AUDIT COMMITTEE, UNDERPRICING OF IPOS AND ACCURACY OF MANAGEMENT EARNINGS FORECASTS

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Research Question/Issue: This paper examines the role of audit committees in the Initial Public Offering (IPO) process in a setting where audit committee (AC) best practices are known but their adoption is voluntary. We consider the creation and characteristics of the committee as signals which issuing firms can use to reduce the underpricing often associated with IPOs. We also examine the effect of the committee on the quality of management earnings forecasts included in the prospectus.

Research Findings/Insights: Our empirical analysis is performed on archival data from a sample of 246 IPOs issued in the Canadian province of Québec over the period 1982 to 2002. We find that the mere creation of an audit committee at the time of the IPO has no effect on underpricing unless its members are independent and have expertise in financial matters, in which case it decreases significantly the level of underpricing of the IPO. However, we find no significant association between these two governance attributes and the accuracy of forecasts included in prospectus.

Theoretical/Academic Implications: Our study contributes to the signaling literature by examining the role of the AC as a signal in the IPO context. . Our results suggest that the AC is a credible signal that could be used in the firm's signaling strategy and they provide support for the monitoring role of the board, as proposed by the agency theory.

Practitioner/Policy Implications: Our results support the world-wide movement in legislations requiring audit committee independence and expertise. They stress the importance of the presence qualified members on the audit committee, i.e. members with sufficient knowledge of accounting and finance. Recent legislation changes in several countries go in this direction.

INTRODUCTION

Accounting scandals such as those of Enron and WorldCom have triggered first an awareness of the effects of weak corporate governance and then an increase in the regulation of governance mechanisms in the US and around the world. Some questions remain about the effectiveness of these regulations (Romano 2005). We contribute to the debate by examining a setting where governance best practices are known and available but not mandatory.[1] In particular, we examine the decisions relative to the creation and the characteristics of an audit committee made by companies in preparation for an initial public offering (IPO, hereafter), and their impact on the pricing of the issue. The IPO setting is ideal for this type of study because, in preparation for the issue, the firm's existing shareholders and managers have to establish disclosure and signaling strategies that will convince investors to purchase the newly issued shares.

IPOs are characterized by a large information asymmetry between the existing shareholders who have private knowledge about their firm's expected future cash flows and investors with whom they want to share the firm's ownership and risk. This information asymmetry drives the existing shareholders to "underprice" the issue, asking for an offering price which they know to be lower than the intrinsic value of the shares being issued. Underpricing represents a wealth transfer from the firm's founders and existing shareholders to the new investors (Filatotchev and Bishop 2002).

The existing shareholders can use signals to communicate their private information to investors and hence reduce underpricing. Prior studies have shown, both analytically and empirically, that signals such as the retention of a significant percentage of firm ownership (Leland and Pyle 1977; Datar et al. 1991; Courteau 1995) or the hiring of underwriters and/or auditors of prestige (Beatty and Ritter 1986; Feltham et al. 1991; Clarkson and Simunic 1994;

Bédard et al. 2000) can convince potential shareholders of the quality of the issue, thus reducing the need for underpricing. Recent studies suggest that the structure of the board of directors may also be used as a signal of quality of the issuing firm (Certo et al. 2001a; Filatotchev and Bishop 2002).

The objective of this study is to extend the signaling literature by examining the effectiveness of the existence and characteristics of the audit committee (AC, hereafter) as a signal in an IPO setting. Like the board of directors, the AC has a potential role to play an important monitoring role, especially regarding the quality of the information (financial and non financial) that is communicated to the markets, through the prospectus in the specific case of IPOs. Since the AC is the component of the governance structure that is the most closely related to the production and disclosure of information, its creation and characteristics are the most likely to be used by existing shareholders as credible signals of the quality of their firm and of the quality of the information it is providing.

Because of the limited knowledge investors have about IPO companies, they must place substantial reliance on the prospectus prepared by the new issuer. The presence of an AC with the adequate characteristics helps ensure that the information communicated before the issue is credible and that the firm's managers will continue to provide quality information even after the IPO. If the signal is effective, investors will be confident that the AC in place provides this assurance and they are likely to require a lower level of underpricing of the issue. In addition, the presence and characteristics of an AC may have an effect on the credibility of the information disclosed in the prospectus.

We provide empirical evidence on the role of ACs in IPOs using a sample of 246 IPOs in a context where both the creation of the AC and the disclosure provided are voluntary. Our results show that while the mere existence of an AC does not seem to have any effect on the level of underpricing, the independence and the financial expertise of the committee members seem to significantly decrease the level of underpricing of the IPO. It is not clear that the presence or the characteristics of the AC has an effect on the credibility of the prospectus content, however. Indeed, we find no significant association between the existence, independence or financial expertise of ACs and prediction errors in the earnings forecast included in prospectuses.

Our study contributes to the signaling literature by examining the role of the AC as a signal in the IPO context, which to our knowledge has never been studied in the past. Our results suggest that the AC is a credible signal that could be used in the firm's signaling strategy. The mere existence of an AC is not sufficient, however, the committee must be composed of a majority of independent members and include at least one financial expert for the signal to be credible.

The study also contributes to the corporate governance literature by examining the effect of AC characteristics on the credibility of disclosure in a context where both the creation of the AC and the disclosure provided are voluntary. Contrary to previous studies (Wild 1994, Bédard et al. 2004; Klein 2002, Karamanou and Vafeas 2005), we find no significant effect on the credibility of disclosure as approximated by forecasts precision.

The remainder of the paper is organized as follows. The next section introduces specificities of Corporate Governance in the Canadian context. The third section develops our research hypotheses from existing theories and previous studies. The fourth section presents the research

design used to test these hypotheses, the sample selection procedures and the measurement of variables. Our empirical results are presented in the fourth section and a conclusion follows.

CORPORATE GOVERNANCE IN CANADA

Weimer and Pape (1999) classify Canada as having an Anglo-Saxon corporate governance system along with the U.S., the U.K, and Australia. Indeed, like the US, Canada is characterized by shareholder orientation, one-tier boards of directors, shareholder rights, capital market orientation, and a market for corporate control. Compared to the U.S., however, the ownership concentration is higher (Gadhoum, 2006) and the legal enforcement system weaker (de Carteret Cory and Pilkington, 2006, Clarkson and Simunic, 1994).

The corporate governance of Canadian companies is regulated by the Act under which they are incorporated, the stock exchanges, and the Provincial Securities Commissions. Private companies are not required to have an AC even if they are preparing an IPO. Once they become public, however, companies incorporated under the Canadian Business Corporation Act (CBCA section 171(1)) have to create an AC with a majority of non-executive members. Companies incorporated under the Québec Incorporation Act, however, are not required have such a committee. Between 1995 and 2004 the corporate governance guidelines of the various Canadian stock exchanges recommended that listed companies have an AC composed only of outside directors (TSX Company Manual, Sec. 473 and 474). Compliance with these guidelines was, however, not mandatory, as long as the non-compliance was disclosed. In 2004, the Canadian Securities Commissions adopted Multilateral Instrument 52-110 (MI 52-110), making independent audit committees mandatory for all public companies for fiscal years ending on or after June 30, 2005 (after our sample). For IPO firms, this requirement does not apply for a period of up to one year after the issue if the majority of the committee members are independent (MI

52-110, par. 2.1). For the other governance guidelines, the application is still voluntary and companies must indicate each year whether or not they comply with the guidelines and explain why they have chosen not to comply.

In summary, before 2004 Québec companies were required to have ACs with a majority of non-executive members only if they were incorporated under the Canadian Business Corporation Act (CBCA section 171(1)). Between 1995 and 2004 the (non mandatory) guideline #13 applied to the various stock exchanges of the country and recommended that ACs be composed of only outside directors (TSX Company Manual, Sec. 473 and 474).

This set of regulations makes Québec IPOs an excellent terrain for examining the role of the audit committee at the time of the IPO. Our study examines a country characterized by an Anglo-Saxon model of corporate governance and a North-American economic setting, but where AC formation is not mandatory. Our results may shed light on the role of the ACs in other countries, since corporate governance reforms are often influenced by the principles underlying the US model of corporate governance (Jackson and Moerke 2005). Indeed, in their analysis of corporate governance codes issued by 20 European countries, Collier and Zaman (2005) find that ACs are widely accepted in 16 countries with both unitary and two-tier governance systems. Extrapolation to emerging economies might be more risky because of the absence or inefficiency of formal institutions such as laws and regulations (Young et al. 2008).

THEORETICAL BACKGROUND AND HYPOTHESES

Our examination of the role of the AC in the IPO process is articulated around two questions: (1) what is the effect of the AC on the equilibrium pricing of securities in the context of an IPO? and (2) what is the effect of the AC on the quality of the information disclosed in the IPO prospectus?

Audit committee and IPO underpricing

IPOs are characterized by a large information asymmetry between the existing shareholders who have private knowledge about their firm's expected future cash flows and investors with whom they want to share the firm's ownership and risk. Prior studies have shown that existing shareholders attempt to communicate to investors their private information about the quality of their firm by choosing from a set of signals such as ownership retention (Leland and Pyle 1977), auditor and underwriter reputation (Datar et al. 1991; Hughes 1986), and underpricing (Grinblatt and Hwang 1989; Welch 1989). Each of these signals generates a cost to the issuer that is high enough to discourage low-quality firms from incurring them and mimicking the behaviour of higher-quality firms. In preparation for the issue, the shareholders responsible for the issue can choose a combination of signaling devices that maximise the expected issue proceeds, net of issuing and signaling costs.

