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Management Quality and Operating Performance: Evidence from Canadian IPO companies

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A Thesis

In

The John Molson School of Business

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Administration (FINANCE)
at Concordia University
Montreal, Quebec, Canada

August 2009

Canada

CONCORDIA UNIVERSITY

School of Graduate Studies

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Entitled:
Management Quality and Operating Performance: Evidence from Canadian IPO companies

and submitted in partial fulfillment of the requirements for the degree of

Master of Science in Administration (Finance)

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Abstract

Management Quality and Operating Performance: Evidence from Canadian IPO companies

Jean-François Bourdon

This study investigates the impact of management quality on the operating performance of Canadian IPO's. Several dimensions of management quality are explored, including: the average tenure of management team members, the heterogeneity of tenures of team members, the size of the top management team, the number of outside directors, the educational and professional credentials of managers, the CEO dominance of the team, the past industry-specific experience of team members, and the presence of the founder in the management team. Operating performance is positively associated with the management team's tenure, size, and the team's inclusion of chartered accountants. Heterogeneous membership tenure, as well as the presence of dominant CEO's and MBAs on the top management team are negatively related to performance. Some evidence of earnings management by managers in the sample is also observed. Finally, equity retention of directors and officers following the IPO has some explanatory power on the firm's value.

<u>Acknowledgments</u>

Table of Contents

List of Tables

1. Introduction

The performance of initial public offerings (IPO's) has been subject of an extensive scrutiny in the past two decades in the United States and in Canada. (see, e.g., Ritter, 1991; Jain and Kini, 1994; Loughran and Ritter, 1995; Kooli, and Suret, 2004; Carpentier and Suret, 2006). Several studies conclude that IPO firms underperform in the long-run. Indeed, Kooli, and Suret, (2004) find that the 5-year cumulative abnormal return (CAR) for Canadian IPOs issued during the period 1991-1998 ranges from -11.02% to -20.65%. Various hypotheses have been advanced by researchers to explain this phenomenon including: a) Investor exuberance – The premise here is that over-optimism regarding future earnings for newly listed firms leads to irrationally high stock prices; b) Market timing: Managers time their stock offerings to coincide with superior (though unsustainable) performance (see, e.g., Loughran and Ritter, 1995); c) Earnings Management: Firms use accruals to artificially enhance short-term earnings in order to boost stock prices, (see, e.g., Teoh et al., 1998).[1]

This paper focuses on the internal governance of the firm, reflected by the quality of the top management team as a determinant of post-IPO performance. With the exception of Chemmanur and Paeglis (2005), the role of the management team in explaining IPO underperformance has not received much attention in the literature to date. The authors identify several management quality variables that significantly affect post-IPO operating performance for US firms. They also demonstrate that level of underpricing, underwriting fees, the size of the offerings and the number of institutional

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[1] For instance, Teoh, S.H., et al. (1998) find that new issuers with unusually high accruals in the IPO year exhibit poor stock return performances in the three years following the IPO. Furthermore, stock returns of issuers using accruals aggressively were around 20% less than more conservative issuers.

investors involved in new issues are all related to management quality.[2] Whether these results are robust for IPO's in other countries remains an open question.

The purpose of this study is to provide new evidence on this score for a sample of Canadian IPOs. Following Chemmanur and Paeglis (2005), management quality is defined and measured according to two dimensions; management team resources and management team structure. Four proxies are used to measure management team structure. First, we employ the average tenure of the team. Intuitively, greater average tenure should result in a better cohesion between team members, thus lowering costs of conflict. The dispersion of tenure amongst team members is also tested against performance; profitable new ideas and more entrepreneurial flexibility may be more likely to exist with a management team characterized by diverse levels of experience amongst its members. An alternative view is that tenure heterogeneity may be associated with less cohesive management teams, which could adversely affect performance. The third measure of team structure is the CEO dominance over other team members. A CEO who bears the responsibilities for the firm's performance, and who dominates the decision making process may reduce stress for the other team members. However, a dominant CEO may stifle the initiatives of other senior managers, to the detriment of firm value. A final measure of the management team structure is the presence of the founder(s) on the management team. The presumption is that founders know the original purpose of the company and should be better able to allocate resources efficiently, to the benefit of shareholders (see, e.g., Kor, 2003).

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[2] More recently, Chemmanur, T.J., et al (2007) show that a high management quality team was able to select projects with superior net present values (NPV).

On the whole, this paper identifies several proxies for management quality that significantly affect the operating performance of IPOs in Canada. Operating performance is positively associated with the management team's tenure, size, and the team's inclusion of chartered accountants. Heterogeneous membership tenure, as well as the presence of dominant CEO's and MBA's on the top management team are negatively related to performance. Some evidence of earnings management from managers in the sample is also observed. Finally, equity retention of directors and officers following the issue has some explanatory power on the firm's value.

The remainder of the paper is organized as follows. Section 2 presents the hypotheses to be tested. Section 3 describes the performance measures used in the analyses. Section 4 provides a description of the data. Results follow in Section 5. The study concludes with a summary in Section 6.

2. Theory and Hypotheses

Management Quality and Performance

The presence of the founder in the top management team should contribute to the ability of the team to seize new growth opportunities. The founder's experience should provide the foundation of management team competency. The founder of the firm is likely to have defined the original purpose of the firm and be most attuned to identifying the opportunity set of the firm in its deployment of resources to their most efficient uses (see, e.g., Kor, 2003)[3]. The idea that founders have the capacity to allocate efficiently all resources within the company is critical. On the other hand, old time founders may

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[3] Kor (2003) finds that the percentage of founders in the management team was positively related to sales growth.

3

become entrenched and less efficient. In this case, decisions of the management team may be at the expense of shareholders. Morck et al (1988) posit that the business quality of the founder is less valuable for older firms due to entrenchment effects. Firms conducting IPOs are usually young and small; 10.72 years on average in this sample. Hence, a positive relationship between the founders' presence on the management team is postulated.

Hypothesis 1: *The presence of founders in the management team is positively related to operating performance.*

The base of expertise could be enhanced with a larger team, which would improve the quality of decision making (see, e.g., Cooper et al. 1994; Feeser and Willard, 1990)[4]. A larger team could provide a broad source of ideas, and relevant areas of expertise. Risk sharing among members could also enable the team to behave in a more entrepreneurial fashion to enhance shareholder value. Teams that are too large, however, may be faced with communication and coordination problems. Haleblian and Finkelstein (1993) find that large groups were more profitable in turbulent environments (computer industry) than in stable environments (natural gas distribution).

Hypothesis 2: *The size of the top-management team is positively related to operating performance.*

Industry-specific experience enhances the team's knowledge of competitive conditions and specific technologies. It allows managers to position new products on the market and to anticipate the nature and the magnitude of potential challenges faced by

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[4] Cooper et Al (1994) find that companies who started their operations as a team did better than firms with a single founder and that when examining the numbers of partners; larger did better than smaller teams. Feeser and Willard (1990) find that high growth firms had team sizes that were significantly larger than low growth firms.

new enterprises (see, e.g., Kor, 2003; Cooper et al. 1994). Experienced managers are likely to have developed useful networks of relationships with suppliers, distributors and customers. Industry experience may facilitate access to credit markets (see, e.g., Bruderl et al. 1992[5] and Lamont et al. 2001). In this research, the information on the exact period of employment for each manager in a specific industry is not always available. Therefore, the number of past senior managerial positions is used as a proxy for experience (see, e.g., Kor, 2003).[6]

Hypothesis 3: *Industry-specific experiences of the management team are positively related to operating performance.*

The education level of the management should help to handle problems, to find original solutions and to succeed in fast-changing environments. Presumably, education is related to knowledge, ability, motivation and skills; all qualities required by teams to perform and to compete in strong competitive industries. Indeed, many studies conclude that the prior level of education is positively related to performance (see, e.g., Cooper et al. 1994).

One proxy for educational qualifications is the possession of an MBA degree. The few studies written on the topic use surveys and are often subject to the objectivity of responders. For instant, Baruch and Leeming (2001) find that MBAs have strong personal esteem and judge themselves as being highly competent. However, graduates attribute

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[5] Bruderl et al (1992) find that the previous and industry-specific experience of the founder has a strong influence on the survival chances of new organizations and that starting a business without previous experience in the industry significantly increases the mortality rates of new firms.

[6] This of course may be an imperfect proxy when a manager's turnover experience is high. For instance, 10 years of experience in the same company at the same position is considered less experience than 5 years in the industry but at 2 different positions. Hence, this methodology may valorise opportunistic managers which move from firm to firm in order to increases their personal benefits. Consequently, these managers might not be as loyal and committed to their business as other managers with longer tenures.

only a moderate contribution from the MBA program to their high level of skills and knowledge. Moreover, the provenance of the degree is likely to mitigate its value. Intuitively, the quality of the manager will depend on the quality of the program and the more prestigious business schools should produce the best managers (see, e.g., Gottesman and Morey, 2006)[7].

