PRE-IPO FIRM PERFORMANCE AND CORPORATE GOVERNANCE OF U.S. IPO FIRMS: DOES VENTURE CAPITALISTS BACKING MATTER?

Marie-Claude Morin

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 2003

Your file Votre référence
ISBN: 0-612-83955-9
Our file Notre référence
ISBN: 0-612-83955-9

ABSTRACT

Pre-IPO Firm Performance and Corporate Governance of U.S. IPO Firms:
Does Venture Capitalists Backing Matter?

Marie-Claude Morin

This study examines differences between venture-backed and non venture-backed IPO firms in three aspects. First, operating performance and firm growth are examined in the pre-IPO period and in the IPO year. Second, differences in the corporate governance mechanisms in place at the time of the IPO are considered. In order to do so, board structure and directors' ownership and voting power are considered. Third, differences in the degree of IPO underpricing between the two groups are tested. Possible relationships of IPO underpricing with firm performance and corporate governance are also explored. We find venture-backed firms experience poorer operating performance in the IPO year as well as in the four years preceding it. On the other hand, they show higher growth in operating performance and revenues compared to non venture-backed firms. Board size is positively related to the number of VCs involved, but negatively related to VCs' ownership in the firm. Venture-backed firms have more outside directors but fewer independent directors on their board compared to non venture-backed firms. In addition, CEO duality is less common in venture-backed firms. Finally, IPO underpricing is larger for venture-backed firms, except for firms in the smallest size quartile. We also find underpricing not to be significantly related to firm performance and corporate governance mechanisms.

ACKNOWLEDGMENTS

I am grateful to my thesis supervisor, Dr. Harjeet Bhabra, for his patience, kindness, and open-minded spirit. I would not have learned so much without his interest in the topic. Thank you for letting me study what I had in mind and for pushing me even further.

I thank my committee members, Dr. Khaled Soufani and Dr. Sandra Betton, for their helpful comments. I am also thankful to Dr. Michel Magnan for giving me the opportunity to work in research. Special thanks to Anas Aboulamer for his unbelievable computer skills and patience.

Finally, I am grateful to my parents for their constant support. Thank you for believing in me and always encouraging me to do more than I imagine possible. Thanks to all my friends for their understanding and support.

TABLE OF CONTENTS

LIST OF TABLES

1. INTRODUCTION

The initial public offering (IPO) of equity is a major step in a firm's development. It is, thus, very interesting to study how firms are "structured" in order to meet IPO requirements. Going from a private to a public status usually requires changes in the governance structure. There are certain established legislative guidelines to respect. In addition, outside investors need to feel confident that the control mechanisms in place are appropriate and sufficient. The evolution of the firm in the years preceding the IPO is also of great interest. Studies on pre-IPO performance are rare in the literature, partly because data on private firms' performance requires an extensive effort.

Many firms in the developing stage are financed in part by venture capitalists (VCs). Venture capital firms are usually involved for some years prior to the IPO, during the IPO process itself, and remain generally present for some time after the IPO. Venture capitalists are known to be involved in the various aspects of their ventures' activities. The current study explores the differences between venture-backed and non venture-backed IPO firms vis-à-vis operating performance and corporate governance.

Previous studies examine issues related to the ones explored in this paper. Brav and Gompers (1997) look at the long-run market performance of IPOs completed between 1972 and 1992 and find venture-backed IPOs to outperform non venture-backed IPOs. In addition, they conclude that underperformance is not an IPO effect. Loughran and Ritter (1995) also focus on stock returns, as they examine how IPOs and seasoned equity offerings (SEOs) perform vis-à-vis non-issuing firms over a five-year period. Their

results show both IPOs and SEOs underperform non-issuing firms. Megginson and Weiss (1991) examine the effect of venture capital backing on IPO underpricing. They find venture-backed firms to be less underpriced than non venture-backed firms. Their study is very relevant to the IPO literature, but they concentrate on the effect of VCs' involvement on IPO conditions and do not examine the pre-IPO period nor the corporate governance structure in place at the time of the offering. Lerner (1994) tests whether VCs are able to time IPOs by looking at venture-backed private firms between 1978 and 1992. His results are consistent as he finds that venture-backed firms use private financing when equity valuation is low and go public when valuation is high. Unfortunately, his study is limited to the biotechnology industry and includes only venture-backed firms.

Jain and Kini (1994) examine operating performance in the post-IPO period. They find IPO underpricing is positively related to managerial ownership retention after the issue but is not related to post-IPO operating performance. Although interesting for its links with firm performance and management ownership, the study does not account for VCs' involvement in the firms. On the other hand, Jain (2001) studies the relationship between VCs' involvement in corporate governance and firm performance, but does not look at how VCs influence the corporate governance structure. Finally, Hellman and Puri (2000) observe the positive influence of VCs on the professionalisation of private firms. They do not, however, look at the effect of VCs' involvement on other corporate governance mechanisms.

The present study adds to the existing literature by exploring the relationships between firm performance in the pre-IPO years, corporate governance mechanisms and underpricing using a large sample of firms from different industries and financed through various sources, including venture capitalists. Differences between venture-backed and non venture-backed IPO firms are examined with respect to firm performance, corporate governance, and underpricing.

The paper is divided into three parts: firm performance, corporate governance, and IPO underpricing. We look at firm performance in the IPO year and the four years preceding the IPO. Firm performance is divided into operating performance and firm growth, where operating performance is measured based on operating income and net income and firm growth is proxied by annual growth rate of sales. Corporate governance structure is observed at the time of the IPO. Outside investors pay particular attention to the control mechanisms in place when assessing IPO firm quality. Besides, VCs usually lose most of their control rights with the completion of the IPO, although they tend to maintain their equity interest. The mechanisms we examine are board size, participation of outside and independent[1] directors on the board, separation of the chief executive officer and chair of the board positions, and directors' personal stock ownership and voting power. The purpose is not to test the effectiveness of these control mechanisms but rather to study how venture-backed and non venture-backed firms differ with respect to their governance mechanisms. Finally, we study some aspects of IPO underpricing. We first test for differences in underpricing between venture-backed and non venture-backed firms.

[1] Independent directors are outside directors not related to the firm other than sitting on its board of directors.

Second, we try to identify factors that most likely have an impact on IPO underpricing, by investigating the relationships between firm performance and corporate governance variables vis-à-vis the degree of underpricing.

The sample includes 465 IPOs completed by U.S. firms between January 1996 and December 1998. Data was mainly collected from the website of IPO Maven and the IPO prospectus available on the EDGAR website. Univariate tests are performed to study differences between venture-backed and non venture-backed firms. To a lesser extent, differences between firms having corporate investors involved, other than VCs, and those without are also examined. Ordinary Least Square (OLS) regressions are also performed to test relationships between VCs' and corporate investors' involvement and firm performance, corporate governance mechanisms, and IPO underpricing. Both VCs' and corporate investors' involvement are measured by the number of VCs or corporate investors involved and their equity ownership in the IPO firms.

Venture-backed firms show lower operating performance results in the four years preceding the IPO and in the year of the issue itself. Differences between the two types of firms are larger in the high-tech industries compared to the low-tech industries. Venture-backed firms experience higher growth in operating performance than non venture-backed firms in the IPO year, but the situation is reversed in the year preceding the IPO. Venture-backed firms have higher growth rates in sales than non venture-backed firms in the five-year period leading up to the IPO.

Results on corporate governance are mixed. While VCs' ownership is negatively related to the board size, the relationship is reversed when looking at the number of VCs involved. Venture-backed firms have more outside directors but fewer independent directors on their board than non venture-backed firms. A larger proportion of venture-backed firms separate the positions of chief executive officer and chair of the board compared to non venture-backed firms. Members of the board of directors, taken as a group, management directors, and outside directors have, on average, lower ownership in the case of venture-backed firms. On the contrary, outside directors not representing investors[2] and independent directors have, on average, larger ownership and voting power in venture-backed firms compared to non venture-backed firms.

Finally, firms are more underpriced at their IPO when VCs are involved, except for smaller firms, which are less underpriced. In general, variables related to firm performance and corporate governance fail to explain the degree of underpricing, except for the proportion of outside directors on the board, which is positive and significant. Finally, smaller firms and firms with high leverage ratios experience less underpricing.

The rest of this thesis is organized as follows: Section 2 reviews the relevant literature, section 3 presents the hypotheses, section 4 gives details on the sample selection and data collection process, section 5 provides a description of the data, section 6 presents the empirical results, section 7 summarizes and concludes the study, and Section 8 offers some suggestions for further research.

[2] Outside directors not representing investors is a category grouping the related directors and the independent directors. These directors are not sitting on the board to represent VCs or other institutional investors involved in the firm.

2. LITERATURE REVIEW

2.1 Structure and Investment Process of Venture Capital Firms

The literature on the structure of venture capitalist funds, the screening and monitoring processes and the effect of having venture capital financing on firm's success is quite large. The main theories and findings on the issue are here reviewed. Definitions of venture capitalists differ from one author to the next. Based on these various definitions, venture capitalists are defined as professionals investing in a portfolio of privately held, high growth companies in various stages of development, using equity or equity-linked securities. They are generally structured as limited partnerships having a limited duration of ten to twelve years. After such period, profits are distributed to the fund's investors, which are mostly institutions, insurance companies, pension funds and individuals. The fund managers are usually highly involved in the management and the oversight of the firms in which they invest. In order for their involvement to generate optimal outcome, VCs tend to select small and young firms in which information asymmetry problems are the highest. Since entrepreneurs are faced with the trade-off between higher costs of venture financing compared to bank financing and the increase in project value due to advising, only entrepreneurs with risky projects will seek venture capital (Dietz, 2002). As Gompers and Lerner (1999) point out, the typical venture-backed firm has few tangible assets, operates in markets that change rapidly and presents high levels of uncertainty in general. Agency problems in venture-backed firms are generally recognized as particularly significant (see Gompers (1995), Kirilenko (2001), Klausner and Litvak (2001)). This is not particularly surprising, considering that expected agency costs increase as assets become less tangible, growth options increase and asset

specificity rises (Gompers, 1995). As Kaplan and Stromberg (2001) argue, the entrepreneur's interest is analogous to an option: "all he has to lose is his investment and the opportunity cost of his time", while he may gain from the private benefits of running his own business.

VCs use various screening and monitoring mechanisms to deal with the information asymmetry and agency problems. Although the degree of reliance on each of these mechanisms tends to vary across VCs, the use of each of them is almost universal in VC investments. First, VCs favor convertible preferred securities in exchange for their capital infusions. As Hellman and Puri (2000) points out, if the venture is to be acquired, the VC keeps his preferred stock and gets a liquidation preference, plus a pro rata share of the remaining proceeds if he has participation rights. On the other hand, if the venture is to go public, the VC's ownership will automatically convert to common shares, giving him a pro rata share of the proceeds. Second, VCs rarely invest in a venture by themselves. They rather form a syndicate of investors after identifying an interesting venture; the first VC involved being generally the lead investor. Syndication allows the VCs to gather various evaluations of the venture and also to diversify the risk among the VC investors. Third, investments are staged into several capital infusions. Staging investments gives the VC the option to stop financing unsuccessful firms. It also gives entrepreneurs incentives to expend optimal effort while restraining personal perquisites. Fourth, VCs will link the entrepreneur's compensation to firm performance. See Klausner and Litvak (2001), Kaplan and Stromberg (2001), Gompers (1995) and Sahlman (1990) among others for discussion on these monitoring mechanisms. In addition, as Klausner and Livak (2001)

and Gompers (1998) show, VCs generally have rights to control management that are disproportionate to their equity interest. For instance, VCs often have rights to hold more board seats that their pecuniary interest in the firm may justify. They also have the right to veto certain major management decisions such as asset sales and purchases, changes in control and issuance of securities. Gompers (1998) finds that these veto rights are not generally related to whether the VC has board control or not. They can either be included in the contracts between the entrepreneur and the VC or they can be attached to the class of equity held by the VC (Klausner and Litvak, 2001). Black and Gilson (1998) present an interesting explanation for the disproportionate allocation of control rights. They hypothesize that the initial transfer of control to the VC is costly to the entrepreneur because he loses the private benefits of control. Therefore, the opportunity to regain control at the IPO creates powerful non-monetary incentives for the entrepreneur to increase the value of the company. They compare this to a call option on control. Finally, VCs closely monitor the firms they invest in. Fried and Hisrich (1994) argue that VCs may be more efficient in monitoring the firms compared to other outside investors due to lower information-gathering costs. They base their assumption on the economies of scale (the VCs gather the information on behalf on a number of investors in the limited partnership), the economies of scope (the VCs invest in different ventures and have a network of referral sources, service provides, industry contacts) and the learning curve on which the VCs may rely.

Does receiving financing from VCs really bring something to the entrepreneurial firm? The issue has been studied by many academics through both theoretical models and

empirical studies. Klausner and Litvak (2001) argue that "the value of the services that VCs provide is reflected in the rich financial terms they command in their dealings with both investors and entrepreneurs". Likewise, Dietz (2002) shows that even though VC finance is more expensive than bank finance, there are entrepreneurs who are explicitly looking for VC finance even if they could obtain financing through banks. According to Engel (2002), the decline of the financial constraints due to the capital infusions by the VC, the monitoring and the provided services have a positive impact on the performance of venture-backed firms. As Engel points out, the monitoring and control rights held by the VC reduce moral hazard problems and create incentives for the entrepreneur to provide optimal efforts. Moreover, the entrepreneur's ability to manage obstacles is increased by the services provided. VCs may provide services such as serving on the board of directors, being actively involved in key personnel and strategic decisions, giving advice to the entrepreneur, meeting with customers and suppliers, certifying the firm quality to stakeholders through their reputation, and networking (see Lerner (1995), Engel (2002), Klausner and Litvak (2001), and Gompers (1995) among others for discussion). Furthermore, Leshchinskii (2000) show that in industries with high externalities, VCs can increase social welfare by coordinating their investments into portfolio companies. As a result, "when the network externalities are positive, coordinated investments by VCs guarantee profitable investment into some projects that would otherwise have ex-ante negative NPV and fail to attract funding" (Leshchinskii, 2000). Finally, Admati and Pfleiderer (1994) argue that obtaining capital from an inside investor might solve the overinvestment problem. To the extent that VCs establish close ties with the firm, have access to private information on the project's profitability and are

involved in subsequent investment decision making processes, they might then diminish the overinvestment problem.

Looking at empirical studies, Kortum and Lerner (1998) find that a dollar of venture capital financing in firms highly involved in research and development is up to ten times more effective in stimulating patents than a dollar of traditional corporate R&D investment. As they say, while venture capital finance represents less than 3% of corporate R&D, it is responsible for about 15% of industrial innovations. Regarding the efficiency of venture capitalists, Gompers (1995) looks at the staging and monitoring of VC investments. He finds that venture-backed firms leading to an IPO receive more total financing and a greater number of rounds of financing than do venture-backed firms going bankrupt or being acquired. According to Gompers, this finding supports the idea that VCs can successfully discriminate between successful and unsuccessful ventures through their monitoring. It is also often argued that VCs can accelerate the professionalisation of the entrepreneurial firms they invest in (see for instance Klausner and Litvak, 2001). Hellman and Puri (2000) surveyed the evolution of 170 young, privately held, high technology private firms in Silicon Valley firms. Their sample includes both firms with and without venture capital financing. In general, their results support the hypothesis that VCs contribute to the professionalisation of their ventures. For instance, they find that venture-backed firms are more likely to use business and professional contacts as opposed to personal contacts when recruiting personnel (senior management, sales, marketing, administrative and managerial personnel). Venture-backed companies are also twice as fast in hiring a vice-president of sales compared to

other firms. Also, they are twice as likely to have a professionally designed employee stock option plan. Jain (2001) looks at the effect of VC involvement on post-IPO performance using a sample of venture-backed IPOs from 1982 to 1990. He defines performing firms as firms that increased their operating return after the IPO (average in the three following years) compared to the prior fiscal year level. He finds that the proportion of VCs on the board is 35.30% for performing firms compared to 24.20% for non-performing ones. VCs have also been sitting on the board of performing firms longer than on the board of non-performing firms (36.01 years compared to 31.35), although the difference is not statistically significant. Jain concludes that VCs' involvement in the corporate governance of their ventures may improve their performance.

2.2 Effect of Having Venture Financing for IPO Firms

It is well recognized both in the literature and in the venture capital industry that bringing a firm to the public market is the exit option providing the highest returns for the VC (see Gompers (1995) among others for discussion). The VC then converts his preferred convertible securities into common stock. Although a majority of VCs do not sell any of their shares at the time of the offering (Megginson and Weiss, 1991), their ownership is much more liquid and can be ultimately sold at higher price compared to the private market. Having venture capital financing may actually allow entrepreneurial firms to enter the public market in more favorable conditions. Megginson and Weiss (1991) study the difference in underpricing and find that venture-backed IPOs show significantly less underpricing compared to non venture-backed IPOs. The authors relate this finding to the VC reputation effect. Indeed, they argue that since VCs repeatedly bring firms to the

public market, they can credibly stake their reputation that these firms are not overvalued. Moreover, the authors find that underwriters of venture-backed IPOs are significantly more experienced. These firms are also charged significantly lower fees compared to non venture-backed IPOs. Brav and Gompers (1997) look at the long-run stock performance of venture-backed IPOs compared to non venture-backed IPOs. They hypothesize that the VCs' ability to attract a larger number of high quality analysts to follow the firms they take public may lower asymmetric information at the time of the offering. The authors also assume that venture-backed IPOs are more likely to attract institutional investors compared to non venture-backed IPOs. Considering that institutional investors are the primary source of capital for venture funds, they may be more willing to invest in the ventures of VCs with whom they have already invested. Indeed, Megginson and Weiss (1991), in a prior research, found that institutional investors had larger holdings of venture-backed firms after the IPO than they had of comparable non venture-backed IPOs. Finally, Brav and Gompers (1997) argue that venture-backed firms are less subject to investor sentiment due to the greater availability of information and the higher institutional shareholding.

Various studies show the significant differences in firm characteristics between venture-backed and non venture-backed IPOs. For instance, Megginson and Weiss (1991) show that venture-backed companies are able to complete their IPO at a younger age (8.6 years for venture backed firms compared to 12.2 years for non venture-backed ones). They also find that venture-backed firms exhibit higher IPO prices compared to non venture-backed companies. Engel, Gordon, and Hayes (2001) and Fenn, Liang, and Prowse (1996) notice

that venture-backed firms tend to raise more capital at the time of their IPO compared to non venture-backed firms, even though they are often smaller. Moreover, Engel, Gordon, Hayes (2001) find that venture-backed IPO firms have lower and "quite negative" net income. They also show that they have lower book-to-market ratios compared to non venture-backed IPO firms, which is consistent with their higher growth opportunities. As in the case for privately held venture-backed firms, venture-backed IPO firms tend to concentrate in high technology industries. Fenn, Liang, and Prowse (1996) look at a total sample of 786 IPOs (both with and without venture financing) from 1991 to 1993. It appears that the main industries for the two types of IPO firms are quite different. Indeed, 65% of the venture-backed firms were in the computer-related or medical and health sectors, compared with only 26% in the subsample without venture financing. The latter firms were more concentrated in the manufacturing and retail and wholesale industries. Correspondingly, venture-backed firms present higher ratios of R&D expenditures to assets and lower ratios of fixed assets to total assets.

Finally, having venture capital may help the firm management team in timing the IPO. Lerner (1994) studies the choice of VCs between another private round of financing versus taking the firm to the public market. He finds that VCs are efficient in timing the market, bringing the firm public at a market peak and relying on private financing when valuations are lower. However, since Lerner's data is limited to the biotechnology industry, he mentions that the demand for capital and the changing need for oversight by active investors may be more important than market conditions in timing the IPO for firms in other industries.

2.3 Corporate Governance Mechanisms and Their Impact on Firm Performance

This study examines the effect of VCs' involvement on the corporate governance structure of IPO firms. We do not examine every control mechanism available but rather focus on the structure of the board of directors as well as on the management and directors ownership variables. Some previous studies supporting the argument that these governance mechanisms do have an effect of firm performance are here reviewed. Several studies dealing with the effect of having venture financing on the application of these mechanisms are also examined.

Academics have divergent opinions regarding the effects of board structure and composition on firm performance. Agency and strategic restructuring research by Dalton et al. (1999), Pearce and Zahra (1991) and Zhara and Pearce (1989) find that the firm's board structure, characteristics and processes may influence strategic choices and various organizational outcomes. As stated by strategy researchers, the board's service and strategic roles are particularly important when the firm faces a highly uncertain environment (Chaganti et al., 1985; Kesner, 1987) or when it goes through transition phases such as an IPO (Certo et al., 2001, Daily and Dalton, 1992). As Filatotchev (2002) points out, external investors "may provide a counter-balance to incumbents' entrenchment by contributing to the development of more efficient boards". In contrast, Baysinger and Butler (1985), Hermalin and Weisbach (1991) and Bhagat and Black (1997) did not find any significant relationship between the various characteristics of board composition and firm performance. However, several other studies contend that boards should be kept to moderate size. In fact, Yermack (1996) shows that firm value

and performance are a decreasing function of board size. Similarly, Core, Holthausen, and Larcker (1999) find that chief executive officers receive a higher level of compensation in firms with larger board of directors. The authors examine the effects of corporate governance mechanisms such as board structure and ownership concentration on the level of CEO compensation. Assuming that the level of CEO compensation is a proxy for the corporate governance structure efficiency, the results are relevant to the present study.

The influence of outside directors on board efficiency and firm performance is also ambiguous. Byrd and Hickman (1992) argue that inside directors provide the board with valuable information about the firm's activities while outside directors bring their expertise and objectivity in evaluating the decisions. Daily and Dalton (1992) maintain that outside directors are particularly important for small and high growth firms going through transition stages. Filatotchev (2002) survey various signaling researches (Beatty and Ritter, 1986; Booth and Smith, 1986; Espenlaub and Tonks, 1998) suggesting that IPO firms may reduce agency costs caused by information asymmetry and "liability of newness" associated with untested management by having independent directors on its board. Some empirical studies find the proportion of outside directors on the board to be positively related to firm performance. For instance, Weisbach (1988) shows that CEO turnover is more highly correlated with firm performance when there is a majority of outside directors on the board rather than a majority of insiders. As stated by the author, the results support the idea that outside directors are important in monitoring management. In the same way, Rosenstein and Wyatt (1990) find that the appointment of

an additional outside director on their sample firms' board resulted in a significant positive stock price reaction, even though outside directors were already in the majority prior to the announcement. In contrast, Core, Holthausen, and Larcker (1999) find that a greater proportion of outside directors on the board is associated with higher CEO compensation. Their results are consistent with Lambert and el. (1993), Boyd (1994), and Agrawal and Knoeber (1996). The latter study tests for reverse causality and finds that the negative relationship really runs from the percentage of outside directors sitting on the board to firm performance and not the reverse. As a result, Agrawal and Knoeber suggest that firms tend to have too many outside directors on their board. On the contrary, Yermack (1996) finds no significant relationship between the percentage of outside directors on the board and firm performance. Likewise, Finkelstein and Hambrick (1989) find CEO compensation to be unrelated to the proportion of outside directors sitting on the board. A relevant issue is the characteristics of the outside directors. Outside directors may be completely independent from the company or they may be related to the company in some way (suppliers, accountants, attorneys, customers). The latter type of outside directors is what Core, Holthausen, and Larcker (1999) call "grey" directors. The authors find CEO compensation to be higher when the outside directors are elected after the CEO's appointment or when they are "grey" directors. Likewise, Crystal (1991) argues that boards cannot be efficient in setting CEO compensation level because outside directors are essentially hired by the CEO and can be removed by him. As a result, these directors may be reluctant to contradict the CEO throughout the decision making process. On the other hand, Rosenstein and Wyatt (1990) do not find any

significant evidence that the occupation of outside directors can affect their influence on the board.

Although investors often blame CEO duality when firms face poor performance, academic findings are mixed on the effectiveness of separating the CEO and chair of the board positions. Baliga, Moyer, and Rao (1996) find that the US market does not significantly react when a firm goes from CEO duality to non-CEO duality. Moreover, their results show limited operating performance changes around a firm' duality status, and weak evidence of a relationship between duality status and firm performance in the long-run. Faleye (2003) argues that separating the CEO and chairman positions is not optimal for all firms. According to his study, the two positions are more likely to be combined when there is organizational complexity, good CEO reputation, large insider ownership, and small board of directors. Finally, Core, Holthausen, and Larcker (1999) find CEO compensation to be significantly higher when the two positions are assigned to the same person. This finding suggests that avoiding CEO duality may enhance corporate governance efficiency.

Several previous studies examined the involvement of VCs on the board of directors of their venture firms. Barry, Muscarella, Peavy and Vetsuypens (1990) find that VCs have substantial representation on the boards of private firms, that their lengthier tenure on the board is associated with reduced underpricing when the firm completes its IPO, and that their involvement continues after the introduction to the public market. Kaplan and Stromberg (2001) uncover only a slight correlation between voting control and board

control. As the authors point out, VCs and entrepreneurs commonly settle voting and board issues separately in the contracts. This is to overcome the rules of plurality voting generally applied when electing directors, resulting in majority voting control completely dominating the board. Kaplan and Stromberg make a clear distinction between the seats formally controlled by the VC and the seats filled by directors agreed upon by the VC and the entrepreneur. They find that VCs control the majority of board seats in 26% of the firms in their sample, while founders control a majority in 12% of the firms. In 62% of the firms, neither the VC nor the entrepreneur controls a majority of the seats, most of the directors being appointed by the VC and the entrepreneur together. Looking at the efficiency of VC board involvement, Lerner (1995) shows that an average of 1.75 VCs are added to the board between financing rounds when there is a CEO turnover in the interval while only 0.24 VCs are added to the board between other rounds. No difference was observed in the addition of other outside directors. Lerner's results suggest that VCs tend to be more involved when the need for oversight is the highest. Going from the private to the public market is also a critical phase in a firm's existence. As Filatotchev (2002) argues, assuming that VCs are important providers of managerial oversight, they should be particularly involved in developing an efficient board when the need for oversight is greater, such as during and after the IPO.

There is also controversy about the effect of ownership concentration. Previous studies have examined the incentives created by the shareholdings of the CEO, the management team, the board of directors, inside directors, outside directors, and officers and directors as a group. Morck, Shleifer and Vishny (1988) present a positive relationship between

board ownership and firm performance, as measured by Tobin Q, in the 0% to 5% board ownership range, while the relation appears negative and less pronounced in the 5% to 25% range and is positive again beyond the 25% board ownership. Dealing strictly with insider ownership, McConnell and Servaes (1990) find a significant curvilinear relation between firm performance and ownership concentration. Their results show a curve sloping upward until insider ownership approaches 40% to 50% and then sloping slightly downward. On the other hand, Mikkelson, Partch and Shah (1997) did not observe any relationship between operating performance measures and ownership of officers and directors in firms conducting IPOs. However, Mikkelson et al. hypothesize that new pressures from the public market might explain the lack of relationship between operating performance and insider ownership. Indeed, takeover threats, monitoring by outside directors and the effects of stock based compensation may in part replace the incentives related to management ownership.

3. HYPOTHESES

3.1 Firm Performance

As seen in the literature review, many studies show venture capitalists to have a positive effect on their ventures' performance[3]. Indeed, VCs tend to be highly involved in the oversight and management of the entrepreneurial firms they finance. As a result, we would expect these firms to show higher operating returns when compared to non venture-backed firms. Thus, the following hypothesis is tested.

Hypothesis 1.1: Venture-backed firms show better operating performance results than non venture-backed firms.

When examining operating performance, it is particularly interesting to examine how efficient firms are in generating operating income. Deflating operating income by firm's sales is the more appropriate procedure in the case of IPO firms. In fact, firms go through major changes in their capital structure when conducting their IPO. They are likely to use the proceeds to increase their asset base through internal investment or acquisitions. As Mikkelson, Partch and Shah (1997) point out, using operating income deflated by total assets may induce a downward bias to the operating performance analysis.

Moreover, it is relevant to investigate the impact of VCs' involvement on firm growth. Firms conducting their IPO generally experience strong growth in the preceding years. This can be related to their intrinsic characteristics, as they often present high growth opportunities. In addition, managers are concerned about showing the firm's potential to outside investors. Consequently, we develop the following hypothesis.

[3] See Engel (2002), Lerner (1995), Klausner and Litvak (2001), Kortum and Lerner (1998) and Jain (2001).

Hypothesis 1.2: Venture-backed firms show higher growth than non venture-backed firms, as proxied by sales growth.

3.2 Corporate Governance

Considering that VCs promote themselves as active investors, we expect venture-backed firms to show a governance structure different from non venture-backed firms. VCs have strong incentives to establish optimal governance mechanisms. First, they usually have large shareholdings in the firm. Since their funds command high returns, it is in their best interest not to let agency problems impede performance. Second, their reputation is at stake and their ventures' success is the strongest argument when raising capital for a new fund, or when dealing with new entrepreneurs. Third, VCs lose most of their special control rights when the firm completes its IPO (Black and Gilson, 1998). Since they generally do not sell their shares at the time of the offering, they must ensure that other control mechanisms compensate for their lost control rights. Thus, establishing an efficient governance structure may prevent them from losing capital and reputation. Some control mechanisms presented in the literature review will be examined in the paper. These are board size, the proportion of outside and independent directors on the board, the separation of the chief executive officer and chair of the board positions, and directors' stock ownership. The following hypotheses present differences we expect to observe between the two types of firms.

Hypothesis 2.1: Venture-backed firms have a larger board of directors than non venture-backed firms.