The board of directors represents another signal that can be used by the existing shareholders to communicate information about firm quality. The dominant theoretical perspectives on the role of the board suggest various ways in which board characteristics may constitute credible signals.

The resource dependence theory suggests that the board's primary role is to assist management in strategic decisions and to secure critical resources. From the resource-based point of view, larger boards and nonexecutive directors provide the firm with a larger pool of resources and are associated with higher levels of firm performance (e.g., Alexander, Fennell and Halpern 1993; Goodstein, Gautam and Boeker 1994). In an IPO context, resource dependence suggests that nonexecutive directors may provide the firm with additional bargaining power in its relationship with the underwriter and investors, enabling firm owners to extract a higher value

when setting the opening price (Filatotchev and Bishop 2002, Certo et al. 2001a). In addition, investors may perceive the benefits of a larger pool of resources and thereby require a lower level of underpricing when the board is larger (Certo et al. 2001a).

The agency theory emphasizes the monitoring role of the board. From an agency perspective, the board is the "ultimate internal monitor […] whose most important role is to scrutinize the highest decision makers within the firm" (Fama 1980: 294). Accordingly, a greater proportion of independent board members and the separation of CEO and chair positions provide better monitoring to minimize opportunistic behaviour by management and thus maximise firm performance (Fama and Jensen, 1983; Shivdasani, 1993). Given the value placed on independence by key shareholder groups, in an IPO context, board independence may serve as a proxy for firm quality, enabling firm owners to reduce the underpricing (Certo et al. 2001a). Contrary to the resource dependence theory, the agency theory suggests that a larger board is less likely to function effectively and is easier for the CEO to control (Jensen 1993).

In contrast with this, the stewardship theory presumes that executive managers, far from being opportunistic, are honest and that they are good stewards of the corporate assets. Given the absence of an inner motivational problem among executives, the stewardship theory focuses on facilitative, empowering structures that allow effective and efficient decision making by managers. According to the stewardship view, such structures should include a significant proportion of executive directors and the fact that the CEO is also chairperson (CEO duality, hereafter) is beneficial to the firm (Donaldson & Davis, 1991, 1994). Executive directors, due to their detailed firm-specific knowledge, can be superior to outside directors in formulating firm strategy and policy and in maintaining a clear strategic focus. For IPO firms, where "potential

investors critically view and value clarity of strategic direction", having more executive directors might result in less underpricing (Certo et al. 2001b).

Table 1 provides a summary of the relationships predicted by these three theories. Although the theories prescribe different board characteristics, a commonality among them is that board characteristics have the potential to influence firm performance and, because they are publicly observable before the IPO, they may act as a credible signal of expected future performance. Two recent studies have examined the use of boards of directors as signaling devices in IPOs. Certo et al. (2001a) find that board size is negatively associated with underpricing, a result that is consistent with both the resource dependence and the agency theories. The results regarding board independence are contradictory. On the one hand, Filatotchev and Bishop (2002) find that boards with more nonexecutive directors have significantly lower underpricing, which is consistent with the resource dependence and agency theories. On the other hand, Certo et al. (2001a) find that the proportion of outsiders on the board seems to increase, rather decrease, the level of underpricing. While inconsistent with agency theory, this last result is consistent with the stewardship theory. Regarding CEO duality, both studies find no significant effects, a result inconsistent with the agency and stewardship theories. Both Certo et al. (2001a) and Filatotchev and Bishop (2002) find a significantly negative relationship between underpricing and the reputation of non-executive board members, which is consistent with the resource dependence and agency theories.

Table 1

These results support the idea that governance can be part of the signaling strategy in firms preparing to go public. However, given that the different theories lead to contradictory recommendations about board structure it is difficult to determine which structure is a better

signal or why it may be so. For example, agency theory prescribes a greater proportion of independent board members and the separation of CEO and chair positions while the stewardship theory prescribes the contrary. For these characteristics, a positive or a negative association with IPO underpricing may both suggest a successful signaling strategy. A non significant association may even suggest that each of the two theories play a predominant role for some companies and not for others and that the effect is zero on average.

While the board as a whole may play various roles (e.g. oversight, service, advice), its committees have more specific roles. For example, the finance and long-term investment committees have a primarily advisory role while the primary role of the audit and executive compensation committees is to act as independent monitors (Klein 1998). Because a committee has a specific role, it is possible to focus on one board role by studying the relevant committee.. This study is concerned with the effect of the board on the quality and credibility of the financial information included in the IPO prospectus, so we focus on the audit committee which exercises the board's monitoring role over financial disclosure

As indicated in the Blue Ribbon Committee Report (BRC, hereafter), the "audit committee's role flows directly from the board oversight function" (BRC 1999: 20). A key element of board oversight includes "ensuring that quality accounting policies, internal controls, and independent and objective outside auditors are in place to […] promote accurate, high quality and timely disclosure of financial and other material information to the board, to the public markets, and to shareholders" (BRC 1999: 20). This oversight function is normally delegated to the AC. Because of its mostly monitoring role, the effect of this committee on firm performance is better explained by the agency theory than by the alternative approaches examined earlier.

Because ACs are voluntary for private companies, existing shareholders can use the creation of an AC as a device in the IPO company's signaling strategy. It has all the necessary attributes to constitute a credible signal: the creation of an AC is costly for the entrepreneur, both in terms of direct disbursements and by the fact that a well-functioning committee has the knowledge to understand and the power to reduce the firm's ability to manage earnings in the future. Moreover, the costs related to this constraint are higher for low-quality issuers who, according to the agency theory, may have greater incentive to use earnings management to present a performance which is deemed satisfactory by investors. For example, Ducharme et al. (2001) find that pre-IPO earnings reported by IPO firms contain on average abnormally high levels of positive (income increasing) accruals and that these accrual are positively related to initial firm value. The presence of a best practice audit committee could restrain the management of earnings (Bédard et al. 2004; Klein 2002).

For this reason, the creation of an AC is expected to increase investor confidence about the quality of current and future financial information. Indeed, Wild (1994) finds that the earnings of US companies which formed an AC between 1966 and 1980 are significantly more informative to market participants after formation of the AC than before. This finding is consistent with the notion that the presence of an AC in the governance structure improves the shareholders' perception of earnings quality. Yee (2006) shows that poor earnings quality increases the firm's fundamental risk for investors, which prompts them to require a higher risk premium for investing in the firm. Beatty and Ritter (1986) show that there is a positive relationship between ex ante uncertainty and expected IPO underpricing. Hence, if the presence of an AC increases the quality of earnings, it should help reduce the uncertainty generated by information asymmetry

and the typical adverse selection problem in an IPO context and thus reduce the underpricing required by investors. Accordingly, we hypothesize that:

H1a: The presence of an audit committee is negatively associated with the level of underpricing of the IPO.

Creating an AC is a good governance practice, but it is not enough. The AC cannot be effective if it does not have the "right people" as members (Sabia and Goodfellow 2005). Regulators recognize that some attributes are important for AC membership, among them independence and financial competency.

Given their oversight role, listed companies in most jurisdictions are required or encouraged to maintain an AC with a majority or all of its members being independent from management. For example, since 2005 all Canadian public companies must have an AC composed exclusively of independent members. In addition, because of its primary responsibility in overseeing the financial reporting process and ensuring high-quality financial reporting, the AC clearly has a need for members with accounting and/or related financial expertise (BRC 1999, SEC 2003) and this need has been recognized by regulators. For example, in the US, public companies have to disclose whether or not a financial expert is serving on their AC. In Canada, public companies are required to provide, for each member of the AC, information about their education and their experience that relate to their specific responsibilities as committee members.

As is the case for the creation of an AC, previous research shows that investors perceive that some of the committee characteristics enhance its monitoring capacity. For example, some US evidence indicates that market participants react favourably when firms appoint financial experts to their ACs (Davidson et al. 2004; DeFond et al. 2005). The BRC recommendations and

research results highlight the importance of independence and financial expertise in enhancing the AC's monitoring role. According to the recommendations of the BRC, the SEC and numerous stock exchanges around the world, a strong audit committee is one whose members are both independent and competent. Hence we define a competent and independent audit committee as one having a majority of independent members with as least one financially literate (Geiger and Rama 2003). This provides a basis for the following hypothesis:

H1b: The presence of an independent and competent audit committee is negatively associated with the level of underpricing of the IPO.

Audit committee and forecast errors

An underlying assumption in the use of the audit committee as a signal is that the committee has a positive effect on the quality of financial disclosure. Previous empirical research on public companies has shown that ACs are positively associated with the quality of financial information. For example, McMullen (1996) finds that the presence of an AC is negatively associated with financial restatements and sanctions by the US Securities and Exchange Commission while Klein (2002) and Bédard et al. (2004) find that AC independence and financial expertise are negatively associated with earnings management as measured by discretionary accruals. To our knowledge, no studies have examined the relationship between audit committees and the quality of financial disclosure by IPO companies (see DeZoort et al. 2002 for a review of the literature on AC characteristics).

Information quality is difficult to measure in general, but even more so in the context of IPOs. Several proxies have been used for disclosure quality. A recent literature review by Pomeroy and Thornton (2007) lists 13 different measures used in studies of the effect of AC

independence on financial reporting quality. The measures most often used are the level of discretionary accruals in accounting numbers and abnormal market returns associated with the release of accounting information, but these two measures are impossible to use on firms for which prior financial information is scarce and whose shares have never been traded before.