Similar to Chemmanur et al (2004)[8], we also test for the contribution of chartered accountants in the intellectual capital of the firm. In this research, the percentage of MBA and accounting title holders is use to measure the contribution on operating performance.

Hypothesis 4: *The presence of MBA designation holders and chartered accountants in the management team is positively related to operating performance.*

Managers with a history of working may be more adept in collaborating and focus on solving problems rather than on managing unproductive group issues. Moreover, past work experiences between members can save valuable time in building coordination and trust; positively affecting the firm's ability to grow (see, e.g., Eisenhardt and Schoonhoven, 1990)[9]. Teamwork and knowledge of skills and habits of other team members also prepare the team to take risks and save time in the resolution of conflicts and in coordination (see, e.g., Kor, 2003). Shared experience in working together as a team and the specific knowledge accumulated through debates and discussions regarding

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[7] Examining the mutual fund industry, they find that managers holding MBAs from high-GMAT programs exhibit better performance than managers without MBA degrees and managers with MBA degrees from low-GMAT programs.

[8] Chemmamur et al (2004) study the percentage of PCPA holders into companies and find a positive relationship with the level of investments. Indeed, the percentage of PCPA holders is positively associated with the level of investments and since better projects should be characterized by large net present values (NPV), high management quality firms should have high levels of capital expenditures and other investments.

[9] Eisenhardt and Schoonhoven (1990) find that specific experience characteristics of managers are positively related to sales growth for new firms and that the past-shared work experience of founders was positively related to revenues.

skills and limitations of others create a collective talent which is unique to each team and allows the firm to grow under conditions of uncertainty. Consequently, management can appropriately match resources and capabilities with opportunities (see, e.g., Kor and Mahoney, 2000). Moreover, the positive dynamic likely to emerge from managers working with the same group creates a particular value for the company which cannot simply be replicated by the sum of all individuals' contributions. Finally, managers can have difficulties to efficiently communicate and to function productively because of goal conflicts that emerge in firms without familiarity between team members. Although, long tenures and experience are usually viewed as good since it brings a useful amount of knowledge on the company and the industry specific needs, it may also affect the firm's ability to react promptly to vital changes. Indeed, Eisenhardt and Schoonhoven (1990) find that older team are more likely to promote and maintain the status quo. Hence, in high changing environment industries, the adaptability of younger teams might benefit the company and increase performance.

Hypothesis 5: *The average tenure of the management team is positively related to operating performance.*

In industries where changes are fundamental for growth and survival, it is essential to have mechanisms to limit the attraction of older and more experienced managers to the status quo. High team heterogeneity within the organization should promote the divergence of opinions during discussions; allowing firms to avoid costly mistakes and stimulate creativity and change. Moreover, diverse experience and tenure between team members combine the knowledge of experienced managers with the innovation, ideas and freshness of new comers. Indeed, diversity and innovation give a

7

considerable competitive advantage to new firms (see, e.g., Eisenhardt and Schoonhoven, 1990). Furthermore, Sorescu and Spanjol (2008) find that the capacity to innovate has a positive effect on stock returns and operating performance[10]. Alternatively, lower costs of conflicts in teams with a longer history of working together could partially offset the benefits of heterogeneity. Indeed, it is advanced that better communication between top executives and greater levels of social interaction promote the ability to carry out changes in corporate strategy and to move a group rapidly toward decision implementation (see, e.g., Wiersema and Bantel, 1992).

Hypothesis 6: *Tenure heterogeneity of the management team is related to operating performance.*

According to Fama and Jensen (1983), because of the absence of a separation between decision-making management and decision control, corporations that are dominated by the CEO are likely to suffer in terms of competition for survival. It is primordial that the individuals in charge of making the important decisions be monitored by independent tiers; usually the board of directors. However, when the board is not entirely independent and in situations of dominant CEOs, no control is maintained on decisions and shareholders have little protection against opportunistic actions from the management. Furthermore, a strong dominant CEO may severely diminish potential contributions from other members (see, e.g., Chemmanur and Paeglis, 2005). Consequently, crucial decisions are made by only one person and positive contributions of other members to bring ideas and different points of view disappear. On the other

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[10]Studying a sample of consumer packaged goods companies, Sorescu, A., Spanjol, J., (2008) find that innovation is associated with above-normal stock returns, normal profits and economic rents and that, on average, each breakthrough innovation in the sample is associated with an increase in firm value of $4.2 million.

8

hand, strong CEOs may enhance the cohesion of management which can be much more valuable for young firms in the early stages of their formation.

Hypothesis 8: *The level of CEO dominance over the team's members is negatively related to operating performance.*

Firm Quality and Performance

In this research, additional variables such as; age, size and the composition of the board of directors are introduced in order to separate the effect of management quality from other aspects of firm quality. New firms face various difficulties in their early years. According to the phenomenon called the "liabilities of the newness", elaborated by Stinchcombe in 1965, the lack of a track record with buyers and suppliers and the inefficiency to quickly adjust to new roles and working relationships are the primary reasons for the high propensity of new organizations to fail (see, e.g., Cooper et al. 1994). Moreover, as time passes, lenders and investors learn about the firm and its management. Hence, they can accordingly adjust the terms of contracts; resulting in a better ability to raise capital which contributes to financial performance (see, e.g., Brito and Mello, 1995)[11]. It is advanced that growth rates increase with age and that financial market imperfections, such as asymmetric information, are partially responsible for the negative economic growth of newly founded organizations. Firms having long-term relationships with lenders can get funds more easily while financial constrained companies may be forced to pass up profitable projects. Lamont et al. (2001) find that financially

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[11] Brito and Mello (1995) find that smaller and younger firms which are relatively unknown by capital providers face greater liquidity restrictions, financial constraints and higher costs of capital than more mature and established companies in the market.

constraints negatively affect firm value and that financially constrained firms earn lower stock returns than unconstrained firms. The slower is the learning process, the higher are the probabilities that the new business will not survive (see, e.g., Bruderl et al. 1992). Finally, Kim et al (2004) find that older firms seem to enjoy higher levels of operating performance than younger firms after going public. Consequently, since age is likely to be a significant determinant in the success of firms conducting an IPO, it is a good indicator of firm quality and should have a significant impact on operating performance.

In situations of low volume of sales, high initial operating costs and aggressive pricing strategies needed to position their firms in their respective industries, younger and smaller firms can report lower performance. Indeed, in addition to age, size is also positively related to pre and post-IPO performances (see, e.g., Mikkelson et al. 1997). As it is for age, large firms are advantaged because size facilitates the access to capital which contributes to higher growth and survival rates (see, e.g., Cooper et al. 1994). More financial capital is associated with better performance since capital allows firms to buy time during rough financial periods, to undertake more ambitious strategies and to finance expansion. Small, young and unknown firms also face greater liquidity and higher costs of capital than mature firms. Hence, since banks and other capital providers cannot observe the true quality of small and young firms at the beginning of their lives, greater capital constraints will be imposed; restraining their capacity to invest in profitable projects and to grow (see, e.g., Brito and Mello. 1995).

The board of directors has the responsibility to monitor and to insure that management acts in the best interests of shareholders. However, managers may sometimes make decisions for themselves at their expense. For instance, management

could grow the company above its optimal size in order to increase their salaries or guarantee their employment. Hence the independency of the board is one of the mechanisms implemented to insure that managers will promote shareholders' interests. The appointment of outside directors on the board is indeed well seen by investors as a means to monitor management and to protect shareholders' interests, (see, e.g., Rosenstein et al. 1990)[12]. Since the responsibilities of the board are to hire, fire, establish top managers compensations and monitor important decisions, the size and the independency of its composition is a good indicator of firm quality (see, e.g., Fama and Jensen, 1983). However, due to the lack of information available to apply a proper surveillance and the asymmetric information between outside and inside directors, it is difficult to exercise efficient control over strategic decisions. Indeed, Mikkelson et al (1997) find no relationship between the composition of the board of directors and the performance of IPO firms. Finally, because of coordination and communication problems in large boards of directors, a negative correlation between board size and profitability has already been observed for small firms (see, e.g., Eisenberg et al. 1997).