VCs generally have representation on the board as a condition of their investment. Board size is likely to increase according to the addition of these directors. On the other hand, VC directors may fill seats that would otherwise be filled by management or related directors. Thus, we may not find strong support for Hypothesis 2.1.

Logically, the inclusion of directors coming from the VCs should increase the proportion of outside directors on the board. This leads to the following hypothesis.

Hypothesis 2.2: Venture-backed firms have a larger proportion of their board filled by outside directors than non venture-backed firms.

As Core, Holthausen, and Larcker (1999) argue, outside directors may be divided into various categories, depending on their affiliation with the firm. As the authors point out, directors providing services to the firm or having other business relationships with the firm[4] might be less efficient in monitoring the management team. Consequently, we classify outside directors into four categories: directors coming from VC firms, directors coming from corporations, outside VC firms, with a 5% or more interest in the firm, directors having business relationships with the firm (attorneys, accountants, suppliers, etc.), and directors free of affiliation with the firm outside of their board duty.

VCs involved in the firm may or may not require the presence of other outside directors, such as independent directors, on the board. On the one hand, outside directors are generally recognized as positively related to firm performance. This is particularly true for young and growing firms, such as most IPO firms. On the other hand, VCs may not feel the need for outside monitoring and expertise, as they are already involved in these

[4] Core, Holthausen, and Larcker describe such directors as "grey" directors.

activities themselves. Thus, the following hypothesis is tested, although we have mixed expectations about it.

Hypothesis 2.3: Venture-backed firms have a larger proportion of their board filled by independent directors than non venture-backed firms.

The separation of the chief executive officer and chair of the board positions is also interesting to examine. The literature shows mixed results on the real effects of CEO duality. Nevertheless, it is generally accepted that firms should avoid combining the two positions in order to enhance their governance. Hence, the following hypothesis is tested.

Hypothesis 2.4: Venture-backed firms more commonly separate the chief executive officer and chair of the board positions than non venture-backed firms.

Finally, VCs are likely to promote large stock ownership from management, as well as from outside directors. As reviewed in Section 2, having large shareholdings generally creates incentives for management and directors to increase firm value and performance. When investigating directors' ownership, differentiation is done between personally owned shares and shares over which the directors have voting control. This distinction is particularly relevant for directors representing VC firms or corporations of which they are employees. We test the following five hypotheses.

Hypothesis 2.5.1: Board members as a group show larger average ownership in venture-backed firms than in non venture-backed ones.

Hypothesis 2.5.2: Management directors show larger average ownership in venture-backed firms than in non venture-backed ones.

Hypothesis 2.5.3: Outside directors show larger average ownership in venture-backed firms than in non venture-backed ones.

Hypothesis 2.5.4: Outside directors not representing investors show larger average ownership in venture-backed firms than in non venture-backed ones.

Hypothesis 2.5.5: Independent directors show larger average ownership in venture-backed firms than in non venture-backed ones.

We could look at CEO ownership, but we would probably not find significant results regarding such hypothesis. Engel, Gordon and Hayes (2001) find that the larger the VCs' involvement in the firm, the lower the CEO's ownership, both at the time of the IPO and in the following years. The authors also find that the CEO is less likely to be the founder in venture-backed firms. In the same way, Hellman and Puri (2000) look at young high-tech firms and find founders of venture-backed firms more likely to be replaced by an outside CEO. Moreover, their results show leadership changes to occur faster in venture-backed companies. As Agrawal and Knoeber (1996) point out, longer serving CEOs and founding CEOs are likely to hold more shares compared to newly appointed CEO. Consequently, if VCs do encourage leadership changes in the pre-IPO period and if founding CEOs do hold more shares than newly appointed CEOs, then venture-backed firms could fail to show larger CEO's ownership even though it is known to be a relevant governance mechanism.

3.3 Underpricing

Based on previous studies, venture-backed firms are expected to benefit from better financing conditions when entering the public market compared to non venture-backed

firms. In line with Megginson and Weiss (1991), we expect underpricing of venture-backed IPOs to be less important than for non venture-backed ones. VCs can credibly assert to outside investors that the firms they bring to the public market are not overvalued. With their reputation at stake, investors know VCs have no incentives to misprice their IPO firms. As Barry, Muscarella, Peavy, and Vetsuypens (1990) mention, investors need less of a discount because VCs monitored the firms. Prices can then be set at higher prices, which are closer to the true value. Accordingly, the following hypothesis is developed.

Hypothesis 3.1: Venture-backed firms are less underpriced than non venture-backed firms at the time of their IPO.

Finally, it is interesting to examine what influences IPO underpricing. We can logically expected underpricing to be related to firm performance and corporate governance. The following hypotheses are intended to test for such relationships.

Hypothesis 3.2.1: Underpricing is negatively related to firm performance.

Hypothesis 3.2.2: Underpricing is negatively related to the quality of the corporate governance structure.

4. SAMPLE SELECTION AND DATA COLLECTION

The sample consists of both venture-backed and non venture-backed firms that completed their first public equity offering between January 1996 and December 1998 in the United States and are listed either on NYSE, AMEX, or NASDAQ. Moreover, the offerings have to be of common stock. The sample was constructed based on the IPO Maven database. This database covers roughly half the IPOs completed in the selected period. Although IPO Maven does not cover all IPOs completed during the period, there is no reason to think that restricting the sample to these firms could bias or affect the results. IPO Maven was used to collect financial results for the four years preceding the IPO as well as for the year of the IPO itself. The database presents a summary of both the balance sheet and the income statement. Additional data was gathered from the Securities Data Corporation (SDC), including the firms' industry affiliation, a business description, the four-digit SIC code, and the exchange where the firm is listed. Finally, the data was completed by looking through the IPO prospectus. The referred prospectus were posted on the EDGAR website on the offering day or the following days but no longer than a week after the IPO. The missing items from the balance sheets and income statements were then filled, since IPO Maven does not generally cover all items for the four years prior. As a result, firm performance can be examined for a longer pre-IPO period. Offering details were also collected, such as price at the offering, number of shares offered and number of shares outstanding after the IPO. In addition, information was collected on board structure, directors' voting power and stock ownership and 5% blockholders. Classification regarding CEO duality was also established. All directors sitting on the board at the time of the IPO were listed. For each director, the name, the ties with the IPO company, the

number of shares for which he/she was allowed to vote before and after the IPO, and the number of shares he/she personally owned before and after the IPO were brought together. For each blockholder with 5% or more of the firm's equity, the name, the number of shares owned before and after the offering, and a description were collected. Whether the blockholders were venture capital firms or not was established based on these comments. The classification was double-checked through web sites specialized in the industry. These sites are www.vfinance.com, the National Venture Capital Association (NVCA), and www.findingmoney.com.

From the initial sample based on the IPO Maven database, observations that were not common stock offerings (33 firms) were dropped. The observations for which the data was incomplete in IPO Maven, could not be found in SDC, and/or for which no prospectus was found on EDGAR (142 firms) were also excluded. This large decline is mainly due to the fact that EDGAR does not cover offerings prior to May 1996. Financial firms, real estate investment trusts, holding companies, insurance companies and companies related to natural resources were also excluded (120 firms). Finally, IPO firms involved in major changes in the year of the offering or the year prior were eliminated. Accordingly, firms were dropped if (a) there was a merger, an acquisition accounted for as a pooling of interest or a change in control (26 firms), (b) the firm was recently formed from the acquisition of many "founding firms" (52 firms), (c) the firm went through major restructuring in the period before the offering (34 firms), (d) the firm did not have history either because it was incorporated in the year of the IPO or in the year prior, or because it was a subsidiary without a stand alone history (39 firms). The final sample includes 465 firms that completed their IPO between January 1996 and December 1998.

5. DATA DESCRIPTION

Tables 1.1 to 1.4 present descriptive statistics for the sample. A definition of the variables used in the study is introduced in Table 1.1. As mentioned previously, the final sample includes a total of 465 initial public offerings completed between January 1996 and December 1998. The number of observations per year is roughly equal, as we can see in Table 1.2 (36%, 33%, and 31% of the sample in 1996, 1997, and 1998, respectively). The issuing firms are classified as venture-backed or non venture-backed firms. A firm is categorized as venture-backed when there is at least one venture capitalist involved in its financing, with an interest equal to or higher than 5% of the firm's capitalization after the IPO. The sample contains a total of 218 venture-backed IPOs and 247 non venture-backed IPOs. Venture-backed firms represent 52%, 44%, and 44% of the observations in 1996, 1997, and 1998, respectively. Table 1.2 also presents the distribution of issues based on whether the firm is from a high-tech or low-tech industry. This classification is based on the four-digit SIC codes. The high-tech category includes firms involved in biotechnology, electronic components and computer-related manufacturing, communications equipment manufacturing, and other industries involving intense research and development (R&D) activities. The distribution of IPOs between high-tech and low-tech industries is relatively stable across time, as 41%, 47%, and 44% of the issuing firms in 1996, 1997, and 1998 respectively are from high-tech industries. A majority of venture-backed firms are from high-tech industries (60%, 69%, and 57% in 1996, 1997, and 1998 respectively), while non venture-backed firms are mostly from low-tech industries (80%, 69%, and 67% in 1996, 1997, and 1998 respectively).

General characteristics of the issuing firms included in the sample are presented in Table 1.3. All balance sheet and income statement items are taken as of the end of the fiscal year when the issue was completed. The number of venture capitalists and corporate investors as well as their equity interest in the firms were taken from the IPO prospectus. The total value of the offer is the product of the number of shares offered in the issue and the offer price, as taken from the IPO prospectus. This variable is generally larger in venture-backed firms. The percentage of the issue offered by current shareholders is usually small and not significantly different between venture-backed and non venture-backed IPOs. On the other hand, venture-backed firms are generally smaller in terms of total assets, total equity, and number of employees compared to non venture-backed firms. Venture-backed firms have also a slightly higher proportion of intangible assets. This latter measure refers to assets net of property, plant, and equipment. Non venture-backed firms have higher leverage, most likely because they do not have access to venture capital financing or have access to non-VC sources of capital. Finally, venture-backed firms have lower revenues compared to non venture-backed firms. Various factors may explain this difference in sales. First, from total assets, total equity and number of employees we see that venture-backed firms are smaller in size, which makes it logical for them to have lower sales than larger firms. Second, the difference in revenues may be explained by the intense research and development activities of venture-backed firms. This assumption is based on the idea that venture-backed firms have more intangible assets and are more likely to be in high-tech industries. Some of these firms may go public as soon as their products are developed or even when they are still in the R&D process, due to capital requirements. Third, venture-backed firms may be able to go

public without large revenues due to their growth opportunities. Fourth, venture capital backing may allow firms to go public even if they are not yet profitable. The VCs involved may "guarantee" the prospects of the firm to outside investors. As reviewed in Section 2, VCs are known as credible backers since they put their reputation at stake when taking a firm public.

Figures for VCs' and corporate investors' involvement in the issuing firms are also presented in Table 1.3. The number of VCs involved in venture-backed firms ranges from one to seven, with an average of two. The total VCs' equity interest in the firms is on average approximately 36% before the issue and drops to around 26% after the issue. Figures are also presented for corporate investors' involvement. Corporate investors refer to any corporations that invest in the issuing firm, other than venture capitalists and parent companies. Corporate investors, thus, include corporations investing in start-ups with high R&D prospects (e.g. Microsoft investing in a start-up involved in software development), angel investors, pension funds, trusts, and insurance companies. In order to be classified as corporate investors, they need to own at least a 5% interest in the IPO firm. Corporate investors seem to be more present in venture-backed firms, although they are also involved in non venture-backed firms. In the venture-backed group, their average interest is significantly smaller than the VCs' interest. The change in ownership, in percentage, from before to after the issue is similar for VCs and corporate investors.

Table 1.4 describes the composition of boards of directors and the directors' voting power and personal stock ownership. The list of directors sitting on the board at the time

of the IPO and their ownership were collected from the IPO prospectus. It includes directors elected and those to be elected simultaneously or immediately after the issue. In order for the latter directors to be accounted for, a full biography had to be included in the prospectus, as is done for other directors. Directors are classified into five distinct categories based on the biography provided in the prospectus. The categories are management directors, VC directors, corporate investor directors, related directors, and independent directors. Management directors include the chief executive officer, directors from the top-management team, the founders (even if they are no longer in the top-management team), relatives of executive officers or founders, retired employees of the company, and directors who are also executive officers of the parent company.

VC directors represent venture capital organizations having equity interest in the IPO firm. Although classifying a firm as venture-backed requires VCs' ownership of 5% or more, this criterion is not applied to VC directors. In order for a director to be a VC director, he/she has to represent a VC firm having some equity interest in the firm. Directors working for a VC firm with no investment in the IPO firm are classified as independent directors, though such cases are rare.

Corporate investor directors represent corporations investing in the firm, other than VCs, based on the description presented previously. Related directors are outside directors not employed by a VC firm or a corporation investing in the firm. They are generally presented as independent directors by the firm in its IPO prospectus. However, when looking at their biography more closely, we see that they either provide services to the

company (e.g. lawyers, accountants, underwriters, and consultants), are major customers, or are important resource providers to the company.

The last category, independent directors, refers to the truly independent directors. These directors do not represent a VC firm or a corporation investing in the firm, and they do not enter in the category of related directors. They do not have relationships with the IPO firm outside of sitting on the board of directors. Directors are grouped as "outside directors" to perform some tests in Section 6.2. This group includes VC directors, corporate investor directors, related directors, and independent directors. The total number of directors on the board is also presented in Table 1.4. The board size is similar between venture-backed and non venture-backed firms. However, non venture-backed firms have more management directors on their board, while venture-backed firms have more outside directors. This is mainly due to the presence of VC directors on the board of venture-backed firms.

The second part of Table 1.4 presents the figures for directors' voting power, while the third part looks at directors' personal stock ownership. Both measures are taken from the IPO prospectus and refer to the period immediately following the completion of the offer. Voting power refers to the percentage of shares the director has the right to vote on. It includes personally owned shares, shares owned by the spouse, the children, and trusts for the benefit of the director, the spouse and/or the children. It also includes shares owned by the VC firm or corporation for whom the director sits on the board, as well as shares owned by any company the director works for or has a controlling interest in. Any

shares owned by such an investor are included in the director's voting power, whether it represents a 5% interest or not. Personally owned shares include shares owned by the director or the spouse. It also includes shares owned by a company if it is clearly stated in the prospectus that the director owns a controlling interest in such company[5]. In cases where two or more directors have common control over some shares, the figures are adjusted to exclude double counting. Voting power and ownership figures do not include options but do include warrants. All measures assume that the underwriters do not exercise the over-allotment option. Figures for voting power and ownership in Table 1.4 are all aggregated and do not account for the number of directors per category[6]. We see that management directors tend to have larger total voting power and ownership in non venture-backed firms. On the other hand, outside directors have, on aggregate, larger voting power, but slightly lower personal ownership in venture-backed firms compared to non venture-backed firms. VC directors have a mean total voting power of 22% after the offering. There is no substantial difference between venture-backed and non venture-backed firms regarding the boards' total voting power after the offer, but we find a substantial difference in the ownership figures (means of 19.02% and 39.23% in venture-backed and non venture-backed firms, respectively). Differences in directors' personal ownership and voting power between venture-backed and non venture-backed firms are studied in detail in Section 6.2.

[5] In cases were the prospectus presents the proportion the director owns in the investing company, this proportion is applied to his ownership in the IPO firm.
[6] Univariate tests on directors' ownership and voting power, however, use averaged figures.

6. EMPIRICAL RESULTS

6.1 Firm Performance

In this section, we test the hypotheses related to firm performance presented in Section 3. We examine the relationships between venture capitalists' involvement and operating performance, as well as with firm growth. To a lesser extent, at the relationships between corporate investors' involvement and firm performance are also studied. The hypotheses are the following.

Hypothesis 1.1: Venture-backed firms show better operating performance results than non venture-backed firms.

Hypothesis 1.2: Venture-backed firms show higher growth than non venture-backed firms, as proxied by sales growth.

In order to test the hypotheses, univariate tests using various variables proxying for firms' operating performance and growth are first performed. Multiple OLS regressions examining the effect of VCs' and corporate investors' involvement are also executed. Firms' characteristics likely to influence the performance can then be accounted for.

Operating performance is proxied by four variables: operating income over sales (operating income before interest and depreciation/sales) (OIS), operating income over assets (operating income before interest and depreciation/total assets) (OIA), profit margin (net income including extraordinary items/sales) (PM), and return on assets (net income including extraordinary items/total assets) (ROA). Firm growth is proxied using growth of sales. The measures are computed at the end of the fiscal year where the issue was completed (called year 0) and at the end of each of the four preceding years.

Averages of each measure over different periods of time are also computed: two years (years 0 and –1), three years (years 0 to –2), four years (years 0 to –3), and five years (years 0 to –4). In addition, the growth of each measure from one year to the next is calculated. For instance, growth of OIS in year –2 is the growth of operating income over sales from the end of the fiscal year –3 to the end of the fiscal year –2. Finally, average growth rates of each measure over different periods of time are computed: two years (growth in years 0 and –1), three years (growth in years 0 to –2), and four years (growth in years 0 to –3). To limit the impact of outliers, extreme values are dropped. Accordingly, ratios based on sales (OIS and PM) are bounded to –500% and +500% and ratios based on total assets (OIA and ROA) are bounded to –200% and +200%. Using such cut-off values should not significantly affect the sample or the results as only a very small portion of the sample is dropped. In fact, it allows a more accurate study of the data. All growth rates (growth of OIS, OIA, PM, and ROA) are contained in a –25 and +25 interval, which represents limits of +/- 2500%. Sales growth is restricted to +/- 5000%. The cut-off values are applied when performing both univariate tests and OLS regressions. However, dropping an observation when analyzing one measure does not systematically result in excluding it in the other tests.

6.1.1 Operating Performance

This section presents results of tests related to Hypothesis 1.1. The univariate tests are first analyzed. Results of the OLS regressions are presented later in the section. Univariate tests are performed using both means and medians. Indeed, the results differ from one another. The differences between tests using means and medians are more

important when examining ratios based on sales (OIS and PM) than ratios based on assets (OIA and ROA).

Tables 2.1 to 2.3 look at differences in means, medians, and medians using high-tech/ low-tech grouping. The four operating performance measures are examined on a yearly basis. We see that all mean and median measures are largely negative in venture-backed firms throughout the period. Non venture-backed firms also show generally negative mean results. However, the results are not as negative as in venture-backed firms and are actually positive when looking at medians. In fact, the differences in means and medians are largely negative and significant at the 1% level for the four measures consistently for each year. High-tech firms show larger differences in medians than low-tech firms. Firms from low-tech industries still show negative and significant differences in medians, although these are smaller.

Examining OIS, we see that venture-backed firms exhibit a decline in performance as they approach the IPO. At the same time, non venture-backed firms improve their OIS. In fact, the differences in means and medians are the largest in year –1 and year 0 respectively. Overall, the differences between venture-backed and non venture-backed firms grow larger from year –4 to year 0. Differences in means range from –21.58% (year –4) to –46.20% (year –1) and differences in medians range from –4.36% (year –3) to –9.61% (year 0). Differences in median OIS between venture-backed and non venture-backed firms are larger in high-tech industries. Indeed, they range from –5.35% (year –3) to –28.37% (year –1) in the high-tech group and from –2.49% (year –4) to –6.04% (year

–1) in the low-tech group. Results are somewhat different for the other ratio using operating income, OIA. Indeed, venture-backed firms seem to increase their OIA as they come closer to the IPO. As a result, differences in means become smaller from year –3 to year 0 as they range from –17.58% (year 0) to –36.08% (year –3). Differences in medians remain relatively stable, except for a drop in the IPO year, and range from –12.39 (year 0) to –20.64% (year –1). Differences in medians are larger for high-tech firms, as was the case for OIS.

Looking at ROA, we see that venture-backed firms show both mean and median negative returns for all the years. Nevertheless, there is an improvement in the IPO year. Non venture-backed firms show negative mean results in the four years preceding the IPO, but a positive ratio in the IPO year. In contrast, median results are all positive. The differences between venture-backed and non venture-backed firms are all negative and significant at the 1% level. Differences range from –12.93% (year 0) to –31.67% (year –3) based on means and from –7.08% (year 0) to –17.36% (year –4) based on medians. Panel D in Table 2.3 shows larger differences in medians for high-tech firms. In fact, results range from –10.29 (year 0) to –33.12% (year –1) in the high-tech group, while they range from –4.56% (year –4) to –8.30% (year –1) in the low-tech group. Results for profit margin are generally similar to ROA. Differences in means range from -24.86% (year –4) to –41.14% (year –1) and differences in medians range from –5.49% (year –4) to –7.67% (year –1).

Overall, venture-backed firms show significantly lower operating performance on a yearly basis compared to non venture-backed firms. Furthermore, differences between venture-backed and non venture-backed firms are more pronounced in the high-tech group, even though the differences are still negative and significant in the low-tech group.

Tables 3.1 and 3.2 present each of the operating performance measures averaged over two to five years. We see that all mean averages are negative for venture-backed firms. The median averages are also generally negative, although averages over four and five years are sometimes positive. On the contrary, non venture-backed firms show positive mean averages for all measures except profit margin. Median averages are all positive, including profit margin. Differences in means and medians between venture-backed and non venture-backed firms are all largely negative and significant at the 1% level.

We see that mean and median averages are always negative for venture-backed firms when looking at OIS. Due to the decline in the IPO year and the preceding year, as observed in Tables 2.1 and 2.2, averages over two and three years are a lot lower than averages over four and five years. On the other hand, mean and median OIS averages are positive in non venture-backed firms. Differences in means and medians are all negative and significant at the 1% level. Differences in means are larger over two and three years than over four and five years. Results for averaged OIA are similar to results for averaged OIS. In Table 3.2, we can clearly observe how venture-backed firms decline in operating performance in years surrounding the IPO, while non venture-backed firms show

relatively stable averages. This also shows up in differences in medians, where the trends are similar to OIS. Difference in medians is larger and positive in the short run (two years), at -17.40%, compared to the longer run average (five years), at –7.41%.

Likewise, venture-backed firms present negative averaged ROA in every period, while non venture-backed firms present positive results. In Table 3.2, we see that averaged ROA is relatively stable in non venture-backed firms, while it is declining in venture-backed firms. Differences in mean and median averaged ROA are all significantly negative (at the 1% level) and are similar to OIS and OIA. Results for averaged PM differ somewhat in magnitude from averaged ROA results. The trends, however, are similar. Differences between mean and median results are larger here. Once again, the decline in operating performance in venture-backed firms as they come closer to the IPO year is reflected in the differences in means and medians.

In general, there are significantly negative differences between venture-backed and non venture-backed firms regarding the averaged operating performance measures. Differences are generally larger in two- and three- year averages. This is due to the declining performance of venture-backed firms in the years preceding the IPO.

Tables 4.1, 4.2, and 4.3 examine growth rates of the four operating performance measures, from one year to the next. In general, results differ depending on whether we use mean or median growth rates. In Table 4.1, we see that venture-backed firms present large variations over the years and their mean growth rates are all negative in year –1.

Results are particularly large for ratios using net income (PM and ROA). Results are generally negative in year –3 (except for OIA) and positive in year –2 (except for OIA) and in the IPO year. In contrast, venture-backed firms' median growth rates are all positive and the largest growth is observed in the IPO year. Non venture-backed firms generally show positive mean and median growth rates. In contrast with venture-backed firms, non venture-backed firms experience the largest growth in the year preceding the IPO rather than in the IPO year, especially when looking at mean growth rates. Differences in means and medians vary from one year to another and are sensitive to whether the tests use mean or median growth rates. Table 4.1 shows very large and negative differences in mean growth rates for all four measures in year –1, significant at the 1% or 5% level, while results are mixed and insignificant in the other years. In Table 4.2, we find positive differences in median growth rates of all four measures, with significant results in years –2 and 0. Results are, in general, insignificant when the sample is divided based on the high-tech/low-tech dummy.

Venture-backed firms show mean OIS growth rates positive in years –2 and 0 and negative in years –3 and –1, while median results are positive for every year. Non venture-backed firms show generally positive mean and median OIS growth rates. We see in Table 4.2 that growth rates increase for both venture-backed and non venture-backed firms as they approach their IPO. Results vary between differences in means and medians. Differences in means range from –83.64% (year –1) to 13.80% (year –2) while differences in medians range from 3.29% (year -3) to 22.37% (year –2). Venture-backed firms have significantly lower OIS growth than non venture-backed firms in year –1. In

contrast, differences in medians are strictly positive, although generally insignificant. In Table 4.3, differences in medians range from 5.64% (year –3) to 41.24% (year –2) in the high-tech group and from 1.79% (year –3) to 14.01% (year –2) in the low-tech group, but none of them is significant. Nevertheless, differences in medians are consistently larger in the high-tech group. Results are quite similar when examining OIA growth. We clearly see an increasing trend in venture-backed firms when looking at this measure. Differences in means range from –61.10% (year –1) to 14.16% (year 0), with only the value for year –1 being significant at the 5% level. Differences in medians are all positive, as for OIS growth, and range from 1.79% (year –1) to 41.06% (year 0). Only two of them are significant, however. Differences in medians are generally positive in both high-tech and low-tech groups, but are larger in the high-tech one, as for OIS.

Examining ROA growth, we find that venture-backed firms show mixed mean results, but strictly positive median results. The mean and median growth rates are strictly positive in non venture-backed firms. Differences in means range from 0.61% (year –2) to –69.11% (year –1), but only the one in year –1 is significant (at the 1% level). Differences in medians range from –8.62% (year –3) to 44.10% (year 0). This latter difference is significant at the 1% level. Dividing the sample into high-tech and low-tech groups, only two results are significant and there is no clear pattern between the two groups. Results for PM growth are very much similar to ROA growth results. Figures change in magnitude but follow similar trends.

Overall, Tables 4.1 to 4.3 show that venture-backed firms experience their largest growth in operating performance in the IPO year. On the contrary, non venture-backed firms experience their largest growth in operating performance in the year preceding the IPO. Differences between venture-backed and non venture-backed firms' mean growth rates are generally negative and significant for all four measures in year –1. Differences in median growth rates are generally positive and significant in the IPO year. Non venture-backed firms wait longer before completing their IPO.

Tables 5.1 and 5.2 look at average growth rates of the four operating performance measures over four different time periods. Venture-backed firms generally show positive results. Results for the IPO year are larger than the two-year period. Average growth rates are also generally positive for non venture-backed firms. However, the averages here are the largest in the two-year period. This is expected since Tables 4.1 and 4.2 show that non venture-backed firms have their highest operating performance growth in year –1. Differences in means are all negative and insignificant, except for one. On the other hand, differences in medians are all positive, excluding one observation. Only the difference in medians in the IPO year is significant, where it is large and positive.

Venture-backed firms experience their largest OIS average growth in year 0. For non venture-backed firms, it is in the two-year period. Differences in means are all negative but insignificant and range from -4.46% (year 0) to –41.04% (two years). Differences in medians are generally positive but insignificant and range from –4.41% (two years) to 8.32% (year 0). Results are similar when examining the OIA average growth rates.

ROA mean and median average growth rates are consistently positive for both venture-backed and non venture-backed firms. Venture-backed firms experience their largest growth in the IPO year while it is the two-year average for non venture-backed firms. Differences in means are negative but insignificant and range from –2.95% (year 0) to –27.82% (two years). Differences in medians are strictly positive and range from 2.94% (four years) to 44.10% (year 0). None of them is significant except in year 0, as presented in Table 4.2. Results are similar for PM average growth. We can note, however, the significant (at the 5% level) –63.78% difference in mean PM two-year average growth.

In brief, results in Tables 5.1 and 5.2 are consistent with those reported in Tables 4.1 and 4.2. Venture-backed firms experience their largest operating performance growth during the year of their IPO. In contrast, non venture-backed firms present their largest growth in operating performance during the year preceding the IPO.

We can draw general conclusions regarding differences in operating performance between venture-backed and non venture-backed IPO firms based on the univariate tests. We find that venture-backed firms show significantly lower operating performance results than non venture-backed firms for every year of the period. This is robust across the different measures of performance examined. Similarly, Tables 3.1 and 3.2 show averages of operating performance measures over different periods of time to be significantly lower in venture-backed firms. Differences between venture-backed and non venture-backed firms are larger in the high-tech industries than in the low-tech industries. However, venture-backed firms present a large increase in operating performance in the

IPO year. On the other hand, they show significantly lower growth in operating performance in year –1 compared to non venture-backed firms.

We can now look at the regression results studying the relationships between IPO firms' operating performance and VC's and corporate investors' involvement. As in the univariate tests, four operating performance measures are examined: operating income over sales (OIS), operating income over assets (OIA), return on assets (ROA), and profit margin (PM). In general, the coefficients are smaller in regressions using measures based on assets (OIA and ROA) compared to measures based on sales (OIS and PM). For each measure, the IPO year, three-year average, five-year average, growth in the IPO year, and four-year average growth are investigated. Venture capitalists' involvement is measured using two variables: VCs' ownership (after the IPO) and the number of VCs involved. Corporate investors' involvement is measured in a similar way, using corporate investors' ownership (after the IPO) and the number of corporate investors involved. These variables are computed as presented in Section 5. Firms being subsidiaries are also accounted for. In order to do so, a dummy variable that takes the value of one if the firm has a parent company and zero otherwise is included in the regressions. Subsidiaries are identified based on information gathered from the IPO prospectus. Finally, three control variables are used: high-tech dummy, firm size, and debt. The high-tech dummy takes the value of one if the firm is from a high-tech industry and zero otherwise. The classification between high-tech and low-tech industries is presented in Section 5. Firm size is the log value of market capitalization immediately after the IPO, and market capitalization is the product of the offer price and the total common stock outstanding after the issue. Debt

refers to the leverage ratio and is measured as long-term debt divided by total assets, both measured at the end of the fiscal year of the IPO.