The Canadian setting of our study provides us with a measure that is not available for IPOs in the US and in several other countries. Indeed, Canadian disclosure regulations allow the inclusion of management earnings forecasts in IPO prospectuses. Before 1989, these forecasts were only reviewed by the external auditors but a 1989 recommendation of the Canadian Institute of Chartered Accountants (CICA) requires that all forward-oriented financial information included in the prospectus be audited. The choice to include forecasts and the requirement that those issued after 1988 be audited apply to all Canadian issuers, whatever the jurisdiction under which they are incorporated or listed.

We use the precision of management earnings forecast included in the IPO prospectus as a measure of the quality of the information disclosed. It is an imperfect measure because precision is measured ex-post as the forecast error and many factors outside of management's control can affect the error. However, a similar measure was used by Karamanou and Vafeas (2005) in their study of the effect of AC independence and financial expertise on disclosure quality of Fortune 500 companies in the US. Given the role of the AC as overseeing the process of preparation of financial disclosure, we expect that the presence an AC in the governance structure of the IPO results in more precise management earnings forecast and make the following hypothesis:

H2a: The presence of an audit committee is positively associated with the precision of earnings forecasts included in the IPO prospectus.

Consistent with the expectations of regulators and with results of several empirical studies of the independence and expertise of the AC (Klein 2002; Bédard et al. 2004; Karamanou and Vafeas 2005), we also expect that these characteristics help the committee to better discharge of its duties and have a positive effect on the quality of earnings forecasts.

H2b: The presence of an independent and competent audit committee is positively associated with the precision of earnings forecasts included in the IPO prospectus.

METHODOLOGY AND SAMPLE FORMATION

Sample

We test our hypotheses on a sample of IPOs by Québec-based corporations during the period 1982 to 2002. All issues that pre-date the 1999 reform of Canadian stock exchanges were made on the Montreal Stock Exchange, while the issues made after 1998 were listed on the Toronto Stock Exchange (TSE, hereafter) but still under Québec Securities Commission rules. The sample includes all corporations that made an IPO in the province of Québec in that period, except those in the mining and resources sector, because their prospectus is based more on geological than on financial data (Lee et al. 2003), and spin-offs as they were not privately owned before the IPO.[2] We also excluded 16 companies with missing price data in the aftermarket. Our final sample comprises 246 firms, 116 of which incorporated an earnings forecast in their prospectus.

The prospectuses were obtained directly from the Québec Securities Commission for the issues prior to 1997 and from SEDAR, the database of documents and information filed by public companies in Canada. Accounting and other prospectus data were collected manually from the prospectuses.[3] Aftermarket prices were collected manually from the *Financial Post*.

Underpricing and audit committee

In order to test hypothesis H1a (H1b), we examine the relationship between the level of underpricing of the issue and the presence of an AC (the presence of an independent and competent AC). To isolate the effect of the committee on underpricing, we control for other variables which have been found to affect the underpricing of IPOs in previous studies. We test the hypotheses with the following cross-sectional regression model.

$$\begin{aligned} \text{Undpr}_i = {} & \alpha + \beta_1 \text{AC}_i + \beta_2 \text{ACqual}_i + \beta_3 \text{Bsize}_i + \beta_4 \text{Bind}_i + \beta_5 \text{Bdual}_i + \beta_6 \%\text{Ret}_i + \beta_7 \text{UW}_i \\ & + \beta_8 \text{Aud}_i + \beta_9 \text{Age}_i + \beta_{10} \text{Lev}_i + \beta_{11} \text{RiskFact}_i + \beta_{12} \text{Unit}_i + \beta_{13} \text{IPOprice}_i \\ & + \beta_{14} \text{LnAssets}_i + \beta_{15} \text{TaxDed}_i + \sum_k \gamma_k \text{Year}_{ik} + \varepsilon_i \end{aligned} \quad (1)$$

Underpricing

Underpricing (*Undpr*) is the initial return from investing in the new issue of company *i*. It is typically calculated as the difference between the closing market price on the first trading day, P_1, and the offer price from the prospectus, P_0, expressed as a percentage of the initial price P_0. That is, underpricing is equal to $(P_1 - P_0) / P_0$. [4]

Audit committee attributes

We measure the existence of an AC with a binary variable (*AC)* that equals 1 if the firm has an AC at the time of the IPO and 0 otherwise. This variable is used to test hypothesis H1a. In hypothesis H1b we examine the impact of two AC characteristics: independence and financial competence.

The concept of AC independence has two dimensions: the independence of individual members and the independence of the committee as a whole. The independence of a member is

generally defined as the absence of relationship between the member and the company or its executives that may interfere with the exercise of his/her role as representative of shareholder interests (BRC 1999). Historically, regulators and researchers have defined independence in terms of the absence of employment relationship and considered all non-management directors as independent. This definition of independence does not take into account personal and business relationships which may influence the member to favour management's positions. Following Certo et al. (2001a) and Carcello and Neal (2003), we classify a committee member as independent if she/he is not employed by the firm and has no personal ties with the firm's executives nor any professional association with the firm or its management, e.g. professional advisor, officer of a significant supplier or customer.

The second dimension of the concept of independence is that of the committee as a whole. In general, researchers and regulators agree that a majority of the AC members should be independent. However, they disagree on the ideal proportion, i.e. whether a majority of independent directors is sufficient to ensure the independence of the committee or whether it is necessary that all members be independent (e.g. Klein 2002; Bédard et al. 2004). Consistent with the TSX governance guidelines, which were applicable to Canadian firms after 1995, and previous studies (e.g. Klein 2002), we use 50% as a threshold and consider the AC as independent (*AC*=1) if it is composed of a majority of outside directors with no personal or professional association with the company or its management.

As underlined in the BRC Report of 1999, the AC clearly needs members with accounting and/or related financial expertise because of its responsibility in overseeing corporate accounting and financial reporting. Consistent with this Report and studies such as Bédard et al. (2004) and Beasly and Salterio (2001), we consider that a member has financial expertise if she/he holds an

accounting or CFA title or has some previous experience as a CFO. In tests of hypothesis H1b, a firm's AC is classified as independent and competent (*ACqual*=1) if more than 50% of its members are independent and at least one has financial expertise, as defined above.

Control variables

Given the extensive theoretical and empirical literature on the determinants of IPO underpricing, the tests of hypotheses H1a and H1b must control for factors have been shown to affect the pricing of IPOs.[5]

Board characteristics: Certo et al. (2001a) and Filatotchev and Bishop (2002) find a significant role for some board characteristics in IPOs, so we include as control variables in our tests the board's size (*Bsize*) and independence (*Bind*) as well as CEO duality (*Bdual*). Following Beasley and Salterio (2001) and Certo et al. (2001a) among others, we measure *Bsize* as the number of directors, *Bind* as the percentage of outside members on the board of directors and we set *Bdual* equal to one if the CEO is also chairperson. However, since the various theories on the role of the board of directors lead to contradicting predictions as to the effect of these characteristics, we restrain from predicting the direction of their effect on underpricing.

Retained ownership: In 1977 Leland and Pyle identified retained ownership as a signal entrepreneurs can use to communicate their firm's type to prospective investors. The fact that an entrepreneur who has private knowledge about her/his firm's future performance is willing to retain a substantial portion of the firm's risk has been found to be sufficient to convince investors of the value of the issue and to decrease the level of underpricing. Our variable *%Ret* represents the percentage of common shares retained by the main pre-IPO shareholders listed in the prospectus. While the signaling literature predicts that this measure is negatively associated with

IPO underpricing (Downes and Heinkel 1982; Datar et al. 1991; Firth and Liau-Tan 1998), Beatty and Welch (1996) report that the sign on this parameter depends on whether the sample consists of young/small company IPOs or of older/larger ones. Hence, no prediction is made on the sign of this parameter.

Underwriter reputation: Hughes (1986) and Willenborg (1999) show that the reputation of the underwriter hired for the issue serves as a signal of firm quality. Beatty and Ritter (1986) suggest that underwriters, through repeated business, can develop a reputation and that an underwriter with a good reputation can earn higher returns through lower distribution costs or by being able to command higher underwriting fees. Carter and Manaster (1990) suggest that the desire to protect their reputation leads underwriters to prefer low-risk IPOs. Consistent with this view, Carter et al. (1998) find that the often documented long-term underperformance of IPO stocks relative to the market is less severe for IPOs handled by more prestigious underwriters.

Following Holland and Horton (1993) and Clarkson and Simunic (1994), among others, we use the underwriter's ranking to proxy for its reputation. Because the market for investment bankers in Québec is characterised by the presence of large firms that do business only in the province, we use Bédard et al.'s (2000) classification in which underwriter reputation (*UW*) is defined as a categorical variable which equals 1 if the underwriter is a large Canadian firm, 2 if the underwriter is one of the largest Québec firms, and 3 if the underwriter is a small Canadian firm.[6] Larger Canadian firms are expected to be associated with lower levels of underpricing.

