables studied.

Panel A of table 1 shows that, on average, the ultimate (dominant) shareholder holds about 25% of the cash-flow rights—clearly less than the average of voting rights under his control (36%). Furthermore, the degree of separation between voting rights and cash-flow rights (Sep) amounts, on average, to 0.76, meaning that to control, say, 50% of the voting rights, the dominant shareholder needs only 38% of the cash-flow rights. This degree of separation between voting and cash-flow rights is similar to that observed in Asian companies (Claessens et al., 2000) whereas it is more pronounced than that observed by Faccio and Lang (2002) in Europe, with the exception of Italy. We note also that the deviation from the "one share/one vote" rule is widespread in Canada. In more than 37% of the companies selected, the voting rights of the dominant shareholder are not proportionate to his cash-flow rights. Furthermore, this separation is mainly achieved through the use of shares with multiple voting rights: 26% of the controlled firms have dual-class shares whereas pyramidal structures are observed in 17% of those Canadian firms. In line with previous research (La Porta et al., 1999; Claessens et al., 2000; Faccio and Lang, 2002), we find that dominant shareholders are very often involved in the management of the firms, either as directors and/or officers. In our sample, we observe that the dominant shareholder is an insider for 76% of the firms. These statistics suggest the dominant shareholder's increased power of expropriation over minority shareholders and his strong influence over disclosure policies. Finally, like those in many countries, Canadian publicly traded companies are most often controlled by families. Indeed, 66% of our sampled firms are family controlled against 15% for institutions and 19% for other types of owners.

Panel B of table 1 shows that the average stock return is relatively weak (2.2%), whereas the ratio of net earnings over market value of equity is negative. The debt level of controlled firms averages about 37%. On the other hand, we observe that firm size is less homogeneous, since average assets stand at around $1.5 billion as compared to maximum value which hovers around $51 billions. Finally, firms' growth opportunities, as reflected by the Market-to-book ratio, are on the positive side, with an average ratio of 2.3. [See appendices, table 1].

Table 2 presents a correlation matrix for the main variables examined. These Pearson correlations highlight that the level of voting rights (VR) appears to be associated with wider separation between voting and cash-flow rights (Sep), as suggested by the negative (-0.359) and statistically significant ($P<0.01$) correlation. On the other hand, we note that the concentration of voting rights is also strongly and positively associated with cash-flow rights (0.658, $P<0.01$). Table 2 also shows that neither the stock returns nor the earnings of firms seem to be correlated with ownership structure. We do however observe that large Canadian controlled firms are characterized by more concentrated ownership.

Theses results are consistent with those Rao and Lee-Sing (1995) obtained**,** based on their sample of Canadian companies. The negative coefficient between the debt level and the Market-to-book ratio (-0.126, P<0.05) suggests that capital markets expect highly leveraged firms to have low growth opportunities. Finally, we note a significantly positive, though weak, correlation between a firm's earnings and stock returns. [See appendices, table 2].

4.2. Regression analyses

4.2.1. Preliminary tests

We first run a test to examine the basic relationship between stock returns and reported earnings. To this end, we use the following simple OLS regression model:

$$R_{it} = a + \beta_1 NI_{it} + e \quad (1)$$

Stock returns of the 1999 fiscal year-end (R_{it}) are regressed on the net earnings at year 1999 divided by the market value of equity at the beginning of 1999 (NI_{it}). To lessen the influence of extreme values, R_{it} is censored at the first and 99th percentiles by setting outlying values at the first and 99th percentiles. The results are presented in table 3. First, we notice that although the adjusted R^2 is very low (1.2%), our regression model is statistically robust (F=5634, P<0.02). Second, the estimated coefficient of earnings (NI) is positive and statistically significant at the 1% threshold. Though preliminary, these results suggest that the earnings reported by Canadian controlled companies are useful to investors. [See appendices, table 3].