Measures of performance

Accounting returns are sometimes criticized by economists for treating research and development (R&D) and advertising expenditures as expenses rather than investments. As a result, current expenses are likely to be overstated and assets understated in firms spending massively on the promotion and development of new products. However, firms that do not invest adequately in R&D and other vital expenses

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[12] Rosenstein et al (1990) find that the appointment of outside directors has a positive impact on the stock price.

may face unsustainable growth and profits when compared to their competitors (see, e.g., Brush et al. 2000). Furthermore, earnings can be managed in such a way that reported profits are affected when no real performance has actually changed. These examples of earnings management are likely to occur whenever companies are looking for additional funding since, by taking aggressive positive accruals, firms can instantly report earnings in excess of cash flows. For instance, revenues could be recorded for goods shipped on credit even though substantial risk of default remains. This type of manipulation is legal since it is usually aimed at better representing the financial situation of the company. However, it must be seriously considered by investors since it can impact results and lead to biased estimations of actual performance, (see, e.g., Teoh, Wong and Roa, 1998)[13].

Moreover, to avoid suspicion and potential lawsuits from investors, Teoh et al (1998) find that issuers that manage pre-IPO earnings are also likely to manipulate post-IPO earnings. Besides, management is often constrained from selling shares for a period of 180 days or more after the issue. Consequently, it has the advantage of boosting earnings after the IPO to maintain a high stock price until the lock up period ends. Therefore, accounting reversals are likely to occur during the period after the first financial year following the issue; when managers are free of their shares and less susceptible to face potential lawsuits.

Consequently, if firms time the market and use accruals to boost the price of issuing shares, a negative correlation between IPO offer prices (PRICE) and operating performance after new issues is expected. To avoid any correlation between size, age and industry, residuals from the regression of (PRICE) on size, age and industry dummies is

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[13] Teoh, Wong and Roa (1998) find that on average, IPO firms have high earnings and abnormally high accruals in the pre-IPO year followed by poor long-run earnings and stock performance.

used (XPRICE). Therefore, an unusually high price relatively to its size, age and the industry in which a company operates may be an indicator of the presence of earnings manipulation by management.

It is critical to control for earnings manipulation because even though managers are good and have all the qualities required to run a company successfully; if they manage the earnings and accruals are reversed afterwards, poor performance is likely to occur no matter who runs the company. Although ROA has been criticized for its lack of economic sense, is still a good measure of the efficiency of asset utilization (see, e.g., Jain and Kini, 1994) and it is used as a proxy for post-IPO performance. Here, ROA is taken one year after the IPO year at December 31st. For instance, in the situation where a firm went public in October 1999, the ROA on December 31st of the year 2000 prevails. The ROA is calculated by dividing trailing 12-month net income (losses) minus trailing 12-month total cash preferred dividends on average assets, times 100.

Stock Ownership and Firm Value

Agency problems are more likely to occur in enterprises where managers are not the principal claimants to the benefits and do not bear the direct wealth consequences of their decisions. Thus, if not monitored, management may act in its own interests and not for the benefit of shareholders (see, e.g., Fama and Jensen, 1983). Moreover, as its stock ownership increases, managerial interests become more aligned with shareholders interests, (see, e.g., Jensen and Meckling, 1976)[14]. The level of ownership held by

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[14] Jensen and Meckling (1976) argue that non-optimal decisions, such as promoting sales growth in unprofitable projects or in other types of non-value-maximizing activities, are likely to diminish with the level of stock ownership held by insiders.

13

managers on performance for IPO firms has been tested in previous literature (see, e.g., Kim et al. 2004; Chen et al. 1993; Mikkelson et al. 1997; Jain and Kini, 1994). Brush et al (1999) find that owner-managed firms use free cash flow to grow faster than firms without free cash flow and exhibit faster sales growth and better performance. Furthermore, having top management with high stock ownership may be an incentive to seek out profitable projects and growth opportunities leading to positive shareholder returns, (see, e.g., Mehran, 1995)[15]. Furthermore, Morck et al. (1988) find evidence of a non-monotonic relationship between management ownership and market valuation. At low levels of stock ownership, 0 to 5%, and high, over 25%, the alignment of interests hypothesis states that managers will act in the best interests of shareholders and thus increase firm value. However, at the intermediate level, between 5% and 25%, the entrenchment of management seems to dominate the alignment of interests. The voting power and the control over the board of directors, at high levels of ownership, make managers feel free of corporate control and thus, engage the company in non-value-maximizing objectives; promoting sales growth beyond the optimal level, building empires for personal prestige or increasing employee welfare. Consequently, managers feeling untouchable and imputable by outside shareholders may not act in the best interests of shareholders and thereby decrease firm value.

A significant decline of operating performance has been observed in the period following the IPO, (see, e.g., Jain and Kini, 1994; Kim et al. 2004). Moreover, investors seem to systematically base profit expectations on unsustainable and biased levels of earnings growth. Interestingly, firms with management that own high levels of equity

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[15] Studying manufacturing companies, Mehran(1995) finds that firm performance is positively related to the level of equity owned by top executives and the percentage of their salary based on equity.

exhibit superior ROA and sales growth relative to other firms with low levels. Alternatively, Jain and Kini (1994) suggested that the subsequent decline in performance might be explained by the dilution of ownership interests following the issue of new shares. Principal/agent problems increase which result in higher agency costs (see, e.g., Jensen and Meckling, 1976).

In studying the Thai IPO market, Kim et al (2004) find a decline in performance following new issues. Moreover, a non-linear relationship between management ownership and the change in performance in the post-IPO year is observed. The relationship is positive for firms with low and high levels of ownership owned by the management and negative at intermediate levels; between 31% and 71%. The presence of a non-linear relationship between management ownership levels and performance is in line with Morck et al. (1988) finding.

Hypothesis 9: *The percentage of equity owned by officers and directors is positively related to firm value for low and high levels and negatively related for intermediate levels.*

In this study and following Morck et al (1988), Tobin's Q is used as proxy for firm value. Although the exact formula consists of the firm market value divided by the replacement cost of the assets, a simplified form of the equation is used. The measurement of Tobin's Q can sometimes be complicated; the principal challenge is in the need to value the replacement cost of the assets. For large US companies, it is usually not a problem because the SEC requires that firms disclose this specific information. However, for small and non-US firms, where there is no such requirement, the valuation of the replacement cost of assets is much harder and may be impossible due to the lack of

accurate accounting information. Moreover, assumptions needed for inflation, discount and depreciation rates may significantly bias the results.

In this research, the sum of the market value of equity plus the book value of total debt divided by the book value of total assets is used. This formula is slightly different from the approximation of Chung and Pruitt (1994) which explains 96.6% the variability of Lindenberg and Ross (1981) more theoretically correct model. While Chung and Pruitt (1994) sum up current liabilities net of current assets and add the book value of long term debt, the book value of total debt is used because there are many firms in the sample with current assets higher than the sum of current liabilities and long term debt added together. As a result, it produces a negative market value of debt which is not economically plausible.

Morck et al (1988) use R&D and advertising expenditures as control variables to proxy for intangible assets. These items are considered expenses instead of investments in financial statements but are primordial for the long-run good performance of businesses. Indeed, companies eventually profit from these investments by the development of new products and by increased revenues from advertising and marketing. Consequently, firms investing intensively in these two categories are likely to have high Tobin's Q ratios because of undervalued assets. Beside, since stock prices are partially based on earnings expectations, market capitalizations for firms with great future potential should be high relative to the value of tangible assets. Intangible assets may also take the form of patents or human capital proper to specific industries. For instance, firms in the technology sector usually exhibit high Q ratios due to large R&D and capital

expenditures needed to develop new products. Likewise, lower Q ratios will characterize firms in industries with important physical assets (see, e.g., Lindenberg and Ross, 1981).

In this research, since the information on R&D and advertising expenses is usually unavailable in financial reports and in databases, age, firm size and 1-digit industry dummies are used as control variables in the models. The industry dummy is important because high growth firms tend to have high Tobin's Q ratios. Eisenhardt and Schoonhoven (1990) find that founding a business in a growth-stage market is positively associated with growth among new firms. Hence, it is essential to control for the industry effect in order to isolate the management ownership influence on firm value. Indeed, the development of market shares is particularly difficult for young firms in more mature markets where established competitors already operate, (see, e.g., Cooper et al. 1994)[16]. Low start-up barriers in these sectors may cause important competitive pressures on new firms and considerably affect their ability to grow. Finally, tough competition that pushes firms to cut prices and the resulting low profit margins hurt new and small size firms with low financial capacities. Indeed, small firms have more difficulty to resist and to survive from price wars since they do not have the same sufficient financial resources to compete in such aggressive environments (see, e.g., Brito and Mello, 1995).