Auditor reputation: The role of the auditor in an IPO is to add credibility to the financial disclosure included in the prospectus. The higher the quality of the audit, the more easily investors are convinced of the value of the issuing firm and the lower the underpricing they

require. DeAngelo (1981) argues that large accounting firms supply higher quality services compared to other suppliers in order to protect their investment in reputation capital. Beatty (1989) finds significantly lower underpricing for IPOs where a reputable auditor is involved. Following Michaely and Shaw (1995) and Clarkson and Simunic (1994), among others, we classify as high-reputation auditors (*Aud*=1) the major international audit firms (known as the Big 8, Big 6 or Big 4, depending on the degree of concentration of the audit sector over the sample years).

Risk: Rock (1986) analytically demonstrates that investors' uncertainty about an IPO firm value increases the level of underpricing. Uncertainty being a function of risk, issuing firm's riskiness in the IPO process was found to be associated with higher levels of underpricing in various empirical studies (Feltham et al. 1991; Clarkson and Simunic 1994). We use three ex-ante measures of risk: *Age* which proxies for the stage of development of the firm, older firms being assumed to be less risky, financial leverage (*Lev*) a proxy for cash flow risk, and the number of risk factors listed in the prospectus (*RiskFact*). We expect lower levels of risk to be associated with lower levels of underpricing.

Units: Firms that go public via an IPO may choose to issue units (i.e. bundles combining common shares with other securities such as warrants) rather than common shares alone. Unit IPOs (*Unit*=1) have been found to be issued by firms that are smaller and younger than those that issue only common share and to experience significantly higher levels of underpricing (Schultz 1993; Hogan 1997).

Share price: We also control for share price-related effects which have been found in previous IPO studies by using the inverse of the offering IPO price per share, expressed in constant dollars,

as a control variable (*IPOprice*). Based on the results of Guenther and Willenborg (1999) we expect issues with a lower price per share (higher value of *IPOprice* as defined here) to have higher levels of underpricing.

Firm size: Larger firms are usually older and less risky than smaller firms and they have been found to have lower levels of underpricing when they go public. Following Ibbotson et al. (1988), Tinic (1988), and Guenther and Willenborg (1999), we control for firm size (*LnAssets*) measured as the natural log of pre-IPO total assets in constant Canadian dollars.

Tax incentives: The last control variable in Equation (1) is related to the specificity of our sample. Québec residents pay income taxes at both the federal and provincial levels. Individuals who are resident in the province at the end of the taxation year are entitled, in computing their taxable income for provincial tax purposes, to deduct a stipulated percentage of the cost of qualifying shares which they have purchased during the year and included in a stock savings plan. The deduction rates range from 0 to 150 percent of the purchase price, depending on the class of shares, the size and type of the issuer, as well as the year of the issue. Bédard et al. (2007) examine the issue of implicit taxes and the sharing of the benefits between the entrepreneur and investors and they find that these tax incentives constitute an important element in explaining underpricing in this particular market. We use the deduction rate stipulated for the issue (*TaxDed*) to control for this implicit tax effect.

Issue year: Finally, because the IPOs included in the sample are spread out over 21 years, we include a series of dummy variables ($Year_k$) indicating the year of each issue to control for inflation and economic growth over the sample period.

Forecasts precision

Our second set of hypotheses concerns the effect of AC presence and characteristics on the precision of the earnings forecasts included in the prospectus. To test H2a and H2b, we run a series of multivariate tests from a cross-sectional regression model where the dependent variable is the ex-post forecast error, which is an inverse measure of the precision of the forecasts, and the explanatory variables are measures of the attributes of the AC. We also control for factors that have been shown in previous studies to affect the accuracy and bias of earnings forecasts. These factors include the other features of the governance structure, here proxied by characteristics of the board of directors, characteristics of the forecast itself, and characteristics of the firm making the forecast.

$$\begin{aligned} FERR_i = {} & \alpha + \beta_1 AC_i + \beta_2 ACqual_i + \beta_3 Bsize_i + \beta_4 Bind_i + \beta_5 Bdual_i + \beta_6 Fhyp_i \\ & + \beta_7 Fhor_i + \beta_8 Faudit_i + \beta_9 Age_i + \beta_{10} Growth_i + \beta_{11} RiskFact_i \\ & + \beta_{12} Aud_i + \beta_{13} LnAssets_i + \varepsilon_i \end{aligned} \qquad (2)$$

Forecasts error

Forecast errors are computed by comparing the earnings prediction to its realization. *FERR* is the percentage forecast error ((Forecast – Actual)/|Forecast|), where the actual earnings is collected from the first annual report after the IPO. Like Karamanou and Vafeas (2005) we consider both the signed error, which is a measure of the bias of the forecast, and the absolute error, which is an inverse measure of accuracy.

Control variables

Board characteristics: A large number of studies have found a positive relationship between best practices board attributes and the quality of disclosure. Karamanou and Vafeas (2005) find a

similar relationship between board attributes and management forecast accuracy and unbiasedness. For this reason we expect best practice board variables (*Bsize*, *Bind*, *Bdual*=0) to be associated with lower forecast bias and higher accuracy.

Forecast attributes: We also control for factors that have been found to be associated with forecast errors. In the context of Canadian IPOs, Clarkson (2000) finds that forecast errors are related positively to the forecast horizon, *Fhor* (when the forecast is for a longer period in the future there is more chance of error), and negatively to the number of hypotheses mentioned in the prospectus as basis for the forecast, *Fhyp*, a measure of the care with which the forecast is prepared. In addition, the fact that the forecast is audited (*Faudit*=1) as opposed to having only an auditor review, which represents a lower level of assurance (*Faudit*=0), has been found to reduce the error in forecasts made at the time of the IPO (Clarkson 2000; McConomy 1998; Davidson and Neu 1993).

Other control variables: Firms with more operating experience (*Age*) are expected to have lower forecast errors (Clarkson 2000) while growth firms (*Growth*), because their future earnings are more difficult to forecast, are likely to have higher errors. We measure growth as the average growth in revenue in the three years preceding the issue. Similarly, larger firms (*LnAssets*) have been found to have lower forecast errors (Clarkson 2000). Finally, given the association of auditors with earnings forecasts we control for the reputation of auditors (*Aud*).

Table 3 presents descriptive statistics for the sample of IPOs. A brief look at the statistics shows that board features are significantly different between the firms with an AC (61% of the sample) and those without. The median board size is 7 members for both subsamples, but the mean is significantly higher when there is an AC. Further, in both groups the average board is

composed of a majority of independent directors (60% and 53%). We also find that in a large proportion of our sample firms the CEO plays a dual role by serving also as chairperson of the board (*Bdual*=1), and this dual role is more prevalent in firms without an AC (79% vs. 66%). Given the relatively small size of the sample firms (with median assets of 16.6 and 11.2 million $CAN), this prevalence of the dual role of the CEO is to be expected. A quarter (25%) of the ACs have a majority of independent members and at least one with financial expertise (*ACqual*).

Table 3

Issuers with an AC are on average larger (although the difference is not significant) and disclose significantly more risk factors in their prospectus (*RiskFact*). The other firm characteristics do not seem to differ significantly across the two groups. Both subsamples have an equivalent proportion of firms issuing earnings forecasts (*Forecast*), except that those with an AC disclose more forecast assumptions (*Fhyp*), and their forecasts are audited in a larger proportion (*Faudit*). Panel B of Table 3 indicates that although our sample IPOs are clustered in the years leading to the stock market crash of 1987, the presence of ACs is fairly well distributed over time. In all years except 5, there are issuers with and without a separate AC.

Table 4 presents the correlation between the various independent variables used in the regressions. Our variables of interest *AC* and *ACqual* show very little correlation with the other control variables. Their correlation with the other board variables is relatively low but slightly higher than with the control variables. Given that the AC is a subcommittee of the board, it is expected that its existence is related to board size and board independence. Signs are as expected, *AC* and *ACqual* are positively correlated with *Bsize* and *Bind*, and negative correlated with *Bdual*. Among the other variables, firm size (*LnAssets*) is showing significant correlation with the other

control variables. We do not specify any hypothesis on firm size, but its inclusion in the multivariate regression analysis should control for this correlation.

Table 4

EMPIRICAL RESULTS

Governance and IPO underpricing

Table 5 shows the results of testing hypotheses H1a and H1b on the relation between ACs and underpricing. Model 1a is presented as a benchmark. It is similar to the models used by Certo et al. (2001a) and Filatotchev and Bishop (2002) and includes only governance explanatory variables related to the board of directors, *Bsize*, *Bind* and *Bdual*. Our results show that in our sample the board variables have no significant relationship with the level of underpricing (*Bsize* p=0.20, *Bind* p=0.65 and *Bdual* p=0.55). The lack of significance of the double role of the CEO (*Bdual*) is consistent with the findings of both studies cited above, but Certo et al. (2001a) find a negative relationship between board size and underpricing in a sample of US IPOs over the period 1990-1998. As for the effect of board independence, Certo et al. (2001a) find a significantly positive relationship while Filatotchev and Bishop (2003) find a significantly negative one on a sample of UK IPOs made in 2000. The other control variables included in the model have either a non-significant coefficient or the expected effect on the dependant variable. In particular, the reputation of the auditor (*Aud* $p<0.01$) and the importance of the tax incentives related to the issue (*TaxDed* $p<0.01$) seem to have a negative effect on underpricing while firm-specific financial risk (*Lev* $p<0.01$) seems to have a positive effect.