4.2.2. Ownership concentration and earnings informativeness (H_1)

Our research hypotheses predict that the informativeness of earnings is directly dependent on corporate ownership structure. According to our first research hypothesis H_1, the concentration of voting rights in the hands of the dominant shareholder adversely affects the quality of the reported earnings. In order to test this hypothesis, we rerun our first OLS regression model on the basic earnings-return relationship but we introduce the ownership variables and control variables. More specifically, our regression model—drawn from models used by Warfield et al. (1995), Jung and Kwon (2002) and Fan and Wong (2002) — reads as follows:

$$R_{it} = a + \beta_1 NI_{it} + \beta_2 NI_{it} * Ownership\ concentration + \beta_3\ Control\ var. + e \quad (2)$$

By examining the magnitude of the earnings coefficients, we measure the informativeness of the reported earnings. The coefficient β_1 captures a basic earnings-return relationship, whereas the coefficient β_2 measures a differential earnings informativeness according to the level of ownership concentration in the hands of the dominant shareholder. We expect the coefficient β_2 to be negative, suggesting that reported earnings become less and less informative as the level of ownership concentration increases. Also included in our model (2) are variables to control for firm size, debt, growth opportunities, and industry[2].

The results of the tests for hypothesis H_1 are reported in table 4. In the first column of table 4 (Eq. 1), ownership concentration is defined as the cash-flow rights held by the dominant shareholder. On the other hand, ownership concentration is defined as the voting rights of the dominant shareholder in the second column of table 4. In both cases, we observe that the regression models are statistically significant (P<0.01) and provide about 11% of explanatory power (Adjusted R^2) — a level slightly higher than that obtained in previous studies.

Eq (1) of table 4 shows that earnings (NI) are positive but statistically non-significant at conventional thresholds. Rather than indicating that earnings are not informative, these results suggest that ownership concentration has a greater influence. We also note that the interactive term NI*Cash-flow rights displays a positive and statistically significant coefficient (P<.05). It appears that earnings informativeness increases as the dominant shareholder's cash-flow rights increase, supporting Jensen and Meckling's (1976) convergence-of-interests hypothesis. These results suggest that ownership concentration helps in resolving agency conflicts and reassures investors that the dominant shareholder is behaving in ways that maximize firm value. On the other hand, Eq (2) of table 4 shows a negative coefficient for the interactive term NI * Voting rights, suggesting that investors lose confidence in reported earnings when the dominant shareholder has effective control and thereby can entrench himself against corporate governance mechanisms. These contrasting results on the impacts of cash-flow rights and voting rights on earnings informativeness are consistent with

[2] Previous studies (Warfield et al., 1995; Fan and Wong, 2002) examine the effects of the interaction between net earnings and the control variables. Because the use of these interaction terms raises multicollinearity problems, we use a model specification where size, debt and, growth are introduced as control variables. Our procedure is similar to the one adopted by Jung and Kwon (2002).

previous studies (Fan and Wong, 2002; Jung and Kwon, 2002).

Eq (3) of table 4 is designed to test whether investors find reported earnings even less credible when the dominant shareholder has enough power to entrench himself and to extract private benefits from control without internalizing a significant fraction of the costs. To do so, two ownership variables are introduced. First, NI*VR≤25CFR captures the impact of ownership concentration on earnings informativeness when the dominant shareholder controls more than 5% of the voting rights but 25 % or less of the cash-flow rights. Second, NI*VR>25CFR captures the impact of ownership concentration on earnings informativeness when the dominant shareholder controls more than 5% of the voting rights and at least 25 % of the cash-flow rights. According to our first hypothesis, we expect both coefficients to be negative. However, because agency conflicts between the dominant shareholder and minority shareholders are likely to be more severe when the dominant shareholder has the power and the incentives to expropriate, we expect NI*VR≤25CFR to display a stronger negative coefficient.

In line with our expectations, Eq (3) of table 4 displays a strong negative relation between earnings informativeness and ownership concentration, when the dominant shareholder has effective control of voting rights despite a small share of cash-flow rights —25% or less of such rights. The negative coefficient of the interactive term NI*VR≤25CFR is highly significant statistically (P<0.01). On the other hand, as soon as the dominant shareholder holds a significant share of cash-flow rights (more than 25%) and, therefore internalizes at least 25% of the costs of corporate outlays, ownership concentration no longer seems to have a negative impact on earnings informativeness. Indeed, we observe that the coefficient of NI*VR>25CFR is negative but statistically non-significant at conventional thresholds.