In 2002, in response to financial scandals, Enron, WorldCom, etc, the Bush administration adopted the Sarbanes-Oxley act (SOX) with the objective being to promote better accounting practices in public companies. A new agency was created, the Public Company Accounting Oversight Board (PCAOB), which is responsible to inspect, regulate and discipline accounting firms in their role of auditors for public firms. In this

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[16] Cooper et al (1994) find that the probability of growth is higher for companies that are not operating in the retail and personal services sectors.

study, an additional dummy variable is added to capture the potentially positive effect of the act on market valuations. Indeed, the compliance with SOX has a positive effect on the market valuation for Canadian small-cap firms, (see, e.g., Switzer, 2007)[17]. In this research, a dummy variable is added which takes the value of one if the Tobin's Q is calculated for the year 2003 or after and is zero otherwise.

Tobin's Q ratio is computed as follows at the December 31st of the offering year:

$$\frac{\text{Common Stock Market Capitalization + Preferred shares liquidating value + Book value of total debt}}{\text{Book value of total assets}}$$

Tobin's Q ratio is a good way to identify if the firm has positive NPV projects available. A Q ratio higher than 1 indicates that the firm makes profitable investments and will continue in the future since the market value is above its actual book value (Brush et al. 1999).

3. Data collection

When studying the influence of management quality on operating performance, it is important to consider that changes within the management team through the years are possible. Indeed, as time passes, management is likely to change and since data are collected from IPO prospectuses, updates about potential subsequent changes and information on the new management team after the issue are not easily accessible. Therefore, it is assumed that there are no important changes in the management team for

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[17] Switzer (2007) finds that firms subject to the SOX regulation experienced an increase in market valuation from 15.7% to 34% following its application.

IPO firms and that the original team is a good indicator of the management in the first years following the offering.

Data on Canadian IPOs are from SDC/ Platinum New Issue database and all new issues in Canada have been collected. Of the 2,310 total IPOs conducted during the period from 1997 to 2006, after having excluded all IPOs from foreign companies, financials (all firms with SIC codes between 6000 and 6999), price offerings below $2, flow-through shares issues, income funds, limited partnerships, income security deposits, equity carve-outs and considering unavailable prospectus and financial information, the final sample consists of 95 firms. Although small, this sample is assumed to be fairly reasonable for a study of the Canadian IPO market given that Jog, and Riding (1987) research is based on a sample of 100 Canadian IPOs and Kryzanowski and Liang (2008) on a sample of 97 companies. Furthermore, when firms were sold before the performance appraisal date, they were automatically removed from the study. The reason is simple; when some firms may have been acquired when approaching failure, other could have been prospering. Since the required information to distinguish such feature is not available, these firms are excluded for the study. The information on the management team and on other aspects of the firm is taken from the IPO prospectus available on the Canadian financial website SEDAR[18]. Finally, financial data are taken from Bloomberg and Compustat Research Insight.

First of all, firms with offer prices below $2 are excluded from the study given that the market capitalization used in the Tobin's Q formula is affected by the high volatility commonly characterizing low-price stocks. Besides, penny stocks do not have the same level of risk of larger firms and thus are hardly comparable with more

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[18] www.sedar.com

established and less risky companies on the market. Furthermore, several IPO firms during the 1997 to 2006 period went public through the capital pool company program (CPC). Firms participating in the CPC program must be treated with great caution. Unlike standard IPOs, CPCs are created to form shell companies; meaning that they don't need any previous business activity and no assets other than cash to issue shares on the stock market. The only requirement is that the officers provide $100,000 of their own in seed capital to start the business. Then, the amount raised from the offering is used for the identification and evaluation of potential investments and acquisitions. The identification of a potential acquisition and the beginning of an agreement in principal with the target firm, depending of the type, must occur within the first 24 months after the IPO. Moreover, after the acquisition, the management is likely to change[19]. The Venture Pool Program (Vancouver stock exchange), Keystone companies (Alberta stock exchange), and the Junior Pool Program (TSX venture) are all types of capital pool companies seeking to raise capital on the IPO market in Canada. These IPOs are usually very small issuers, with prices often below $1, and constitute highly speculative investments (see, e.g., Carpentier and Suret, 2006). Although, the program has initially been established by Canadian regulators to enable small firms to directly access the stock market, it turns out that they provide poor investments to investors (see, e.g., Carpentier and Suret, 2006)[20]. Therefore, for reasons of non previous business activities, strong likelihood of

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[19] http://www.tsx.com/en/pdf/CPCBrochure.pdf

[20] Carpentier and Suret (2006) find that these firms exhibit poor operating performances, have strong negative stock returns and are usually low-quality firms. They conclude that the CPC program mostly permits poor companies to enter into the stock market.

management changes and abnormal poor operating performances, these firms are excluded from the study.

The popularity of income trusts in Canada increased considerably in the late 1990s and in the early years of 2000. In 2003, they represented around 7% of the entire market capitalization in Canada (see, e.g., Aggarwal and Mintz, 2004). Shareholders of income trusts are fiscally advantaged. Indeed, taxes are not paid by companies at the corporate level if profits are entirely distributed to shareholders; an advantage which has been removed in November 2006 by the Canadian minister of finance to re-establish the fairness in the corporate tax system[21]. Income trusts are usually mature companies with stable earnings and even though their conversions are listed as IPOs, they cannot be compared to smaller and younger firms which usually constitute the IPO market in Canada.

Several studies show that income trusts and real estate income trusts (REIT) exhibit positive abnormal performance (see, e.g., Jog and Wang, 2004; Kryzanowski and Tcherednitchenko, 2007)[22]. While income trusts were advantaged by the legislation in Canada, companies issuing flow-though shares renounce certain deductions or credits that would otherwise only be available for the company at the benefit of shareholders. These deductions are "flowed through" to investors as if they had been directly involved in the company's operations. Although no study has specifically studied the abnormal performances of flow-through share offerings yet, by the fact that these companies renounce potential deductions, operating performances are likely to be lower. Hence,

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[21] http://www.fin.gc.ca/n06/06-061-eng.asp

[22] Jog and Wang (2004) find that income trusts stock overperform the TSE 300 index and Kryzanowski and Tcherednitchenko (2007) find positive excess returns for REITs when compared to the S&P TSX composite index.

these firms cannot be tested in the same way as IPO firms with full access to available deductions and credits.

Finally, carve-out IPOs are excluded from this study to prevent any potential influence of the parent firm's management in the business activities of the company. In the case of a carve-out, the parent usually sells a minority share of the "child" company while retaining the rest of the ownership. However, the partially sold enterprise may still benefit from the parent company's resources and strategic support after the IPO. Thus, the parent's management quality would not be captured in this study while its potential influence on the IPO firm would appear in the data. For this reason, all firms resulting from a carve-out issue are excluded.

4. Measures of management quality

In this section, the different variables used as proxy for the management and the firm's quality in addition to the control variables used in the different models are described. The first con cern of this research is to measure the impact on operating performance of the founder's presence (FOUND) in the management team. FOUND is calculated as the percentage of members qualified as founders and the information is available in the IPO prospectus. The manager is considered as a founder when he is described as such or as the promoter in the sense that he took personal responsibility to create the organisation. Knowing the original purpose of the firm, the founder is expected to better understand and to have the ability to allocate resources within the company more effectively; leading the organization to high operating performance and firm value.

Secondly, it is interesting to examine the contribution of managers specific-industry past experiences (EXP) on operating performance. EXP is defined as the average number of past managerial employment in companies with the same 2-digit SIC code of the firm studied. In each previous position in a specific industry, it is assumed that managers accumulate knowledge about the resources required, the optimal strategy to follow and the strengths and weaknesses of the existing players. Moreover, they should have developed through the years networks with clients and customers of significant value for small and young businesses. Finally, past experiences of the management team should help to avoid costly mistakes and bad decisions mostly expected by inexperienced managers.

Another important measure of management quality is the tenure (TENURE) of its managers in the company. In this study, TENURE is defined as the average tenure of the management team from the beginning of the employment date in the company to the IPO issue. A longer average tenure is likely to improve decision and communication processes within the firm and to decrease costs of unproductive conflicts. Besides, managers with long tenure in a company should have a good knowledge of the business and should be better able to operate it efficiently than new managers without experience. They know how to act with employees, suppliers and clients and this ability to socially interact with all these participants should accelerate processes, lower expenses and ultimately, increases operating performances. However, in order to remove any possible correlation between firm age and tenure, residuals from the regression of TENURE on the natural logarithm of firm age are used, (XTENURE).

While longer tenure is usually viewed as a good thing, the constitution of the management team may also potentially affect the performance of the organization. Contrasting views have been advanced concerning the benefit of management heterogeneity on businesses. Here, the heterogeneity of tenure (TENHET) is measured as the coefficient of variation of managers' tenure. Higher heterogeneity of tenure should encourage constructive conflicts and promote new ideas. However, it may also cause communication and social interaction problems between managers which decrease performance (see, e.g., Murray, 1989). Therefore, the direction of the expected impact (positive or negative) of this characteristic on operating performance is uncertain.