Model 1b tests hypothesis H1a on the effect of the presence of an AC at the time of the IPO on the level of underpricing. Compared to Model 1a, the coefficient estimates of this second model are almost the same and adding the test variable *AC* just barely increases the explanatory

power of the model since the R^2 increases from 20.6% in Model 1a to 21.0% in Model 1b. Given the lack of significance of the *AC* variable (p=0.15), it seems that the presence of an audit committee at the time of the IPO does not have any effect on the level of underpricing and hence does not constitute a credible signal for outside investors.

Model 1c tests hypothesis H1b by replacing the presence of an audit committee (*AC*) by a measure of its attributes, *ACqual*, which equals one if the AC has a majority of independent members and at least one member with financial expertise. The coefficient estimate of this test variable is –0.088 and significant at 5% (p=0.03, one-tailed test). Thus, hypothesis H1b seems to be supported by the data of our sample. The control variables that were significant in the two previous models retain their significance and firm size (*LnAssets* p=0.05) becomes marginally significant and negative.

In summary, it seems that it is the independence and the expertise of the AC, not its mere existence, that constitute a signal which is credible enough that investors require lower levels of underpricing for the issue. The AC attributes play an important role, decreasing the underpricing of IPOs by 8.8 percent (*ACqual* coefficient = -0.088). This effect is economically important, the reduction of 8.8 percent in the level underpricing is of a magnitude similar to that of hiring a prestigious auditor for the prospectus (*Aud* p=0.01). Moreover, consistent with results of other studies on IPO underpricing, the reputation of the auditor seems to reassure investors and to be negatively related to underpricing while the riskiness of the firm as measured by its leverage seems to increase significantly the level of underpricing. Finally, larger firms seem to suffer less from underpricing than smaller ones and the tax advantage provided to investors from the issue decreases the level of underpricing necessary to ensure a successful issue.

Table 5

Governance and Disclosure Quality

Table 6 reports the results of testing hypotheses H2a and H2b on the relationship between ACs and the quality of management earnings forecasts included in IPO prospectuses. In Model 2a and 2b, the dependent variable is the signed forecast error, a measure of the bias of the forecasts. Neither the presence of an audit committee (*AC* p=0.20) in model 2a nor the combination of independence and expertise of the committee (*ACqual* p=0.78) in model 2b seem to have any effect on the optimism or pessimism of the forecasts, when we control for other factors that have been found to affect forecast errors. Among these factors, the length of the period to the forecast horizon (*Fhor* p<0.01) seems to increase the optimism of the forecast, i.e. the forecasted earnings number is on average higher than its realization. This is to be expected since unexpected events affecting earnings are more likely to happen over a longer period in the future. On the other hand, the fact that the forecast is audited, rather than only reviewed by the auditor (*Faudit* p=0.03) seems to decrease the bias of the forecast. Moreover, firm size (*LnAssets* p=0.07) is negatively associated with the signed forecast error, larger firms having relatively more stable earnings which makes them easier to predict. These results are consistent with those of other studies on the determinants of forecast errors (McConomy 1998; Clarkson 2000).

Models 2c and 2d examine the accuracy of the forecast, rather than its bias, by replacing the signed forecast error as the dependent variable by the absolute error. What matters here is not whether the forecast is optimist or pessimist but rather how close it is to the actual earnings realized in the future. The results shown in the last two columns of Table 6 seem to indicate that neither the presence (*AC* p=0.66) nor the independence and expertise of the AC (*ACqual* p=0.57) has any effect on the accuracy of the forecast. Moreover, in neither of the models does the board of directors seem to have any impact on forecast errors. Among the control variables, it seems

that not only the characteristics of the forecast, *Fhor* (Model 2c, p<0.01, Model 2d p<0.01) and *Faudit* (p=0.03) but also the characteristics of the firm whose earnings are forecasted have an impact on forecast accuracy. Firms that have been in operation for a longer period (*Age* Model 2c, p=0.03, Model 2d, p=0.05) have more experience at predicting their future earnings, so their forecasts should be more accurate, and hence their absolute forecast error lower. On the other hand, more risky firms (*Growth* p=0.01 and *RiskFact* p=0.04) have more variability in their earnings, which makes them more difficult to predict, leading to larger absolute forecast errors.

In summary, neither of our hypotheses H2a or H2b seems to be supported in our sample[7]. Although corporate governance and in particular AC attributes have been shown in numerous studies to be positively related to disclosure quality, it does not seem that this is true for voluntary management earnings forecasts in the particular setting of Québec IPOs. This is partly consistent with the results of Karamanou and Vafeas (2005) who find no significant relationship between AC characteristics and either signed or absolute errors in the forecasts US managers voluntarily provide to market participants. They do find, however, that board size has a significantly negative relationship with signed forecast errors and that board independence seems to significantly decrease the absolute forecast errors. Our result may be explained by the fact that earnings are very difficult to predict at the time of an IPO and that the forecast error is due more to factors related to firm operations and characteristics than to its governance structure.

Table 6

CONCLUSION

This study examines the effectiveness of governance best practices for companies making an initial public offering. Specifically, we focus on the existence and the characteristics of the audit committee, a committee of the board whose importance is well documented. Using the audit

committee allows us to examine the monitoring role of the board implied by the agency theory as well as current regulations (BRC 1999, MI 52-110). Report of We hypothesize that an audit committee reassures investors in an IPO context, decreasing the level of underpricing they require, and that this effect is greater if the AC is composed of a majority of independent members and at least one financial expert. We further examine whether the monitoring role of the audit committee has an impact on the quality of information disclosed by the firm, which we measure as the precision of management earnings forecasts for the subset of firms that chose to incorporate a forecast in their prospectus.

We test our hypotheses in the context of IPOs in the Canadian province of Québec, where IPOs are characterized by a large information asymmetry between existing shareholders and potential investors, audit committees are voluntary for private firms, and firms can voluntarily incorporate an earnings forecast in their IPO prospectus.

Our results strongly suggest that it is both the independence and the expertise of the AC, not its mere existence, that constitute a signal which is credible enough for investors to require lower levels of IPO underpricing. They provide support for the perception of the monitoring role of ACs by investors, as proposed by the agency theory. In particular, we find that the effect is economically important, with a reduction of 8.8 percent in the level underpricing, an effect similar in magnitude to that of hiring a prestigious auditor for the prospectus. This result lends support to the world-wide movement in legislations requiring more independence and competence of audit committees.

We do not find any significant effect of the AC on the forecast precision, however. This could be due to the fact that only a subset of our sample firms incorporates a forecast in their

prospectus, and that the precision of forecasts is affected by many factors over which ACs have no control.

Our study contributes to the signaling literature by examining the role of the AC as a signal in the IPO context which, to our knowledge, has never been studied in the past. Our results suggest that an AC is a credible signal that could be used in the firm's signaling strategy but that the committee must be both independent and competent for the signal to be credible.

Previous studies have shown that ACs are associated with more informative earnings (Wild 1994), lower earnings management (Bédard et al. 2004; Klein 2002) and more frequent and accurate earnings forecasts by management (Karamanou and Vafeas 2005). Our study also contributes to this body of literature on corporate governance by showing that a competent and independent audit committee also reduces IPO underpricing.

From a practical point of view, underpricing is often referred as money left on the table, which is costly for the entrepreneur in an IPO setting. Our results suggest that an independent and competent AC, by increasing investor confidence, may decrease the level of underpricing of IPOs and reduce the cost of going.

Future research is needed to examine the effect of ACs on information quality in the IPO context, however. Alternative measures of information quality could be used, such as the level of earnings management of IPO firms, to examine whether it is associated to audit committee characteristics.

REFERENCES

Alexander, J.A., Fennell, M. L. and Halpern, M. T. (1993) Leadership Instability in Hospitals: The Influence of Board-CEO Relations and Organizational Growth and Decline, *Administrative Science Quarterly*, 38, 74-99.

Beasley, M. and Salterio, S. (2001) The Relationship Between Board Characteristics and Voluntary Improvements in Audit Committee Composition and Experience, *Contemporary Accounting Research*, 18, 539-70.

Beatty, R. P. (1989) Auditor Reputation and the Pricing of Initial Public Offerings, *Accounting Review* 64, 693-709.

Beatty, R.P. and Welch, I. (1996) Issuer Expenses and Legal Liability in Initial Public Offerings, *Journal of Law and Economics*, 39, 545-602.

Beatty, R.P., and Ritter, J.R. (1986) Investment Banking, Reputation and the Underpricing of Initial Public Offerings, *Journal of Financial Economics,* 15, 13-232.

Bédard, J., Coulombe, D. and Courteau, L. (2000) Demand and Supply of Auditing in IPOs: An Empirical Analysis of the Québec Market, *International Journal of Auditing*, 4, 227-245.

Bédard, J., Coulombe, D. and Paquette, S. (2007) Tax Incentives on Equity and Firms' Cost of Capital: Evidence from the Quebec Stock Savings Plan, *Contemporary Accounting Research*, 24, 795-824.

Bédard, J., Marakchi-Chtourou, S. and Courteau, L. (2004) The Effect of Audit Committee Expertise, Independence, and Activity on Aggressive Earnings Management, *Auditing: A Journal of Practice and Theory*, 23, 13–35.

Blue Ribbon Committee (BRC). (1999) *Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees*. New York Stock Exchange and National Association of Securities Dealers (www.nyse.com).

Carcello, J.V. and Neal, T.L. (2000) Audit Committee Characteristics and Auditor Reporting, *The Accounting Review* 75, 453-467.

Carter, R. and Manaster, S. (1990) Initial Public Offerings and Underwriter Reputation, *Journal of Finance* 45, 1045-1067.