Table 6 presents the results for the operating performance measures at the end of the IPO year. We find that VCs' ownership is negatively related with the four measures. The coefficients are large and significant in Panels A and C (OIS and PM). They are a lot smaller in Panels B and D (OIA and ROA) and are significant only when the regressions do not include the number of VCs involved in the IPO firms. Similarly, the number of VCs involved is negatively related to the four measures. In the OIS and PM Panels, the coefficients are significant only in two regressions, when VCs' ownership is excluded. On the other hand, the coefficients are significant in Panels B and D (OIA and ROA), except in the regression including all eight independent variables. Results are consistent with the univariate tests, but inconsistent with Hypothesis 1.1.

The corporate investors' ownership variable is always negative in Table 6. However, the coefficients are significant only when the number of corporate investors involved is not included in the regressions. Corporate investors' ownership presents a slightly larger negative coefficient than VCs' ownership. This trend is consistent across all the regressions. Likewise, the coefficient on the number of corporate investors involved is consistently negative in the four panels. In contrast with corporate investors' ownership, the coefficients are always significant, whether corporate investors' ownership is included in the regressions or not. Moreover, the coefficients for the number of corporate investors involved are larger than the coefficients for the number of VCs involved. Thus,

from Table 6, it seems that corporate investors' involvement has a stronger negative relationship with operating performance than VCs' involvement.

The coefficient of the subsidiary dummy is negative but insignificant in all panels of Table 6. The high-tech dummy also takes a negative sign in every regression. It is highly significant in Panels A, B, and C (OIS, OIA, and PM), but marginally or not significant in Panel D (ROA). Firm size is positively related to the four measures. The coefficient is significant at the 1% or 5% level for OIS, only marginally or not significant for PM and ROA, and never significant for OIA. Finally, the relationship between debt and operating performance in the IPO year is mixed and insignificant.

In general, the regressions in Table 6 present relatively large adjusted R^2s. In the four panels, adding the control variables improves the results. In Panels A and C (OIS and PM), regressions looking strictly at VCs' involvement present slightly better results when they include VCs' ownership and exclude the number of VCs involved. In the full model, however, including all eight variables leads to better results. In contrast, regressions in Panels B and D (OIA and ROA) present slightly better results when the number of VCs and corporate investors involved is included while their ownership is left out. The adjusted R^2s are larger for the operating income measures (OIS and OIA) than for the net income measures (PM and ROA).

Table 7 examines the relationships between VCs' and corporate investors' involvement and the operating performance measures averaged over three years. VCs' ownership is

negatively related to operating performance when significant and the coefficients are relatively large in the four panels. In Panel A (OIS), VCs' ownership is significant only in two regressions when the number of VCs involved is not included. The coefficients are smaller for OIS averaged over three years than for OIS in the IPO year (Table 6). In Panels B and C (OIA and PM), VC's ownership is are also significant strictly when the number of VCs involved is not accounted for, but the relationship is stronger than in Table 6. In Panel D (ROA), VCs' ownership is significant in four regressions instead of only two, and the coefficients are larger and more significant compared to Table 6. The coefficients for the number of VCs involved are negative and significant in the four panels. They are generally larger and more significant here than in Table 6. Overall, results in Table 7 are inconsistent with Hypothesis 1.1, as VC's involvement is negatively related to operating performance averaged over three years.

Corporate investors' ownership is negatively related to the four operating performance measures averaged over three years. This finding is consistent with Table 6. However, the coefficients are larger here than in Table 6 for measures based on assets (OIA and ROA) while they are smaller for measures based on sales (OIS and PM). In contrast with Table 6, the negative relationship between corporate investors' ownership and operating performance is not as strong as the one between VCs' ownership and operating performance. The number of corporate investors involved in the IPO firms is also negatively and significantly related to operating performance. The relationship is stronger when looking at three-year averages for OIA and ROA, but it is weaker for OIS and PM. Panels A and C (OIS and PM) show that the number of corporate investors involved has a

stronger negative relationship with operating performance than the number of VCs involved. However, it is the reverse in Panels B and D (OIA and ROA).

The subsidiary dummy presents a negative coefficient in all regressions in Table 7. The results are significant in the OIA and ROA panels (at the 5% or 10% level), but are insignificant in the OIS and PM panels. The high-tech dummy is negative and significant at the 1% level in every regression. Firm size takes a positive and significant (at the 5% or 10% level) coefficient in Panels B and D (OIA and ROA), but is insignificant in the other two panels. Finally, debt is consistently positive but insignificant in this table.

The adjusted R^2s are generally large in the regressions looking at the three-year averages, although they are not as large as in Table 6. In Panels A and C (OIS and PM), regressions are more significant when they include only the number of VCs and corporate investors involved and exclude their ownership, although the difference is very small. The adjusted R^2s in Panels B and D (OIA and ROA) are very similar, whether we include only the number of VCs and corporate investors involved or include also their ownership.

Table 8 explores the relationships between the independent variables and the operating performance measures averaged over five years. The coefficients are generally of the same sign as in Tables 6 and 7, although their magnitude changes. Accordingly, VCs' ownership is negatively related to the four measures. The coefficients are significant only when the number of VCs involved is not accounted for but in such cases, they are significant at the 1% level. VCs' ownership has a stronger negative relationship with

operating performance averaged over five years than averaged over three years. The negative relationship is also stronger here compared to results in the IPO year alone for OIS and PM, but is weaker for OIA and ROA. The number of VCs involved presents generally negative coefficients in the four panels. The coefficients are always significant at the 1% level in Panels B and D (OIA and ROA) and are also significant in Panels A and C (OIS and PM), except when all eight independent variables are included. The negative relationship between VCs' involvement and operating performance, as presented in Table 8, is inconsistent with Hypothesis 1.1.

Corporate investors' ownership shows a negative relationship with five-year average operating performance, consistent with Tables 6 and 7. Similar to previous results, the coefficients are significant only when the number of corporate investors involved is not included in the regressions. The coefficients are then significant at the 1% level. The relationship is similar or slightly stronger in this table compared to Table 7 (three-year averages). It is also stronger here compared to Table 6 (IPO year) for OIA and ROA, while it is somewhat weaker for OIS and PM. When both variables are significant, corporate investors' ownership presents a stronger negative relationship with operating performance averaged over five years than VCs' ownership. The number of corporate investors involved is also negatively related to the four measures and the coefficients are always significant at the 1% level. The coefficients for the number of corporate investors involved are similar or slightly larger here than in Table 7 (three-year averages), while they are generally smaller than in Table 6 (IPO year). The number of corporate investors

involved is more negatively related to operating performance than the number of VCs involved, which is consistent with Table 7.

The subsidiary dummy takes a negative and significant coefficient in all four panels. The significance level ranges from 1% in Panels A and C (OIS and PM) to 5% or 10% in Panels B and D (OIA and ROA). The high-tech dummy shows a negative and highly significant coefficient in every regression. On the other hand, firm size and debt are never significant in this table.

Looking at the explanatory power of the tests, the adjusted R^2s are in general relatively large. The regressions present similar or slightly better results when they include only the number of VCs and corporate investors involved and ignore their ownership. The difference between such regressions and the full model is very small, however. The power of the regressions is generally larger in Table 8 than in Tables 6 and 7.

Table 9 examines the relationships between the independent variables and growth of the four operating performance measures, in the IPO year. Results are not as conclusive as reported for the measures themselves. The power of the regressions is, in general, very low, and most of the coefficients are insignificant. VCs' ownership presents a large and positive coefficient in Panel B (OIA growth). Results in this panel are significant at the 5% or 10% level, but only when the number of VCs involved is not accounted for. VCs' ownership is insignificant related to OIS, PM, and ROA growth. The number of VCs involved takes a positive coefficient in Panel B (OIA growth), but is significant only

when VCs' ownership is not included. The variable is also positive and significant in Panel C (PM growth) in regressions including all the variables. The coefficients are insignificant in the other two panels.

None of the variables measuring corporate investors' involvement are significant in Table 9. Corporate investors' ownership is always negative, but never significant. The sign of the coefficient for the number of corporate investors involved is mixed and insignificant.

Being a subsidiary is not significantly related to growth in operating performance, except for OIA, where the variable takes a positive and significant (at the 5% level) coefficient. The variable is insignificant in the other panels. The high-tech dummy is negative and significant at the 5% or 10% level when examining OIS and ROA growth, but is insignificant for OIA and PM growth. Firm size is negative in the four panels, but is only marginally significant in some regressions of Panel C (PM growth). Debt takes a negative but insignificant coefficient in the four panels.

As mentioned previously, the adjusted R^2s in Table 9 are really low. Including only the number of VCs and corporate investors involved or their ownership, rather than both, usually leads to more interesting results. In fact, the number of VCs and corporate investors involved generally adds more to the explanatory power of the regressions than their ownership. Nevertheless, the improvement in the adjusted R^2s is relatively small and the results remain low.

Table 10 looks at four-year average growth of the operating performance measures and the relationships with the independent variables. The results are somewhat better here than in Table 9. VCs' ownership is positively related to the four dependent variables. The coefficients are large and significant (at the 5% or 10% level) in Panels B and D (OIA and ROA growth), but only in regressions including the number of VCs involved and the control variables. Results are insignificant in Panels A and C (OIS and PM growth). The number of VCs involved is not significantly related to the four-year operating performance average growth, except in Panel B (OIA growth). It is then significant at the 5% level, but only when VCs' ownership is also included in the regressions.

Corporate investors' ownership is in general negatively related to the four-year average growth of the measures. However, the coefficients are large and significant only in Panels A and B (OIS and OIA growth), and only when the number of corporate investors involved is excluded. Results are mixed and insignificant in the other two panels. Similarly, the number of corporate investors is always negative, with results significant at 1% in Panel A (OIS growth), at 5% or 10% in Panel C (PM growth), only marginally significant in Panel B (OIA growth), and insignificant in Panel D (ROA growth).

The control variables are in general insignificant in Table 10. Nevertheless, they do improve the explanatory power of the tests. The subsidiary dummy presents mixed but insignificant coefficients. On the other hand, the high-tech dummy always takes a negative sign. Results are significant at 1% in Panel A (OIS growth), at 5% or 10% in Panels B and D (OIA and ROA growth), and not significant in Panel C (PM growth).

Firm size is never significant, except in Panel B (OIA growth), where it is negative and marginally significant in some regressions. Finally, debt is generally negative but never significant in the four panels.

The adjusted R^2s are a lot better in this table than in Table 9, but are still not very large. Results are in general better when variables measuring the number of VCs and corporate investors involved and their ownership are all included in the regressions. In some cases, particularly in Panels A and C (OIS and PM growth), the adjusted R^2s are slightly larger when only the number of VCs and corporate investors involved are accounted for, although the difference is small.

6.1.2 Firm Growth

The differences between venture-backed and non venture-backed firms in terms of firm growth, as developed in Hypothesis 1.2, are investigated in the present section. Results for the univariate tests are presented in Tables 11.1 to 11.3 and the regression results are presented in Tables 12 and 13. As mentioned previously, firm growth is measured using sales growth, on a yearly basis as well as averaged over four periods of time.

Tables 11.1 and 11.2 present tests based on mean and median results, respectively, while Table 11.3 presents differences in medians within the high-tech and low-tech groups. Both venture-backed and non venture-backed firms experience high growth in the IPO year and in the three preceding years. Mean results are larger than median ones, but median results are more stable through time and are less influenced by extreme

observations. Table 11.2 shows that both venture-backed and non venture-backed firms consistently increase their growth rates through the years. Indeed, median sales growth in venture-backed (non venture-backed) firms goes from 33.45% (26.01%) in year –3 to 81.35% (40.16%) in the IPO year. In both Tables 11.1 and 11.2, venture-backed firms show significantly higher growth than non venture-backed firms. Differences in means range from 53.40% (year –3) to 147.11% (year –2), significant at the 1% or 5% level in every year. The largest differences in mean growth are found in years –2 and –1. Differences in medians range from an insignificant 7.44% (year –3) to 47.25% (year –1). The difference in medians is the largest in year –1, but results are still large and significant in year –2 and in the IPO year. In both high-tech and low-tech groups, venture-backed firms show significantly higher sales growth. Results are significant at the 1% level, except in year –3. Differences in medians are generally larger in high-tech industries, where they range from 37.89% (year 0) to 45.66% (year –1). Results are also large and significant in the low-tech group as they range from 10.43% (year –2) to 35.15% (year –1).

Tables 11.1 and 11.2 also present results for growth of sales averaged over different periods of time. Results are consistent with results on a yearly basis. Difference in means and medians are still large and significant at the 1% or 5% level. Overall, Tables 11.1 to 11.3 provide support for Hypothesis 1.2.

Tables 12 and 13 present results for OLS regressions looking at firm growth. Table 12 examines the relationships between the independent variables and sales growth in the IPO

year, while Table 13 focus on the four-year average growth. The independent variables are the same as in Section 6.1.1. In Table 12, we find none of the variables measuring VCs' or corporate investors' involvement to be significantly related to firm growth in the IPO year. Both the number of VCs involved and their ownership take positive coefficients. However, the coefficients are never significant for VCs' ownership, while the number of VCs involved is marginally significant in one regression, where VCs' ownership is not included. The findings do not provide strong support for Hypothesis 1.2, but the sign of the coefficients are as expected.

Similarly, the number of corporate investors involved and their ownership are positively related to sales growth, but none of the coefficients are significant. The subsidiaries in the sample seem to experience lower growth, although the coefficient is insignificant. The high-tech dummy and the firm size variable are both positively but insignificantly related to firm growth in the IPO year. On the other hand, debt takes a negative coefficient, significant at the 5% or 10% level. All regressions in Table 12 present low adjusted R^2s, as expected from the insignificant coefficients. The model is somewhat better when we include either the number of VCs and corporate investors involved or their ownership only. In general, variables measuring the number of VCs or corporate investors involved bring more to the regressions than their ownership.

Results in Table 13 are more interesting than in Table 12, although most of the variables remain insignificant and the adjusted R^2s are still relatively low. The coefficient for VCs' ownership takes a negative sign when the number of VCs involved is included in the

regressions, but the sign flips to positive when the latter variable is excluded. The coefficient is marginally significant in some regressions, including when the number of VCs involved is excluded. Conversely, the number of VCs involved is always positively related to sales growth, significant at the 1% level. This result is consistent with Hypothesis 1.2.

The number of corporate investors involved and their ownership are both positively related to sales growth, but the relationships are insignificant. The subsidiary dummy presents mixed but insignificant results. On the other hand, the high-tech dummy takes a positive and significant coefficient, at the 5% or 10% level. Finally, firm size presents a positive coefficient, while debt presents a negative one, both of them insignificant. The adjusted R^2s are larger when looking at the four-year average growth rather than growth in the IPO year, but the results are still relatively weak. The regressions have more explanatory power when we include the number of VCs and corporate investors involved and their ownership simultaneously.

In conclusion, we find venture-backed firms to have lower operating performance than non venture-backed firms in the IPO year and in the four years preceding the offering. This is true whether we look at univariate tests or OLS regressions. Indeed, the coefficients of the variables measuring VCs' involvement are all negative in the regressions, as are the differences in means and medians. The largest differences between the two groups appear to be in the IPO year and the year preceding it. Results are consistent whether we examine yearly or averaged operating performance. Yet, the

coefficients are more negative in regressions examining five-year averages than the three-year averages or IPO year results. Throughout the tests, there appears to be more differences between venture-backed and non venture-backed firms in high-tech than low-tech industries. Interestingly, results show variables related to corporate investors' involvement to be in general more strongly and negatively related to operating performance than those related to VCs' involvement.

Venture-backed firms show significantly lower growth in operating performance than non venture-backed firms in the year preceding the issue (Table 4.1). On the other hand, they experience significantly higher operating performance growth in the IPO year (Table 4.2). The coefficients in the regressions are not always significant, either for VCs' or corporate investors' involvement. Nevertheless, VCs' involvement appears to be positively related to operating performance growth, even if the relationship is not always statistically significant. In contrast, the relationship seems to be negative for corporate investors' involvement, although insignificant.

Finally, venture-backed firms experience higher sales growth than non venture-backed firms in the IPO year as well as in the three preceding years. The largest difference is observed in the year preceding the issue. OLS regressions show generally positive coefficients for variables measuring VCs' involvement, but the results are not always significant. Once again, differences between venture-backed and non venture-backed firms appear to be more important for high-tech firms.

6.2 Corporate Governance

This section explores the relationships between VCs' and corporate investors' involvement and the use of some corporate control mechanisms. The structure of the board of directors is first examined: its size (Table 14), the inclusion of outside and truly independent directors (Tables 15 and 16, respectively), and the separation of the chief executive officer and chair of the board positions (Table 17). The percentage of shares and voting power held by various categories of directors is also studied: the entire board (Table 18), management directors (Table 19), outside directors (Table 20), outside directors not representing investors (Table 21), and truly independent directors (Table 22). Directors are classified as described in Section 5. Outside directors not representing investors is a category combining the related and the independent directors. OLS regressions are run to examine board structure, except for CEO/COB duality, where univariate tests are performed. The variables measuring VCs' and corporate investors' involvement are the same as in Section 6.1: VCs' ownership, number of VCs involved, corporate investors' ownership, and number of corporate investors involved. The control variables included in the previous tests are used here as well: the subsidiary dummy, firm size, the high-tech dummy, and leverage. In addition, Tables 15 and 16 include an independent variable controlling for board size because the regressions examine the proportion of the board filled by outside and independent directors.

The market for corporate control, as an external governance mechanism, may be a substitute for some internal governance mechanisms. In order to construct a proxy for the market for corporate control, the number of takeovers completed from January 1995 to

December 1997 was first collected. The acquiring firms were not required to be public companies, but targets had to be listed on either NYSE, AMEX, or NASDAQ. Leveraged buyouts (LBOs), repurchases of shares, minority stake acquisition, and acquisition of remaining interest were excluded. The number of publicly listed firms on NYSE, AMEX, and NASDAQ during the same period was also collected. The market for corporate control variable is the number of takeovers completed in the year preceding the IPO divided by the number of publicly listed firms in the same period. Two-digits SIC codes were used to match the variable with observations in the sample. The variable is excluded from the regressions because it was never significant and did not significantly improve the tests' power.

Univariate tests are performed to study differences in directors' ownership and voting power between venture-backed and non venture-backed firms. Section 5 provides details on how personal stock ownership and voting power figures were established. Both variables are averaged based on the number of directors in each category for the purpose of the tests. Subsidiaries[7] are excluded from these tests. The parent company generally owns most of equity in such firms. Moreover, executive officers and directors rarely have ownership in the subsidiary, but often have some interest in the parent company. Unfortunately, such ownership could not be accounted for in this study.

Table 14 examines the board size. The following hypothesis is tested.

Hypothesis 2.1: Venture-backed firms have a larger board of directors than non venture-backed firms.

[7] The sample includes a total of 24 subsidiaries.

As described in Section 5, board size refers to directors in position at the time of the IPO or to be elected concurrently. In general, VCs' ownership has a negative relationship with board size, significant at the 1% level. However, the coefficient on VCs' ownership changes sign and loses significance when the regressions exclude the number of VCs involved. In contrast, the number of VCs involved takes a positive and significant coefficient, at the 1% or 5% level. The coefficient drops in magnitude when VCs' ownership is not included in the regressions, but remains significant. Consequently, we find support for Hypothesis 2.1 when measuring VCs' involvement by the number of VCs involved, but the results are inconsistent when VCs' ownership is the proxy for VCs' involvement.

Corporate investors' ownership is always positively related to board size. The coefficient is insignificant when the number of corporate investors involved is included in the regressions, but becomes significant at the 1% or 5% level otherwise. The number of corporate investors involved is positive and significant at the 1% or 5% level in every regression.

The subsidiary dummy takes a negative but insignificant coefficient in Table 14. Firm size is positively and significantly related to board size, at the 1% or 5% level. Thus, larger firms have larger boards, which is consistent with previous research on corporate governance. The high-tech dummy and debt are both insignificant.

Regressions in Table 14 show good adjusted R^2s, especially for regressions dealing with corporate governance variables. Including all the independent variables in the regressions leads to more interesting results. Although the control variables are not always significant, they still improve the results. The variables measuring the number of VCs and corporate investors involved appear to be more stable than those measuring their ownership. However, board size is differently related to VCs' ownership and the number of VCs involved. The more the firms are financed through venture capital, the smaller their board of directors tends to be. On the other hand, firms where many VCs are involved tend to have larger boards. As a result, the relationship between VCs' involvement and board size is not straightforward and depends on the firms' financial structure. In contrast, the relationship between corporate investors' involvement and board size is always positive, although the results are statistically significant only for the number of corporate investors involved.

Table 15 examines how the proportion of outside directors on the board is related to VCs' and corporate investors' involvement. The following hypothesis is explored.

Hypothesis 2.2: Venture-backed firms have a larger proportion of their board filled by outside directors than non venture-backed firms.

As presented in Section 5, outside directors refer to all directors on the board, excluding directors classified as management directors. The coefficient for VCs' ownership is positive and significant at the 1% level in every regression. Similarly, the number of VCs involved is positively related to the dependent variable. The coefficient, however, is significant (at the 1% or 5% level) only when either VCs' ownership or the control

variables are excluded from the regressions. Overall, the results support Hypothesis 2.2 as venture-backed firms tend to have a larger proportion of their board filled by outside directors. We could expect this positive relationship since outside directors include directors who represent VCs investing in the firm. We find more of them when VCs have a large interest in the firm and/or when more VCs invest in the firm.

Likewise, the variables measuring corporate investors' involvement are positively related to the proportion of outside directors on the board. Corporate investors' ownership consistently takes a positive sign, although the coefficient is significant only when the number of corporate investors involved is excluded from the regressions. The coefficient for the number of corporate investors involved is also positive and significant at the 1% or 5% level. The rationale behind this positive relationship is similar to the one between VCs' involvement and the proportion of outside directors.

The subsidiary dummy takes a negative and highly significant coefficient in every regression. This was expected since parent companies are likely to fill the subsidiaries' board with their officers for monitoring purposes, and directors coming from parent companies are classified as management directors. Subsidiaries are usually divisions created by and integrated in the parent companies, up to the IPO year or so. Thus, directors representing the parent company are in most cases founders of the subsidiary and were managing it until it became a stand-alone concern. Firm size is negatively related to the proportion of outside directors on the board, significant at the 1% level. Larger firms may rely more heavily on other control mechanisms, such as debt, than

smaller firms. Board size takes a positive coefficient and is significant at the 1% level. We can expect larger boards to have more of their directors coming from outside the firm. The high-tech dummy is also positive and significant at the 5% or 10% level, except in the full model, where it is insignificant. Firms in high-tech industries might need more outside expertise than low-tech firms. Finally, debt is negative and, in some cases, significant at the 5% or 10% level.

Table 15 presents very large adjusted R^2s. This is true whether we include the control variables or not. Thus, the variables measuring VCs', corporate investors', and parents' involvement really explain the proportion of the board coming from outside the firm.

Table 16 presents the results for the proportion of the board filled by independent directors, based on the following hypothesis.

Hypothesis 2.3: Venture-backed firms have a larger proportion of their board filled by independent directors than non venture-backed firms.

Directors are classified as independent when they have no relationship with the firm other than sitting on its board. VCs' ownership is significant only when the number of VCs involved is not accounted for. In such cases, the coefficient is negative and significant at the 1% level. Similarly, the number of VCs involved constantly takes a negative coefficient. Results are highly significant when VCs' ownership is excluded, but only marginally or insignificant otherwise. The findings in Table 16 are inconsistent with Hypothesis 2.3. As mentioned in Section 3, expectations regarding this hypothesis were

mixed. VCs may determine that they do not need as many independent directors on the board, as they themselves can monitor the firm's performance.

In general, corporate investors' ownership is negatively and significantly (at the 1% or 5% level) related to the proportion of independent directors on the board. The number of corporate investors involved also presents a negative coefficient, significant in every regression except in the full model.

The subsidiary dummy is negative and significant at the 1% or 5% level. The rationale behind this finding is similar to that reported for results in Table 15. Firm size is negatively and significantly (at the 1% level) related to the proportion of independent directors on the board, as was the case for the proportion of outside directors. As mentioned previously, this could be driven by the use of substitute control mechanisms. The coefficient on debt is negative and generally significant in both Tables 15 and 16. This could support the hypothesis of debt substituting for outside and independent directors' representation on the board. As in Table 15, board size is negatively and significantly related to the dependent variable. Finally, the high-tech dummy takes a positive coefficient, significant at the 5% or 10% level in some regressions and insignificant in some others.

Results in Table 16 are not as strong as in Table 15. The control variables improve the results substantially, as was the case in Tables 14 and 15. Variables measuring VCs' and corporate investors' involvement are not always significant. Nevertheless, we find

interesting relationships between the two types of investors and the proportion of the board filled by independent directors.

Table 17 examines the separation of the chief executive officer and chair of the board positions vis-à-vis VCs' and corporate investors' involvement. Univariate tests explore the following hypothesis.

Hypothesis 2.4: Venture-backed firms more commonly separate the chief executive officer and chair of the board positions than non venture-backed firms.

Panel A shows that a smaller proportion of venture-backed firms combine the two positions compare to non venture-backed firms. We cannot rely on the difference in medians in this table. Nevertheless, evidence supports Hypothesis 2.4. In contrast, more firms with corporate investors involved combine the two positions compared to firms without, but the difference is small and insignificant.

Tables 18.1 and 18.2 look at board members' personal ownership and voting power. More specifically, the following hypothesis is tested.

Hypothesis 2.5.1: Board members as a group show larger average ownership in venture-backed firms than in non venture-backed ones.

We find large negative differences in mean and median board's ownership between venture-backed and non venture-backed firms (difference in means of -4.99% and difference in medians of –5.02%). Results are also negative but smaller for mean and median voting power (-2.68% and –2.31%). These results are all significant at the 1% level. The largest differences in mean and median board members' ownership are found

in the first size quartile (–6.26% and –7.18%) and the smallest ones are in the third quartile (-3.74% and –3.20%). Results for ownership within size quartiles are significant at the 1% level. The largest differences in board members' voting power are observed in the second size quartile (-3.19% and –2.90%) and the smallest ones are in the third quartile (-2.29% and –2.38%). Differences in voting power within size quartiles are significant at the 1% or 5% level. Finally, the differences between venture-backed and non venture-backed firms are larger in Table 18.1 (personal ownership) than in Table 18.2 (voting power). Results presented in Tables 18.1 and 18.2 are inconsistent with Hypothesis 2.5.1, as board members have, on average, less personal ownership and voting power in venture-backed firms.

There are also significant differences in board members' ownership and voting power between firms with corporate investors versus those without (Panel B). As in Panel A, differences in mean and median ownership are negative and significant at the 1% level (-4.24% and –4.30%). Results, however, are smaller here than in the case of VCs' involvement. Differences in mean and median voting power are negative and significant at the 1% level (-2.94% and –2.57%), and are slightly larger here than in Panel A. Differences in board members' ownership follow trends similar to Panel A when dividing the sample into size quartiles, with results generally significant at the 1% level. On the other hand, there is no clear pattern based on size quartiles for board members' voting power, although results are significant at the 1% or 5% level. There is more difference between firms with corporate investors involved versus those without when looking at ownership rather than voting power, as was the case for VCs' involvement. Board's

average ownership shows larger differences when looking at VCs' rather than corporate investors' involvement. The situation is reversed for the board's average voting power.

Tables 19.1 and 19.2 examine management directors' ownership and voting power by presenting results for the following hypothesis.

Hypothesis 2.5.2: Management directors show larger average ownership in venture-backed firms than in non venture-backed ones.

Differences between venture-backed and non venture-backed firms are largely negative and significant at the 1% level in both tables. Differences in mean and median management directors' ownership are –6.57% and –6.62%, respectively. Differences in mean and median management directors' voting power are –9.04% and –8.68%, respectively. The largest differences in mean and median management directors' ownership are found in the first size quartile (-9.23% and –10.20%) while the smallest differences are found in the third or fourth quartile, based on mean (-3.25%) or median (-4.63%) results. The largest differences in voting power are found in the first or second quartile, based on median (-11.31%) or mean (-10.31%) results, while the smallest differences are found in the fourth quartile (-7.65% and –5.28%). Within size quartiles results are generally significant at the 1% or 5% level in both tables. Finally, the differences between venture-backed and non venture-backed firms are more striking in Table 19.2 (voting power) than in Table 19.1 (ownership). This contrasts with findings in Tables 18.1 and 18.2. The results in Tables 19.1 and 19.2 contradict Hypothesis 2.5.2, as management directors have lower average ownership in venture-backed firms compared to non venture-backed firms.

In Panel B, management directors' personal ownership and voting power tend to be lower when there are corporate investors involved in the firm. Differences in mean and median ownership are large, negative, and significant at the 1% level (-6.75% and –7.41%). Similarly, differences in mean and median voting power are large and significant at the 1% level (-7.58% and –8.51%). The largest differences in mean and median management directors' ownership are found in the first size quartile (-10.06% and –12.41%), while the smallest differences are found in the fourth quartile (-2.55% and –5.22%). This is consistent with findings in Panel A. There is no clear pattern between size quartiles for voting power. Results within size quartiles are, in general, significant at the 1% or 5% level in both tables. There is generally more difference between firms with corporate investors involved versus those without when examining management directors' voting power rather than their personal ownership, as was the case for VCs' involvement. Overall, differences in management directors' ownership are larger when investigating corporate investors' involvement than VCs' involvement, while it is the contrary for their voting power.

Tables 20.1 and 20.2 study outside directors' personal ownership and voting power, based on the following hypothesis.