In this research, the influence of the size of the top management team (TSIZE) on performance is also investigated. TSIZE is defined as the number of managers with the rank of vice-president or higher in the management team. In order to avoid any correlation between firm size and top management size, (TSIZE) is regressed against the book value of assets (BVA), the logarithm of the book value of assets (LNBVA) and the squared book value of assets (BVA2) and industry dummies. Then, residuals are used to proxy for the size of the top-management team (XTSIZE). Industry dummies are necessary to control for variations of management teams across industries. Indeed, some industries tend to require larger teams than others (see, e.g., Chemmanur and Paeglis, 2005). Larger teams are expected to provide ideas, to bring psychological support in tough times and thus should better be able to avoid damaging mistakes. Consequently, IPOs with larger management teams should produce higher operating performances in the years following the issue.

Management team resources, especially human capital, are essential for the growth and prosperity of any enterprise. In addition to work experience, the education of managers is investigated in this study. (PMBA) and (PCA) are measured as the percentage of the firm management holding an MBA degree and the percentage holding and accounting title; CA, CPA, CMA or CGA. As stated by business schools, managers holding an MBA have managerial skills and chartered accountant analysis skills and competencies to make optimal decisions when facing new challenges. All these claimed qualities should create profitable businesses for investors and above average performances are expected. In the best knowledge of the authors, this is the first study that attempts to measure the contribution of MBA and accounting title holders on the performance of non-financial Canadian companies. Therefore, it adds to the previous literature about the pertinence of following such programs for undergraduate students and for businesses wishing to hire the best managers.

The last measure of management quality is the dominance of the CEO over the other team members (FCEO). It is calculated as the salary of the CEO, base salary, bonuses and other annual compensations, on the average compensation of the management team. When the information concerning the salary of the management team is not given for every member, $100 000 is assumed to be earned since it is the maximum salary allowed to be received by an executive without any requirement of disclosure in the prospectus. Therefore, the degree of CEO dominance is possibly stronger if undisclosed executive salaries are lower than $100 000. Having a substantial influence over their own and team's salary, the CEO assessment of his value compared to others is a good measure of CEO dominance (see, e.g., Chemmanur and Paeglis, 2005). Here,

stocks or options compensation are not taken into account because this type of information and especially the value of such forms of compensation are not always available. Based on Fama and Jensen's (1983) theory on the separation of decision management and decision control, the degree of CEO dominance is expected to be negatively related to the operating performance of IPO firms.

In order to control for other types of "quality" in the company and following Chemmanur and Paeglis (2005), supplementary measures of firm quality are added in the regressions. The first measure of firm quality is age and is measured as the natural logarithm of 1 plus firm age (FAGE). Age is defined as the period from the incorporation to the IPO issue date. When there is a large discrepancy between the incorporation and the date the firm has actually started its operations, the beginning of operations date is assumed (see, e.g., Morck et al. 1988). Age is a good measure of firm quality because it shows that the older is the firm, the better is its track record with buyers and suppliers and the greater are the number of challenges and obstacles that have been surmounted in the past. Moreover, older firms are likely to be in more stable financial and operating stages than younger companies (see, e.g., Brito and Mello 1995).

Another measure of firm quality is the number of outside directors on the board (ODIR). Outside directors are defined as the number of independent directors that are not employed by the company and are not executive managers. The natural logarithm of ODIR is used in regressions (LNODIR). Larger independent boards of directors are presumed to exercise better surveillance on management and thus assure shareholders that firm assets are use efficiently. In addition, it provides the management team with additional knowledge and experience on industries and how to manage a business.

26

Moreover, their potential involvement in other companies or boards of directors can help to create networks and to bring additional linkages to other parties such as clients and suppliers. Hence, the number of outside directors is used in the study to control for firm quality (see, e.g., Chemmanur and Paeglis, 2005). However, in the previous literature, little or no evidence has been found concerning the positive effect of board size on operating performance (see, e.g., Brush et al. 1999; Mikkelson et al. 1997). As mentioned above, the lack of pertinent information makes it difficult for outside directors to exert proper surveillance on management.

The last measure of firm quality is the size of the firm and is defined by the size of total assets. Given the possibility of a nonlinear relationship between firm size and operating performance, the following three variables are used; the book value of assets (BVA), the logarithm of the book value of assets (LNBVA) and the squared book value of assets (BVA2) (see, e.g., Chemmanur and Paeglis, 2005). These coefficients are expected to be positive since larger firms are likely to be of higher quality.

To capture the potential impact of earnings management on post-IPO performance, the offer price (PRICE) is included in the models. However, since it is likely to be correlated with the size of the assets, the age and the industry, the residuals from the regression of the offer price on LNBVA, AGE and industry dummies are also tested, (XPRICE). Besides good performance, abnormally high prices may results from market timing or earnings management. However, in the case of earnings management and the use of accruals by managers, the operating performance of firms using such methods is likely to be worse after the IPO than what it should be without manipulation. Indeed, accruals used to boost earnings have to be reversed sometime or another because

it is generally not a permanent item on the balance sheet. For instance, a manager can record a cash expense of $100 000 from a marketing campaign in the IPO year and report it as deferred assets. However, these "assets" have to be amortized over time. Therefore, it results in inflated earnings in the IPO years and a poorer operating performance will follow subsequently. As stated by Teoh et al (1998), to avoid eventual lawsuits by investors or simply to keep the price of their shares up till the lockup period ends, firms using earnings management are likely to reverse positive accruals after the first financial year following the IPO. Since the inflated operating performance of firms using aggressive accruals in the IPO year is unsustainable; such firms are expected to have low operating performances in the years following the IPO when accruals reverse.

Finally, the effect of stock ownership of all executives and directors on firm value is also examined. Stock ownership (OWN) is measured as the percentage of the equity held or controlled by all directors and officers after the issue on a fully-diluted basis. Moreover, it is assumed that when present, over allotment options are not exercised (see, e.g., Jain and Kini, 1994). Following Morck et al (1988), the alignment of interest is expected to dominate at low and high levels and the entrenchment of management is assumed to prevail at intermediate levels.

The following variables are used to estimate the piecewise linear regressions in relation with Morck et al (1988) findings:

BDR.0to5   = Board ownership if Board ownership < 0.05

                        = 0.05 if Board ownership ≥ 0.05

BDR.5to25   = 0 if Board ownership < 0.05

                        = Board ownership minus 0.05 if 0.05 ≤ Board ownership < 0.25

                        = 0.20 if Board ownership ≥ 0.25

BDR.OVER25   = 0 if Board ownership < 0.25

                        = Board ownership minus 0.25 if Board ownership ≥ 0.25

Table 4 summarizes measures of management quality and includes dependent and control variables in the regressions. The mean offer price is \$9.42, with the smallest offer priced at \$2 and the highest at \$37.31. On average, 15% of the managers have an MBA and 16% an accounting title. The mean (median) size of the top management team (TSIZE) is 6.14 (6). The smallest team gathers 2 members and the biggest, 16 executives. The average tenure of the management team is 3.46 years and range from 0.32 to 21.06 years. The number of past employments in the specific-industry ranges from 0 to 4.2 and founders are present in the management team 15% of the time. Finally, CEOs earn on average 46% more than the rest of their teams. Panel B of table 4 presents the correlations between independent variables.

5. Results and discussion

Results from both regressions show a nonlinear relationship between the stock ownership held by directors and officers and firm value. The relationship is statistically significant at low levels, between 0% and 5% and in line with the alignment of interests

29

hypothesis. Therefore, when managers own only a small fraction of the equity, market discipline forces them toward value maximization. For intermediate levels, between 5% and 25%, the relationship is negative and it seems that the entrenchment hypothesis dominates the alignment of interests hypothesis. Hence, when managers control a substantial fraction of the equity, they may have enough voting power or influence to guarantee their jobs in the company and feel protected against market discipline. Consequently, management will act for its own benefit rather than in the best interests of shareholders. These findings are similar to Morck et al (1988) except that they also find a positive relationship for levels of ownership over 25%. Although a positive relationship for levels above 25% is observed in this study, results are not statistically significant.