Carter, R., Dark, F. and Singh, A. (1998) Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks, *Journal of Finance*, 53, 285-312.

Certo T.S., Daily, C.M. and Dalton, D.R. (2001a) Signaling Firm Value through Board Structure: An Investigation of Initial Public Offerings, *Entrepreneurship Theory & Practice*, 26, 33-50.

Certo, S.T., Covin, J.G., Daily, C.M. and Dalton, D.R. (2001b) Wealth and the Effects of Funder Management Among IPO-Stage New Ventures, *Strategic Management Journal* 22, 641-658.

Clarkson, P.M. (2000) Auditor Quality and Accuracy of Management Earnings Forecasts. *Contemporary Accounting Research*, 17, 595-622.

Clarkson, P.M. and Simunic, D.A. (1994) The Association Between Audit Quality, Retained Ownership, and Firm-Specific Risk in the US vs. Canadian IPO Markets, *Journal of Accounting and Economics*, 17, 207-228.

Collier, P. and Zaman, M. (2005) Convergence in European Corporate Governance: the Audit Committee Concept, *Corporate Governance: An International Review, 13*, 753-768.

Courteau, L. (1995) Under-Diversification and Retention Commitments in IPOs, *Journal of Financial and Quantitative Analysis*, 30, 487-508.

Datar S.M. Feltham, G.A. and Hughes, J.S. (1991) The Role of Audits and Audit Quality in Valuing New Issues, *Journal of Accounting and Economics*, 14, 3-49.

Davidson, R. and Neu, D. (1993) A Note on the Association Between Audit Firm Size and Audit Quality, *Contemporary Accounting Research*, 9, 479-488.

Davidson, W.N., Xie, B. and Xu, W. (2004) Market Reaction to Voluntary Announcements of Audit Committee Appointments: The Effect of Financial Expertise, *Journal of Accounting and Public Policy*, 23, 279-293.

de Carteret Cory, P. and Pilkington, M. L. (2006) *Critical Issues in Enforcement*. Task Force to Modernize Securities Legislation in Canada. http://www.tfmsl.ca/docs/V6(4)%20CoryPilkington.pdf

DeAngelo, L. E. (1981). Auditor Size and Audit Quality, *Journal of Accounting and Economics*, *3*(3), 183-199.

Defond, M.L. Hann, R.N. and Hu, X. (2005) Does the Market Value Financial Expertise on Audit Committees of Boards of Directors? *Journal of Accounting Research*, 43, 153–193.

DeZoort, F. T., Hermanson, D. R., Archambeault, D. S. and Reed, S. A. (2002) Audit Committee Effectiveness: A Synthesis of the Empirical Audit Committee Literature, *Journal of Accounting Literature*, 21, 38-75.

Donaldson, L., and Davis, J. H. (1991) Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns, *Australian Journal of Management, 16*, 49.

Donaldson, L., and Davis, J. H. (1994) Boards and Company Performance - Research Challenges the Conventional Wisdom, *Corporate Governance: An International Review, 2*, 151-160.

Downes, D. and Heinkel, R. (1982) Signaling and the Valuation of Unseasoned New Issues, *Journal of Finance*, 37, 1-10.

DuCharme, L. L., Malatesta, P. H. and Sefcik, S. E. (2001) Earnings Management: IPO Valuation and Subsequent Performance, *Journal of Accounting, Auditing & Finance*, 16, 369-396.

Fama, E. F. (1980) Agency Problems and the Theory of the Firm, *Journal of Political Economy, 88*, 288-307.

Fama, E. F. and Jensen, M. C. (1983) Separation of Ownership and Control, *Journal of Law and Economics, 26*, 301-325.

Feltham, G.A., Hughes, J.S. and Simunic, D.A. (1991) Empirical Assessment of the Impact of Auditor Quality on the Valuation of New Issues, *Journal of Accounting and Economics,* 14, 375-399.

Filatotchev, I. and Bishop, K. (2002) Board Composition, Share Ownership, and Underpricing of U.K. IPO firms, *Strategic Management Journal*, 23, 941-955.

Firth, M. and Liau-Tan, C.K. (1998) Auditor Quality, Signaling, and the Valuation of Initial Public Offerings, *Journal of Business Finance and Accounting,* 25, 145-166.

Gadhoum, Y. (2006) Power of Ultimate Controlling Owners: A Survey of Canadian Landscape, *Journal of Management and Governance*, 10, 179-204.

Geiger, M. A. and Rama, D. V. (2003) Audit Fees, Nonaudit Fees, and Auditor Reporting on Stressed Companies, *Auditing: A Journal of Practice and Theory,* 22, 53-69.

Gompers, P., Ishii, J. and Metrick, A. (2003) Corporate Governance and Equity Prices, *The Quarterly Journal of Economics*, 118, 107-154.

Goodstein J., Gautam, K. and Boeker, W. (1994) The Effects of Board Size and Diversity on Strategic Change, *Strategic Management Journal*, 15, 241-250.

Goodstein, J., Gautam, K. and Boeker, W. (1994) The Effects of Board Size and Diversity on Strategic Change, *Strategic Management Journal, 15*, 241-250.

Grinblatt, M. and Hwang, C.Y. (1989) Signaling and the Pricing of New Issues, *The Journal of Finance*, 44, 393-420.

Guenther, D.A. and Willenborg, M. (1999) Capital Gains Tax Rates and the Cost of Capital for Small Business: Evidence from the IPO Market, *Journal of Financial Economics*, 53, 385-408.

Hogan, C.E. (1997) Cost and Benefits of Audit Quality in the IPO Market: A Self-Selection Analysis, *The Accounting Review*, 72, 67-86.

Holland, K. M. and Horton, J. G. (1993) Initial Public Offerings on the Unlisted Securities Market: The Impact of Professional Advisers, *Accounting & Business Research*, **24**, 19-34.

Hughes, P.J. (1986) Signaling by Direct Disclosure Under Asymmetric Information, *Journal of Accounting and Economics*, 8, 119-142

Ibbotson, R. Sindelar, J. and Ritter, J. (1988) Initial Public Offerings, *Journal of Applied Corporate Finance*, 1, 37-45.

Jackson, G. and Moerke, A. (2005) Continuity and Change in Corporate Governance: comparing Germany and Japan, *Corporate Governance: An International Review, 13*, 351-361.

Jensen, M. C. (1993) The Modern Industrial Revolution, Exit, and the Failure of the Internal Control Systems, *Journal of Finance* XLVIII, 831-880.

Karamanou, I. and Vafeas, N. (2005) The Association Between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis, *Journal of Accounting Research*, 43, 453-86.

Klein, A. (1998) Firm Performance and Board Committee Structure, *Journal of Law and Economics, 41*, 275-303.

Klein, A. (2002) Audit Committee, Board of Director Characteristics, and Earnings Management, *Journal of Accounting and Economics,* 33, 375-400.

Lee, P., Stokes, D., Taylor, S. and Walter, T. (2003) The Association between Audit Quality, Accounting Disclosures and Firm-Specific Risk: Evidence from Initial Public Offerings, *Journal of Accounting and Public Policy*, 22, 377–400.

Leland, H. and Pyle, D. (1977) Information Asymmetries, Financial Structure, and Financial Intermediation, *Journal of Finance*, 32, 371-387.

McConomy, B. (1998) Bias and Accuracy of Management Earnings Forecasts: An Evaluation of the Impact of Auditing, *Contemporary Accounting Research*, 15, 167-195.

McMullen, D.A. (1996) Audit Committee Performance: An Investigation of the Consequences Associated with Audit Committees, *Auditing: A Journal of Practice and Theory*, 15, 87-103.

Menon, K. and Williams, J.D. (1994) The Use of Audit Committees for Monitoring, *Journal of Accounting and Public Policy*, 13, 121-139.

Michaely, R. and Shaw, W. H. (1995) Does the Choice of Auditor Convey Quality in an Initial Public Offering? *Financial Management, 24*(4), 15-30.

Pomeroy, B. and Thornton, D. (2007) Meta-Analysis and Accounting Literature: The Case of Audit Committee Independence and Financial Reporting Quality, *European Accounting Review*, Forthcoming, available at SSRN: http://ssrn.com/abstract=1020342.

Rock, K. (1986) Why New Issues are Underpriced. *Journal of Financial Economics*, 15, 187-212.

Romano, R. (2005) The Sarbanes-Oxley Act and the Making of Quack Corporate Governance, *Yale Law Journal*, 114, 1521-1612.

Sabia, M. J. and Goodfellow, J. L. (2005) *Integrity in the Spotlight* (Second Edition ed.): The Canadian Institute of Chartered Accountants.

Schultz, P. (1993) Unit Initial Public Offerings : A Form of Staged Financing, *Journal of Financial Economics*, 34, 199-219.

Shivdasani, A. (1993) Board Composition, Ownership Structure, and Hostile Takeovers, *Journal of Accounting and Economics*, *16*(1-3), 167-198.

Tinic, S. (1988) Anatomy of Initial Public Offerings of Common Stock, *Journal of Finance*, 43, 789-822.

Weimer, J. ad Pape, J. (1999) A Taxonomy of Systems of Corporate Governance, *Corporate Governance: An International Review*, *7*(2), 152-166.

Welch, I. (1989) Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings, *The Journal of Finance*, 44, 421-499.