Hypothesis 2.5.3: Outside directors show larger average ownership in venture-backed firms than in non venture-backed ones.

Results vary significantly between personal ownership and voting power. This is consistent with expectations since many outside directors represent VCs or corporate investors. These directors have the power to vote the shares held by the investors, but

such shares are not included in their personal ownership. Accordingly, there are only small, and mixed, differences between venture-backed and non venture-backed firms regarding mean and median outside directors' ownership (-0.52% and 0.08%), significant at the 1% and 10% level, respectively. On the other hand, differences in mean and median voting power are large, negative, and significant at the 1% level (5.17% and 6.69%). None of the results for ownership is significant when dividing the sample based on firm size, although they are generally positive. Results within size quartiles are significant at 1% level for voting power, but there is no substantial difference from one quartile to another. Overall, support for Hypothesis 2.5.3 is mixed.

Similarly, there are positive differences in outside directors' ownership and voting power between firms with corporate investors involved versus those without. We find a positive but insignificant difference in mean ownership and a positive and significant at 1% difference in medians (0.13%). Results here are somewhat larger than when looking at VCs' involvement, but are otherwise small. In contrast, there is less difference in outside directors' voting power here than when examining VCs' involvement, with differences in means and medians of 2.35% and 3.52%, both significant at the 1% level. As in Panel A, differences between firms with corporate investors involved versus those without are larger when looking at outside directors' voting power rather than their personal ownership. Only one difference in mean ownership is significant when we examine size quartiles, but the differences in medians are generally significant. The largest difference is in the second quartile (0.53% and 0.21%). In contrast, differences in outside directors' voting power within size quartiles are generally significant. The largest differences are

found in the first or second size quartiles, based on mean (3.27%) or median (5.17%) results and the smallest one is in the third quartile (2.08%).

Tables 21.1 and 21.2 present the results for the following hypothesis.

Hypothesis 2.5.4: Outside directors not representing investors show larger average ownership in venture-backed firms than in non venture-backed ones.

As described previously, outside directors not representing investors is a category grouping the related and the independent directors. Results for ownership and voting power are very similar. This category of directors have higher average ownership and voting power in venture-backed firms compared to non venture-backed firms, consistent with Hypothesis 2.5.4. Differences in means are positive but insignificant in both tables. Differences in medians are positive and significant at the 1% level for both ownership (0.20%) and voting power (0.24%). There are no substantial patterns between size quartiles, although the differences between venture-backed and non venture-backed firms are more important in larger firms.

Findings are very similar when looking at corporate investors' involvement, although the numbers are a little larger here than in Panel A. Differences in means are positive but insignificant, while differences in median ownership (0.26%) and voting power (0.36%) are significant at the 1% level. Once again, differences are somewhat larger when examining directors' voting power instead of their personal ownership. When results are significant in both panels, differences in ownership and voting power for this category of directors are larger when examining corporate investors' than VCs' involvement.

However, we should not put too much emphasis on this last finding since the comparison relies on a small number of significant observations.

We restrict the study to ownership and voting power of truly independent directors in Tables 22.1 and 22.2. Consequently, we test the following hypothesis.

Hypothesis 2.5.5: Independent directors show larger average ownership in venture-backed firms than in non venture-backed ones.

Independent directors are directors not related to the firm outside of their board membership. Results are consistent with Tables 20.1 to 21.2. Accordingly, independent directors have larger personal ownership and voting power in venture-backed than in non venture-backed firms, which supports Hypothesis 2.5.5. Differences in means are all positive but insignificant and differences in medians, although small, are positive and significant at the 1% level for both ownership (0.09%) and voting power (0.11%). Only median results in the first and fourth size quartiles are statistically significant. In view of that, we conclude that the differences appear to be more important in larger firms.

Differences in independent directors' ownership and voting power are somewhat similar when examining corporate investors' involvement (Panel B). Differences in means are positive but insignificant in both Tables 22.1 and 22.2. Differences in median ownership (0.12%) and voting power (0.13%) are positive and significant at the 1% level. The figures are a little larger here than when looking at VCs' involvement, although the difference is very marginal. When we divide the sample according to firm size, mean results are insignificant and median results are only marginally significant.

Overall, the tests on corporate governance mechanisms show interesting differences between venture-backed and non venture-backed firms. First, the larger is the VCs' ownership in a firm, the smaller the board size tends to be. On the other hand, firms tend to have a larger board as more VC firms are involved in the financing. Similarly, firms with corporate investors involved tend to have a larger board of directors than those without. This is true whether we look at the corporate investors' interest in the firm or at how many of them are involved. Moreover, venture-backed firms have a larger proportion of their board filled by directors coming from outside the firm compared to non venture-backed firms, but independent directors represent a smaller proportion of their board. Results are similar when examining board structure with respect to corporate investors' involvement. Finally, fewer venture-backed firms combine the chief executive officer and chair of the board positions compared to non venture-backed firms.

Board members have, on average, less personal ownership and voting power in venture-backed than in non venture-backed firms. The differences are also negative for management directors' ownership and voting power. Outside directors, however, have more voting power in venture-backed than in non venture-backed firms, but there is no real difference when examining their personal ownership. Finally, we find positive, although not always significant, differences between the two types of firms regarding personal ownership and voting power of outside directors not representing investors and independent directors.

6.3 Underpricing

Underpricing of the IPO firms included in the sample is examined in this section. Univariate tests are first performed to explore the differences in underpricing between venture-backed and non venture-backed firms. Differences between firms with corporate investors involved in their financing and those without are also examined. The univariate tests take firm size and industry affiliation into account. Second, the relationships between IPO underpricing and firms' operating performance and growth are studied using OLS regressions. Finally, relationships between some corporate governance mechanisms and IPO underpricing are investigated. Operating performance, firm growth, and corporate governance are measured by the variables presented previously. Underpricing is computed using the formula in Kooli and Suret (2002):

$$\text{Initial Return}_i = \frac{(P_m - P_e)}{P_e}$$

Where P_m is the closing price on the first trading day and P_e is the IPO offer price. Closing prices were gathered from the Center for Research in Security Prices (CRSP) database. Offer prices were collected from the IPO prospectus, and double-checked with SDC and IPO Maven databases.

Tables 23.1 and 23.2 present results for the univariate tests based on the following hypothesis.

Hypothesis 3.1: Venture-backed firms are less underpriced than non venture-backed firms at the time of their IPO.

The sample is divided according to firm size (Table 23.1) and industry classification (Table 23.2). In the entire sample, we find a positive and significant (at the 1% level)

difference in mean underpricing between venture-backed and non venture-backed firms (5.91%), while the difference in medians is also positive but insignificant. Results are significant in every size quartile, except in the second one. Surprisingly, only in the smallest size quartile are differences between venture-backed and non venture-backed firms negative (-8.95% and -7.97%) and significant at the 1% level. In contrast, results are positive and significant, at the 1% or 5% level, in larger firms. The difference in mean underpricing is particularly large in the fourth size quartile, with a significant 20.68%. In Table 23.2, we find no significant differences between venture-backed and non venture-backed firms in the high-tech group. On the other hand, there are positive and significant (at the 1% or 5% level) differences for firms in the low-tech industries. Overall, the results are inconsistent with Hypothesis 3.1, except when examining the smallest firms.

We find firms with corporate investors involved experience less IPO underpricing than those without, as shown in Panel B of both Tables 23.1 and 23.2. However, only the difference in medians is statistically significant when examining the entire sample. The differences remain negative when we divide the sample according to size, but results are generally insignificant. Similarly, results are negative but generally insignificant for both the high-tech and low-tech groups.

We investigate the relationships between underpricing and firm performance in Tables 24 to 26. As in Section 6.1, operating performance and firm growth are used to measure firm performance. The following hypothesis is tested.

Hypothesis 3.2.1: Underpricing is negatively related to firm performance.

Tables 24.1 to 24.3 explore the relationships between operating performance and underpricing. To do so, two measures are employed: operating income over sales (OIS) and return on assets (ROA). Table 24.1 examines both measures at the end of the IPO year, while Tables 24.2 and 24.3 look at three- and five-year averages. The measures are included in the regressions one at a time. The variables measuring VCs' and corporate investors' involvement are included, as well as the control variables used previously. In the three tables, variables related to OIS take positive but insignificant coefficients. Results for ROA differ in significance from one table to another, but the coefficients are positive in all of them. ROA is positively but insignificantly related to underpricing in the IPO year, while the relationship is positive and significant, at the 5% and 10% level, when looking at the three- and five-year averages. The coefficient is slightly larger in Table 24.3 (five-year average) compared to Table 24.2 (three-year average).

Tables 25.1 and 25.2 examine how underpricing is related to growth in operating performance, in the IPO year and averaged over four years. In both tables, OIS and ROA growth are negatively but insignificantly related to underpricing.

Tests on the relationships between firm growth and underpricing are presented in Table 26. The regressions use either sales growth in the IPO year or averaged over four years. Surprisingly, coefficients always take a negative sign, although never significant.

In general, findings do not provide support for Hypothesis 3.2.1. Results are mostly insignificant, and are of an inconsistent sign when statistically significant.

We study relationships between corporate governance mechanisms and underpricing by testing the following hypothesis. Results are presented in Tables 27 and 28.

Hypothesis 3.2.2: Underpricing is negatively related to the quality of the corporate governance structure.

Table 27 deals with board structure, while Table 28 focus on directors' personal ownership and voting power. In both tables, control variables from previous tests are included. Table 27 includes variables related to VCs' and corporate investors' involvement, but these are excluded from the analysis in Table 28. In Table 27, we find board size to be negatively related to underpricing, although the coefficient is not statistically significant. In addition, the proportion of both outside and truly independent directors is positively related to underpricing. The coefficient for the outside directors variable is significant at the 5% level, but is insignificant for the independent directors variable. These findings are inconsistent with Hypothesis 3.2.2.

In Table 28.1 and 28.2, we see that coefficients for directors' personal ownership and voting power vary in sign, but are, in general, insignificant. Ownership variables take positive coefficients for management and independent directors, and negative coefficients for related directors and directors representing VCs or corporate investors, but none of them is significant. Voting power is negatively and significantly related to underpricing only for directors representing corporate investors, at the 10% level. The coefficients are positive but insignificant for the other four types of directors.

In general, results do not support Hypothesis 3.2.2. The proportion of outside directors on the board is significantly related to underpricing, but the sign of the coefficient is not as expected. Other variables exploring board structure are insignificant, so are variables measuring directors' ownership and voting power.

We also investigate the relationships between underpricing and the other independent variables included in the regressions presented in Tables 24 to 28. These are the variables measuring VCs' and corporate investors' involvement and the control variables. In general, VCs' ownership takes a positive but insignificant coefficient. It is, however, marginally significant when the number of VCs involved is excluded from the regressions. The sign on the coefficient on the number of VCs involved is mixed, but never statistically significant. Again, these findings are inconsistent with Hypothesis 3.1. In contrast, corporate investors' ownership is always negative. The coefficient is significant at the 5% or 10% level only in some regressions, when the number of corporate investors involved is not accounted for. This latter variable is in general negatively related to underpricing, but the relationship is rarely significant. Subsidiaries seem to experience less underpricing, with results sometimes marginally significant, but in most cases insignificant. The high-tech dummy is mixed in sign, but never significant. On the contrary, firm size is always positively and significantly (at the 1% level) related to underpricing. Finally, debt consistently takes a negative coefficient, significant at the 1% level.

In brief, venture-backed firms experience larger IPO underpricing than non venture-backed firms, except firms in the smallest size quartile. Operating performance and firm growth do not, in general, explain underpricing. Nevertheless, we find return on assets averaged over three and five years to be positively and significantly related to underpricing. Looking at board structure, only the proportion of the board filled by outside directors is significantly and positively related to underpricing. This is inconsistent with the hypothesis relating board composition to underpricing. Finally, it appears that directors' personal ownership and voting power are not significantly related to underpricing, except for voting power of directors representing corporate investors. Firm size and debt, however, show consistent significant relationships with IPO underpricing. Indeed, smaller firms and firms having large leverage ratios tend to be less underpriced at the time of their IPO.

7. CONCLUSION

This paper explores the differences between venture-backed and non venture-backed firms. We examine operating performance and firm growth in the four-year pre-IPO period as well as in the year of the IPO itself. We also investigate how the two groups of firms differ in their corporate governance structure at the time of the IPO. We study IPO underpricing and how it varies from venture-backed to non venture-backed firms, taking firm size and industry affiliation into account. We also test whether firm performance and corporate governance can explain the degree of IPO underpricing.

The sample includes 465 IPOs completed by U.S. firms between January 1996 and December 1998. Of those 465 IPOs, 218 are venture-backed and 247 are non venture-backed. Univariate tests and OLS regressions are performed in the empirical analysis. Univariate tests control for firm size using size quartiles, and for industry affiliation using a high-tech/low-tech dummy. In the OLS regressions, VCs' and corporate investors' involvement are proxied using two variables: the number of VCs or corporate investors involved and their ownership. The regressions control for the firm being a subsidiary, its industry affiliation using the high-tech/low-tech dummy, size, and amount of debt.

We find venture-backed firms experience poorer operating performance both in the pre-IPO period and during the IPO year. On the other hand, VCs' involvement appears to be positively related to the improvement in operating performance during this period. This is particularly true in the IPO year, when venture-backed firms show higher growth in operating performance than non venture-backed firms. Firms financed with venture

capital also experience significantly higher growth in sales compared to non venture-backed firms. This is consistent for the entire pre-IPO period. Differences between the two groups are more important for firms in the high-tech than in the low-tech industries.

The size of the board of director increases when more VCs are involved in the IPO firm. In contrast, the board size tends to get smaller as VCs' ownership in a firm increases. Venture-backed firms have a larger proportion of their board filled by outside directors, but independent directors represent a smaller proportion of their board. Furthermore, CEO duality is less common in venture-backed firms. Finally, we find larger personal ownership of stock in venture-backed firms for outside directors not representing investors and for independent directors, though the difference is not always statistically significant. On the other hand, management directors and members of the board as a group have, on average, less personal stock ownership in venture-backed firms.

Underpricing at the time of the IPO tends to be larger for venture-backed firms, except for small firms where it is actually less important. In general, firm performance and corporate governance fail to explain the degree of IPO underpricing.

8. SUGGESTIONS FOR FURTHER RESEARCH

The issues examined in this paper can be explored in greater detail in future research. For instance, VCs' involvement could be included in the tests using ownership ranges instead of raw figures. Accounting for the period of time over which the VCs have been involved in the firm before the IPO could also be of great interest. Moreover, a future study could develop a scale for VCs' quality. The categorization could use criteria such as VCs' reputation, age, or total funds under management. The study could then test whether VCs' quality affect the results presented in the present paper.

In addition, it would be pertinent to rerun the tests presented in this paper, using a similar sample and post-IPO data. As did some previous studies, relationships between VCs' involvement, operating performance and firm growth after the issue could be explored. Comparisons between the pre- and the post-IPO results could be done. Moreover, tests on the relationships between VCs' involvement and corporate governance could include an examination of board committees in place at the time of the IPO. This would be particularly relevant for the audit and the compensation committees. Stock retention by current stockholders at the time of the IPO is another topic future research could cover. Finally, differences between venture-backed and non venture-backed firms regarding underwriters' quality could be explored.

REFERENCES

Admati A., P. Pfleiderer, 1994, Robust Financial Contracting and the Role of Venture Capitalists, *Journal of Finance*, 49, 371-402.

Agrawal A., C.R. Knoeber, 1996, Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders, *Journal of Financial and Quantitative Analysis*, 31, 377-397.

Baker M., P.A. Gompers, 2000, The Determinants of Board Structure and Function at the Initial Public Offering, *Working Paper.*

Baliga B.R., R.C. Moyer, R.P. Rao, 1996, CEO Duality and Firm Performance: What's the Fuss?, Strategic Management Journal, 17, 41-53.

Barry C.B., C.J. Muscarella, J.W. Peavy III, M.R Vetsuypens, 1990, The Role of Venture Capital in the Creation of Public Companies: Evidence from the Going Public Process, *Journal of Financial Economics*, 27, 447-471.

Black B., R. Gilson, 1998, Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets, *Journal of Financial Economics*, 47, 243-277.

Brav A., P.A. Gompers, 1997, Myth or Realty? The Long-Run Underperformance of IPOs: Evidence from Venture and Nonventure Capital-Backed Companies, *Journal of Finance*, 52, 1791-1821.

Byrd J.W., K.A. Hickman, 1992, Do Outside Directors Monitor Managers?, *Journal of Financial Economics*, 32, 195-221.

Chemmanur T.J., P. Fulghieri, 1999, A Theory of the Going-Public Decision, *The Review of Financial Studies*, 12, 249-279.

Core J.E., R.W. Holthausen, D.F. Larcker, 1999, Corporate Governance, Chief Executive Officer Compensation, and Firm Performance, *Journal of Financial Economics*, 51, 371-406.

Dietz M.D., 2002, Risk, Self Selection, and Advice: Banks versus Venture Capitalists, *Working Paper*, University of St. Gallen, Switzerland.

Doukas J.A., H. Gonenc, 2000, Long-term Performance of New Equity Issuers, Venture Capital and Reputation of Investment Bankers, *Working Paper.*

Engel D., 2002, The Impact of Venture Capital on Firm Growth: An Empirical Investigation, *Working Paper*, Center for European Economic Research.

Engel E., E.A. Gordon, R.M. Hayes, 2002, The Roles of Performance Measures and Monitoring in Annual Governance Decisions in Entrepreneurial Firms, *Journal of Accounting Research*, 40, 485-518.

Faleye O., 2003, Does One Hat fit All? The Case of Corporate Leadership Structure, *Working Paper*, Northeastern University.

Fenn G., N. Liang, S. Prowse, 1996, The Economics of the Private Equity Markets, *Staff Study #168*, Board of Governors of the Federal Reserve System.

Filatotchev I., 2002, Going Public with Good Governance: Board Selection and Share Ownership in UK IPO Firms, *Working Paper*, Bardford University School of Management.

Fried V.H., R.D. Hisrich, 1994, Toward a Model of Venture Capital Investment Decision Making, *Financial Management*, 23, 28-38.

Gompers P.A, 1998, Ownership and Control in Entrepreneurial Firms: An Examination of Convertible Securities in Venture Capital Investments, *Working Paper*, Harvard Business School.

Gompers P.A, J. Lerner, 1999, The Venture Capital Revolution, *Journal of Economic Perspectives*, 15, 145-168.

Gompers P.A., 1995, Optimal Investment, Monitoring, and the Staging of Venture Capital, *Journal of Finance*, 50, 1461-1489.

Gompers P.A., 1996, Grandstanding in the Venture Capital Industry, *Journal of Financial Economics*, 42, 133-156.

Hellman T., M. Puri, 2000, Venture Capital and the Professionalisation of Start-Up Firms: Empirical Evidence, *Working Paper*, Stanford Business School.

Jain B.A., 2001, Predictors of Performance of Venture Capitalist-Backed Organizations, *Journal of Business Research*, 52, 223-233.

Jain B.A., O. Kini, 1994, The Post-Issue Operating Performance of IPO Firms, *Journal of Finance*, 49, 1699-1726.

Kaplan S., P. Stromberg, 2001, Financial Contracting Theory Meets the Real World: an Empirical Analysis of Venture Capital Contracts, *Working Paper no. 7660*, National Bureau of Economic Research.

Katsuna K., H. Okamura, M. Cowling, 2001, Ownership Structure Pre- and Post-IPOs and the Operating Performance of JASDAQ Companies, *Pacific-Basin Journal*, 10, 163-181.

Kirilenko A.A., 2001, Valuation and Control in Venture Finance, *Journal of Finance*, 56, 565-581.

Klausner M., K. Litvak, 2001, What Economists Have Taught Us About VC Contracting, *Working Paper 221*, Stanford Law School.

Kooli M., J.M. Suret, 2002, The Underpricing of IPOs: Further Canadian Evidence, *Working Paper.*

Kortum S., J. Lerner, 2000, Assessing the Contribution of VC to Innovation, *Rand Journal of Economics*, 31, 674-692.

Lerner J., 1994, Venture Capitalists and the Decision to go Public, *Journal of Financial Economics*, 35, 293-316.

Lerner J., 1995, Venture Capitalists and the Oversight of Private Firms, *Journal of Finance*, 50-301-317.

Leshchinskii D., 2000, Venture Capitalists as Benevolent Vultures: The Role of Network Externalities in Financing Choice, *Working Paper.*

Loughran T., J.R Ritter, 1997, The Operating Performance of Firms Conducting Seasoned Equity Offerings, *Journal of Finance*, 52, 1823-1850.

McConnell J.J., H. Servaes, 1990, Additional Evidence on Equity Ownership and Corporate Value, *Journal of Financial Economics*, 27, 595-612.

Megginson W.C, K.A. Weiss, 1991, Venture Capital Certification in Initial Public Offerings, *Journal of Finance*, 46, 879-893.

Mikkelson W.H., M.M. Partch, K. Shah, 1997, Ownership and Operating Performance of Companies that go Public, *Journal of Financial Economics*, 44, 281-307.

Morck R., A. Shleifer, R.W. Vishny, 1988, Management Ownership and Market Valuation: An Empirical Analysis, *Journal of Financial Economics*, 20, 293-315.

Rosenstein S., J.G. Wyatt, 1990, Outside Directors, Board Independence, and Shareholder Wealth, *Journal of Financial Economics*, 26, 175-191.

Sahlman W.A., 1990, The Structure and Governance of Venture-Capital Organizations, *Journal of Financial Economics*, 27, 473-521.

Smith D.G., 2001, Control Over Exit in Venture Capital Relationships, *Working Paper*

Yermack D., 1996, Higher Market Valuation of Companies with Small Board of Directors, *Journal of Financial Economics*, 40, 185-211.

Table 1.1
Description of the Variables

Venture-Backed Firms	Firms having at least one VC holding a minimum of 5% of its capitalization at the time of the IPO
Firms with Corporate Investors Involved	Firms having at least one institutional investor outside VCs holding a minimum of 5% of its capitalization a the time of the IPO
Operating Income Over Sales (OIS)	Operating income before interest and depreciation / sales
Operating Income Over Assets (OIA)	Operating income before interest and depreciation / total assets at the end of the fiscal year
Profit Margin (PM)	Net income including extraordinary items / sales
Return on Assets (ROA)	Net income including extraordinary items / total assets at the end of the fiscal year
High-Tech Dummy	Takes the value of one if the firm is from a high-tech industry and zero otherwise
VCs' Ownership	Percentage of the firm's capitalization held by VCs immediately following the IPO. Only VCs holding 5% or more of the firm's
Number of VCs Involved	Number of VCs holding 5% or more of the firm's capitalization immediately following the IPO
Corporate Investors' Ownership	Percentage of the firm's capitalization held by institutional investors outside VCs immediately following the IPO. Only investors holding 5% or more of the firm's capitalization after the IPO are accounted
Number of Corporate Investors Involved	Number of institutional investors outside VCs holding 5% or more of the firm's capitalization immediately following the IPO
Subsidiary Dummy	Takes the value of one if the firm has a parent company involved and zero otherwise
Firm Size	= Log (market capitalization) = Log (common stock outstanding after the issue * offer price)
Debt	Long-term debt / total assets at the end of the IPO year
Board Size	Total number of directors sitting on the board
Management Directors	Chief executive officer, directors coming from the top-management team, founders, relatives of executive officers and/or founders, retired employees of the company, and directors coming from the
VC Directors	Directors representing a VC firm investing in the firm

Table 1.1 (continued)
Description of Variables

Corporate Investor Directors	Directors representing an institutional investor investing in the firm, outside VC firms
Related Directors	Directors who do not represent a VC firm or another institutional investor, but provide services to the company, are major customers, or are important resource providers to the company
Independent Directors	Directors with no relationships with the firm outside sitting on its board of directors
Outside Directors	Refer to VC directors, corporate directors, independent directors, and related directors taken together
Outside Directors Not Representing Investors	Refer to related and independent directors taken together
CEO/COB Duality	Dummy variable taking the value of one if the chief executive officer is also the chair of the board
Directors' Ownership	Includes shares personally owned by the director or his wife, shares in trust for the benefit of the director or his wife, and shares owned by a company if the director controls it
Directors' Voting Power	Includes shares in directors' ownership, shares owned the director's children, by the VC firm or the institution investor for which the director sits on the board, and by the company the director works for or has a controlling interest in
Underpricing	= (Pm - Pe) / Pe = (closing price on the first trading day - offer price) / offer price

Table 1.2
Number of Issues Per Year and Industry Affiliation

	Venture-Backed Firms			Non Venture-Backed Firms		
Year	High-Tech IPOs	Low-Tech IPOs	Total Number of IPOs	High-Tech IPOs	Low-Tech IPOs	Total Number of IPOs
1996	53	35	88	16	64	80
1997	46	21	67	27	59	86
1998	36	27	63	27	54	81
Total	135	83	218	70	177	247

Table 1.3
Characteristics of Issuing Firms

	Venture-Backed Firms						Non Venture-Backed Firms					
	N	Mean	Median	Maximum	Minimum	St. Dev.	N	Mean	Median	Maximum	Minimum	St. Dev.
Total Value of Offer ($000)	216	48,529	37,500	258,500	4,500	39,392	244	85,550	44,300	2,808,000	6,000	210,061
Offer Price	216	12.71	12.00	30.00	5.00	4.20	244	13.66	13.50	29.00	4.00	4.70
Percentage Offered by Current Holders (%)	218	9.35%	0.00%	51.28%	0.00%	0.14	247	15.69%	0.00%	100.00%	0.00%	0.24
Total Assets ($000)	215	109,495	56,281	1,241,703	3,723	170,616	244	242,405	75,500	13,163,000	4,696	890,869
PPE Intensity (%)	215	15.58%	8.27%	80.39%	0.30%	0.17	243	19.29%	11.51%	92.86%	0.18%	0.18
Total Equity ($000)	214	54,490	40,281	403,429	(67,248)	57,721	244	102,871	45,262	6,668,000	(188,811)	441,227
Leverage (%)	206	8.69%	0.92%	93.32%	0.00%	0.17	232	13.89%	2.50%	83.48%	0.00%	0.20
Sales ($000)	216	89,666	36,290	2,511,962	0	240,401	246	249,851	84,887	8,057,000	0	641,305
Number of Employees	217	515	168	17,734	5	1,469	245	1,396	436	24,000	11	2,836
Number of VCs Involved	218	2	2	7	1	2	247	NA	NA	NA	NA	NA
VCs' Ownership Before (%)	218	36.24%	35.30%	90.00%	5.40%	0.19	247	NA	NA	NA	NA	NA
VCs' Ownership After (%)	218	26.59%	25.05%	63.47%	5.20%	0.14	247	NA	NA	NA	NA	NA
Number Corporate Investors	218	1	1	5	0	1	247	0	0	3	0	1
Corporate Investors' Ownership Before (%)	218	10.93%	5.55%	67.20%	0.00%	0.15	247	6.93%	0.00%	100.00%	0.00%	0.15
Corporate Investors' Ownership After (%)	218	8.26%	4.05%	49.90%	0.00%	0.11	247	4.33%	0.00%	83.04%	0.00%	0.10

Table 1.4
Corporate Governance of Issuing Firms

	Venture-Backed Firms						Non Venture-Backed Firms				
	N	Mean	Median	Maximum	Minimum	St. Dev.	N	Mean	Median	Maximum	Minimum	St. Dev.
Board Composition												
Management Directors	218	2.16	2.00	6.00	1.00	0.99	247	3.37	3.00	11.00	1.00	1.61
Outside Directors	218	4.29	4.00	11.00	0.00	1.64	247	2.66	2.00	11.00	0.00	1.88
VC Directors	218	2.00	2.00	7.00	0.00	1.17	247	0.09	0.00	2.00	0.00	0.33
Corporate Inv. Directors	218	0.59	0.00	8.00	0.00	1.07	247	0.43	0.00	5.00	0.00	0.96
Related Directors	218	0.39	0.00	3.00	0.00	0.73	247	0.56	0.00	4.00	0.00	0.78
Independent Directors	218	1.31	1.00	5.00	0.00	1.11	247	1.57	1.00	10.00	0.00	1.42
Total Board	218	6.45	6.00	12.00	3.00	1.67	247	6.03	6.00	18.00	2.00	1.98
Voting Power After the Issue												
Management Directors	218	18.47%	13.51%	77.88%	0.00%	0.1689	247	46.54%	51.06%	100.00%	0.00%	0.2708
Outside Directors	218	29.09%	29.16%	89.69%	0.00%	0.1534	247	6.01%	0.00%	74.37%	0.00%	0.1203
VC Directors	218	22.08%	20.56%	70.76%	0.00%	0.1380	247	0.36%	0.00%	15.86%	0.00%	0.0187
Corporate Inv. Directors	218	5.89%	0.00%	84.49%	0.00%	0.1140	247	4.40%	0.00%	74.37%	0.00%	0.1124
Related Directors	218	0.29%	0.00%	11.68%	0.00%	0.0104	247	0.54%	0.00%	37.21%	0.00%	0.0281
Independent Directors	218	0.83%	0.00%	23.12%	0.00%	0.0256	247	0.71%	0.00%	18.23%	0.00%	0.0232
Total Board	218	47.57%	46.58%	98.77%	8.72%	0.1670	247	52.53%	55.80%	1.00%	0.00%	0.2475
Ownership After the Issue												
Management Directors	218	16.77%	9.92%	98.15%	0.00%	0.1733	247	36.78%	34.88%	95.50%	0.00%	0.2715
Outside Directors	218	2.25%	0.36%	29.94%	0.00%	0.0462	247	2.46%	0.00%	54.20%	0.00%	0.0644
VC Directors	218	0.54%	0.00%	22.95%	0.00%	0.0234	247	0.10%	0.00%	11.23%	0.00%	0.0081
Corporate Inv. Directors	218	0.64%	0.00%	29.92%	0.00%	0.0307	247	1.30%	0.00%	54.20%	0.00%	0.0540
Related Directors	218	0.28%	0.00%	11.68%	0.00%	0.0103	247	0.46%	0.00%	30.88%	0.00%	0.0239
Independent Directors	218	0.79%	0.00%	23.12%	0.00%	0.0254	247	0.60%	0.00%	18.23%	0.00%	0.0198
Total Board	218	19.02%	14.22%	100.00%	0.00%	0.1776	247	39.23%	40.08%	95.50%	0.00%	0.2665