According to Fama and Jensen (1983), an organisation in which its managers own more than 50% of the equity may have a hard time to survive. The lack of control over decisions is at the source of their theory. In the sample of Morck et al (1988), only 3.77% of the firms have over 50% of their equity held by directors and officers. In the research, 23.15% of the firms in the sample have 50% or more of the ownership held by directors or officers. Therefore, if the ownership effect on firm value is mitigated at levels between 25% and 100%, it may explain why the results are insignificant at that particular level. It is also possible that larger firms have more diffused ownership. Consequently, it becomes more difficult for outside shareholders to exert control over large firms with many shareholders (see, e.g., Kim et al. 2004). The sample studied in this research is based on IPO firms of relatively small size; an average of 180 $million in total assets. On the other hand, Morck et al (1988) study companies from the Fortune 500 listing. Knowing that firms listed on the Fortune 500 are the biggest US public companies based on gross

revenues, they are certainly much larger than the sample of Canadian IPOs. It is also possible that riskier firms need higher levels of equity owned by managers to ensure shareholders that their interests are in line with the management team. Indeed, since the benefit of promoting managerial interests is less variable than value-maximizing objectives for managers in risky firms, these managers may prefer the sure thing rather than the unsure future gains from their stock ownerships. As a result, it may take more ownership for small corporations to align their interests with shareholders. However, different cut-off points have been tried in the study but results remained insignificant at the high level. Finally, the different control variables used to proxy for intangible assets and the simplified equation for the Tobin's Q ratio can also explain the lack of significance at levels above 25%.

Both control variables, AGE and LNBVA are statistically significant at 10% and 1% respectively and have negative coefficients. Therefore, it indicates that younger and smaller firms exhibit higher Tobin's Q ratios. Intuitively, these firms have a larger portion of their market capitalizations in expectations of future profits rather than in actual assets. Younger firms may also have a larger portion of their values in intangible assets such R&D and human capital. As a result, assets are undervalued which produces high Tobin's Q ratios. Finally, the Sarbanes-Oxley dummy variable proxy for higher corporate governance practices turns out to be insignificant. The high correlation with the year dummy variables may explain this lack of significance.

Table 5 displays the principal results from the regressions of firm and management quality on operating performance. First of all, the proxy for earnings management is statistically significant at 1% for all three regressions. To avoid any correlation between price, age, size and industry, residuals (XPRICE) from the regression of price on firm age, LNBVA, and industry dummies are also used and tested. Results show that XPRICE coefficients are negatively related to operating performance in the two regressions. These results suggest that some IPO firms do manipulate earnings in order to boost the offer price above the industry level. Eventually, the market has to realize the firm's true value when accruals are reversed; which could explains the poor stock price performance of IPO firms observed in many studies. Hence, investors have to be aware that unusually good operating performance relative to the size, the age and the industry may be signs of earnings manipulation and should carefully examine the accrual section of the financial report.

As predicted, FAGE is positively related to firm performance in all regressions and is significant at the 1% level. Hence, it indicates that older firms perform better than their younger counterparts. Abilities acquired through the years to operate in the industry, establish networks with customers and suppliers or having better access to financial credit are all credible reasons evoked in previous studies to explain this better performance. In fact, Kim et al (2004) find that older firms suffer as much as younger firms after going public but still enjoy better performance levels afterwards. The size variable is also significant in all regressions and suggests that larger firms exhibit better performance than smaller firms. The capacity of larger firms to hold on during rough periods, economies of scales and the capacity to raise funds are all plausible explanations for this

better performance. Hence, age and size are good proxies for firm quality as it has previously been found by other studies on IPO companies.

The last control variable used as proxy for firm quality, LNODIR, turns out to be significantly negatively related to performance in two regressions. The conclusion of Mikkelson et al (1997) that the lack of information available to do proper surveillance and the fact that outside directors obviously know less than inside directors making it difficult to exercise effective control over strategic decisions may be a partial explanation for these results. The other part of the answer may come from the idea that the size of large boards could produce unproductive conflicts that are likely to slow down the decision process instead of accelerate it. Therefore, the divergence of opinions inside the board may lead to excessive delays in the execution process and harm the company. It is also been advanced that communication and coordination problems in large boards are responsible for the negative relationship between board size and performance (see, e.g., Eisenberg et al. 1997). Finally, Agrawal and Chadha (2005) study the probability of a company to restate its earnings as a proxy for a sign of weak internal controls and accounting problems. They examine certain corporate governance mechanisms such as the independence of the board of directors and find that it is statistically unrelated to the probability of a company to restate its earnings.

The first measure of management quality, XTENURE, is positive in all regressions and indicates that top managers with a past history of working together did learn the optimal strategy to get along and to communicate with each other efficiently. The idea that they know the strengths and weaknesses of each other allows a better partition of the work and resources through the team and leads to better operating

performance. While some may argue that the heterogeneity of tenure may benefit the firm by encouraging constructive conflicts (see, e.g., Wiersema and Bantel, 1992), results show that TENHET is negatively related to firm performance. It means that even though high team heterogeneity could bring more different ideas and encourage constructive conflicts in the team, it can also slow down decision and execution processes. In rapidly changing environment industries, speed of execution and the ability to react quickly are essential. New members have to learn about the company, industry and their responsibilities; resulting in a learning process potentially damaging for small and young businesses. Besides, conflicts from problems of communication or social interactions are likely to slow down even more execution processes in the company.

Surprisingly, the average number of past managerial employment of managers in the same industry (EXP) turns out to be negatively related to operating performance and statistically significant in one regression. The experience of the industry should bring special knowledge and valuable networks for enterprises. However, good managers are scarce and firms that recognize the value of their people should do everything they can to retain them inside their companies. Therefore, if a manager has held many previous employment positions, it might be because his previous employers were willing to let him go. Moreover, managers which occupied several positions may also be more career-focused. Hence, it is possible that they have low levels of personal involvement and are willing to quit for any better opportunity.

As expected, the size of the top management team (XTSIZE) is positively related to operating performance. The potential psychological synergy of larger teams to solve problems and to give proper attention to a larger number of details, thus reducing the risk

of important mistakes, may explain this relationship. Larger management teams also leave more place for the specialization of members. While managers in smaller firms sometimes have to fulfill several positions, larger firms can designate the appropriate persons in the right places.

In line with Fama and Jensen (1983) theory and due to the absence of the separation between decision management and decision control, teams with dominant CEOs over other members should suffer in terms of competition for survival. In this study, the FCEO coefficient is found to be negatively related to the operating performance in two regressions at the 5% level of significance. Indeed, CEOs earning much more than the average of other managers may have too much influence within the team and bad decisions are likely to occur if no control is exercised. Moreover, other members may be reluctant to contradict the CEO's point of view. As a result, the positive contribution of having a large team diminishes, ideas are not diffused within the team and decisions are ultimately left to the CEO alone.

Surprisingly, the percentage of MBAs holders in the management team turns out to be significantly negatively related to operating performance in one regression. This result may be related to Baruch and Peiperl (2000) findings that MBA managers had lower levels of organization commitment than non-MBA managers and had a higher tendency to leave their organizations. Therefore, even though they might be more qualified managers, if MBAs do not give their full potential and are not totally committed in their work, the performance of the organization will suffer. Moreover, according to Gottesman and Morey (2006) who study mutual fund performance, the only aspect of education related to performance is attending a top or near top MBA program. In this

research, no distinction is made between the quality of MBA diplomas. Consequently, MBA programs are assumed to provide the same level of competencies to all graduates. The level of intelligence required to attain top business schools or social connections developed in these prestigious institutions have been advanced in previous studies as potential explanations for superior performance but were rejected by Gottesman and Morey (2006).

It is also possible that the sample studied herein is not the optimal environment for MBA students. Indeed, MBAs are usually hired by financials and services businesses and there are very few MBAs directed toward construction, mining and manufacturing industries (see, e.g., Baruch and Peiperl, 2000). In this research, all financials firms have been removed from the sample. If the best MBA graduates work in these specific industries, it is conceivable that the others get jobs in less frequent sectors for MBAs. A further explanation may come from a sort of dominance on other team members from MBA managers. As for CEO dominance, if members of the team without MBAs hesitate to contradict other members with MBAs thinking that, if they have a MBA degree they necessarily have to be right, it may result in a lack of conflict between members. Consequently, potentially good ideas will be unshared and the same problems as having a small management team will follow. Studying mutual funds, Switzer and Huang (2007) find that portfolio managers with MBA designations actually underperformed other managers on a fund risk-adjusted returns basis.

The coefficient of variation of the percentage of chartered accountants in the firm is also statistically significant at the 10% level. As opposed to MBAs, the coefficient is positive and shows that having more chartered accountants in the management team

improves the operating performance of IPO companies. Therefore, affirmations from the Chartered Accountants of Canada association seem to be accurate in the sense that they do have professional competencies, values and attitudes required to analyze, synthesize and apply their knowledge efficiently. These findings could potentially interest enterprises in their future hiring process. In the sample, executives with an MBA degree earn on average 239 346$ per year while executive without an MBA earn $225,652. Although the difference is not very large, if managers with an MBA degree do not perform better than the others, why allocate higher salaries?