Overall, the results reported in table 4 (Eq 1 to 3) support our hypothesis H_1. Broadly speaking, as the level of ownership concentrated in the hands of the dominant shareholder increases, investors tend to lose confidence in reported earnings, suspecting that they do not truly reflect the firm's financial position. However, the results reported in table 4 show that there is a non-monotonic negative relationship between ownership concentration and earnings informativeness. As a matter of fact, investors' loss of confidence in reported earnings appears to be even more pronounced when agency conflicts are extreme, i.e., when the dominant shareholder has both the incentives and power to expropriate minority shareholders. These results are consistent with the empirical evidence on the role ownership concentration plays with regard to firm value (see for instance, Morck. et al., 1988).

Finally, table 4 reveals that only firm size shows a statistically significant coefficient, unlike debt level and (Market-to-book) growth opportunities. These results suggest that, all things being equal, large Canadian companies produce a better quality of earnings. [See appendices, table 4].

4.2.3. Divergence between voting and cash-flow rights and earnings informativeness (H_2)

Our second research hypothesis predicts that the extent to which a dominant shareholder's share of voting rights exceeds his cash-flow rights should have a negative effect on earnings informativeness. Empirical evidence from Asian countries suggests that, as the dominant shareholder's voting rights diverge from his share of cash-flow rights, earnings become less and less informative (Fan and Wong, 2002). Though Canadian investors are generally better protected than those in Asia— partially thanks to strict accounting principles and the regulated reporting of financial information (see for instance, La Porta et al., 1998) — it is still relevant to test for the impact that the separation between voting and cash-flow rights may have on the quality of reported earnings.

Results are presented in Table 5**.** The monotonic relationship between earnings informativeness and the degree of separation between voting and cash-flow rights is tested in the three first equations. In all cases, we observe that the interactive term NI*Sep is positive and statistically significant (P<0.01), suggesting that when the voting rights held by a dominant shareholder are in excess of his cash-flow rights, the informativeness of earnings will decrease[3]. Furthermore, the results of Eq (2) and (3) indicate that this negative impact on the quality of reported earnings remains after controlling for the ownership-concentration effects. These results are consistent with the theory put forth by Bebchuk et al. (2000) which predicts that separating voting rights from cash-flow rights can create agency costs higher than those associated with a large dominant shareholder who also has a large share of cash-flow rights.

Eq (4) in table 5 provides evidence on the non-monotonic relationship between earnings

[3] Remember that the Sep variable represents the ratio of cash-flow rights over voting rights, which tends towards zero, as the degree of separation between the dominant shareholder's voting rights and cash-flow rights increases.

informativeness and the divergence between the dominant shareholder's voting and cash-flow rights. The impact of the separation on the quality of earnings is examined according to the level of ownership concentration. Thus, NI * CFR≤25Sep (NI * CFR>25Sep) captures the effect of the voting and cash-flow divergence on the quality of reported earnings when the dominant shareholder controls more than 5% of voting rights but 25% or less (more than 25%) of cash-flow rights.

As predicted by hypothesis H_2, we note that the negative impact of the degree of separation between voting and cash-flow rights is stronger when the dominant shareholder has effective control with 25% or less of cash-flow rights. Indeed, Eq (4) shows a positive and statistically significant coefficient for the interactive term NI * CFR≤25Sep (P<0.01) whereas NI * CFR>25Sep displays a non-significant positive coefficient. Again, these results suggest that when agency conflicts are extreme, dominant shareholders are perceived to report accounting information that serves self-interested purposes, thereby decreasing the informativeness of earnings. On the other hand, when the dominant shareholder holds more than 25% of the cash- flow rights, agency costs are less heavy and, consequently, the degree of separation between voting and cash-flow rights no longer has any significant effect on the quality of reported earnings.

Finally, as regards the results presented in table 4, we note no difference in the impact of the control variables. Once again, unlike firm size, debt and growth prospects do not seem to have any significant effect on the credibility of accounting information. [See appendices, table 5].