Table 2.1

Operating Performance Measures, Differences in Means

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
	Panel A: Venture-Backed Firms Means			
0	-39.11% 189	-9.70% 206	-40.38% 190	-11.17% 206
-1	-47.90% 192	-23.42% 216	-51.27% 192	-27.89% 216
-2	-46.79% 163	-28.06% 194	-41.83% 163	-35.56% 136
-3	-30.78% 127	-31.58% 162	-36.55% 128	-33.51% 162
-4	-25.62% 104	-21.87% 122	-34.38% 105	-27.15% 124
	Panel B: Non Venture-Backed Firms Means			
0	-1.45% 221	7.89% 227	-8.20% 223	1.76% 228
-1	-1.70% 232	-5.45% 241	-10.13% 233	-0.74% 241
-2	-5.35% 219	2.18% 224	-8.22% 218	-5.48% 282
-3	0.31% 196	4.50% 197	-5.68% 195	-1.83% 196
-4	-4.04% 180	4.53% 177	-9.52% 179	-0.69% 175
	Panel C: Difference in Means between Venture-Backed and Non Venture-Backed Firms			
0	-37.66% (5.0178)***	-17.58% (3.5737)***	-32.18% (4.5302)***	-12.93% (6.4528)***
-1	-46.20% (6.1554)***	-17.97% (6.8402)***	-41.14% (5.4847)***	-27.14% (7.6405)***
-2	-41.44% (4.9673)***	-30.24% (6.4443)***	-33.61% (3.3522)***	-30.08% (6.2827)***
-3	-31.08% (4.4876)***	-36.08% (7.2040)***	-30.87% (3.9807)***	-31.67% (6.6984)***
-4	-21.58% (2.7403)***	-26.41% (5.2486)***	-24.86% (2.8586)***	-26.46% (5.4502)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.1 (continued)
Operating Performance Measures, Differences in Means

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Involved Means				
0	-49.64% 144	-11.08% 154	-49.23% 146	-12.46% 155
-1	-54.10% 135	-25.73% 156	-58.84% 135	-31.03% 156
-2	-46.22% 112	-35.47% 136	-37.80% 113	-35.56% 136
-3	-33.45% 84	-35.28% 105	-43.18% 84	-39.94% 105
-4	-40.81% 72	-26.04% 82	-55.61% 74	-32.63% 85
Panel E: Firms without Corporate Investors Involved Means				
0	-2.12% 266	5.37% 279	-8.66% 267	0.11% 279
-1	-8.72% 289	0.89% 301	-14.69% 290	-4.53% 301
-2	-13.41% 270	-0.47% 282	-16.19% 268	-5.48% 282
-3	-4.35% 239	-2.07% 254	-9.03% 239	-6.30% 253
-4	-2.14% 212	1.24% 217	-5.71% 210	-3.33% 214
Panel F: Difference in Means between Firms with and without Corporate Investors Involved				
0	-47.52% (6.1505)***	-16.45% (5.8402)***	-40.58% (5.5437)***	-12.56% (5.9805)***
-1	-45.38% (5.7536)***	-26.62% (5.9185)***	-44.15% (5.5080)***	-26.50% (7.0220)***
-2	-32.81% (3.5657)***	-35.00% (7.0694)***	-21.61% (1.9707)**	-30.08% (6.2827)***
-3	-29.11% (3.7395)***	-33.21% (5.9378)***	-34.15% (3.9478)***	-33.64% (6.4838)***
-4	-38.66% (4.5320)***	-27.28% (4.8952)***	-49.90% (5.4020)***	-29.29% (5.5320)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.2

Operating Performance Measures, Differences in Medians

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Medians				
0	-0.85% 189	-2.82% 206	-1.29% 190	-1.88% 206
-1	-2.51% 192	-9.64% 216	-4.54% 192	-11.78% 216
-2	0.31% 163	-10.71% 194	-3.40% 163	-10.96% 195
-3	1.51% 127	-9.61% 162	-1.48% 128	-11.51% 162
-4	0.33% 104	-9.43% 122	-3.41% 105	-13.41% 124
Panel B: Non Venture-Backed Firms Medians				
0	8.76% 221	9.57% 227	4.42% 223	5.19% 228
-1	6.97% 232	11.01% 241	3.13% 233	4.74% 241
-2	5.74% 219	9.88% 224	2.66% 218	4.48% 223
-3	5.87% 196	9.65% 197	2.32% 195	4.36% 196
-4	4.81% 180	9.39% 177	2.08% 179	3.95% 175
Panel C: Difference in Medians between Venture-Backed and Non Venture-Backed Firms				
0 Wilcoson/M.W. Chi-square	-9.61% (6.6835)*** (29.6931)***	-12.39% (8.2912)*** (47.3700)***	-5.70% (5.5685)*** (27.9415)***	-7.08% (7.1438)*** (40.2509)***
-1 Wilcoson/M.W. Chi-square	-9.48% (6.8896)*** (36.5898)***	-20.64% (8.6216)*** (67.2566)***	-7.67% (6.3954)*** (33.6878)***	-16.52% (7.9959)*** (50.0790)***
-2 Wilcoson/M.W. Chi-square	-5.43% (4.4763)*** (16.2765)***	-20.59% (6.6979)*** (32.3581)***	-6.07% (4.4694)*** (15.9526)***	-15.44% (6.3317)*** (33.4612)***
-3 Wilcoson/M.W. Chi-square	-4.36% (4.7298)*** (19.3408)***	-19.27% (6.8877)*** (34.2553)***	-3.80% (4.7733)*** (22.3989)***	-15.88% (6.5537)*** (32.8776)***
-4 Wilcoson/M.W. Chi-square	-4.48% (4.2195)*** (13.6539)***	-18.82% (5.5278)*** (21.7049)***	-5.49% (3.9334)*** (16.4552)***	-17.36% (5.1979)*** (19.4649)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.2 (continued)
Operating Performance Measures, Differences in Medians

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Medians				
0	-3.83% 144	-3.51% 154	-3.21% 146	-2.77% 155
-1	-4.47% 135	-13.62% 156	-6.82% 135	-14.87% 156
-2	-6.81% 112	-21.60% 136	-5.82% 113	-20.31% 136
-3	-0.16% 84	-19.25% 105	-3.54% 84	-19.59% 105
-4	-3.11% 72	-13.71% 82	-7.16% 74	-19.02% 85
Panel E: Firms without Corporate Investors Medians				
0	8.23% 266	8.33% 279	4.63% 267	4.92% 279
-1	6.43% 289	8.94% 301	2.91% 290	3.99% 301
-2	5.87% 270	9.42% 282	2.86% 268	4.68% 282
-3	5.81% 239	9.12% 254	2.54% 239	4.27% 253
-4	4.35% 212	8.41% 217	1.98% 210	3.80% 214
Panel F: Difference in Medians between Firms with and without Corporate Investors				
0 Wilcoson/M.W. Chi-square	-12.06% (6.1224)*** (26.7596)***	-11.84% (6.8552)*** (38.2959)***	-7.84% (5.9684)*** (28.2599)***	-7.69% (6.5684)*** (34.9348)***
-1 Wilcoson/M.W. Chi-square	-10.90% (5.5381)*** (20.0942)***	-22.56% (7.2626)*** (49.9763)***	-9.74% (6.0051)*** (23.6573)***	-18.86% (7.3866)*** (39.4405)***
-2 Wilcoson/M.W. Chi-square	-12.68% (5.9765)*** (24.4561)***	-31.02% (7.8322)*** (53.4053)***	-8.68% (6.2367)*** (37.6481)***	-24.99% (7.5501)*** (50.3972)***
-3 Wilcoson/M.W. Chi-square	-5.97% (5.1906)*** (22.9156)***	-28.37% (6.5809)*** (40.2874)***	-6.08% (6.1644)*** (36.6685)***	-23.86% (7.0905)*** (43.7848)***
-4 Wilcoson/M.W. Chi-square	-7.46% (4.5184)*** (10.7170)***	-22.11% (5.3833)*** (23.9154)***	-9.14% (5.3307)*** (16.4479)***	-22.82% (5.9739)*** (29.9929)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.3

Operating Performance Measures, Differences in Medians, by Industry Affiliation

PANEL A: OPERATING INCOME OVER SALES

	Year Relative to IPO				
	0	-1	-2	-3	-4
High Tech Firms					
All Firms	1.65%	8.83%	0.41%	1.64%	1.55%
Number of Firms	182	176	154	125	110
Venture-Backed	-5.39%	-20.57%	-11.26%	-2.14%	-4.84%
Number of Firms	118	115	94	71	59
Non Venture-Backed	9.27%	7.80%	4.32%	3.21%	5.02%
Number of Firms	64	61	60	54	51
Difference in Medians	-14.66%	-28.37%	-15.57%	-5.35%	-9.86%
Wilcoson/M.W.	(3.7526)***	(4.5450)***	(2.5286)**	(2.6191)***	(2.6973)***
Chi-Square	(13.8814)***	(21.1000)***	(6.9901)***	(5.3927)**	(13.1971)***
Low Tech Firms					
All Firms	7.44%	6.01%	4.94%	5.44%	3.95%
Number of Firms	228	248	228	198	174
Venture-Backed	4.38%	0.85%	2.42%	2.29%	2.10%
Number of Firms	71	77	69	56	45
Non Venture-Backed	8.50%	6.89%	5.86%	6.21%	4.60%
Number of Firms	157	171	159	142	129
Difference in Medians	-4.12%	-6.04%	-3.43%	-3.92%	-2.49%
Wilcoson/M.W.	(4.1239)***	(4.1630)***	(2.6007)***	(2.8350)***	(2.3577)**
Chi-Square	(7.3839)***	(9.9637)***	(4.6760)**	(6.3742)**	(3.6269)*
High Tech Firms					
All Firms	1.65%	0.88%	0.41%	1.64%	1.55%
Number of Firms	182	176	154	125	110
Corporate Investors	-23.05%	-29.39%	-24.66%	-10.13%	-18.71%
Number of Firms	82	72	57	40	36
No Corporate Investors	8.14%	5.32%	4.04%	2.67%	3.34%
Number of Firms	100	104	97	85	74
Difference in Medians	-31.19%	-34.71%	-28.70%	-12.80%	-22.05%
Wilcoson/M.W.	(5.2047)***	(4.3254)***	(3.7083)***	(2.6913)***	(3.4495)***
Chi-Square	(28.7649)***	(15.8880)***	(12.2832)***	(5.0159)**	(5.9459)**
Low Tech Firms					
All Firms	7.44%	6.01%	4.94%	5.44%	3.95%
Number of Firms	228	248	228	198	174
Corporate Investors	5.24%	1.82%	0.49%	0.85%	1.09%
Number of Firms	62	63	55	44	36
No Corporate Investors	8.23%	6.56%	6.01%	6.50%	4.73%
Number of Firms	166	185	173	154	138
Difference in Medians	-2.99%	-4.74%	-5.52%	-5.64%	-3.64%
Wilcoson/M.W.	(2.3817)**	(2.9444)***	(4.2711)***	(4.3360)***	(2.8254)***
Chi-Square	(2.2153)	(6.1495)**	(10.5673)***	(11.6883)***	(6.8647)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.3 (continued)

Operating Performance Measures, Differences in Medians, by Industry Affiliation

PANEL B: OPERATING INCOME OVER ASSETS

	Year Relative to IPO				
	0	-1	-2	-3	-4
High Tech Firms					
All Firms	-1.50%	-8.70%	-14.74%	-9.66%	-1.62%
Number of Firms	199	201	185	160	126
Venture-Backed	-6.68%	-28.16%	-28.13%	-25.37%	-20.40%
Number of Firms	132	133	121	103	76
Non Venture-Backed	7.52%	9.08%	6.72%	4.65%	10.79%
Number of Firms	67	68	64	57	50
Difference in Medians	-14.20%	-37.25%	-34.85%	-30.02%	-31.19%
Wilcoson/M.W.	(4.2078)***	(4.2685)***	(3.2717)***	(3.4704)***	(3.4631)***
Chi-Square	(16.8154)***	(15.4178)***	(14.1603)***	(12.0184)***	(16.0484)***
Low Tech Firms					
All Firms	8.10%	8.30%	8.09%	9.14%	7.75%
Number of Firms	234	256	233	199	173
Venture-Backed	3.65%	0.42%	4.30%	5.66%	4.87%
Number of Firms	74	83	73	59	46
Non Venture-Backed	10.57%	11.32%	10.46%	11.08%	8.97%
Number of Firms	160	173	160	140	127
Difference in Medians	-6.93%	-10.89%	-6.16%	-5.42%	-4.11%
Wilcoson/M.W.	(5.1451)***	(6.2646)***	(3.9990)***	(3.8662)***	(2.6164)***
Chi-Square	(17.7872)***	(29.9698)***	(14.2073)***	(10.3270)***	(2.8060)*
High Tech Firms					
All Firms	-1.50%	-8.70%	-14.74%	-9.66%	-1.62%
Number of Firms	199	201	185	160	126
Corporate Investors	-11.52%	-35.92%	-41.30%	-52.89%	-28.82%
Number of Firms	88	87	81	61	45
No Corporate Investors	6.48%	5.88%	6.16%	1.32%	3.80%
Number of Firms	111	114	104	99	81
Difference in Medians	-18.00%	-41.80%	-47.46%	-54.21%	-32.62%
Wilcoson/M.W.	(4.9828)***	(4.5436)***	(4.6977)***	(3.9031)***	(3.4265)***
Chi-Square	(22.9427)***	(21.4953)***	(20.5132)***	(14.0156)***	(12.4790)***
Low Tech Firms					
All Firms	8.10%	8.30%	8.09%	9.14%	7.75%
Number of Firms	234	256	233	199	173
Corporate Investors	4.90%	2.21%	0.98%	1.96%	2.25%
Number of Firms	66	69	55	44	37
No Corporate Investors	9.42%	10.04%	10.46%	11.06%	9.72%
Number of Firms	168	187	178	155	136
Difference in Medians	-4.52%	-7.84%	-9.48%	-9.10%	-7.47%
Wilcoson/M.W.	(3.4991)***	(4.5161)***	(5.1187)***	(4.5188)***	(3.6225)**
Chi-Square	(6.8377)***	(14.4636)***	(17.0483)***	(16.4992)***	(9.6877)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.3 (continued)
Operating Performance Measures, Differences in Medians, by Industry Affiliation

PANEL C: PROFIT MARGIN

	Year Relative to IPO				
	0	-1	-2	-3	-4
High Tech Firms					
All Firms	1.29%	-2.19%	-1.48%	0.07%	0.69%
Number of Firms	183	177	154	125	108
Venture-Backed	-2.97%	-22.40%	-12.32%	-2.61%	-7.31%
Number of Firms	119	115	94	71	59
Non Venture-Backed	6.04%	3.91%	1.83%	1.64%	2.10%
Number of Firms	64	62	60	54	49
Difference in Medians	-9.00%	-26.31%	-14.15%	-4.24%	-9.41%
Wilcoson/M.W.	(3.0185)***	(3.4885)***	(2.0989)**	(1.9911)**	(2.1537)**
Chi-Square	(8.0909)***	(10.2811)***	(6.9901)***	(2.3182)	(8.4054)***
Low Tech Firms					
All Firms	3.00%	2.32%	2.17%	1.78%	1.34%
Number of Firms	230	248	227	198	176
Venture-Backed	0.61%	-1.54%	0.17%	-1.15%	-1.01%
Number of Firms	71	77	69	57	46
Non Venture-Backed	4.12%	3.06%	2.91%	2.70%	1.89%
Number of Firms	159	171	158	141	130
Difference in Medians	-3.50%	-4.61%	-2.74%	-3.85%	-2.90%
Wilcoson/M.W.	(4.5928)***	(5.1138)***	(3.5913)***	(4.3060)***	(2.8974)***
Chi-Square	(17.1344)***	(20.5113)***	(10.7258)***	(10.8645)***	(5.7686)**
High Tech Firms					
All Firms	1.29%	-2.19%	-1.48%	0.07%	0.69%
Number of Firms	183	177	154	125	108
Corporate Investors	-21.14%	-30.96%	-22.78%	-9.30%	-17.62%
Number of Firms	82	72	58	40	37
No Corporate Investors	6.01%	3.37%	2.37%	1.31%	1.65%
Number of Firms	101	105	96	85	71
Difference in Medians	-27.15%	-34.33%	-25.15%	-10.61%	-19.27%
Wilcoson/M.W.	(4.7186)***	(4.1941)***	(3.3914)***	(3.0670)***	(3.4181)***
Chi-Square	(21.9979)***	(15.3361)***	(8.9612)***	(9.0396)***	(4.9745)**
Low Tech Firms					
All Firms	3.00%	2.32%	2.17%	1.78%	1.34%
Number of Firms	230	248	227	198	176
Corporate Investors	1.15%	-1.73%	-1.56%	-1.94%	-1.44%
Number of Firms	64	63	55	44	37
No Corporate Investors	3.56%	2.87%	3.12%	2.88%	2.33%
Number of Firms	166	185	172	154	139
Difference in Medians	-2.40%	-4.60%	-4.68%	-4.82%	-3.77%
Wilcoson/M.W.	(3.0283)***	(3.8168)***	(5.1998)***	(5.5711)***	(4.2153)***
Chi-Square	(4.2432)**	(7.6815)***	(19.8450)***	(22.9091)***	(15.0916)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 2.3 (continued)

Operating Performance Measures, Differences in Medians, by Industry Affiliation

PANEL D: RETURN ON ASSETS

	Year Relative to IPO				
	0	-1	-2	-3	-4
High Tech Firms					
All Firms	-0.73%	-11.94%	-16.59%	-10.05%	-3.89%
Number of Firms	199	201	186	160	126
Venture-Backed	-5.21%	-29.38%	-30.10%	-27.27%	-25.98%
Number of Firms	132	133	122	103	78
Non Venture-Backed	5.08%	3.74%	2.50%	0.79%	6.17%
Number of Firms	67	68	64	57	48
Difference in Medians	-10.29%	-33.12%	-32.60%	-28.06%	-32.15%
Wilcoson/M.W.	(3.6374)***	(3.7483)***	(2.8883)***	(3.1319)***	(3.1724)***
Chi-Square	(8.4136)***	(13.1652)***	(13.7213)***	(9.8382)***	(16.2885)***
Low Tech Firms					
All Firms	3.65%	2.84%	3.59%	3.60%	2.99%
Number of Firms	235	256	232	198	173
Venture-Backed	0.34%	-3.12%	-0.45%	-0.86%	-0.90%
Number of Firms	74	83	73	59	46
Non Venture-Backed	5.26%	5.18%	5.01%	4.80%	3.65%
Number of Firms	161	173	159	139	127
Difference in Medians	-4.92%	-8.30%	-5.45%	-5.65%	-4.56%
Wilcoson/M.W.	(5.1410)***	(6.3421)***	(4.4025)***	(4.1298)***	(2.7092)***
Chi-Square	(17.3818)***	(27.1172)***	(16.8099)***	(10.6472)***	(1.7714)
High Tech Firms					
All Firms	-0.73%	-11.94%	-16.59%	-10.05%	-3.89%
Number of Firms	199	201	186	160	126
Corporate Investors	-9.19%	-36.55%	-39.33%	-53.54%	-27.46%
Number of Firms	88	87	81	62	48
No Corporate Investors	4.57%	3.45%	3.04%	-0.58%	2.37%
Number of Firms	111	114	105	98	78
Difference in Medians	-13.76%	-40.01%	-42.36%	-52.96%	-29.83%
Wilcoson/M.W.	(4.6681)***	(4.5925)***	(4.0063)***	(4.2362)***	(3.5995)***
Chi-Square	(17.7993)***	(21.4953)***	(18.3922)***	(15.1679)***	(16.2885)***
Low Tech Firms					
All Firms	3.65%	2.84%	3.59%	3.60%	2.99%
Number of Firms	235	256	232	198	173
Corporate Investors	1.47%	-4.69%	-2.01%	-1.15%	-2.30%
Number of Firms	67	69	55	43	37
No Corporate Investors	4.99%	4.02%	5.17%	5.42%	4.68%
Number of Firms	168	187	177	155	136
Difference in Medians	-3.52%	-8.71%	-7.18%	-6.57%	-6.98%
Wilcoson/M.W.	(3.6738)***	(4.8318)***	(5.6168)***	(4.9721)***	(4.1038)***
Chi-Square	(8.9589)***	(14.4636)***	(25.9525)***	(24.9840)***	(12.1337)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 3.1

Operating Performance Averages, Differences in Means

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Means				
2 years (-1 and 0)	-39.48% 180	-16.59% 204	-40.69% 180	-19.61% 204
3 years (-2 to 0)	-26.20% 150	-17.73% 182	-26.46% 150	-20.75% 183
4 years (-3 to 0)	-13.13% 118	-15.51% 147	-18.25% 119	-18.96% 148
5 years (-4 to 0)	-9.16% 94	-10.37% 107	-16.59% 95	-15.17% 109
Panel B: Non Venture-Backed Firms Means				
2 years (-1 and 0)	1.78% 214	7.62% 221	-6.26% 217	1.33% 222
3 years (-2 to 0)	4.01% 198	7.30% 204	-3.30% 201	1.64% 204
4 years (-3 to 0)	4.95% 179	9.63% 175	-0.15% 180	3.63% 174
5 years (-4 to 0)	3.53% 163	9.43% 158	-1.06% 164	3.90% 156
Panel C: Difference in Means between Venture-Backed and Non Venture-Backed Firms				
2 years (-1 and 0)	-41.26% (6.5147)***	-24.22% (8.0376)***	-34.44% (5.4985)***	-20.94% (8.2717)***
3 years (-2 to 0)	-30.21% (5.9347)***	-25.03% (7.8137)***	-23.16% (4.2795)***	-22.39% (7.9026)***
4 years (-3 to 0)	-18.08% (4.9128)***	-25.14% (7.5328)***	-18.10% (4.7113)***	-22.59% (7.5884)***
5 years (-4 to 0)	-12.68% (3.4291)***	-19.80% (5.8041)***	-15.53% (3.6451)***	-19.07% (6.2959)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 3.1 (continued)
Operating Performance Averages, Differences in Means

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Means				
2 years (-1 and 0)	-43.59% 130	-18.36% 151	-46.78% 132	-21.59% 152
3 years (-2 to 0)	-28.44% 103	-22.25% 130	-30.20% 106	-24.36% 131
4 years (-3 to 0)	-15.42% 78	-19.25% 98	-22.95% 79	-23.39% 99
5 years (-4 to 0)	-16.66% 65	-16.17% 73	-27.07% 68	-21.92% 77
Panel E: Firms without Corporate Investors Means				
2 years (-1 and 0)	-4.02% 264	3.91% 274	-9.46% 265	-1.54% 274
3 years (-2 to 0)	-0.85% 245	4.51% 256	-5.84% 245	-1.06% 256
4 years (-3 to 0)	2.47% 219	5.77% 224	-1.75% 220	0.63% 223
5 years (-4 to 0)	4.15% 192	8.13% 192	0.47% 191	3.42% 188
Panel F: Difference in Means between Firms with and without Corporate Investors				
2 years (-1 and 0)	-39.57% (5.8412)***	-22.27% (6.9636)***	-37.31% (5.6495)***	-20.05% (7.5017)***
3 years (-2 to 0)	-27.60% (4.9246)***	-26.75% (7.9214)***	-24.36% (4.1728)***	-23.30% (7.7763)***
4 years (-3 to 0)	-17.89% (4.3351)***	-25.02% (6.8328)***	-21.19% (4.9911)***	-24.02% (7.4528)***
5 years (-4 to 0)	-20.81% (5.2233)***	-24.30% (6.5904)***	-27.54% (6.1683)***	-25.34% (8.0321)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 3.2

Operating Performance Averages, Differences in Medians

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Medians				
2 years (-1 and 0)	-3.47% 180	-7.16% 204	-6.53% 180	-9.08% 204
3 years (-2 to 0)	-0.42% 150	-6.12% 182	-2.92% 150	-6.32% 183
4 years (-3 to 0)	2.30% 118	-2.82% 147	0.02% 119	-5.93% 148
5 years (-4 to 0)	2.41% 94	2.69% 107	-0.23% 95	-2.95% 109
Panel B: Non Venture-Backed Firms Medians				
2 years (-1 and 0)	8.10% 214	10.24% 221	3.64% 217	5.12% 222
3 years (-2 to 0)	7.07% 198	9.81% 204	3.44% 201	5.19% 204
4 years (-3 to 0)	7.20% 179	10.31% 175	3.48% 180	5.34% 174
5 years (-4 to 0)	6.88% 163	10.10% 158	2.98% 164	5.10% 156
Panel C: Difference in Medians between Venture-Backed and Non Venture-Backed Firms				
2 years (-1 and 0) Wilcoson/M.W. Chi-square	-11.57% (7.2835)*** (44.5551)***	-17.40% (8.8297)*** (62.6466)***	-10.17% (6.5222)*** (27.0061)***	-14.19% (8.0543)*** (43.4955)***
3 years (-2 to 0) Wilcoson/M.W. Chi-square	-7.49% (5.8872)*** (26.9964)***	-15.93% (7.8305)*** (37.4273)***	-6.36% (5.7171)*** (24.1786)***	-11.50% (7.4149)*** (48.6808)***
4 years (-3 to 0) Wilcoson/M.W. Chi-square	-4.90% (4.6511)*** (15.8772)***	-13.13% (7.1384)*** (37.8640)***	-3.46% (5.0049)*** (14.8370)***	-11.27% (6.9875)*** 39.2122
5 years (-4 to 0) Wilcoson/M.W. Chi-square	-4.47% (4.2521)*** (11.0221)***	-7.41% (5.8358)*** (23.3508)***	-3.21% (4.6067)*** (17.7035)***	-8.06% (5.8548)*** (25.6750)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 3.2 (continued)

Operating Performance Averages, Differences in Medians

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Medians				
2 years (-1 and 0)	-3.02% 130	-8.54% 151	-7.31% 132	-9.57% 152
3 years (-2 to 0)	-2.94% 103	-13.49% 130	-4.89% 106	-13.63% 131
4 years (-3 to 0)	0.38% 78	-4.10% 98	-1.62% 79	-9.53% 99
5 years (-4 to 0)	0.03% 65	-2.84% 73	-3.33% 68	-9.65% 77
Panel E: Firms without Corporate Investors Medians				
2 years (-1 and 0)	6.80% 264	8.49% 274	3.51% 265	4.22% 274
3 years (-2 to 0)	6.58% 245	9.15% 256	3.15% 245	4.53% 256
4 years (-3 to 0)	6.72% 219	9.36% 224	2.99% 220	5.17% 223
5 years (-4 to 0)	6.37% 192	10.13% 192	3.04% 191	5.47% 188
Panel F: Difference in Medians between Firms with and without Corporate Investors				
2 years (-1 and 0) Wilcoson/M.W. Chi-square	-9.82% (5.5656)*** (18.3683)***	-17.03% (7.3878)*** (48.4036)***	-10.82% (6.0370)*** (27.9974)***	-13.79% (7.3565)*** (44.5557)***
3 years (-2 to 0) Wilcoson/M.W. Chi-square	-9.52% (5.5353)*** (16.8932)***	-22.64% (8.0990)*** (56.8329)***	-8.04% (5.9217)*** (21.2998)***	-18.16% (7.8262)*** (51.2806)***
4 years (-3 to 0) Wilcoson/M.W. Chi-square	-6.34% (4.3720)*** (9.7969)***	-13.45% (7.0660)*** (36.6709)***	-4.61% (5.7019)*** (25.8138)***	-14.70% (7.6135)*** (50.7715)***
5 years (-4 to 0) Wilcoson/M.W. Chi-square	-6.34% (4.7983)*** (12.6117)***	-12.97% (6.6712)*** (37.8198)***	-6.37% (6.2538)*** (34.7389)***	-15.12% (7.5936)*** (39.9404)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.1
Operating Performance Growth, Differences in Means

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Means				
From year -1 to 0	53.61% 176	37.08% 203	24.04% 174	30.04% 202
From year -2 to -1	-3.84% 158	-0.95% 190	-41.68% 159	-22.08% 192
From year -3 to -2	7.11% 123	-3.80% 155	22.11% 123	17.81% 154
From year -4 to -3	-19.36% 99	13.77% 113	-27.02% 101	-1.52% 115
Panel B: Non Venture-Backed Firms Means				
From year -1 to 0	58.07% 212	22.92% 219	37.65% 213	32.99% 221
From year -2 to -1	79.80% 211	60.15% 219	63.21% 209	47.03% 216
From year -3 to -2	-6.69% 192	-6.88% 191	31.49% 188	17.20% 186
From year -4 to -3	56.17% 175	56.53% 173	35.17% 178	37.87% 175
Panel C: Difference in Means between Venture-Backed and Non Venture-Backed Firms				
From year -1 to 0	-4.46% (0.1186)	14.16% (0.6242)	-13.61% (0.3481)	-2.95% (0.0913)
From year -2 to -1	-83.64% (2.4222)**	-61.10% (2.1973)**	-104.89% (3.1674)***	-69.11% (3.0008)***
From year -3 to -2	13.80% (0.3790)	3.08% (0.0890)	-9.38% (0.2234)	0.61% (0.0184)
From year -4 to -3	-75.53% (1.8712)*	-42.76% (1.1841)	-62.19% (1.4371)	-39.39% (1.0295)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.1 (continued)
Operating Performance Growth, Differences in Means