Welch, I. and Ritter, J. (2002) A Review of IPO Activity, Pricing, and Allocations, Yale ICF Working Paper No. 02-01, available from http://papers.ssrn.com/abstract=296393.

Wild, J. J. (1994) Managerial Accountability To Shareholders: Audit Committees And The Explanatory Power Of Earnings For Returns, *The British Accounting Review*, *26*, 353-374.

Willenborg, M. (1999) Empirical Analysis of the Economic Demand for Auditing in the Initial Public Offerings Market, *Journal of Accounting Research*, 37, 225-238.

Yee, K.K. (2006) Eamings Quality and the Equity Risk Premium: A Benchmark Model, Contemporary Accounting Research, 23, 833-877.

Young, M. N. Peng, M. W. Ahlstrom, D. Bruton, G. D. and Jiang, Y. (2008) Corporate Governance in Emerging Economies: A Review of the Principal-Principal Perspective, *Journal of Management Studies*, 45, 196-220.

Table 1
Relationship between IPO's Underpricing and Boards Characteristics

	Expected Relationship			Empirical Results	
	Resource dependence	**Agency**	**Stewardship**	**Sign**	**Study**
Board size	–	–		–	Certo et al. (2001a)
Nonexecutive directors	–	–	+	–	Filatotchev and Bishop (2002)
				+	Certo et al. (2001a)
CEO duality		–	+	ns	Certo et al. (2001a)
				ns	Filatotchev and Bishop (2002)
Reputation of nonexecutive directors	–	–		–	Certo et al. (2001a)
				–	Filatotchev and Bishop (2002)

TABLE 2
Description of Variables

Undpr	Underpricing, computed as the difference between the closing price for the first day of trading and the initial offer price, as a percentage of the closing price.
AC	Categorical variable that equals 1 if the firm has an audit committee at the time of the IPO and 0 otherwise.
ACqual	Categorical variable equal to 1 if 1 if at least one member of the audit committee has an accounting title, is a CFA or has experience as CFO and more than 50% of the audit committee members are independent and 0 otherwise.
Bsize	Number of directors on the board.
Bind	% of members on the board who are not managers of the firm and who have no business or family relationship with the firm or its managers.
Bdual	Categorical variable that equals 1 if the CEO also chairs the board and 0 otherwise.
%Ret	Percentage of the firm's shares retained by initial owners;
UW	Categorical variable which takes the value of 1 if the firm's underwriter is a large Canadian firm, 2 if the underwriter is considered one of the largest Québec firms, and 3 if the underwriter is a small Canadian firm.
Aud	Categorical variable equal to 1 if the auditor at the time of the IPO is a Big Eight/Big Six Firm (highest quality), and 0 otherwise.
Age	Number of years from the foundation or incorporation to the IPO.
Lev	Financial leverage, defined as total debt over total assets.
RiskFact	Number of risk factors listed in the prospectus.
Unit	Categorical variable equal to 1 if the IPO is a unit offering and 0 otherwise.
IPOprice	The inverse of the IPO offer price per share or per unit, in constant dollars.
Assets	Pre-IPO total assets in millions of constant Canadian dollars.
LnAssets	Natural log of pre-IPO total assets in constant Canadian dollars.
TaxDed	Tax deduction rate allowed for Québec income tax purposes on the IPO issue.
$Year_k$	Categorical variable equal to 1 if the IPO was made in year k and 0 otherwise, k = 1982,...,2001.
Forecast	Categorical variable equal to 1 if the prospectus includes an earnings forecast and 0 otherwise
FERR	Forecast error ((Forecast – Actual)/|Forecast|). The signed error measures *bias* while *accuracy* is computed as the absolute value of the percentage error.
Fhyp	Number of assumptions on which the earnings forecast is based, as listed in the prospectus.
Fhor	Number of months between the date of approval of the prospectus by the board and the end of the forecast period.
Faudit	Categorical variable equal to 1 if the forecast was audited and 0 if it was only reviewed by the auditor.
Growth	Average growth in revenue in the three years preceding the issue.

TABLE 3

Descriptive Statistics of the Sample, Partitioned by Audit Committee[a]

Panel A: Mean and Median of Explanatory Variables

	Firms with an audit committee (n=150)		***Firms without an audit committee (n=96)***		Difference in means[b]
	Mean	Median	Mean	Median	
Undpr	0.05	0.00	0.04	0.00	0.02
Bsize	7.71	7.00	6.82	7.00	0.89***
BInd	0.60	0.60	0.53	0.57	0.07**
Bdual	0.66	1.0	0.79	1.0	-0.13**
ACqual	0.25	0.0	--	--	
Age (years)	20.28	11.59	20.50	14.17	1.78
Assets (M $CAN)	61.04	16.63	35.84	11.22	25.20
Growth	1.36	0.30	0.76	0.27	0.60
RiskFact	11.60	7.00	8.98	6.00	2.62*
%Ret	0.68	0.71	0.69	0.72	-0.01
Aud-h	0.53	1.00	0.46	0.00	0.07
UW	1.90	2.00	2.07	2.000	0.17
Forecast	0.45	0.00	0.52	1.00	-0.05
Fhyp	10.01	8.00	8.02	7.00	1.99*
Fhor	7.74	7.00	7.92	8.00	-0.18
Faudit	0.31	0.00	0.04	0.00	0.27***

Panel B: Distribution of IPOs Across Years

Year[c]	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**00**	**01**	**02**
No audit committee[c]	1	3	5	14	40	12	2	0	3	0	0	2	3	5	2	3	0	1
Audit committee	0	1	6	19	49	19	0	1	14	4	3	10	7	1	5	7	3	1
Total	1	4	11	33	89	31	2	1	17	4	3	12	10	6	7	10	3	2

[a] Sample of 246 primary issues in the Province of Québec between 1982 and 2002. See variable definitions in Table 2.
[b] Test statistics are for F-tests except for categorical variables for which a χ^2 test for independence is used.
[c] Number of issues in each year where the issuing firm did not have an audit committee.
* Significant at the 10% level; **Significant at the 5% level; ***Significant at the 1% level (two-tailed tests).

TABLE 4

Correlation Coefficients Between Variables
(Pearson (Spearman) correlation coefficients are above (below) the diagonal)[a]

	Taxded	Unit	Age	UW	LnAssets	Growth	%Ret	Aud	Dey	Fhor	Risk fact	Faudit	Fhyp	IPO price	Lev	Bsize	Bind	Bdual	AC	ACQual
Taxded	1	**-0,142**	0,050	**0,177**	-0,082	-0,089	0,070	**-0,176**	**-0,393**	-0,110	**-0,406**	**-0,221**	**-0,386**	**-0,158**	-0,179	-0,051	**-0,206**	-0,028	-0,044	-0,031
Unit	**-0,148**	1	0,006	0,100	**-0,141**	-0,021	-0,008	**-0,141**	-0,067	0,018	-0,016	**-0,183**	0,086	**0,166**	-0,041	0,019	0,017	0,010	-0,010	-0,043
Age	0,040	0,011	1	**-0,223**	**0,317**	**-0,186**	0,084	-0,001	**-0,155**	-0,076	**-0,204**	-0,027	0,016	**-0,319**	**-0,142**	0,015	**-0,168**	-0,044	-0,051	0,051
UW	**0,220**	0,100	**-0,215**	1	**-0,471**	0,020	0,027	-0,093	**-0,128**	0,169	-0,055	**-0,201**	-0,132	**0,430**	0,095	**-0,148**	-0,053	0,120	-0,097	0,016
lnAssets	**-0,164**	**-0,172**	**0,345**	**-0,504**	1	-0,006	0,103	**0,175**	-0,004	**-0,206**	-0,042	**0,286**	**0,304**	**-0,608**	**-0,367**	**0,306**	0,038	**-0,144**	0,110	-0,032
Growth	**0,161**	-0,102	**-0,262**	0,120	**-0,203**	1	-0,116	0,063	**0,130**	-0,033	**0,348**	0,050	-0,138	0,005	-0,028	0,038	**0,149**	-0,038	0,086	0,115
%Ret	-0,052	-0,022	0,078	-0,021	**0,174**	-0,029	1	**-0,168**	**-0,338**	**-0,236**	**-0,266**	**-0,241**	**-0,222**	**-0,163**	-0,018	0,018	**-0,290**	**0,138**	-0,032	-0,033
Aud	-0,085	**-0,141**	0,001	-0,094	**0,205**	-0,003	**-0,176**	1	**0,390**	0,046	**0,269**	**0,232**	0,114	-0,054	0,080	0,000	0,060	**-0,153**	0,067	0,102
Dey	**-0,262**	-0,067	**-0,176**	**-0,129**	0,064	0,078	**-0,338**	**0,390**	1	-0,035	**0,703**	**0,946**	**0,620**	**0,177**	0,122	-0,116	**0,176**	-0,032	**0,179**	**0,146**
Fhor	-0,042	0,026	-0,084	0,178	**-0,247**	-0,081	**-0,234**	0,037	-0,025	1	-0,059	-0,063	**0,219**	0,179	0,062	-0,156	**0,248**	-0,042	-0,018	-0,004
Riskfact	**-0,251**	0,040	**-0,237**	-0,036	**-0,182**	**0,159**	**-0,286**	**0,239**	**0,718**	-0,059	1	**0,604**	**0,560**	0,110	0,075	-0,032	**0,217**	-0,075	0,104	**0,171**
Faudit	-0,116	-0,183	-0,055	**-0,201**	**0,304**	0,071	**-0,288**	**0,232**	**0,946**	-0,058	**0,554**	1	**0,546**	**-0,188**	0,176	-0,076	0,149	-0,046	**0,340**	**0,196**
Fhyp	**-0,273**	0,110	0,068	**-0,232**	**0,350**	**-0,214**	-0,156	0,095	**0,551**	0,172	**0,363**	0,518	1	-0,107	0,106	0,024	0,168	-0,095	**0,210**	0,117
IPOprice	**0,163**	**0,233**	**-0,285**	**0,620**	**-0,706**	0,101	-0,089	**-0,187**	-0,061	**0,209**	0,075	-0,196	-0,164	1	**0,317**	**-0,191**	-0,009	**0,165**	-0,038	-0,107
Lev	-0,008	-0,078	**0,131**	-0,034	**0,292**	-0,085	0,016	-0,031	**-0,130**	0,082	**-0,174**	0,180	**0,189**	-0,013	1	0,022	0,091	0,051	-0,101	-0,035
Bsize	-0,074	-0,062	-0,010	**-0,169**	**0,313**	**-0,128**	-0,008	0,076	-0,104	-0,056	-0,111	-0,140	0,174	**-0,254**	**0,148**	1	**0,246**	**-0,176**	**0,177**	**0,174**
Bind	**-0,166**	0,013	**-0,162**	-0,058	0,038	-0,103	**-0,322**	0,086	**0,199**	**0,278**	**0,135**	0,144	**0,198**	-0,080	0,045	**0,246**	1	**-0,348**	**0,155**	**0,259**
Bdual	-0,035	0,010	-0,052	0,120	-0,113	**0,213**	**0,128**	**-0,153**	-0,032	-0,072	-0,005	-0,046	-0,065	**0,148**	0,006	**-0,175**	**-0,371**	1	**-0,142**	**-0,184**
AC	-0,063	-0,010	-0,066	-0,097	0,098	0,037	-0,055	0,067	**0,179**	-0,032	**0,135**	**0,340**	**0,220**	-0,070	-0,015	**0,156**	**0,139**	**-0,142**	1	**0,337**
ACQual	-0,038	-0,043	0,043	0,016	-0,034	-0,002	-0,061	0,102	**0,146**	0,025	**0,154**	**0,196**	0,126	-0,098	-0,107	**0,129**	**0,261**	**-0,184**	**0,337**	1