4.2.4. Sensitivity analyses

When the dominant shareholder also participates in firm management, he actually administers the firm. Since direct involvement facilitates expropriation and may thus result in higher agency costs (Morck et al., 1988; Bozec and Laurin, 2004), one might argue that the inside dominant shareholder can exert an even more powerful influence over the firm's disclosure policies, making reported earnings even less credible to outside investors. Accordingly, Eq (1) of table 6 explicitly accounts for the effects of managerial ownership on earnings informativeness. This regression model corresponds exactly to the second model of table 4, except that we define ownership concentration as the voting rights of the dominant shareholder who is directly involved in the firm's management—as director and/or officer. To this end, we introduce an interactive term NI * VRInsider into the regression. The results show that this variable displays a negative coefficient, suggesting that earnings informativeness decreases as the voting rights of the inside (dominant) shareholder increase. Furthermore, this negative impact appears to be more significant, both economically and statistically, in comparison to the results presented in table 4.

As another sensitivity check, we have examined whether the identity of the dominant shareholder has any impact on the quality of earnings reported to investors. Previous research (see for instance, La Porta et al. (1999)) has documented that ownership concentration in general and voting rights concentration in particular is most often associated with family ownership. On the other hand, Cronqvist and Nilsson (2003), Claessens et al. (2002) and Morck et al. (1988) argue that agency costs associated with ownership concentration may differ between different categories of dominant shareholders. Eq (2) of table 6 provides evidence as to whether Canadian family-controlled firms are perceived to report earnings lower in quality than those of other types of controlled firms. The results clearly show that the concentration of ownership in the hands of families (NI * VRFamily) will adversely affect earnings informativeness (P<0.01), whereas no such evidence is found for Canadian firms controlled by either an institution or other types of owners (widely-held corporations, foreign investors).

Following Faccio and Lang (2001) and Fan and Wong (2002), the separation is defined in this study as the ratio of cash-flow rights to voting rights (CFR/VR). A number of other studies have used different measures. Rather than using a ratio, Claessens et al. (2002) measure the separation as the difference between voting rights and cash-flow rights (VR-CFR). As shown in Eq (3) of table 6, substituting VR-CFR for CFR/VR does not appear to influence our regression results. Using this measure, we still observe that separation between voting and cash-flow rights does negatively affect earnings informativeness. Our last test of robustness addresses the issue of unprofitable firms – firms experiencing losses. Table 1 reveals that the mean earnings are negative for our sample firms. Hayn (1995) shows that the earnings response coefficient is lower for unprofitable firms compared to profitable firms. Therefore, a control variable *Loss* (dummy of one if net earnings are negative, 0 otherwise) is included in the OLS regressions. As shown in Eq (4) of table 6, our results are robust to the inclusion of a control variable for loss. [See appendices, table 6].

5. Summary and conclusion

Recent empirical evidence has shown that the Berle-and-Means model of a firm with widely dispersed ownership does not reflect the reality in most countries (La Porta et al., 1999; Claessens et al., 2000; Faccio and Lang, 2002; Lins, 2003). Indeed, in most countries, publicly traded firms are controlled by large shareholders who frequently own control rights that are well in excess of their cash-flow rights. In this context, the risk of expropriation of minority shareholders by large, dominant shareholders is an important agency problem (Shleifer and Vishny, 1997; Bebchuk et al., 2000).

In this framework, we hypothesize that ownership concentration and the divergence of voting rights and cash-flow rights, by increasing the agency costs associated with the entrenchment of a dominant shareholder, do adversely affect the informativeness of the earnings reported to investors. Previous empirical studies, mostly from Asia, provide strong evidence of the negative impact of ownership concentration and deviation to the one share – one vote rule on earnings response coefficient. However, as pointed out by La Porta et al. (1998), East Asian countries have relatively weak and corruption-prone institutions. Empirical evidence from institutional settings where laws are protective of outside shareholders is lacking. This study expands on previous studies in that it examines the link between corporate ownership structure and the informativeness of earnings reported by Canadian closely-held firms. Indeed, Canadian institutions are believed to offer good protection to minority shareholders. With a score of 5 out of 6 measuring "Andirector Rights," La Porta et al. (1998) ranks Canada in the group of countries where minority shareholders are well protected.