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Means				
From year -1 to 0	27.47% 127	11.45% 150	10.51% 132	29.80% 152
From year -2 to -1	-1.04% 107	16.44% 134	-2.73% 106	0.90% 133
From year -3 to -2	-14.91% 80	-26.27% 100	-3.78% 78	-3.01% 97
From year -4 to -3	-54.41% 69	-14.04% 77	-66.02% 72	-23.30% 81
Panel E: Firms without Corporate Investors Means				
From year -1 to 0	69.95% 261	39.82% 272	42.41% 255	32.57% 271
From year -2 to -1	62.38% 262	39.23% 275	26.23% 262	21.09% 275
From year -3 to -2	3.28% 235	2.94% 246	38.35% 233	25.65% 243
From year -4 to -3	56.92% 205	59.41% 209	40.03% 207	39.91% 209
Panel F: Difference in Means between Firms with and without Corporate Investors				
From year -1 to 0	-42.48% (1.0657)	-28.37% (1.1994)	-31.90% (0.7785)	-2.77% (0.0824)
From year -2 to -1	-63.42% (1.6774)*	-22.80% (0.7675)	-28.96% (0.7893)	-20.19% (0.8150)
From year -3 to -2	-18.18% (0.4486)	-29.21% (0.7692)	-42.12% (0.8900)	-28.66% (0.7848)
From year -4 to -3	-111.32% (2.5045)**	-73.46% (1.8522)*	-106.05% (2.2130)**	-63.20% (1.5184)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.2
Operating Performance Growth, Differences in Medians

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Medians				
From year -1 to 0	26.35% 176	39.80% 203	41.06% 174	44.97% 202
From year -2 to -1	22.88% 158	14.34% 190	22.92% 159	17.38% 192
From year -3 to -2	27.34% 123	26.75% 155	28.53% 123	25.73% 154
From year -4 to -3	11.93% 99	13.04% 113	5.54% 101	2.37% 115
Panel B: Non Venture-Backed Firms Medians				
From year -1 to 0	18.03% 212	-1.26% 219	22.49% 213	0.86% 221
From year -2 to -1	13.66% 211	12.55% 219	20.01% 209	10.20% 216
From year -3 to -2	4.98% 192	-0.43% 191	10.79% 188	3.44% 186
From year -4 to -3	8.64% 175	7.17% 173	16.08% 178	11.00% 175
Panel C: Difference in Medians between Venture-Backed and Non Venture-Backed Firms				
From year -1 to 0 Wilcoson/M.W. Chi-square	8.32% (0.5306) (1.0399)	41.06% (2.6273)*** (9.1221)***	18.58% (1.3287) (5.2626)**	44.10% (2.7131)*** (17.0969)***
From year -2 to -1 Wilcoson/M.W. Chi-square	9.22% (0.5213) (1.2037)	1.79% (1.4883) (0.0597)	2.91% (1.3523) (0.0111)	7.18% (1.7373)* (0.3542)
From year -3 to -2 Wilcoson/M.W. Chi-square	22.37% (2.4708)** (6.1031)**	27.18% (1.9173)* (6.1825)**	17.74% (1.5496) (1.7465)	22.29% (1.4115) (2.3265)
From year -4 to -3 Wilcoson/M.W. Chi-square	3.29% (0.5793) (0.1423)	5.87% (0.4870) (0.7169)	-10.54% (1.0800) (0.6838)	-8.62% (1.2124) (0.7061)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.2 (continued)
Operating Performance Growth, Differences in Medians

Year Relative to IPO	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Medians				
From year -1 to 0	24.01% 127	38.62% 150	39.59% 132	51.94% 152
From year -2 to -1	34.53% 107	30.33% 134	33.17% 106	29.68% 133
From year -3 to -2	26.27% 80	29.61% 100	41.63% 78	40.01% 97
From year -4 to -3	-11.09% 69	-2.64% 77	-14.99% 72	-15.09% 81
Panel E: Firms without Corporate Investors Medians				
From year -1 to 0	20.74% 261	0.80% 272	29.27% 255	4.19% 271
From year -2 to -1	10.67% 262	8.57% 275	12.79% 262	4.77% 275
From year -3 to -2	10.42% 235	1.35% 246	10.72% 233	2.77% 243
From year -4 to -3	13.53% 205	9.95% 209	20.61% 207	11.87% 209
Panel F: Difference in Medians between Firms with and without Corporate Investors				
From year -1 to 0 Wilcoson/M.W. Chi-square	3.27% (0.1900) (0.2926)	37.82% (2.3469)** (8.1090)***	10.33% (0.8047) (1.7511)	47.76% (3.0980)*** (18.4259)***
From year -2 to -1 Wilcoson/M.W. Chi-square	23.86% (1.4666) (8.4186)***	21.76% (0.9460) (4.5863)**	20.37% (1.2039) (5.3003)**	24.91% (0.8553) (5.9011)**
From year -3 to -2 Wilcoson/M.W. Chi-square	15.85% (1.2969) (3.4043)*	28.26% (1.3048) (4.5571)**	30.91% (1.6635)* (5.7000)**	37.24% (1.5347) (7.6306)***
From year -4 to -3 Wilcoson/M.W. Chi-square	-24.63% (2.3097)** (4.3584)**	-12.58% (2.0310)** (0.4443)	-35.61% (2.4902)** (3.5351)*	-26.96% (2.5783)*** (2.8950)*

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.3

Operating Performance Growth, Differences in Medians, by Industry Affiliation

PANEL A: OPERATING INCOME OVER SALES

	Year Relative to IPO			
	From -1 to 0	From -2 to -1	From -3 to -2	From -4 to -3
High Tech Firms				
All Firms	25.64%	22.94%	23.00%	7.60%
Number of Firms	167	147	120	106
Venture-Backed	33.83%	31.76%	41.40%	11.31%
Number of Firms	109	91	68	55
Non Venture-Backed	21.21%	18.68%	0.17%	5.67%
Number of Firms	58	56	52	51
Difference in Medians	12.63%	13.08%	41.24%	5.64%
Wilcoson/M.W.	(0.4857)	(0.4009)	(1.4061)	(0.3984)
Chi-Square	(0.3525)	(0.3778)	(2.1719)	(0.3401)
Low Tech Firms				
All Firms	19.94%	11.49%	11.21%	11.01%
Number of Firms	221	222	195	168
Venture-Backed	22.43%	18.81%	19.43%	12.23%
Number of Firms	67	67	55	44
Non Venture-Backed	17.30%	10.35%	5.42%	10.44%
Number of Firms	157	155	140	124
Difference in Medians	5.13%	8.46%	14.01%	1.79%
Wilcoson/M.W.	(0.1591)	(0.7353)	(1.8766)*	(0.6836)
Chi-Square	(0.6024)	(0.5344)	(3.2235)*	(0.1232)
High Tech Firms				
All Firms	25.64%	22.94%	23.00%	7.60%
Number of Firms	167	147	120	106
Corporate Investors	24.01%	36.65%	26.52%	-6.40%
Number of Firms	69	55	36	33
No Corporate Investors	28.94%	15.30%	19.89%	8.64%
Number of Firms	98	92	84	73
Difference in Medians	-4.93%	21.35%	6.63%	-15.04%
Wilcoson/M.W.	(1.4479)	0.302226	(-0.0029)	(0.1979)
Chi-Square	(0.1653)	2.552999	(0.1587)	(0.3960)
Low Tech Firms				
All Firms	19.94%	11.49%	11.21%	11.01%
Number of Firms	221	222	195	168
Corporate Investors	24.96%	29.33%	26.00%	-19.00%
Number of Firms	58	52	44	36
No Corporate Investors	18.53%	5.42%	7.05%	15.80%
Number of Firms	163	170	151	132
Difference in Medians	6.43%	23.91%	18.94%	-34.80%
Wilcoson/M.W.	(1.0318)	(1.6025)	(1.6833)*	(2.7812)***
Chi-Square	(0.4247)	(4.9222)**	(4.3869)**	(5.0909)**

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.3 (continued)

Operating Performance Growth, Differences in Medians, by Industry Affiliation

PANEL B: OPERATING INCOME OVER ASSETS

	Year Relative to IPO			
	From -1 to 0	From -2 to -1	From -3 to -2	From -4 to -3
High Tech Firms				
All Firms	28.47%	18.49%	23.00%	-4.30%
Number of Firms	195	178	120	119
Venture-Backed	49.73%	18.59%	41.40%	7.01%
Number of Firms	130	117	68	69
Non Venture-Backed	4.28%	18.39%	0.17%	-16.52%
Number of Firms	65	61	52	50
Difference in Medians	45.45%	0.20%	41.24%	23.53%
Wilcoson/M.W.	(2.3620)**	(0.7141)	(1.4061)	(0.5357)
Chi-Square	(9.8567)***	(0.0249)	(2.1719)	(1.0740)
Low Tech Firms				
All Firms	1.40%	11.12%	6.68%	15.53%
Number of Firms	227	231	197	167
Venture-Backed	15.41%	8.39%	26.75%	15.91%
Number of Firms	73	73	59	44
Non Venture-Backed	-1.27%	11.15%	-1.02%	14.32%
Number of Firms	154	158	138	123
Difference in Medians	16.68%	-2.77%	27.77%	1.59%
Wilcoson/M.W.	(1.2755)	(1.2632)	(1.7748)*	(0.1580)
Chi-Square	(1.7546)	(0.0094)	(4.2797)**	(0.1581)
High Tech Firms				
All Firms	28.47%	18.49%	23.00%	-4.30%
Number of Firms	195	178	120	119
Corporate Investors	48.04%	27.96%	26.52%	1.54%
Number of Firms	86	80	36	42
No Corporate Investors	19.06%	12.46%	19.89%	-13.09%
Number of Firms	109	98	84	77
Difference in Medians	28.98%	15.50%	6.63%	14.63%
Wilcoson/M.W.	(0.7629)	(0.3524)	(-0.0029)	(0.0083)
Chi-Square	(3.2198)*	(1.4531)	(0.1587)	(0.2037)
Low Tech Firms				
All Firms	1.40%	11.12%	6.68%	15.53%
Number of Firms	227	231	197	167
Corporate Investors	35.60%	41.50%	26.55%	-17.09%
Number of Firms	64	54	44	35
No Corporate Investors	-2.16%	6.96%	-0.18%	18.40%
Number of Firms	163	177	153	132
Difference in Medians	37.76%	34.54%	26.73%	-35.48%
Wilcoson/M.W.	(2.2158)**	(1.9808)**	(1.3817)	(2.2236)**
Chi-Square	(7.2730)***	(4.8966)**	(1.9789)	(0.2815)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.3 (continued)
Operating Performance Growth, Differences in Medians, by Industry Affiliation

PANEL C: PROFIT MARGIN

	Year Relative to IPO			
	From -1 to 0	From -2 to -1	From -3 to -2	From -4 to -3
High Tech Firms				
All Firms	42.33%	23.99%	18.22%	6.69%
Number of Firms	168	149	118	105
Venture-Backed	46.67%	25.53%	39.26%	7.69%
Number of Firms	109	92	67	56
Non Venture-Backed	37.43%	22.46%	5.54%	0.27%
Number of Firms	59	57	51	49
Difference in Medians	9.24%	3.07%	33.72%	7.42%
Wilcoson/M.W.	(0.4286)	(0.9472)	(1.4776)	(0.4593)
Chi-Square	(0.2351)	(0.1947)	(2.7972)*	(0.0109)
Low Tech Firms				
All Firms	24.52%	19.94%	14.26%	16.08%
Number of Firms	219	219	193	174
Venture-Backed	38.40%	19.94%	20.25%	3.97%
Number of Firms	65	67	56	45
Non Venture-Backed	16.76%	19.47%	12.67%	18.83%
Number of Firms	154	152	137	129
Difference in Medians	21.63%	0.47%	7.58%	-14.86%
Wilcoson/M.W.	(1.0329)	(1.1005)	(0.9384)	(1.5913)
Chi-Square	(3.8682)**	(0.0104)	(0.1319)	(0.2698)
High Tech Firms				
All Firms	42.33%	23.99%	18.22%	6.69%
Number of Firms	168	149	118	105
Corporate Investors	39.70%	29.91%	34.33%	-14.63%
Number of Firms	71	54	36	35
No Corporate Investors	42.61%	8.14%	15.70%	8.82%
Number of Firms	97	95	82	70
Difference in Medians	-2.91%	21.77%	18.63%	-23.45%
Wilcoson/M.W.	(1.0179)	(0.1560)	(0.64000)	(1.0230)
Chi-Square	(0.0244)	(2.0312)	(0.6396)	(0.9334)
Low Tech Firms				
All Firms	24.52%	19.94%	14.26%	16.08%
Number of Firms	219	219	193	174
Corporate Investors	39.48%	41.29%	43.68%	-32.58%
Number of Firms	61	52	42	37
No Corporate Investors	17.32%	13.84%	8.62%	21.53%
Number of Firms	158	167	151	138
Difference in Medians	22.17%	27.46%	35.06%	-54.11%
Wilcoson/M.W.	(2.1208)**	(1.4348)	(1.7005)*	(2.2509)**
Chi-Square	(4.0065)**	(3.7767)*	(6.1517)**	(2.7804)*

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 4.3 (continued)
Operating Performance Growth, Differences in Medians, by Industry Affiliation

PANEL D: RETURN ON ASSETS

	Year Relative to IPO			
	From -1 to 0	From -2 to -1	From -3 to -2	From -4 to -3
High Tech Firms				
All Firms	41.02%	5.61%	9.54%	-9.71%
Number of Firms	195	181	147	119
Venture-Backed	51.94%	14.64%	27.09%	-8.95%
Number of Firms	130	119	95	71
Non Venture-Backed	6.96%	5.33%	-2.19%	-14.58%
Number of Firms	65	62	52	48
Difference in Medians	44.99%	9.31%	29.28%	5.63%
Wilcoson/M.W.	(1.5518)	(0.9163)	(1.3714)	(0.5606)
Chi-Square	(2.6257)	(0.0674)	(2.7690)*	(0.4517)
Low Tech Firms				
All Firms	8.09%	13.94%	16.83%	14.81%
Number of Firms	228	227	193	171
Venture-Backed	38.72%	26.06%	24.28%	10.35%
Number of Firms	72	73	59	44
Non Venture-Backed	-4.92%	12.11%	7.38%	17.13%
Number of Firms	156	154	134	127
Difference in Medians	43.63%	13.96%	16.89%	-6.77%
Wilcoson/M.W.	(1.8673)*	(1.2734)	(1.0531)	(1.3480)
Chi-Square	(8.1197)***	(0.5718)	(2.1140)	(0.4287)
High Tech Firms				
All Firms	41.02%	5.61%	9.54%	-9.71%
Number of Firms	195	181	147	119
Corporate Investors	59.11%	23.74%	39.49%	-8.07%
Number of Firms	86	79	56	46
No Corporate Investors	22.82%	3.66%	0.26%	-11.08%
Number of Firms	109	102	91	73
Difference in Medians	36.29%	20.08%	39.23%	3.01%
Wilcoson/M.W.	(1.5807)	(0.4562)	(1.0431)	(0.7613)
Chi-Square	(4.3383)**	(2.0002)	(3.1087)*	(0.2019)
Low Tech Firms				
All Firms	8.09%	13.94%	16.83%	14.81%
Number of Firms	228	227	193	171
Corporate Investors	40.43%	46.62%	41.71%	-38.90%
Number of Firms	66	54	41	35
No Corporate Investors	-2.50%	5.52%	5.91%	17.87%
Number of Firms	162	173	152	136
Difference in Medians	42.93%	41.10%	35.81%	-56.77%
Wilcoson/M.W.	(2.5204)**	(1.8953)*	(1.3941)	(2.1994)**
Chi-Square	(8.5297)***	(4.9259)**	(5.4064)**	(0.8261)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 5.1

Operating Performance Growth Averages, Differences in Means

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Means				
1 year (0)	53.61% 176	37.08% 203	24.04% 174	30.04% 202
2 years (-1 and 0)	30.53% 144	19.69% 179	-12.99% 144	9.90% 180
3 years (-2 to 0)	14.75% 112	6.25% 144	4.37% 111	8.69% 142
4 years (-3 to 0)	12.81% 87	18.17% 102	2.50% 86	6.46% 101
Panel B: Non Venture-Backed Firms Means				
1 year (0)	58.07% 212	22.92% 219	37.65% 213	32.99% 221
2 years (-1 and 0)	71.57% 193	45.58% 198	50.79% 192	37.73% 198
3 years (-2 to 0)	40.88% 173	23.84% 168	35.63% 168	27.09% 168
4 years (-3 to 0)	37.15% 154	27.44% 149	31.65% 153	27.98% 148
Panel C: Difference in Means between Venture-Backed and Non Venture-Backed Firms				
1 year (0)	-4.46% (0.1186)	14.16% (0.6242)	-13.61% (0.3481)	-2.95% (0.0913)
2 years (-1 and 0)	-41.04% (1.4309)	-25.88% (1.4004)	-63.78% (2.2364)**	-27.82% (1.3490)
3 years (-2 to 0)	-26.12% (1.2025)	-17.60% (1.0601)	-31.26% (1.3349)	-18.40% (1.0356)
4 years (-3 to 0)	-24.34% (1.1709)	-9.27% (0.5462)	-29.15% (1.2206)	-21.52% (1.0915)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 5.1 (continued)
Operating Performance Growth Averages, Differences in Means

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Means				
1 year (0)	27.47% 127	11.45% 150	10.51% 132	29.80% 152
2 years (-1 and 0)	8.55% 99	11.07% 128	-2.38% 103	16.09% 129
3 years (-2 to 0)	2.19% 74	-8.28% 95	-2.58% 73	2.72% 93
4 years (-3 to 0)	-9.08% 62	-5.06% 69	-11.28% 63	-0.23% 71
Panel E: Firms without Corporate Investors Means				
1 year (0)	69.95% 261	39.82% 272	42.41% 255	32.57% 271
2 years (-1 and 0)	72.95% 238	44.71% 249	34.88% 233	28.82% 249
3 years (-2 to 0)	40.58% 211	26.23% 217	32.33% 206	25.47% 214
4 years (-3 to 0)	41.34% 179	34.57% 182	32.77% 176	27.02% 178
Panel F: Difference in Means between Firms with and without Corporate Investors				
1 year (0)	-42.48% (1.0657)	-28.37% (1.1994)	-31.90% (0.7785)	-2.77% (0.0824)
2 years (-1 and 0)	-64.40% (2.0743)**	-33.64% (1.7281)*	-37.25% (1.2107)	-12.73% (0.5847)
3 years (-2 to 0)	-38.39% (1.5896)	-34.51% (1.9271)*	-34.91% (1.3384)	-22.75% (1.1808)
4 years (-3 to 0)	-50.42% (2.2238)**	-39.63% (2.1412)**	-44.05% (1.6980)*	-27.26% (1.2723)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 5.2

Operating Performance Growth Averages, Differences in Medians

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel A: Venture-Backed Firms Medians				
1 year (0)	26.35% 176	39.80% 203	41.06% 174	44.97% 202
2 years (-1 and 0)	16.17% 144	16.75% 179	21.73% 144	19.44% 180
3 years (-2 to 0)	17.42% 112	12.16% 144	23.18% 111	17.30% 142
4 years (-3 to 0)	16.83% 87	15.26% 102	20.65% 86	10.43% 101
Panel B: Non Venture-Backed Firms Medians				
1 year (0)	18.03% 212	-1.26% 219	22.49% 213	0.86% 221
2 years (-1 and 0)	20.58% 193	7.56% 198	20.29% 192	5.32% 198
3 years (-2 to 0)	16.71% 173	6.74% 168	21.10% 168	5.17% 165
4 years (-3 to 0)	14.75% 154	6.31% 149	16.52% 153	7.49% 148
Panel C: Difference in Medians between Venture-Backed and Non Venture-Backed Firms				
1 year (0) Wilcoson/M.W. Chi-square	8.32% (0.5306) (1.0399)	41.06% (2.6273)*** (9.1221)***	18.58% (1.3287) (5.2626)**	44.10% (2.7131)*** (17.0969)***
2 years (-1 and 0) Wilcoson/M.W. Chi-square	-4.41% (0.8629) (0.3766)	9.19% (0.3459) (1.4006)	1.43% (0.8858) (0.1944)	14.12% (0.1560) (2.0788)
3 years (-2 to 0) Wilcoson/M.W. Chi-square	0.71% (0.2435) (0.0023)	5.43% (0.2436) (0.8254)	2.08% (0.5132) (0.4359)	12.13% (0.0935) (1.4343)
4 years (-3 to 0) Wilcoson/M.W. Chi-square	2.08% (0.1529) (0.2032)	8.95% (0.1850) (2.5420)	4.13% (0.1803) (0.1012)	2.94% (0.2303) (0.4868)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 5.2 (continued)
Operating Performance Growth Averages, Differences in Medians

Averages	OI/SALES	OI/ASSETS	PROFIT MARGIN	ROA
Panel D: Firms with Corporate Investors Medians				
1 year (0)	24.01% 127	38.62% 150	39.59% 132	51.94% 152
2 years (-1 and 0)	20.37% 99	25.92% 128	27.14% 103	30.46% 129
3 years (-2 to 0)	26.42% 74	15.41% 95	24.98% 73	7.25% 93
4 years (-3 to 0)	15.63% 62	0.24% 69	21.72% 63	3.52% 71
Panel E: Firms without Corporate Investors Medians				
1 year (0)	20.74% 261	0.80% 272	29.27% 255	4.19% 271
2 years (-1 and 0)	17.81% 238	10.69% 249	16.17% 233	1.63% 249
3 years (-2 to 0)	14.20% 211	9.44% 217	20.20% 206	13.39% 214
4 years (-3 to 0)	15.74% 179	8.76% 182	16.43% 176	9.72% 178
Panel F: Difference in Medians between Firms with and without Corporate Investors				
1 year (0) Wilcoson/M.W. Chi-square	3.27% (0.1900) (0.2926)	37.82% (2.3469)** (8.1090)***	10.33% (0.8047) (1.7511)	47.76% (3.0980)*** (18.4259)***
2 years (-1 and 0) Wilcoson/M.W. Chi-square	2.56% (0.4916) (0.1552)	15.23% (1.2301) (3.1580)*	10.97% (0.2473) (3.1501)*	28.83% (1.5349) (6.2253)**
3 years (-2 to 0) Wilcoson/M.W. Chi-square	12.22% (0.5713) (2.7434)*	5.98% (0.0586) (0.3784)	4.78% (0.2169) (0.5136)	-6.14% (0.4848) (0.0075)
4 years (-3 to 0) Wilcoson/M.W. Chi-square	-0.11% (0.6817) (0.0014)	-8.52% (1.4945) (0.9040)	5.29% (0.3854) (0.2296)	-6.20% (1.0085) (0.1452)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 6

Operating Performance in the IPO Year, OLS Regressions

PANEL A: OPERATING INCOME OVER SALES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.0229 (-0.4930)	-1.4496 (-1.7181)*	-1.2945 (-1.5261)	-1.4335 (-1.6917)*	0.0861 (1.6310)	-1.5521 (-1.8674)*	-1.2043 (-1.4607)	-1.3231 (-1.6028)
VCs' Ownership	-1.1190 (-2.3113)**	-1.1148 (-4.6118)***		-1.0119 (-2.0564)**	-1.3192 (-2.7913)***	-1.0800 (-4.4756)***		-1.2014 (-2.5068)***
Number of VCs Involved	-0.0264 (-0.5251)		-0.1035 (-4.1112)***	-0.0122 (-0.2401)	0.0143 (0.2899)		-0.0879 (-3.5229)***	0.0213 (0.4275)
Corporate Investors' Ownership					0.7177 (1.2448)	-1.2920 (-3.8547)***		0.3761 (0.6492)
Number of Corporate Investors Involved					-0.2695 (-3.9478)***		-0.1952 (-5.0037)***	-0.2389 (-3.5170)***
Subsidiary Dummy					-0.0421 (-0.2620)	-0.0495 (-0.3003)	-0.0583 (-0.3569)	-0.0857 (-0.5260)
High-Tech Dummy		-0.2504 (-3.0112)***	-0.2589 (-3.0850)***	-0.2482 (-2.9649)***		-0.2319 (-2.8308)***	-0.2113 (-2.5751)***	-0.1925 (-2.3469)**
Firm Size		0.0802 (1.7762)*	0.0710 (1.5664)	0.0793 (1.7504)*		0.0890 (1.9966)**	0.0704 (1.5972)	0.0780 (1.7639)*
Debt		0.0562 (0.2657)	0.0786 (0.3699)	0.0571 (0.2694)		0.1297 (0.6205)	0.1882 (0.9071)	0.1644 (0.7963)
ADJUSTED R^2	0.0742	0.1102	0.1004	0.1080	0.1277	0.1392	0.1518	0.1621
SUM SQ. RESIDUAL	229.0378	201.6929	203.9007	201.6624	214.2052	194.0839	191.2475	187.9312
SAMPLE	410	387	387	387	410	387	387	387

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 6 (continued)
Operating Performance in the IPO Year, OLS Regressions

PANEL B: OPERATING INCOME OVER ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0601 (3.5407)***	-0.2643 (-0.8459)	-0.2176 (-0.6994)	-0.2259 (-0.7239)	0.1013 (5.2065)***	-0.3153 (-1.0207)	-0.2270 (-0.7450)	-0.2348 (-0.7658)
VCs' Ownership	-0.0732 (-0.4284)	-0.3819 (-4.2375)***		-0.0796 (-0.4442)	-0.1306 (-0.7800)	-0.3729 (-4.1298)***		-0.1368 (-0.7768)
Number of VCs Involved	-0.0463 (-2.6798)***		-0.0424 (-4.6618)***	-0.0354 (-1.9507)*	-0.0351 (-2.0692)**		-0.0381 (-4.2065)***	-0.0260 (-1.4545)
Corporate Investors' Ownership					0.1891 (0.9037)	-0.4615 (-3.6789)***		0.0706 (0.3219)
Number of Corporate Investors Involved					-0.0883 (-3.5542)***		-0.0661 (-4.5199)***	-0.0738 (-2.8507)***
Subsidiary Dummy					-0.0289 (-0.4915)	-0.0203 (-0.3243)	-0.0306 (-0.4943)	-0.0340 (-0.5460)*
High-Tech Dummy		-0.0941 (-3.1068)***	-0.0892 (-2.9529)***	-0.0880 (-2.8992)***		-0.0920 (-3.0797)***	-0.0798 (-2.6961)***	-0.0768 (-2.5672)***
Firm Size		0.0187 (1.1278)	0.0162 (0.9829)	0.0167 (1.0101)		0.0229 (1.3939)	0.0186 (1.1494)	0.0191 (1.1738)
Debt		0.0061 (0.2687)	0.0071 (0.3160)	0.0068 (0.3009)		0.0058 (0.2578)	0.0068 (0.3094)	0.0063 (0.2824)
ADJUSTED R^2	0.0843	0.0914	0.0994	0.0976	0.1297	0.1167	0.1388	0.1360
SUM SQ. RESIDUAL	33.3926	32.1366	31.8515	31.8360	31.5183	31.0878	30.3096	30.2561
SAMPLE	433	409	409	409	433	409	409	409

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 6 (continued)
Operating Performance in the IPO Year, OLS Regressions

PANEL C: PROFIT MARGIN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.0914 (-2.0716)**	-1.5067 (-1.8508)*	-1.3634 (-1.6672)*	-1.5016 (-1.8351)*	0.0002 (0.0045)	-1.6178 (-2.0025)*	-1.3437 (-1.6745)*	-1.4530 (-1.8036)*
VCs' Ownership	-0.8000 (-1.7258)*	-0.9467 (-3.9999)***		-0.9172 (-1.8980)*	-0.9769 (-2.1495)**	-0.9093 (-3.8246)***		-1.0740 (-2.2574)**
Number of VCs Involved	-0.0378 (-0.7874)		-0.0864 (-3.5040)***	-0.0035 (-0.0702)	-0.0002 (-0.0041)		-0.0726 (-2.9474)***	0.0254 (0.5125)
Corporate Investors' Ownership					0.7163 (1.3008)	-1.0180 (-3.0858)***		0.4302 (0.7477)
Number of Corporate Investors Involved					-0.2449 (-3.7530)***		-0.1585 (-4.1274)***	-0.2070 (-3.0754)***
Subsidiary Dummy					0.0124 (0.0805)	0.0191 (0.1173)	0.0120 (0.0738)	-0.0121 (-0.0747)
High-Tech Dummy		-0.2205 (-2.8152)***	-0.2315 (-2.9346)***	-0.2199 (-2.7888)***		-0.2129 (-2.7436)***	-0.2042 (-2.6311)***	-0.1844 (-2.3681)**
Firm Size		0.0789 (1.8249)*	0.0706 (1.6270)	0.0786 (1.8098)*		0.0877 (2.0382)**	0.0735 (1.7240)*	0.0802 (1.8715)*
Debt		-0.0022 (-0.0382)	0.0003 (0.0056)	-0.0022 (-0.0380)		-0.0016 (-0.0275)	0.0016 (0.0281)	-0.0015 (-0.0263)
ADJUSTED R^2	0.0576	0.0832	0.0746	0.0808	0.1047	0.1013	0.1102	0.1186
SUM SQ. RESIDUAL	209.4787	196.9812	198.8217	196.9787	197.5499	192.0811	190.1796	187.4199
SAMPLE	413	391	391	391	413	391	391	391