The last variable tested, FOUND, turns out to be insignificant in all regressions. Therefore, while some may argue that founders know the original purpose of their business and therefore allocate resources more efficiently, the results are inconclusive towards this argument. As a possible explanation, Kor (2003) argues that a conflicting effect occurs when founders operate in an environment where managers have high levels of past industry experience. In such circumstances, the team becomes less effective in creating new opportunities because it over-emphasizes on actual industry practices. In order to control for possible differences in operating performance between industries, management quality variables are tested against industry adjusted-ROA[23]. At the exception of the book value of assets which becomes insignificant, all other variables with explanatory power in the third regression remain significant. Moreover, we test the relationship between management quality and firm's value. As expected, small and younger firms have higher Tobin's Q values. However, none of the other variables are significant. It seems that when management quality has predictive power on operating performance, it is not reflected in firm's value.

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[23] Adjusted-ROA is defined as the firm's ROA minus the median ROA of its industry.

6. Statistical test: Hausman Test

The Hausman (1978) test allows the identification of potential endogeneity of variables in the model. Here, each explanatory variable is tested and none of the tests reject the null hypothesis of exogeneity. Indeed, results reported in Table 7 show that all management quality variables are not endogenous along with the operating performance and indicate that there is no simultaneity bias in the OLS regression results.

7. Conclusion

The quality of management is essential to the development and financial health of every business. While financial information is broadly available for publicly-traded companies, the data on IPO firms are sometimes limited. In order to make the best investments, all pieces of information have to be considered. In this research, the relationship between several aspects of the management team such as tenure, heterogeneity of tenure, size of the top management team, the experience in the specific industry, CEO dominance, the presence of MBAs and chartered accountants designations holders, and finally the presence of the original founders on the operating performance for Canadian IPO companies that went public during the period from 1997 to 2006 have been examined. Results suggest that some differences in performance may be attributed to differences in the characteristics of the management team. Tenure of the management team, size of the top management team and the presence of chartered accountants increase the operating performance while heterogeneity of tenure, CEO dominance and MBAs have a negative effect. As expected, larger and older firms exhibit a better operating performance than their smaller and younger counterparts. Moreover, evidence of earnings management is observed in the sample. Indeed, some firms seem to use

38

accruals in order to boost the IPO price and exhibit poor operating performances in the year after the issue. In this study, the effect of common stock ownership held by directors and officers on firm value is also investigated. As Morck et al (1988) find, a non monotonic relationship exists in the sample. A positive relationship is observed at low and high levels of ownership, although not significant at levels over 25%, and a negative relationship is found for levels between 5% and 25%.

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Table 1.

Mean values of Tobin's Q for 95 Canadian IPO firms during the period 1997-2006 grouped by level of equity ownership of all officers and directors

Board's stake	Number of firms	Mean Tobin's Q	Standard error of mean Q
Negligible	4	1.814	0.874
0-5%	14	4.306	4.883
5-10%	6	3.238	2.351
10-15%	9	2.185	1.123
15-20%	10	2.352	1.663
20-25%	6	2.548	0.860
25-30%	4	1.654	0.542
30-35%	6	2.597	1.599
35-40%	7	2.015	1.492
40-50%	7	3.376	4.214
50-60%	8	2.130	1.430
60-70%	6	3.437	3.019
70-80%	4	4.050	2.205
80-100%	4	1.655	0.790

[a] negligible board stake : no more than 0.2% of the firm's common stock is owned by board members

Table 2.

Number of IPOs by year											
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Total	371	243	189	225	180	151	146	248	278	279	2310
Foreign Firms	13	15	8	11	9	6	3	3	11	9	88
Financials	111	83	83	100	110	81	89	154	160	151	1122
Price below $2	189	109	80	83	51	33	29	57	58	78	767
Income Fund	8	8	0	0	3	19	11	14	25	15	103
Limited Partnerships	3	4	2	0	1	2	3	1	1	2	19
Income Security Deposit	0	1	0	0	0	0	0	1	2	0	4
Carve-outs	2	4	1	5	2	1	0	1	2	4	22
Flow Through Shares	4	0	0	0	1	4	6	2	5	9	31
Prospectus not available	17	3	2	4	0	1	2	0	0	0	29
Incomplete data	3	1	0	0	0	1	0	0	1	0	6
Bloomberg/Compustat not available	11	5	0	3	1	0	1	1	1	1	24
Final sample	10	10	13	19	2	3	2	14	12	10	95

Table 3.

Industry	Number of firms
Mining	20
Construction	1
Manufacturing	36
Transportation	3
Communication	6
Retail Trade	1
Services	28
Total	**95**

Table 4.

The sample consists of 95 initial public offerings between 1997 and 2006. PRICE is the firm's offer price. XPRICE is the residuals from the regression of the offer price on firm's age, LNBVA and industry dummies, where LNBVA is the natural log of the book value of firm's assets. BVA is the book value of assets (in $million) and BVA2 is BVA squared. FAGE is the natural log of one plus firm age, where firm age is the number of years between the incorporation date or the start of operations (which ever is earlier) and the IPO issue. TENURE is the average number of years managers have been working for the issuing company. XTENURE is the residuals from the regression of TENURE on firm's age. TEHNET is the coefficient of variation of the team members' tenures. ODIR is the number of outside directors that are not executive officers or employed by the company. LNODIR is the natural log of ODIR. TSIZE is the size of the management team which is defined as the number of managers with the rank of vice-president or higher. XTSIZE are residuals from a regression of TSIZE on LNBVA, BVA, BVA2 and industry dummies. PMBA is the percentage of the firm's management team with MBA degrees. PCA is the percentage of the firm's management team with chartered accountant title; CA, CMA or CGA. EXP is the average number of previous managerial employments in the same 2-digit SIC code industry of the team's managers. FOUND is the percentage of the firm's management team who are founders of the firm. FCEO is the ratio of CEO salary, bonus and other compensations excluding stocks and options in the fiscal year preceding IPO to the average salary, bonus and other compensations of the other management team members. OWN is the percentage ownership owned by all directors and officers of the IPO firm on a fully dilituted basis and excluding over allotment options. ROA is the ROA of the year after the first fiscal year after the IPO. Tobin's is the market value of common shares plus the liquidation value of preferred shares plus the book value of total debt, divided by the book value of total assets at the december 31th of the IPO year. LNQ is the natural log of Tobin's Q.

	Min	Mean	Median	Max	Std. dev.
Panel A: Summary statistics					
PRICE	2.00	9.42	8.25	37.31	5.70
XPRICE	-9.44	0.00	-0.61	22.30	4.35
BVA	2.88	179.53	82.13	3043.32	359.51
LNBVA	1.06	4.38	4.41	8.02	1.24
BVA2	8.32	160115.606	745.17	9261772.28	966033.86
FAGE	0.52	2.15	2.07	3.98	0.80
TENURE	0.32	4.77	3.46	21.06	4.14
XTENURE	-6.00	0.00	-0.41	11.43	2.72
TENHET	0.00	0.68	0.64	1.67	0.36
ODIR	1.00	4.75	4.00	14.00	1.95
LNODIR	0.00	1.48	1.39	2.64	0.41
TSIZE	2.00	6.14	6.00	16.00	2.50
XTSIZE	-3.66	0.00	-0.05	5.39	1.89
PMBA	0.00	0.15	0.13	0.60	0.17
PCA	0.00	0.16	0.17	0.50	0.12
EXP	0.00	1.11	0.89	4.20	0.90
FOUND	0.00	0.15	0.13	0.67	0.16
FCEO	0.58	1.52	1.46	3.56	0.53
OWN	0.00	0.30	0.24	1.00	0.26
ROA	-261.94	-0.11	-1.81	47.89	33.39
Tobin's Q	0.20	2.80	1.89	17.66	2.65
LNQ	-1.63	0.74	0.64	2.87	0.74

Table 4 continued:

Panel B: Correlation table

PANEL B: Correlations between independent variables

	XPRICE	FAGE	BVA	BVA2	LNBVA	LNODIR	XTENURE	TENHET	XTSIZE	EXP	FCEO	PMBA	PCA	FOUND	YEARROA
XPRICE	1														
FAGE	-0.0567	1													
BVA	0.0792	0.1093	1												
BVA2	0.0366	0.1800***	0.9162*	1											
LNBVA	0.0000	0.0446	0.6738*	.4057*	1										
LNODIR	0.0598	-0.0771	0.3014*	0.1992**	0.2747*	1									
XTENURE	0.2155**	0.0386	-0.1881***	-0.1505	-0.1558	-0.1581	1								
TENHET	-0.1048	0.3698*	0.1228	0.1714***	0.0617	-0.0304	-0.2800	1							
XTSIZE	0.0482	0.1350	-0.0027	-0.0028	-0.0013	0.0040	-0.1955***	0.2095**	1						
EXP	-0.0321	-0.5273***	0.0277	-0.0600	0.1258	0.0610	-0.1574	-0.1559	-0.0115	1					
FCEO	-0.0947	0.3812*	0.2887*	0.25943*	0.2144**	0.2127**	-0.1638	0.2421**	0.2579**	-0.2664***	1				
PMBA	0.2869*	-0.1061	0.0508	-0.0379	0.0510	-0.1349	-0.1219	0.1129	0.0783	0.0546	-0.0249	1			
PCA	-0.0660	0.0239	0.0861	0.0251	0.1737***	0.05284	0.0400	0.0251	-0.1149	-0.0847	0.1287	0.0249	1		
FOUND	-0.0023	-0.2638	-0.1810***	-0.1308	-0.2083***	-0.2470**	0.3319*	-0.0667	-0.2264***	0.1443	-0.3062*	-0.0438	-0.0312	1	
YEARROA	-0.1375	-0.2751*	0.0216	-0.0101	0.2253***	0.0919	-0.2117***	-0.0064	0.0004	0.3321*	-0.0735	-0.1998***	0.1365	-0.1395	1

Table 5.