We show that earnings informativeness, as measured by the earnings-return relationship, increases with the dominant shareholder's claim to cash-flow rights but decreases with his control over voting rights.

These results are consistent with an abundant literature on the positive incentive effects and on the negative entrenchment effects **a**ssociated with ownership concentration. We also find that earnings informativeness clearly declines as the gap between the dominant shareholder's voting rights and cash-flow rights widen**s**. This result is consistent with the theory of Bebchuck et al. (2000) which predicts that divergent voting and cash-flow rights will exacerbate the agency costs associated with the dominant shareholder's entrenchment. Our findings are also broadly consistent with empirical evidence drawn from the Asian context (Fan and Wong, 2002; Jung and Kwon, 2002). Furthermore, we show that our results appear to be driven by family control and managerial shareholding (dominant shareholder who also participates in firm management).

Finally, when investigating a non-monotonic linear relationship, we show that earnings informativeness is at its lowest level when the dominant shareholder controls more than 5% of voting rights while holding only 25% or less of cash-flow rights. Our results indicate that ownership concentration and divergence between voting and cash-flow rights have their most pronounced negative impact on earnings quality when dominant shareholders have the power and incentives to expropriate minority shareholders. These results are consistent with the literature relating ownership structure to firm value (see for instance, Morck et al., 1988).

Overall, we show that, like those in Asian countries, large dominant shareholders in Canada are perceived to report low-quality earnings. Given the decisive role played by the disclosure of high-quality financial information in promoting effective corporate governance, these results should be of great interest to Canadian policy-makers and regulators.

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Appendices

Appendix A. Definition of main variables

Ownership:	
Voting rights (VR)	Voting rights directly and indirectly held by the largest ultimate (dominant) shareholder
Cash-Flow rights (CFR)	Cash-flow rights directly and indirectly held by the largest ultimate (dominant) shareholder
Separation (Sep)	Ratio CFR/VR
Pyramid	1 if the firm is controlled via a pyramidal structure, otherwise 0
Dual class shares	1 if the firm has issued shares with multiple voting rights, otherwise 0
Insiders	1 if the dominant shareholder participates in firm management, otherwise 0
Earnings quality:	
Stock return (R)	Stock return calculated on a yearly basis (Buy-and-hold approach)
Net Earnings (NI)	Net earnings over market value of equity
Control variables:	
Debt	Long-term debt over assets
Size	Logarithm of total assets
Industry	Dummy variables for the industry
Growth	Market-to-book ratio
Loss	1 if net earnings < 0, otherwise 0

Table 1.

This table reports summary statistics on corporate ownership structure and other firm characteristics. Our sample is composed of 412 Canadian controlled firms, i.e. publicly traded firms where the dominant shareholder controls at least 5% of the voting rights. See appendix A for definitions of variables.

	Mean	Standard dev	Min.	Max.
Panel A: Ownership structure				
Ownership concentration:				
Voting rights (VR)	36%	24%	5%	99%
Cash-flow rights (CFR)	25%	21%	0%	99%
Separation of voting and cash-flow rights:				
Separation (CFR/VR)	0.76	0.36	0.01	1.00
Deviation "one share-one vote"	37%	48%	0%	100%
Dual class shares	26%	44%	0%	100%
Pyramid (PY)	17%	38%	0%	100%
Insider	76%	43%	0%	100%
Identity of the dominant shareholder:				
Family	66%	47%	0%	100%
Institutions	15%	35%	0%	100%
Others	19%	39%	0%	100%
Panel B: Financial data				
Stock return (R)	2.2%	45%	-98%	172%
Net earnings (NI)	-1.2%	16%	-32%	25%
Debt	38%	28%	1%	214%
Growth opportunities (Q)	2.3	2.0	0.1	18
Size (Assets in billions)	1.47	0.4	0.8	51.1

Table 2.