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 6 (continued)
Operating Performance in the IPO Year, OLS Regressions

PANEL D: RETURN ON ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0022 (0.1730)	-0.3822 (-1.6221)	-0.3465 (-1.4745)	-0.3566 (-1.5141)	0.0337 (2.3211)**	-0.4190 (-1.8026)*	-0.3531 (-1.5433)	-0.3591 (-1.5614)
VCs' Ownership	-0.0661 (-0.5139)	-0.2981 (-4.3938)***		-0.0975 (-0.7223)	-0.1087 (-0.8678)	-0.2869 (-4.2299)***		-0.1418 (-1.0746)
Number of VCs Involved	-0.0314 (-2.4156)**		-0.0320 (-4.6744)***	-0.0235 (-1.7168)*	-0.0221 (-1.7378)*		-0.0281 (-4.1342)***	-0.0155 (-1.1566)
Corporate Investors' Ownership					0.1813 (1.1575)	-0.3663 (-3.8875)***		0.0989 (0.6013)
Number of Corporate Investors Involved					-0.0745 (-4.0075)***		-0.0546 (-4.9784)***	-0.0651 (-3.3521)***
Subsidiary Dummy					-0.0041 (-0.0930)	-0.0004 (-0.0094)	-0.0086 (-0.1862)	-0.0120 (-0.2571)
High-Tech Dummy		-0.0437 (-1.9174)*	-0.0411 (-1.8062)*	-0.0396 (-1.7339)*		-0.0420 (-1.8727)*	-0.0333 (-1.4983)	-0.0298 (-1.3285)
Firm Size		0.0211 (1.6877)*	0.0192 (1.5381)	0.0198 (1.5833)		0.0242 (1.9546)*	0.0210 (1.7272)*	0.0214 (1.7517)*
Debt		-0.0036 (-0.2090)	-0.0027 (-0.1584)	-0.0031 (-0.1818)		-0.0037 (-0.2187)	-0.0028 (-0.1685)	-0.0034 (-0.2041)
ADJUSTED R^2	0.0746	0.0730	0.0786	0.0775	0.1308	0.1027	0.1282	0.1272
SUM SQ. RESIDUAL	18.9502	18.2621	18.1533	18.1299	17.6761	17.5910	17.0906	17.0262
SAMPLE	434	410	410	410	434	410	410	410

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 7

Operating Performance Averaged Over Three Years, OLS Regressions

PANEL A: OPERATING INCOME OVER SALES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0374 (1.2435)	-0.5492 (-0.9931)	-0.3840 (-0.7076)	-0.3755 (-0.6880)	0.1009 (2.9337)***	-0.6092 (-1.1129)	-0.3770 (-0.7060)	-0.3781 (-0.7015)
VCs' Ownership	0.0594 (0.1854)	-0.9326 (-5.2834)***		0.0572 (0.1731)	-0.0757 (-0.2391)	-0.9431 (-5.3192)***		-0.0703 (-0.2149)
Number of VCs Involved	-0.1383 (-4.1113)***		-0.1172 (-6.4341)***	-0.1223 (-3.5218)***	-0.1173 (-3.5068)***		-0.1117 (-6.1102)***	-0.1052 (-3.0448)***
Corporate Investors' Ownership					0.2633 (0.6672)	-0.7202 (-3.0771)***		0.1096 (0.2723)
Number of Corporate Investors Involved					-0.1379 (-2.8008)***		-0.1016 (-3.5867)***	-0.1133 (-2.2724)***
Subsidiary Dummy					-0.1197 (-1.2043)	-0.1070 (-1.0194)	-0.1288 (-1.2577)	-0.1305 (-1.2659)
High-Tech Dummy		-0.1903 (-3.4800)***	-0.1679 (-3.1151)***	-0.1685 (-3.1150)***		-0.1823 (-3.3686)***	-0.1537 (-2.8937)***	-0.1521 (-2.8427)***
Firm Size		0.0336 (1.1420)	0.0252 (0.8722)	-0.0247 (0.8494)		0.0391 (1.3401)	0.0276 (0.9724)	0.0278 (0.9663)
Debt		0.0256 (0.6895)	0.0235 (0.6452)	0.0236 (0.6467)		0.0246 (0.6719)	0.0237 (0.6610)	0.0236 (0.6581)
ADJUSTED R^2	0.1448	0.1480	0.1795	0.1770	0.1769	0.1683	0.2076	0.2030
SUM SQ. RESIDUAL	71.6905	67.6715	65.1677	65.1616	68.4065	65.6506	62.5443	62.5207
SAMPLE	348	328	328	328	348	328	328	328

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 7 (continued)
Operating Performance Averaged Over Three Years, OLS Regressions

PANEL B: OPERATING INCOME OVER ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0767 (4.0278)***	-0.5590 (-1.6340)	-0.4623 (-1.3750)	-0.4835 (-1.4351)	0.1363 (6.3857)***	-0.6242 (-1.8665)*	-0.4643 (-1.4280)	-0.4856 (-1.4882)
VCs' Ownership	-0.1206 (-0.6404)	-0.8008 (-7.9102)***		-0.1914 (-0.9944)	-0.2313 (-1.2696)	-0.8154 (-8.1207)***		-0.3033 (-1.6209)
Number of VCs Involved	-0.0917 (-4.8181)***		-0.0881 (-8.8013)***	-0.0716 (-3.6978)***	-0.0751 (-4.0499)***		-0.0842 (-8.5326)***	-0.0579 (-3.0649)***
Corporate Investors' Ownership					0.2107 (0.8903)	-0.5948 (-4.2668)***		0.1370 (0.5667)
Number of Corporate Investors Involved					-0.1107 (-3.9525)***		-0.0806 (-5.0679)***	-0.0964 (-3.4053)***
Subsidiary Dummy					-0.1306 (-2.0744)**	-0.1209 (-1.8158)*	-0.1305 (-2.0163)**	-0.1390 (-2.1439)**
High-Tech Dummy		-0.1238 (-3.6822)***	-0.1153 (-3.4999)***	-0.1120 (-3.3806)***		-0.1153 (-3.5130)***	-0.1001 (-3.1281)***	-0.0932 (-2.8939)***
Firm Size		0.0355 (1.9553)*	0.0304 (1.7011)*	0.0317 (1.7691)*		0.0412 (2.3115)**	0.0330 (1.9096)*	0.0345 (1.9857)**
Debt		0.0122 (0.5118)	0.0142 (0.6056)	0.0134 (0.5717)		0.0108 (0.4657)	0.0136 (0.6011)	0.0124 (0.5487)
ADJUSTED R^2	0.2344	0.2380	0.2640	0.2640	0.2933	0.2741	0.3126	0.3145
SUM SQ. RESIDUAL	33.4629	31.2882	30.2232	30.1402	30.6477	29.6424	28.0681	27.8359
SAMPLE	386	365	365	365	386	365	365	365

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 7 (continued)
Operating Performance Averaged Over Three Years, OLS Regressions

PANEL C: PROFIT MARGIN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.0361 (-1.1181)	-0.2310 (-0.3943)	-0.0934 (-0.1617)	-0.0394 (-0.0677)	0.0236 (0.6375)	-0.2750 (-0.4711)	-0.0820 (-0.1432)	-0.0320 (-0.0552)
VCs' Ownership	0.3230 (0.9278)	-0.6233 (-3.3416)***		0.2913 (0.8251)	0.1929 (0.5586)	-0.6229 (-3.3046)***		0.1946 (0.5521)
Number of VCs Involved	-0.3147 (-3.7136)***		-0.0859 (-4.4729)***	-0.1118 (-3.0364)***	-0.1125 (-3.1023)***		-0.0802 (-4.1290)***	-0.0972 (-2.6334)***
Corporate Investors' Ownership					0.2267 (0.5311)	-0.5903 (-2.3855)**		0.1487 (0.3472)
Number of Corporate Investors Involved					-0.1330 (-2.4954)**		-0.0871 (-2.8855)***	-0.1007 (-1.8986)*
Subsidiary Dummy					-0.0853 (-0.7932)	-0.0704 (-0.6349)	-0.0960 (-0.8810)	-0.0908 (-0.8286)
High-Tech Dummy		-0.2063 (-3.6002)***	-0.1841 (-3.2443)***	-0.1875 (-3.2944)***		-0.2000 (-3.5066)***	-0.1724 (-3.0598)***	-0.1738 (-3.0642)***
Firm Size		0.0135 (0.4319)	0.0066 (0.2163)	0.0036 (0.1146)		0.0176 (0.5655)	0.0084 (0.2754)	0.0055 (0.1784)
Debt		0.0079 (0.2029)	0.0057 (0.1483)	0.0062 (0.1597)		0.0073 (0.1891)	0.0060 (0.1567)	0.0064 (0.1680)
ADJUSTED R^2	0.0838	0.0898	0.1131	0.1122	0.1108	0.1003	0.1307	0.1264
SUM SQ. RESIDUAL	84.1499	75.1557	73.2298	73.0763	80.9665	73.8280	71.3374	71.2435
SAMPLE	351	330	330	330	351	330	330	330

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 7 (continued)
Operating Performance Averaged Over Three Years, OLS Regressions

PANEL D: RETURN ON ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0196 (1.1617)	-0.5483 (-1.7988)*	-0.4579 (-1.5201)	-0.4850 (-1.6088)	0.0739 (3.9081)***	-0.6086 (-2.0403)**	-0.4669 (-1.6035)	-0.4895 (-1.6802)*
VCs' Ownership	-0.1862 (-1.1154)	-0.7194 (-8.0308)***		-0.2392 (-1.3944)	-0.2834 (-1.7580)*	-0.7387 (-8.3064)***		-0.3390 (-2.0370)**
Number of VCs Involved	-0.0729 (4.3478)***		-0.0765 (-8.6457)***	-0.0560 (-3.2661)***	-0.0589 (-3.6156)***		-0.0739 (-8.4733)***	-0.0445 (-2.6698)***
Corporate Investors' Ownership					0.2441 (1.1630)	-0.5043 (-4.0682)***		0.1844 (0.8560)
Number of Corporate Investors Involved					-0.1039 (-4.1857)***		-0.0714 (-5.0346)***	-0.0919 (-3.6478)***
Subsidiary Dummy					-0.1299 (-2.3285)**	-0.1241 (-2.0961)**	-0.1314 (-2.2740)**	-0.1410 (-2.4403)**
High-Tech Dummy		-0.1070 (-3.5890)***	-0.1017 (-3.4526)***	-0.0975 (-3.2978)***		-0.1000 (-3.4261)***	-0.0884 (-3.0911)***	-0.0804 (-2.8018)***
Firm Size		0.0318 (1.9628)**	0.0269 (1.6794)*	0.0285 (1.7804)*		0.0369 (2.3258)**	0.0297 (1.9170)*	0.0312 (2.0158)**
Debt		0.0006 (0.0302)	0.0026 (0.1241)	0.0016 (0.0768)		-0.0008 (-0.0378)	0.0019 (0.0929)	0.0006 (0.0277)
ADJUSTED R^2	0.2330	0.2379	0.2558	0.2578	0.2944	0.2724	0.3057	0.3113
SUM SQ. RESIDUAL	26.4396	24.7864	24.2031	24.0731	24.1314	23.5340	22.4566	22.1510
SAMPLE	387	366	366	366	387	366	366	366

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 8

Operating Performance Averaged Over Five Years, OLS Regressions

PANEL A: OPERATING INCOME OVER SALES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0435 (2.1162)**	-0.0370 (-0.0933)	0.0823 (0.2088)	0.0729 (0.1832)	0.1102 (4.8667)***	-0.1026 (0.2718)	0.0947 (0.2575)	0.0486 (0.1308)
VCs' Ownership	-0.1567 (-0.6626)	-0.4533 (-3.6307)***		-0.0466 (-0.1927)	-0.3240 (-1.4381)	-0.4967 (-4.1331)***		-0.2270 (-0.9994)
Number of VCs Involved	-0.0520 (-1.9609)**		-0.0573 (-4.1477)***	-0.0529 (-1.9577)**	-0.0346 (-1.3632)		-0.0529 (-4.0294)***	-0.0311 (-1.2195)
Corporate Investors' Ownership					0.0286 (0.1097)	-0.7353 (-4.5906)***		-0.0048 (-0.0186)
Number of Corporate Investors Involved					-0.1101 (-3.2154)***		-0.1160 (-5.6062)***	-0.1178 (-3.4658)***
Subsidiary Dummy					-0.2151 (-3.2548)***	-0.2118 (-3.0378)***	-0.2262 (-3.3369)***	-0.2311 (-3.3929)***
High-Tech Dummy		-0.0833 (-2.1108)**	-0.0823 (-2.1105)**	-0.0815 (-2.0764)**		-0.0875 (-2.3300)**	-0.0824 (-2.2668)**	-0.0788 (-2.1487)**
Firm Size		0.0052 (0.2464)	-0.0009 (-0.0419)	-0.0004 (-0.0168)		0.0115 (0.5670)	0.0016 (0.0807)	0.0042 (0.2119)
Debt		0.0002 (0.0023)	-0.0045 (-0.0468)	-0.0049 (-0.0501)		0.0146 (0.1552)	0.0599 (0.6487)	0.0594 (0.6404)
ADJUSTED R^2	0.0851	0.0772	0.0917	0.0881	0.1831	0.1668	0.2127	0.2093
SUM SQ. RESIDUAL	19.7439	18.1465	17.8605	17.8577	17.4220	16.2474	15.3520	15.2868
SAMPLE	257	243	243	243	257	243	243	243

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 8 (continued)

Operating Performance Averaged Over Five Years, OLS Regressions

PANEL B: OPERATING INCOME OVER ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0939 (4.8345)***	-0.0427 (-0.1109)	0.1569 (0.4257)	0.2322 (0.6238)	0.1533 (7.2817)***	-0.0575 (-0.1568)	0.2006 (0.5838)	0.2334 (0.6689)
VCs' Ownership	0.1694 (0.8349)	-0.5674 (-4.6920)***		0.2840 (1.3568)	0.0161 (0.0838)	-0.5737 (-4.9289)***		0.1310 (0.6634)
Number of VCs Involved	-0.1066 (-4.9724)***		-0.0816 (-6.7738)***	-0.1063 (-4.8804)***	-0.0839 (-4.0753)***		-0.0715 (-6.2210)***	-0.0831 (-4.0018)***
Corporate Investors' Ownership					0.0546 (0.2329)	-0.7704 (-5.1080)***		-0.0311 (-0.1338)
Number of Corporate Investors Involved					-0.1134 (-3.7767)***		-0.1119 (-6.1301)***	-0.1073 (-3.5805)***
Subsidiary Dummy					-0.1362 (-2.1074)**	-0.1268 (-1.7723)*	-0.1484 (-2.2158)**	-0.1450 (-2.1499)**
High-Tech Dummy		-0.1227 (-3.2115)***	-0.1036 (-2.8345)***	-0.1085 (-2.9593)***		-0.1195 (-3.2780)***	-0.0944 (-2.7636)***	-0.0970 (-2.8111)***
Firm Size		0.0093 (0.4525)	-0.0008 (-0.0426)	-0.0051 (-0.2563)		0.0123 (0.6264)	-0.0007 (-0.0392)	-0.0026 (-0.1398)
Debt		-0.0895 (-0.9519)	-0.0731 (-0.8128)	-0.0634 (-0.7038)		-0.0582 (-0.6467)	0.0012 (0.0139)	0.0042 (0.0485)
ADJUSTED R^2	0.1914	0.1456	0.2157	0.2184	0.2847	0.2266	0.3209	0.3165
SUM SQ. RESIDUAL	17.6806	17.4176	15.9883	15.8686	15.4691	15.6373	13.7312	13.7051
SAMPLE	265	250	250	250	265	250	250	250

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 8 (continued)
Operating Performance Averaged Over Five Years, OLS Regressions

PANEL C: PROFIT MARGIN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.0121 (-0.5067)	-0.1333 (-0.3474)	-0.0214 (-0.0563)	-0.1781 (-0.0464)	0.0742 (2.8887)***	-0.2312 (-0.6367)	-0.0448 (-0.1275)	-0.0876 (-0.2460)
VCs' Ownership	0.1628 (0.5993)	-0.4406 (-3.6065)***		0.0185 (0.0792)	-0.1223 (-0.4823)	-0.4720 (-4.0439)***		-0.2053 (-0.9420)
Number of VCs Involved	-0.0887 (-2.9404)***		-0.0577 (-4.3145)***	-0.0595 (-2.3027)**	-0.0526 (-1.8523)*		-0.0500 (-3.9574)***	-0.0305 (-1.2533)
Corporate Investors' Ownership					-0.0833 (-0.2839)	-0.7908 (-5.2149)***		-0.0249 (-0.1010)
Number of Corporate Investors Involved					-0.1456 (-3.7466)***		-0.1218 (-6.1911)***	-0.1219 (-3.7022)***
Subsidiary Dummy					-0.1947 (-2.5923)***	-0.1852 (-2.7330)***	-0.1997 (-3.0448)***	-0.2046 (-3.1030)***
High-Tech Dummy		-0.1001 (-2.5887)***	-0.0964 (-2.5311)**	-0.0967 (-2.5218)***		-0.0993 (-2.7222)***	-0.0917 (-2.6056)***	-0.0886 (-2.4956)**
Firm Size		0.0087 (0.4240)	0.0030 (0.1501)	0.0028 (0.1388)		0.0166 (0.8540)	0.0073 (0.3883)	0.0098 (0.5123)
Debt		-0.1073 (-1.1167)	-0.1150 (-1.2091)	-0.1149 (-1.2054)		-0.0904 (-0.9905)	-0.0448 (-0.5010)	-0.0451 (-0.5022)
ADJUSTED R^2	0.0756	0.0830	0.1029	0.0992	0.2156	0.1849	0.2361	0.2325
SUM SQ. RESIDUAL	27.0612	17.4698	17.0896	17.0891	22.6924	15.3987	14.4319	14.3772
SAMPLE	259	244	244	244	259	244	244	244

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 8 (continued)

Operating Performance Averaged Over Five Years, OLS Regressions

PANEL D: RETURN ON ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0380 (2.1817)**	-0.1754 (-0.5234)	-0.0017 (-0.0053)	0.0441 (0.1356)	0.0972 (5.3163)***	-0.1953 (-0.6210)	0.0412 (0.1407)	0.0495 (0.1667)
VCs' Ownership	0.0854 (0.4769)	-0.5297 (-5.0231)***		0.1834 (1.0071)	-0.0676 (-0.4089)	-0.5238 (-5.2388)***		0.0292 (0.1743)
Number of VCs Involved	-0.0918 (-4.8853)***		-0.0730 (-6.9693)***	-0.0888 (-4.7091)***	-0.0659 (-3.7495)***		-0.0611 (-6.2498)***	-0.0636 (-3.6245)***
Corporate Investors' Ownership					0.1106 (0.5538)	-0.7507 (-5.9464)***		0.0147 (0.0747)
Number of Corporate Investors Involved					-0.1214 (-4.8114)***		-0.1090 (-7.2561)***	-0.1102 (-4.4117)***
Subsidiary Dummy					-0.1119 (-2.0016)**	-0.1047 (-1.6934)*	-0.1220 (-2.1249)**	-0.1211 (-2.0933)**
High-Tech Dummy		-0.1369 (-4.0800)***	-0.1203 (-3.7434)***	-0.1237 (-3.8268)***		-0.1290 (-4.0935)***	-0.1049 (-3.5743)***	-0.1053 (-3.5469)***
Firm Size		0.0139 (0.7788)	0.0051 (0.2952)	0.0025 (0.1416)		0.0171 (1.0155)	0.0050 (0.3218)	0.0045 (0.2856)
Debt		-0.1466 (-1.7725)*	-0.1338 (-1.6883)*	-0.1279 (-1.6095)		-0.1186 (-1.5229)	-0.0611 (-0.8385)	-0.0600 (-0.8152)
ADJUSTED R^2	0.2071	0.1870	0.2516	0.2516	0.3375	0.2874	0.3835	0.3785
SUM SQ. RESIDUAL	14.0132	13.4004	12.3351	12.2801	11.5744	11.6493	10.0774	10.0759
SAMPLE	265	250	250	250	265	250	250	250

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 9

Operating Performance Growth in the IPO Year, OLS Regressions

PANEL A: OPERATING INCOME OVER SALES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.5274 (2,2581)**	3.1830 (0,7297)	3.0060 (0,6899)	2.8010 (0,6402)	0.7017 (2,5819)***	2.9009 (0,6633)	3.0892 (0,7071)	2.4500 (0,5555)
VCs' Ownership	-1.8523 (-0,7432)	0.9602 (0,7457)		-1.5468 (-0,5835)	-2.1925 (-0,8726)	0.9624 (0,7359)		-1.8489 (-0,6921)
Number of VCs Involved	0.2288 (0,8876)		0.1576 (1,1784)	0.2982 (1,0818)	0.2754 (1,0513)		0.1724 (1,2609)	0.3356 (1,2028)
Corporate Investors' Ownership					-1.6079 (-0,5370)	-2.4729 (-1,3397)		-2.7454 (-0,8630)
Number of Corporate Investors Involved					-0.1244 (-0,3399)		-0.2466 (-1,1071)	0.0077 (0,0200)
Subsidiary Dummy					-0.2995 (-0,3594)	-0.3641 (-0,4082)	-0.2892 (-0,3245)	-0.3489 (-0,3900)
High-Tech Dummy		-0.8440 (-1,9662)**	-0.9187 (-2,1272)**	-0.9053 (-2,0914)**		-0.8287 (-1,9294)*	-0.8825 (-2,0356)**	-0.8975 (-2,0560)**
Firm Size		-0.1238 (-0,5344)	-0.1161 (-0,5020)	-0.1040 (-0,4473)		-0.1005 (-0,4316)	-0.1135 (-0,4892)	-0.0765 (-0,3262)
Debt		-0.2295 (-0,7534)	-0.2263 (-0,7440)	-0.2303 (-0,7562)		-0.2310 (-0,7580)	-0.2261 (-0,7424)	0.2317 (-0,7596)
ADJUSTED R^2	-0.0031	0.0012	0.0035	0.0017	-0.0055	0.0008	0.0015	-0.0007
SUM SQ. RESIDUAL	5243.3950	5160.6220	5148.7980	5143.9470	5215.0170	5134.1700	5130.8620	5113.1830
SAMPLE	388	367	367	367	388	367	367	367

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 9 (continued)
Operating Performance Growth in the IPO Year, OLS Regressions

PANEL B: OPERATING INCOME OVER ASSETS								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.1747 (1,2140)	4.3841 (1,6578)*	4.2258 (1,5968)	4.3434 (1,6369)	0.1417 (0,8435)	4.4697 (1,6971)*	4.4056 (1,6722)*	4.3458 (1,6396)
VCs' Ownership	0.5700 (0,3953)	1.3852 (1,8086)*		1.0735 (0,7020)	0.6844 (0,4741)	1.7114 (2,2152)**		1.2214 (0,7986)
Number of VCs Involved	0.0410 (0,2810)		0.1311 (1,6821)*	0.0366 (0,2356)	0.0629 (0,4282)		0.1660 (2,1034)**	0.0564 (0,3616)
Corporate Investors' Ownership					-1.2028 (-0,6654)	-1.2175 (-1,1376)		-1.7779 (-0,9307)
Number of Corporate Investors Involved					0.0144 (0,0670)		-0.1060 (-0,8388)	0.0748 (0,3323)
Subsidiary Dummy					1.0906 (2,1318)**	1.1788 (2,1707)**	1.1696 (2,1516)**	1.1936 (2,1880)**
High-Tech Dummy		-0.3941 (-1,5288)	-0.3873 (-1,4954)	-0.4013 (-1,5440)		-0.3823 (-1,4913)	-0.3640 (-1,4097)	-0.4042 (-1,5520)
Firm Size		-0.2158 (-1,5374)	-0.2064 (-1,4712)	-0.2136 (-1,5174)		-0.2221 (-1,5753)	-0.2185 (-1,5619)	-0.2160 (-1,5330)
Debt		-0.1548 (-0,8104)	-0.1603 (-0,8392)	-0.1556 (-0,8137)		-0.1438 (-0,7573)	-0.1503 (-0,7906)	-0.1450 (-0,7619)
ADJUSTED R^2	-0.0002	0.0074	0.0063	0.0050	0.0079	0.0192	0.0161	0.0148
SUM SQ. RESIDUAL	2268.8310	2220.8070	2223.2720	2220.4940	2234.3560	2183.2570	2190.1320	2181.7890
SAMPLE	422	400	400	400	422	400	400	400

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 9 (continued)
Operating Performance Growth in the IPO Year, OLS Regressions

PANEL C: PROFIT MARGIN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.2921 (1,2075)	8.1693 (1,7834)*	8.0752 (1,7682)*	7.4939 (1,6317)*	0.3209 (1,1385)	8.2536 (1,7969)*	8.2945 (1,8129)*	7.5981 (1,6409)*
VCs' Ownership	-3.7199 (-1,4231)	0.5678 (0,4142)		-3.2364 (-1,1490)	-3.7629 (-1,4283)	0.8118 (0,5821)		-3.2120 (-1,1320)
Number of VCs Involved	0.4210 (1,5586)		0.1568 (1,1129)	0.4479 (1,5452)	0.4603 (1,6763)*		0.1908 (1,3231)	0.4781 (1,6295)*
Corporate Investors' Ownership					-0.4953 (-0,1597)	-1.0410 (-0,5420)		-0.8604 (-0,2597)
Number of Corporate Investors Involved					-0.1227 (-0,3235)		-0.1334 (-0,5752)	-0.0695 (-0,1735)
Subsidiary Dummy					0.6818 (0,7901)	0.7474 (0,8056)	0.8368 (0,9041)	0.7561 (0,8139)
High-Tech Dummy		-0.5471 (-1,2215)	-0.6559 (-1,4679)	-0.6067 (-1,3521)		-0.5417 (-1,2076)	-0.6339 (-1,4132)	-0.5933 (-1,3086)
Firm Size		-0.4069 (-1,6720)*	-0.4051 (-1,6717)*	-0.3720 (-1,5251)		-0.4120 (-1,6849)*	-0.4174 (-1,7188)*	-0.3771 (-1,5315)
Debt		-0.2210 (-0,6975)	-0.2136 (-0,6753)	-0.2210 (-0,6989)		-0.2140 (-0,6742)	-0.2054 (-0,6486)	-0.2135 (-0,6733)
ADJUSTED R^2	0.0011	0.0017	0.0047	0.0055	-0.0029	-0.0009	0.0027	0.0009
SUM SQ. RESIDUAL	5597.3060	5550.3010	5533.9090	5513.6320	5575.7430	5533.8260	5513.7620	5492.8580
SAMPLE	387	365	365	365	387	365	365	365

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 9 (continued)
Operating Performance Growth in the IPO Year, OLS Regressions

PANEL D: RETURN ON ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.1989 (0,9713)	4.5830 (1,2095)	4.3996 (1,1612)	4.4818 (1,1793)	0.1546 (0,6440)	4.6081 (1,2121)	4.4734 (1,1781)	4.3219 (1,1308)
VCs' Ownership	0.2321 (0,1127)	1.5929 (1,4510)		0.7755 (0,3539)	0.3338 (0,1609)	1.7449 (1,5644)		0.9140 (0,4141)
Number of VCs Involved	0.0726 (0,3471)		0.1649 (1,4719)	0.0965 (0,4312)	0.0711 (0,3357)		0.1772 (1,5512)	0.0935 (0,4138)
Corporate Investors' Ownership					-1.6599 (-0,6394)	-0.5067 (-0,3285)		-2.3091 (-0,8381)
Number of Corporate Investors Involved					0.1680 (0,5426)		0.0167 (0,0918)	0.2475 (0,7625)
Subsidiary Dummy					0.5767 (0,7703)	0.5779 (0,7225)	0.6103 (0,7633)	0.6238 (0,7770)
High-Tech Dummy		-0.6726 (-1,8229)*	-0.6823 (-1,8406)*	-0.6921 (-1,8599)*		-0.6697 (-1,8118)*	-0.6819 (-1,8330)*	-0.7252 (-1,9310)*
Firm Size		-0.2195 (-1,0917)	-0.2092 (-1,0414)	-0.2143 (-1,0626)		-0.2218 (-1,0970)	-0.2162 (-1,0725)	-0.2083 (-1,0250)
Debt		-0.2350 (-0,8601)	-0.2404 (-0,8801)	-0.2371 (-0,8666)		-0.2306 (-0,8424)	-0.2360 (-0,8622)	-0.2325 (-0,8477)
ADJUSTED R^2	-0.0026	0.0041	0.0043	0.0021	-0.0073	0.0009	0.0007	-0.0022
SUM SQ. RESIDUAL	4624.4790	4561.0960	4560.3960	4558.9500	4613.1420	4552.9960	4553.6600	4543.5750
SAMPLE	423	401	401	401	423	401	401	401