Ordinary least squares regression of 1997-2006 period ROA and industry-adjusted ROA on management and firm's qualities and ordinary least square regression of 1997-2006 period industry-adjusted Tobin's Q on management and firm's qualities for Canadian IPO firms

	Dependent variable				
	ROA			Adjusted ROA	Adjusted Tobin's Q
PRICE	-4.111	-	-	-	-
	(6.75) *				
XPRICE	-	-3.6421	-3.9715	-3.9082	-
		(5.66) *	(5.94) *	(5.74)*	
FAGE	17.290	11.4069	15.2722	16.6233	-0.0218
	(4.79) *	(3.14)*	(3.37) *	(3.60)*	(1.91)***
BVA	0.058	-	0.0645	0.0492	-
	(1.62)		(1.73)***	(1.30)	
BVA2	0.00001	-	-0.00002	-0.00001	-
	(1.54)		(1.53)	(1.14)	
LNBVA	11.106	5.7137	-0.4379	0.4375	-0.2526
	(2.39) **	(2.40) **	(0.09)	(0.09)	(3.16)*
LNODIR	-11.136	-13.4623	-11.4034	-10.4015	-0.0734
	(1.67)***	(1.91)***	(1.64)	(1.47)	(0.38)
XTENURE	2.018	-	2.1283	2.1019	0.0224
	(1.86) ***		(1.84) ***	(1.79)***	(0.66)
TENHET	-16.409	-	-14.3290	-16.5955	0.0610
	(2.06) **		(1.70)***	(1.94)***	(0.24)
EXP	-7.2237	-	-4.9725	-4.0352	-0.0364
	(2.10) **		(1.39)	(1.11)	(0.35)
XTSIZE	2.677	-	3.2460	3.3061	-0.0007
	(1.86) ***		(2.18) **	(2.18)**	(0.02)
FCEO	-13.1702	-	-14.4091	-13.5295	-0.1439
	(2.36) **		(2.45) **	(2.26)**	(0.88)
PMBA	-21.0812	-	-31.7007	-32.8251	0.6543
	(1.26)		(1.86)***	(1.88)***	(1.51)
PCA	30.3468	-	39.5866	43.5637	0.2391
	(1.37)		(1.74)***	(1.88)***	(0.39)
FOUND	-3.5353	-	2.6531	9.5703	-0.5929
	(0.19)		(0.14)	(0.49)	(1.14)
YEAR	1.9593	0.7547	2.5449	2.6734	0.0024
	(1.88)***	(0.77)	(2.38)**	(2.45)**	(0.08)
R²	0.5824	0.3963	0.5447	0.5399	0.3320
Industry dummies 1-digit SIC Codes	No	No	No	No	Yes
N			95		

[a] Numbers in parentheses are T values according to SAS regression results.

[b] *, **, *** indicate significance at the 1%, 5%, 10% levels, respectively.

[c] Adjusted ROA is defined as the firm's ROA minus the median ROA of its industry.

[d] Adjusted Tobin's Q is defined as the firm's Tobin's Q minus the median Tobin's Q of its industry

Table 5 provides Ordinary least squares estimates of the quality of the management and performance of the following models.

$ROA_1 = B1 + B2*Price + B3*FAGE + B4*BVA + B5*BVA2 + B6*LNBVA + B7*LNODIR + B8*XTENURE + B9*TENHET + B10*EXP+ B11*XTSIZE + B12*FCEO + B13*PMBA + B14*PCA + B15*FOUND + B12*YEAR + \varepsilon_1$

$ROA_2 = B1 + B2*XPrice + B3*FAGE + B4*LNBVA + B5*LNODIR + B6*YEAR + \varepsilon_2$

$ROA_3 = B1 + B2*XPrice + B3*FAGE + B4*BVA + B5*BVA2 + B6*LNBVA + B7*LNODIR + B8*XTENURE + B9*TENHET + B10*EXP+ B11*XTSIZE + B12*FCEO + B13*PMBA + B14*PCA + B15*FOUND + B12*YEAR + \varepsilon_3$

$ADROA = B1 + B2*XPrice + B3*FAGE + B4*BVA + B5*BVA2 + B6*LNBVA + B7*LNODIR + B8*XTENURE + B9*TENHET + B10*EXP+ B11*XTSIZE + B12*FCEO + B13*PMBA + B14*PCA + B15*FOUND + B12*YEAR + \varepsilon4$

$ADTOBINQ = B1 + B2*FAGE + B3LNBVA + B4*LNODIR + B5*XTENURE + B6*TENHET + B7*EXP+ B8*XTSIZE + B9*FCEO + B10*PMBA + B11*PCA + B12*FOUND + B13*YEAR + \varepsilon5$

Table 6.

Piecewise linear ordinary least squares regressions of 1997-2006 period Tobin's Q on board ownership for Canadian IPO firms

	Dependent variable Tobin's Q	
Age	-0.0178	-0.0179
	(1.99) ***	(2.01) **
LNBVA	-0.2670	-0.2672
	(3.84) *	(3.93) *
BDR0to5	11.7349	11.7497
	(1.76) ***	(1.78) ***
BDR5to25	-2.9031	-2.9019
	(2.22) **	(2.24) **
BDRover25	0.4876	0.4872
	(1.08)	(1.09)
Year	0.0083	0.0072
	(0.13)	(0.15)
Sarbanes-Oxley dummy	- 0.0078	-
	(0.02)	
Industry dummies 1-digit SIC Codes	Yes	Yes
R^2	0.3386	0.3386
N	95	

[a] Numbers in parentheses are T values according to SAS regression results.

[b] BDR.0to5   = Board ownership if Board ownership < 0.05

                                    = if 0.05 if Board ownership $\geq$ 0.05

    BDR.5to25   = 0 if Board ownership < 0.05

                                      = if Board ownership minus 0.05 if 0.05 $\leq$ Board ownership < 0.25

                                      = 0.20 if Board ownership $\geq$ 0.25

    BDR.OVER25   = 0 if Board ownership < 0.25

                                      = Board ownership minus 0.25 if Board ownership $\geq$ 0.25

[c] *, **, *** indicate significance at the 1%, 5%, 10% levels, respectively.

Table 6 provides ordinary least squares estimates of the board ownership and firm value equations of the following models.

TOBINQ = B1 + B2*AGE + B3*LNBVA + B4*BDR0to5 + B5*BDR5to25 + B6*BDRover25 + B7*YEAR + B8*SOXLEY + B9*INDUSTRY + ε_1

$TOBINQ_2$ = B1 + B2*AGE + B3*LNBVA + B4*BDR0to5 + B5*BDR5to25 + B6*BDRover25 + B7*YEAR + B8*INDUSTRY + ε_2

48

Table 7.

Hausman tests for endogeneity of the management quality variables and operating performance

	Residual Coefficient	Std Error	T-Statistic	Significance
XPRICE	-0.0067	0.0330	(0.20)	0.8389
FAGE	-0.0063	0.0066	(0.96)	0.3394
LNODIR	-0.0010	0.0036	(0.28)	0.7834
XTENURE	-0.0099	0.0239	(0.42)	0.6787
TENHET	0.0029	0.0031	(0.92)	0.3625
EXP	0.0071	0.0074	(0.96)	0.3399
XTSIZE	-0.0011	0.0166	(0.07)	0.9469
FCEO	-0.0046	0.0047	(0.99)	0.3246
PMBA	-0.0007	0.0014	(0.47)	0.6371
PCA	0.0013	0.0010	(1.22)	0.2254
FOUND	0.0005	0.0014	(0.37)	0.7139