This table presents a Pearson correlation matrix of the dependent and independent variables.

See appendix A for definitions of the variables.

	CFR	VR	CFR/VR	Rt	NI	Size	Debt	Q
Cash-flow rights (CFR)	1.000	.570**	.456**	.010	.047	.070	.033	-.033
Voting rights (VR)		1.000	-.359**	.066	-.013	.104*	.076	.014
Sep (CFR/VR)			1.000	-.062	.087	-.038	-.035	-.027
Stock return (R_t)				1.000	.114*	.086	-.099	.019
Net earnings (NI)					1.000	-.022	-.053	.060
Firm size						1.000	.057	-.037
Debt							. 1.000	-.126*
Growth opportunities (Q)								1.000

***, * Statistically significant at 1% and 5% respectively*

Table 3.

This table reports simple OLS regression on earnings-return relationship. Stock returns (Rt) —calculated as the 12-month period to the fiscal year-end— are regressed on the reported net earnings over the market value of equity (NI). The value t of the Student test is shown between parentheses below the coefficient.*, **, *** significant at the threshold of 10%, 5% and 1% respectively.

	Intercept	NI	Adjusted R^2	P value	n
Rt					
	.836	0.326**	1.2	<.02	402
	(.355)	(2.374)			

Table 4.

This table reports OLS regressions on the relation between ownership concentration and earnings informativeness. Stock returns (Rt)—calculated as the 12-month period to the fiscal year-end—are regressed on the reported net earnings over the market value of equity (NI), the interactive term NI * Ownership concentration. Ownership concentration is defined as the cash-flow rights held by the dominant shareholder (CFR), his voting rights (VR), his voting rights when he controls more than 5% of voting rights but 25% or less of cash-flow rights (VR≤25CFR) and, his voting rights when he controls more than 5% of the voting rights and more than 25% of the cash-flow rights (VR>25CFR). We also introduce the following control variables: debt, size, industry, growth opportunities. These variables are defined in Appendix A. The value t of the Student test is shown between parentheses below the coefficient.*, **, *** significant at the threshold of 10%, 5% and 1% respectively.

	Predicted	*Eq (1)*	*Eq (2)*	*Eq (3)*
	Sign			
Intercept		*-0.943***	*-0.965***	*-0.914***
		(-2.368)	(-2.441)	(-2.328)
NI	+	0.002	*0.035***	*0.054****
		(.285)	(2.102)	(2.956)
NI*Cash-flow rights	+	*0.073***		
		(1.904)		
NI*Voting rights	-		*-0.072***	
			(-1.913)	
NI*VR≤25CFR	-			***-0.115****
				(-2.789)
NI*VR>25CFR	+			-0.011
				(-.258)
Debt	+/-	-0.160	-0.169	-0.152
		(-1.394)	(-1.477)	(-1.343)
Growth (Q)	+/-	-0.008	-0.005	-0.008
		(-.649)	(-.430)	(-.612)
Size	+	*0.061****	*0.063****	*0.059****
		(3.418)	(3.495)	(3.310)
Industry dummies	+/-	Incl.	Incl.	Incl.
Adjusted R^2		.109	.109	.123
P Value		<.01	<.01	<.01
n		402	402	402

Table 5.

This table reports OLS regressions on the relation between ownership concentration, divergence between voting and cash-flow rights, and earnings informativeness. Stock returns (Rt)—calculated as the 12-month period to the fiscal year-end—are regressed on the reported net earnings over the market value of equity (NI), the interactive term NI * Ownership concentration— where ownership concentration is defined as the cash-flow rights held by the dominant shareholder (CFR) and his voting rights (VR)—and the interactive term NI * divergence between voting and cash-flow rights— defined as the ratio of cash-flow rights to voting rights (Sep) when the dominant shareholder controls more than 5% of voting rights but 25% or less of cash-flow rights (CFR≤25Sep) and, the ratio of cash-flow rights to voting rights when the dominant shareholder controls more than 5% of voting rights and more than 25% of cash-flow rights (CFR>25Sep). We also introduce the following control variables: debt, size, industry, growth opportunities. These variables are defined in Appendix A. The value t of the Student test is shown between parentheses below the coefficient.*, **, *** significant at the threshold of 10%, 5% and 1% respectively.