[a] Sample of 246 primary issues in the Province of Québec between 1982 and 2002. All variables are defined in Table 2
Bold: significant at 5% level

TABLE 5

GLM Regression of Underpricing on Audit Committees Attributes and Control Variables

$$\text{Undpr}_i = \alpha + \beta_1 \text{AC}_i + \beta_2 \text{ACqual}_i + \beta_3 \text{Bsize}_i + \beta_4 \text{Bind}_i + \beta_5 \text{Bdual}_i + \beta_6 \%\text{Ret}_i + \beta_7 \text{UW}_i + \beta_8 \text{Aud}_i + \beta_9 \text{Age}_i + \beta_{10} \text{Lev}_i + \beta_{11} \text{RiskFact}_i + \beta_{12} \text{Unit}_i + \beta_{13} \text{IPOprice}_i + \beta_{14} \text{LnAssets}_i + \beta_{15} \text{TaxDed}_i + \sum_k \gamma_k \text{Year}_{ik} + \varepsilon_i$$

		Model 1a		***Model 1b***		***Model 1c***	
Variables[a]	***Predicted***	***Coefficient estimate***	***p values***[b]	***Coefficient estimate***	***p values***[b]	***Coefficient estimate***	***p values***[b]
AC	-			0.048	0.15		
ACqual	-					***-0.088***	***0.03***
Bsize	?	-0.009	0.20	-0.010	0.13	-0.006	0.38
Bind	?	0.038	0.65	0.033	0.69	0.075	0.39
Bdual	?	0.023	0.55	0.028	0.46	0.020	0.60
%Ret	?	0.053	0.61	0.042	0.68	0.073	0.48
UW	+	0.029	0.09	0.030	0.08	0.031	0.07
Aud	-	***-0.091***	***<0.01***	***-0.092***	***<0.01***	***-0.088***	***0.01***
Age	-	-0.011	0.25	-0.011	0.26	-0.006	0.36
Lev	+	***0.002***	***<0.01***	***0.002***	***<0.01***	***0.002***	***<0.01***
RiskFact	+	0.0005	0.42	0.0005	0.41	0.0007	0.38
Unit	?	-0.017	0.68	-0.016	0.69	-0.020	0.62
IPOprice	+	-0.015	0.84	-0.020	0.77	-0.032	0.66
LnAssets	-	-0.020	0.10	-0.020	0.10	***-0.026***	***0.05***
TaxDed	-	***-0.188***	***<0.01***	***-0.193***	***<0.01***	***-0.188***	***<0.01***
Year			ns[c]		ns		ns
Intercept		0.412	0.14	0.430	0.18	0.410	0.20
N.		246		246		246	
Model F Value		3.12	<0.01	3.10	<0.01	3.17	<0.01
Adjusted R^2		20.6%		21.0%		21.6%	

[a] Sample of 246 primary issues in the Province of Québec between 1982 and 2002. The variables are defined in Table 2.
[b] We report one-tailed tests where prediction is supported.
[c] Coefficients non significant.

TABLE 6

GLM Regression of Forecast Errors on Audit Committees Attributes and Control Variables

$$FERR_i = \alpha + \beta_1 AC_i + \beta_2 ACqual_i + \beta_3 Bsize_i + \beta_4 Bind_i + \beta_5 Bdual_i + \beta_6 Fhyp_i + \beta_7 Fhor_i + \beta_8 Faudit_i + \beta_9 Age_i + \beta_{10} Growth_i + \beta_{11} RiskFact_i + \beta_{12} Aud_i + \beta_{13} LnAssets_i + \varepsilon_i$$

		Model 2a		***Model 2b***		***Model 2c***		***Model 2d***	
		Bias		***Bias***		***Accuracy***		***Accuracy***	
Variables[a]	***Pred.***	***Coefficient estimate***	***p values***[b]	***Coefficient estimate***	***p values***[b]	***Coefficient estimate***	***p values***[b]	***Coefficient estimate***	***p values***[b]
AC	-	0.110	0.20			-0.028	0.66		
ACqual	-			0.037	0.78			-0.055	0.57
Bsize	-	-0.013	0.56	-0.013	0.56	-0.024	0.15	-0.023	0.18
Bind	-	-0.062	0.79	-0.059	0.80	0.068	0.69	0.085	0.62
Bdual	+	0.168	0.12	0.168	0.12	-0.018	0.82	-0.019	0.81
Fhyp	+	0.017	0.17	0.017	0.19	0.006	0.52	0.006	0.50
Fhor	+	***0.026***	***<0.01***	***0.026***	***<0.01***	***0.021***	***<0.01***	***0.021***	***<0.01***
Faudit	-	***-0.277***	***0.03***	***-0.245***	***0.05***	***-0.207***	***0.03***	***-0.207***	***0.03***
Age	-	-0.001	0.44	-0.002	0.41	***-0.003***	***0.03***	***-0.002***	***0.05***
Growth	+	0.029	0.40	0.029	0.40	***0.059***	***0.01***	***0.060***	***0.01***
RiskFact	+	0.007	0.50	0.008	0.47	***0.015***	***0.04***	***0.015***	***0.04***
Aud	-	-0.001	0.99	-0.009	0.92	-0.069	0.28	-0.063	0.33
LnAssets	?	***-0.081***	***0.07***	-0.073	0.10	0.047	0.14	0.042	0.20
Intercept		0.635	0.11	0.617	0.13	-0.091	0.76	-0.080	0.81
N.						116		116	
Model F Value		3.25	<0.01	3.08	<0.01	3.02	<0.01	3.04	<0.01
Adjusted R^2		18.9%		17.7%		17.3%		17.4%	

[a] Sample of 116 primary issues in the Province of Québec between 1982 and 2002. The variables are defined in Table 2.

[b] We report one-tailed tests where prediction is supported.

Endnotes

[1] A setting where best practices are not mandatory allows for a greater variability in governance structures across firms and avoids the problem caused by ritual conformity, which may confound the results in cross-sectional analysis.

[2] These Québec-based IPOs were identified using the *Bulletin de la statistique* (Statistical Bulletin) and the *Répertoire des placements avec prospectus* (list of issues with prospectus) published by the Commission des valeurs mobilières du Québec (Québec Securities Commission).

[3] The data collection process involved multiple coders. However, the only item that involved judgement in data collection was the number of risk factor in the prospectus. This information was coded by a PhD student under the supervision of one of the authors. The other variables, namely accounting data, auditor, underwriter, forecast data were only copied from the prospectus to the database by research assistants and then sample-checked by the authors. Auditor and underwriter reputation variables were coded by the authors.

[4] See Table 2 for a description of the variables used in this study.

[5] See Welch and Ritter (2002) for a recent review of the literature on IPO activity, pricing, and allocations.

[6] There is no official classification of underwriters in Canada. Bédard et al.'s (2000) classification is based on the number of employees of each underwriting firm in Canada and in Québec as published every year in *Les affaires 500*. Moreover, all issues are underwritten on a firm commitment basis.

[7] We also performed our analysis of model 2 incorporating industry controls. None of the industry parameters were significant, results are not tabulated.