	Predicted	*Eq (1)*	*Eq (2)*	*Eq (3)*	*Eq (4)*
	Sign				
Intercept		*-0.928***	*-0.928***	*-0.928***	*-0.920***
		(-2.368)	(-2.363)	(-2.364)	(-2.338)
NI	+	0.002	0.001	0.001	0.002
		(.783)	(.720)	(.965)	(.752)
NI*Cash-flow rights	+		0.002		-0.001
			(.043)		(-.350)
NI*Voting rights	-			0.001	
				(.009)	
NI*Sep	+	*0.043****	*0.043****	*0.043****	
		(3.144)	(2.486)	(2.478)	
NI*CFR≤25Sep	+				*0.045****
					(2.475)
NI*CFR>25Sep	+				0.077
					(.866)
Debt	+/-	-0.149	-0.150	-0.149	-0.148
		(-1.314)	(-1.311)	(-1.312)	(-1.303)
Growth (Q)	+/-	-0.008	-0.008	-0.009	-0.008
		(-.656)	(-.657)	(-.654)	(-.669)
Size	+	*0.060****	*0.060****	*0.060****	*0.059****
		(3.366)	(3.359)	(3.360)	(3.317)
Industry dummies	+/-	Incl.	Incl.	incl.	incl.
Adjusted R^2		.125	.123	.123	.120
P Value		<.01	<.01	<.01	<.01
n		402	402	402	402

Table 6.

This table reports OLS regressions on the relation between ownership concentration and earnings informativeness. Stock returns (Rt)—calculated as the 12-month period to the fiscal year-end—are regressed on the reported net earnings over the market value of equity (NI), and the following variables: the interactive term NI * Ownership concentration—where ownership concentration is defined as the cash-flow rights held by the dominant shareholder (CFR), the voting rights held by the dominant shareholder who also participates in firm management (VRInsider), the voting rights held by the dominant "Family shareholder" (VRFamily), the voting rights held by the dominant "Institutional shareholder" (VRInstitution), the voting rights held by the dominant "Other shareholder" (VROthers) — the interactive term NI * voting and cash-flow rights divergence— defined as the difference between voting rights and cash-flow rights (VR-CFR). We also introduce the following control variables: debt, size, industry, growth opportunities and, loss. These variables are defined in Appendix A. The value t of the Student test is shown between parentheses below the coefficient.*, **, *** significant at the threshold of 10%, 5% and 1% respectively.

	Predicted	Eq (1)	Eq (2)	Eq (3)	Eq (4)
	Sign				
Intercept		-0.923**	-0.931**	-0.925**	-0.793**
		(-2.362)	(-2.369)	(-2.358)	(-2.058)
NI	+	0.050***	0.045***	0.044***	0.032*
		(3.135)	(2.797)	(2.601)	(1.909)
NI*Cash-flow rights	+			0.001	0.004
				(.030)	(.091)
NI*VRInsider	-	-0.106***			
		(-2.942)			
NI*VRFamily	-		-0.094***		
			(-2.606)		
NI*VRInstitutions	+/-		1.601		
			(1.266)		
NI*VROthers	+/-		-0.006		
			(-.143)		
NI*Voting minus Cash-Flow	-			-0.097***	-0.010*
				(-2.513)	(-1.837)
Debt	+/-	-0.157	-0.149	-0.149	-0.045
		(-1.383)	(-1.270)	(-1.311)	(-0.396)
Growth (Q)	+/-	-0.007	-0.007	-0.008	-0.013
		(-.589)	(-.602)	(-.648)	(-1.102)
Size	+	0.060***	0.060***	0.060***	0.049***
		(3.356)	(3.347)	(3.352)	(2.747)
Loss					-0.234***
					(-3.980)
Industry dummies	+/-	Incl.	Incl.	Incl.	Incl.
Adjusted R^2		.122	.121	.123	.160
P Value		<.01	<.01	<.01	<.01
n		402	402	402	402