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 10

Operating Performance Growth Averaged Over Four Years, OLS Regressions

PANEL A: OPERATING INCOME OVER SALES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.3348 (2,8495)***	2.2565 (0,9802)	2.3852 (1,0350)	2.8076 (1,2054)	0.5708 (4,2790)***	2.3226 (1,0190)	2.7744 (1,2351)	3.1319 (1,3728)
VCs' Ownership	0.7592 (0,5521)	-0.0516 (-0,0724)		1.7000 (1,1962)	0.1877 (0,1392)	0.0032 (0,0045)		1.2080 (0,8658)
Number of VCs Involved	-0.1523 (-0,9984)		-0.0609 (-0,7746)	-0.2233 (-1,4237)	-0.0683 (-0,4546)		-0.0200 (-0,2569)	-0.1335 (-0,8626)
Corporate Investors' Ownership					0.8253 (0,5519)	-2.5824 (-2,7643)***		0.7094 (0,4720)
Number of Corporate Investors Involved					-0.5583 (-2,8240)***		-0.4741 (-3,8642)***	-0.5382 (-2,6831)***
Subsidiary Dummy					-0.2973 (-0,7414)	-0.0309 (-0,0718)	-0.1493 (-0,3532)	-0.1224 (-0,2883)
High-Tech Dummy		-0.6388 (-2,8192)***	-0.6087 (-2,6970)***	-0.6300 (-2,7854)***		-0.6334 (-2,8294)***	-0.5823 (-2,6516)***	-0.5931 (-2,6832)***
Firm Size		-0.0883 (-0,7174)	-0.0932 (-0,7578)	-0.1166 (-0,9370)		-0.0864 (-0,7077)	-0.1056 (-0,8803)	-0.1258 (-1,0304)
Debt		-0.5510 (-0,9961)	-0.5857 (-1,0605)	-0.5648 (-1,0231)		-0.4046 (-0,7352)	-0.2119 (-0,3874)	-0.1846 (-0,3357)
ADJUSTED R^2	-0.0025	0.0228	0.0255	0.0273	0.0492	0.0473	0.0792	0.0748
SUM SQ. RESIDUAL	574.0994	526.4504	525.0436	521.6658	537.6111	508.6640	491.6408	489.4799
SAMPLE	241	227	227	227	241	227	227	227

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 10 (continued)
Operating Performance Growth Averaged Over Four Years, OLS Regressions

PANEL B: OPERATING INCOME OVER ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.2811 (2,7884)***	3.0946 (1,5505)	3.1345 (1,5747)	3.9568 (1,9732)**	0.3696 (3,1977)***	3.2940 (1,6613)*	3.4373 (1,7463)*	4.2141 (2,1162)**
VCs' Ownership	1.6529 (1,5900)	0.2542 (0,4145)		2.5139 (2,2828)**	1.4001 (1,3441)	0.4195 (0,6811)		2.3362 (2,1216)**
Number of VCs Involved	-0.2305 (-2,1105)**		-0.0631 (-0,9963)	-0.2800 (-2,4589)**	-0.1725 (-1,5572)		-0.0237 (-0,3698)	-0.2254 (-1,9576)**
Corporate Investors' Ownership					0.3619 (0,2884)	-1.4919 (-1,8653)*		0.3333 (0,2612)
Number of Corporate Investors Involved					-0.2825 (-1,7155)*		-0.2644 (-2,5048)**	-0.2728 (-1,6104)
Subsidiary Dummy					0.2166 (0,6093)	0.5047 (1,3095)	0.3886 (1,0158)	0.4562 (1,1950)
High-Tech Dummy		-0.4839 (-2,4748)**	-0.4056 (-2,0774)**	-0.4423 (-2,2781)**		-0.4503 (-2,3158)**	-0.3788 (-1,7997)*	-0.3824 (-1,9725)**
Firm Size		-0.1410 (-1,3201)	-0.1401 (-1,3188)	-0.1864 (-1,7382)*		-0.1515 (-1,4263)	-0.1547 (-1,4715)	-0.1992 (-1,8682)*
Debt		-0.1188 (-0,2507)	-0.1400 (-0,2965)	-0.0417 (-0,0887)		0.0164 (0,0345)	0.1124 (0,2367)	0.1962 (0,4132)
ADJUSTED R^2	0.0102	0.0180	0.0215	0.0390	0.0255	0.0337	0.0462	0.0568
SUM SQ. RESIDUAL	426.7753	408.5276	407.0822	398.0632	415.1021	398.5228	393.3705	385.6077
SAMPLE	251	236	236	236	251	236	236	236

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 10 (continued)
Operating Performance Growth Averaged Over Four Years, OLS Regressions

PANEL C: PROFIT MARGIN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.2426 (1,7803)*	-0.1619 (-0,0635)	-0.1284 (-0,0504)	0.1604 (0,0624)	0.3861 (2,4694)**	0.0058 (0,0023)	0.1298 (0,0510)	0.4045 (0,1572)
VCs' Ownership	0.2273 (0,1421)	0.0165 (0,0200)		1.3559 (0,8326)	-0.2998 (-0,1860)	0.1174 (0,1399)		1.0151 (0,6174)
Number of VCs Involved	-0.0667 (-0,3693)		-0.0430 (-0,4668)	-0.1736 (-0,9541)	0.0255 (0,1384)		-0.0019 (-0,0202)	-0.0955 (-0,5133)
Corporate Investors' Ownership					1.8518 (1,0223)	-1.0651 (-1,0170)		1.8084 (1,0147)
Number of Corporate Investors Involved					-0.5182 (-2,1451)**		-0.2744 (-1,9374)*	-0.4590 (-1,9023)*
Subsidiary Dummy					-0.0810 (-0,1728)	0.1918 (0,3930)	0.0976 (0,2015)	0.1202 (0,2470)
High-Tech Dummy		-0.3149 (-1,2279)	-0.2868 (-1,1286)	-0.3148 (-1,2274)		-0.3064 (-1,1924)	-0.2731 (-1,0787)	-0.2897 (-1,1323)
Firm Size		0.0294 (0,2152)	0.0291 (0,2136)	0.0131 (0,0955)		0.0214 (0,1558)	0.0187 (0,1368)	0.0031 (0,0224)
Debt		-0.8538 (-1,3215)	-0.8826 (-1,3662)	-0.8731 (-1,3503)		-0.7638 (-1,1711)	-0.6185 (-0,9411)	-0.5667 (-0,8583)
ADJUSTED R^2	-0.0073	-0.0061	-0.0051	-0.0065	0.0064	-0.0094	0.0037	0.0009
SUM SQ. RESIDUAL	748.0037	648.1311	647.4880	645.4358	728.4122	644.3165	635.9540	631.9093
SAMPLE	239	224	224	224	239	224	224	224

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 10 (continued)

Operating Performance Growth Averaged Over Four Years, OLS Regressions

PANEL D: RETURN ON ASSETS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.2423 (2,0355)**	0.7590 (0,3387)	0.7402 (0,3309)	1.2590 (0,5595)	0.2765 (2,0275)**	0.8941 (0,3969)	0.8837 (0,3933)	1.4100 (0,6228)
VCs' Ownership	1.2862 (1,0641)	0.2880 (0,4088)		2.0613 (1,6521)*	1.1515 (0,9364)	0.3881 (0,5418)		2.0484 (1,6132)
Number of VCs Involved	-0.2001 (-1,5101)		-0.0476 (-0,6246)	-0.2322 (-1,7187)*	-0.1623 (-1,1791)		-0.0275 (-0,3462)	-0.2107 (-1,5012)
Corporate Investors' Ownership					1.0490 (0,7030)	-0.2231 (-0,2459)		1.0050 (0,6732)
Number of Corporate Investors Involved					-0.2148 (-1,1128)		-0.0824 (-0,6907)	-0.1570 (-0,8033)
Subsidiary Dummy					0.1073 (0,2566)	0.3460 (0,7814)	0.2547 (0,5762)	0.3152 (0,7122)
High-Tech Dummy		-0.4972 (-2,2193)**	-0.4210 (-1,8758)*	-0.4544 (-2,0239)**		-0.4859 (-2,1556)**	-0.4013 (-1,7758)*	-0.4308 (-1,8987)*
Firm Size		-0.0176 (-0,1470)	-0.0142 (-0,1187)	-0.0438 (-0,3636)		-0.0263 (-0,2175)	-0.0221 (-0,1840)	-0.0530 (-0,4370)
Debt		-0.5879 (-1,0476)	-0.6051 (-1,0804)	-0.5298 (-0,9464)		-0.5455 (-0,9624)	-0.5131 (-0,8973)	-0.4345 (-0,7585)
ADJUSTED R^2	0.0018	0.0056	0.0066	0.0140	-0.0045	0.0000	0.0018	0.0063
SUM SQ. RESIDUAL	573.4589	522.5247	522.0168	515.8413	570.0053	1.5148	519.9502	513.0210
SAMPLE	249	234	234	234	249	234	234	234

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 11.1
Growth of Sales, Differences in Means

Year Relative to IPO	GROWTH OF SALES	Averages	AVERAGE GROWTH
Panel A: Venture-Backed Firms Means			
From year -1 to 0	173.00% 198	1 year (0)	173.00% 198
From year -2 to -1	217.75% 182	2 years (-1 and 0)	168.37% 173
From year -3 to -2	219.96% 147	3 years (-2 to 0)	150.22% 139
From year -4 to -3	106.19% 113	4 years (-3 to 0)	86.85% 110
Panel B: Non Venture-Backed Firms Means			
From year -1 to 0	113.18% 226	1 year (0)	113.18% 226
From year -2 to -1	107.84% 225	2 years (-1 and 0)	99.02% 210
From year -3 to -2	72.85% 201	3 years (-2 to 0)	71.47% 186
From year -4 to -3	52.79% 185	4 years (-3 to 0)	53.88% 183
Panel C: Difference in Means between Venture-Backed and Non Venture-Backed Firms			
From year -1 to 0	59.81% (2.0641)**	1 year (0)	59.81% (2.0641)**
From year -2 to -1	109.91% (2.4995)**	2 years (-1 and 0)	69.35% (2.5082)**
From year -3 to -2	147.11% (2.9727)***	3 years (-2 to 0)	78.75% (3.3203)***
From year -4 to -3	53.40% (2.2667)**	4 years (-3 to 0)	32.97% (2.7320)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 11.1 (continued)
Growth of Sales, Differences in Means

DEPENDENT VARIABLE: GROWTH OF SALES			
Year Relative to IPO	**GROWTH OF SALES**	**Averages**	**AVERAGE GROWTH**
Panel D: Firms with Corporate Investors Means			
From year -1 to 0	212.40% 149	1 year (0)	212.40% 149
From year -2 to -1	228.75% 128	2 years (-1 and 0)	183.47% 124
From year -3 to -2	258.72% 102	3 years (-2 to 0)	167.93% 98
From year -4 to -3	104.75% 80	4 years (-3 to 0)	85.56% 78
Panel E: Firms without Corporate Investors Means			
From year -1 to 0	102.49% 275	1 year (0)	102.49% 275
From year -2 to -1	125.37% 279	2 years (-1 and 0)	104.91% 259
From year -3 to -2	83.69% 246	3 years (-2 to 0)	78.05% 227
From year -4 to -3	61.40% 218	4 years (-3 to 0)	59.25% 215
Panel F: Difference in Means between Firms with and without Corporate Investors			
From year -1 to 0	109.91% (3.6683)***	1 year (0)	109.91% (3.6683)***
From year -2 to -1	103.38% (2.1521)**	2 years (-1 and 0)	78.56% (2.6743)***
From year -3 to -2	175.03% (3.2678)***	3 years (-2 to 0)	89.88% (3.5221)***
From year -4 to -3	43.35% (1.6741)*	4 years (-3 to 0)	26.31% (1.9782)**

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 11.2

Growth of Sales, Differences in Medians

Year Relative to IPO	GROWTH OF SALES	Averages	AVERAGE GROWTH
Panel A: Venture-Backed Firms Medians			
From year -1 to 0	81.35% 198	1 year (0)	81.35% 198
From year -2 to -1	78.44% 182	2 years (-1 and 0)	75.35% 173
From year -3 to -2	50.03% 147	3 years (-2 to 0)	62.75% 139
From year -4 to -3	33.45% 113	4 years (-3 to 0)	53.01% 110
Panel B: Non Venture-Backed Firms Medians			
From year -1 to 0	40.16% 226	1 year (0)	40.16% 226
From year -2 to -1	31.20% 225	2 years (-1 and 0)	36.04% 210
From year -3 to -2	25.59% 201	3 years (-2 to 0)	31.54% 186
From year -4 to -3	26.01% 185	4 years (-3 to 0)	30.06% 183
Panel C: Difference in Medians between Venture-Backed and Non Venture-Backed Firms			
From year -1 to 0 Wilcoson/M.W. Chi-square	41.19% (5.0405)*** (34.1110)***	1 year (0)	41.19% (5.0405)*** (34.1110)***
From year -2 to -1 Wilcoson/M.W. Chi-square	47.25% (4.8565)*** (29.4641)***	2 years (-1 and 0)	39.31% (5.0087)*** (32.4165)***
From year -3 to -2 Wilcoson/M.W. Chi-square	24.44% (4.5157)*** (17.9141)***	3 years (-2 to 0)	31.22% (5.0395)*** (28.2764)***
From year -4 to -3 Wilcoson/M.W. Chi-square	7.44% (0.8161) (1.1547)	4 years (-3 to 0)	22.95% (3.3883)*** (19.2595)***

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 11.2 (continued)
Growth of Sales, Differences in Medians

Year Relative to IPO	GROWTH OF SALES	Averages	AVERAGE GROWTH
Panel D: Firms with Corporate Investors Medians			
From year -1 to 0	69.96% 149	1 year (0)	69.96% 149
From year -2 to -1	60.37% 128	2 years (-1 and 0)	70.41% 124
From year -3 to -2	37.85% 102	3 years (-2 to 0)	60.75% 98
From year -4 to -3	32.16% 80	4 years (-3 to 0)	47.73% 78
Panel E: Firms without Corporate Investors Medians			
From year -1 to 0	46.28% 275	1 year (0)	46.28% 275
From year -2 to -1	35.13% 279	2 years (-1 and 0)	43.61% 259
From year -3 to -2	30.09% 249	3 years (-2 to 0)	38.67% 227
From year -4 to -3	27.60% 218	4 years (-3 to 0)	32.15% 215
Panel F: Difference in Medians between Firms with and without Corporate Investors			
From year -1 to 0 Wilcoson/M.W. Chi-square	23.68% (3.0905)*** (9.9442)***	1 year (0)	23.68% (3.0905)*** (9.9442)***
From year -2 to -1 Wilcoson/M.W. Chi-square	25.24% (2.1830)** (4.7032)**	2 years (-1 and 0)	26.81% (3.0476)*** (7.0557)***
From year -3 to -2 Wilcoson/M.W. Chi-square	7.76% (1.1560) (2.7183)*	3 years (-2 to 0)	22.08% (2.5952)*** (3.8823)**
From year -4 to -3 Wilcoson/M.W. Chi-square	4.57% (0.5499) (0.2734)	4 years (-3 to 0)	15.58% (2.0648)** (5.8296)**

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 11.3

Growth of Sales, Differences in Medians, by Industry Affiliation

	Year Relative to IPO			
	From -1 to 0	From -2 to -1	From -3 to -2	From -4 to -3
High Tech Firms				
All Firms	79.47%	56.92%	48.02%	37.64%
Number of Firms	189	173	146	116
Venture-Backed	89.83%	79.06%	72.66%	39.88%
Number of Firms	125	109	88	65
Non Venture-Backed	51.94%	33.40%	33.00%	34.14%
Number of Firms	64	64	58	51
Difference in Medians	37.89%	45.66%	39.66%	5.74%
Wilcoson/M.W.	(2.2211)**	(2.7087)***	(2.4895)***	(0.0501)
Chi-Square	(5.7949)**	(9.5565)***	(7.3229)***	(0.3149)
Low Tech Firms				
All Firms	40.29%	32.90%	25.74%	24.75%
Number of Firms	235	234	202	182
Venture-Backed	64.44%	64.41%	33.74%	28.00%
Number of Firms	73	73	59	48
Non Venture-Backed	35.86%	29.26%	23.31%	23.12%
Number of Firms	162	161	143	134
Difference in Medians	28.58%	35.15%	10.43%	4.88%
Wilcoson/M.W.	(3.1114)***	(3.2642)***	(2.5040)***	(0.7232)
Chi-Square	(5.9548)**	(5.7539)**	(4.0462)**	(1.0187)
High Tech Firms				
All Firms	79.47%	56.92%	48.02%	37.64%
Number of Firms	189	173	146	116
Corporate Investors	95.91%	88.39%	44.20%	34.14%
Number of Firms	83	70	56	41
No Corporate Investors	63.11%	47.63%	48.72%	37.98%
Number of Firms	106	103	90	75
Difference in Medians	32.79%	40.76%	-4.52%	-3.84%
Wilcoson/M.W.	(2.0590)**	(1.8665)*	(0.0221)	(0.2021)
Chi-Square	(5.1208)**	(3.6923)*	(0.1159)	(0.0377)
Low Tech Firms				
All Firms	40.29%	32.90%	25.74%	24.75%
Number of Firms	235	234	202	182
Corporate Investors	43.18%	35.50%	28.73%	28.97%
Number of Firms	66	58	46	39
No Corporate Investors	37.84%	32.57%	25.74%	23.57%
Number of Firms	169	176	156	143
Difference in Medians	5.33%	2.93%	2.99%	5.41%
Wilcoson/M.W.	(1.3419)	(0.8331)	(1.0720)	(0.8161)
Chi-Square	(0.3861)	(0.8252)	(0.0000)	(0.2937)

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 12

Growth of Sales in the IPO Year, OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	1.1188 (6,1540)***	-3.9099 (-1.1358)	-4.0975 (-1.1916)	-4.0871 (-1.1847)	0.9842 (4,6025)***	-3.9350 (-1.1408)	-4.3160 (-1.2520)	-4.1882 (-1.2065)
VCs' Ownership	0.4100 (0,2214)	1.5567 (1.5772)		0.0955 (0.0485)	0.6131 (0,3291)	1.4540 (1.4488)		0.2058 (0.1038)
Number of VCs Involved	0.2092 (1,1078)		0.1800 (1.7959)*	0.1716 (0.2003)	0.1720 (0,9011)		0.1606 (1.5707)	0.1443 (0.7149)
Corporate Investors' Ownership					1.2870 (0,5584)	1.8559 (1.3132)		1.0279 (0.4214)
Number of Corporate Investors Involved					0.1151 (0,4167)		0.2082 (1.2347)	0.1097 (0.3767)
Subsidiary Dummy					-0.0413 (-0,0643)	-0.1548 (-0.2266)	-0.1395 (-0.2044)	-0.1289 (-0.1879)
High-Tech Dummy		0.3350 (0.9807)	0.3024 (0.8818)	0.3013 (0.8759)		0.3092 (0.9036)	0.2539 (0.7354)	0.2633 (0.7566)
Firm Size		0.2740 (1,4866)	0.2842 (1.5444)	0.2835 (1.5346)		0.2716 (1.4680)	0.2921 (1.5825)	0.2846 (1.5295)
Debt		-1.5381 (-1.7747)*	-1.5865 (-1.8349)*	-1.5831 (-1.8227)*		-1.6317 (-1.8765)*	-1.6816 (-1.9371)**	-1.6784 (-1.9230)*
ADJUSTED R^2	0.0127	0.0214	0.0232	0.0207	0.0120	0.0211	0.0224	0.0179
SUM SQ. RESIDUAL	3711.8010	3605.9100	3599.2130	3599.1910	3687.9830	3588.6600	3583.9500	3582.2200
SAMPLE	424	399	399	399	424	399	399	399

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 13

Growth of Sales Averaged Over Four Years, OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.5581 (7,7175)***	0.3186 (0.2392)	0.0995 (0.0757)	-0.1330 (-0.1009)	0.5325 (6,2804)***	0.3132 (0.2348)	0.0439 (0.0333)	-0.1377 (-0.1037)
VCs' Ownership	-0.9701 (-1,2073)	0.7367 (1.7968)*		-1.3133 (-1.6984)*	-0.8772 (-1,0746)	0.7330 (1.7662)*		-1.1935 (-1.5234)
Number of VCs Involved	0.2457 (2,9468)***		0.1317 (3.1674)***	0.2468 (3.1070)***	0.2320 (2,7203)***		0.1257 (2.9638)***	0.2313 (2.8605)***
Corporate Investors' Ownership					0.4218 (0,4391)	0.8350 (1.5373)		0.3544 (0.3939)
Number of Corporate Investors Involved					0.0157 (0,1239)		0.0934 (1.3081)	0.0428 (0.3588)
Subsidiary Dummy					-0.0163 (-0,0660)	0.0547 (0.2240)	0.0927 (1.3081)	0.0625 (0.2585)
High-Tech Dummy		0.2973 (2.2672)**	0.2547 (1.9722)**	0.2747 (2.1260)**		0.2870 (2.1830)**	0.2452 (1.8901)*	0.2656 (2.0394)**
Firm Size		0.0074 (0.1034)	0.0176 (0.2508)	0.0311 (0.4415)		0.0056 (0.0785)	0.0185 (0.2627)	0.0295 (0.4154)
Debt		0.0353 (0.1106)	-0.0020 (-0.0062)	-0.0498 (-0.1578)		0.0055 (0.0170)	-0.0534 (-01670)	-0.0817 (-0.2540)
ADJUSTED R^2	0.0462	0.0300	0.0548	0.0616	0.0388	0.0314	0.0539	0.0558
SUM SQ. RESIDUAL	279.9667	230.7827	224.9022	222.3963	279.0438	228.6612	223.3597	221.1574
SAMPLE	278	262	262	262	278	262	262	262

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 14
Board Size, OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	6.0874 (57.2072)***	0.3343 (0.1686)	0.1569 (0.0801)	-0.1665 (-0.0856)	5.8566 (48.6095)***	0.5436 (0.2796)	0.1154 (0.0605)	-0.1722 (-0.0905)
VCs' Ownership	-3.2632 (-2.9580)***	0.9776 (1.7364)*		-3.2801 (-2.9106)***	-2.9316 (-2.7185)***	0.8021 (1.4345)		-2.9728 (-2.6942)***
Number of VCs Involved	0.4612 (4.1487)***		0.2049 (3.6345)***	0.4946 (4.3326)***	0.3857 (3.5333)***		0.1657 (2.9702)***	0.4284 (3.8240)***
Corporate Investors' Ownership					0.3523 (0.2635)	3.4289 (4.3327)***		0.2521 (0.1856)
Number of Corporate Investors Involved					0.4304 (2.7136)***		0.4642 (5.0562)***	0.4210 (2.6235)***
Subsidiary Dummy					-0.2733 (-0.7176)	-0.3772 (-0.9442)	-0.2122 (-0.5414)	-0.2884 (-0.7384)
Firm Size		0.3087 (2.9352)***	0.3145 (3.0274)***	0.3344 (3.2393)***		0.2894 (2.7995)***	0.3061 (3.0237)***	0.3244 (3.2085)***
High-Tech Dummy		-0.0366 (-0.1929)	(-0.1502) 0.2973	-0.1133 (-0.6064)		-0.0683 (-0.3673)	-0.2380 (-1.2998)	-0.1899 (-1.0359)
Debt		-0.1511 (-1.0370)	-0.1502 (-1.0435)	-0.1633 (-1.1437)		-0.1536 (-1.0773)	-0.1522 (-1.0875)	-0.1646 (-1.1828)
ADJUSTED R^2	0.0365	0.0207	0.0434	0.0598	0.0879	0.0625	0.0965	0.1076
SUM SQ. RESIDUAL	1528.5250	1409.0620	1376.4300	1349.5920	1437.5040	1342.5920	1293.9540	1272.0230
SAMPLE	465	432	432	432	465	432	432	432

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 15

Proportion of Outside Directors on the Board, OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.4423 (36.3812)***	1.1225 (5.1887)***	1.0470 (4.7560)***	1.0978 (5.1857)***	0.4189 (31.9109)***	1.1096 (5.5423)***	1.0100 (4.9713)***	1.0788 (5.3924)**
VCs' Ownership	0.3580 (2.8408)***	0.6123 (10.1296)***		0.4931 (3.9826)***	0.3849 (3.2724)***	0.5638 (9.7666)***		0.4797 (4.0997)***
Number of VCs Involved	0.0359 (2.8233)***		0.0579 (9.1921)***	0.0137 (1.0793)	0.0236 (1.9861)**		0.0513 (8.5453)***	0.0090 (0.7541)
Corporate Investors' Ownership					0.0143 (0.4297)	0.4500 (5.4033)***		0.2033 (1.4235)
Number of Corporate Investors Involved					0.0671 (6.2515)***		0.0536 (5.3233)***	0.0357 (2.0974)**
Subsidiary Dummy					-0.1707 (-4.1107)***	-0.1741 (-4.2279)***	-0.1829 (-4.3787)***	-0.1688 (-4.1064)***
Firm Size		-0.0487 (-4.1772)***	-0.0429 (-3.6174)***	-0.0465 (-4.0937)***		-0.0457 (-4.2520)***	-0.0385 (-3.5310)***	-0.0436 (-4.0488)***
High-Tech Dummy		0.0421 (1.9841)**	0.0448 (2.0670)**	0.0358 (1.7605)*		0.0339 (1.7695)*	0.0323 (1.6510)*	0.0275 (1.4259)
Debt		-0.0015 (-0.0282)	-0.0202 (-0.3702)	-0.0266 (-1.7082)*		-0.0286 (-1.9486)**	-0.0318 (-2.1264)**	-0.0293 (-1.9964)**
Board Size		0.0363 (6.9906)***	0.0324 (6.0667)***	0.0347 (6.5805)***		0.0286 (5.7260)***	0.0237 (4.5888)***	0.0264 (5.1591)***
ADJUSTED R^2	0.2291	0.3279	0.3040	0.3325	0.3348	0.4037	0.3846	0.4081
SUM SQ. RESIDUAL	19.9524	16.0859	16.6567	15.9370	17.1051	14.2048	14.6590	14.0322
SAMPLE	465	432	432	432	465	432	432	432

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 16

Proportion of Independent Directors on the Board, OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.2479 (22.4221)***	0.9164 (4.4956)***	0.9419 (4.6351)***	1.0080 (5.0404)***	0.2691 (21.2137)***	0.9320 (4.7423)***	0.9846 (5.0035)***	0.9522 (4.8343)***
VCs' Ownership	-0.0440 (-0.3835)	-0.1866 (-3.2765)***		-0.0092 (-0.0785)	-0.0799 (-0.7025)	-0.2060 (-3.6350)***		-0.0429 (-0.3724)
Number of VCs Involved	-0.0118 (-1.0188)		-0.0214 (-3.6770)***	-0.0207 (-1.7235)*	-0.0081 (-0.7010)		-0.0222 (-3.8211)***	-0.0191 (-1.6197)*
Corporate Investors' Ownership					0.0598 (1.8648)*	-0.3170 (-3.8782)***		-0.3010 (-2.1405)**
Number of Corporate Investors Involved					-0.0322 (-3.1023)***		-0.0306 (-3.1364)***	-0.0016 (-0.0950)
Subsidiary Dummy					-0.1023 (-2.5485)**	-0.1046 (-2.5869)***	-0.1024 (-2.5313)***	-0.1052 (-2.5988)***
Firm Size		-0.0393 (-3.5779)***	-0.0412 (-3.7664)***	-0.0449 (-4.1775)***		-0.0400 (-3.7889)***	-0.0435 (-4.1156)***	-0.0415 (-3.9192)***
High-Tech Dummy		0.0224 (1.1229)	0.0259 (1.2956)	0.0343 (1.7851)*		0.0344 (1.8327)*	0.0399 (2.1088)**	0.0376 (1.9811)**
Debt		-0.1030 (-2.0412)**	-0.0972 (-1.9343)**	-0.0248 (-1.6843)*		-0.0261 (-1.8096)*	-0.0251 (-1.7348)*	-0.0254 (-1.7604)*
Board Size		0.0124 (2.5377)***	0.0141 (2.8678)***	0.0128 (2.5743)***		0.0142 (2.9019)***	0.0160 (3.1967)***	0.0159 (3.1502)***
ADJUSTED R^2	0.0142	0.0660	0.0719	0.0678	0.0391	0.1008	0.0964	0.1022
SUM SQ. RESIDUAL	16.4966	14.2841	14.1935	14.2233	15.9754	13.6871	13.7535	13.6012
SAMPLE	465	432	432	432	465	432	432	432

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 17

Chief Executive Officer and Chair of the Board Duality, Differences in Means and Medians

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	405	0.575309			1.000000			
Venture-Backed	184	0.516304	-0.108130	2.1996**	1.000000	0.000000	2.1888**	NA
Non Venture-Backed	221	0.624434			1.000000			
Panel B : Firms with and without Corporate Investors Involved								
All Firms	405	0.575309			1.000000			
Corporate Investors	135	0.577778	0.003704	0.0709	1.000000	0.000000	0.0705	NA
No Corporate Investors	270	0.574074			1.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 18.1

All Board Members' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	441	0.057922			0.039994			
Venture-Backed	218	0.032677	-0.049923	9.7445***	0.021240	-0.050206	9.1646***	63.2574***
Non Venture-Backed	223	0.082600			0.071446			
1st Size Quartile								
All Firms	110	0.060246			0.041409			
Venture-Backed	45	0.023283	-0.062554	5.9492***	0.011333	-0.071800	6.3956***	31.6274***
Non Venture-Backed	65	0.085837			0.083133			
2nd Size Quartile								
All Firms	108	0.054581			0.035324			
Venture-Backed	61	0.032320	-0.051153	4.9548***	0.026070	-0.036255	4.7591***	19.9275***
Non Venture-Backed	47	0.083473			0.062325			
3rd Size Quartile								
All Firms	111	0.053887			0.043942			
Venture-Backed	57	0.035682	-0.037421	4.0772***	0.025614	-0.032021	3.9087***	12.3253***
Non Venture-Backed	54	0.073103			0.057635			
4th Size Quartile								
All Firms	107	0.061511			0.037749			
Venture-Backed	53	0.036927	-0.048713	4.2894***	0.019149	-0.049277	3.3553***	10.1851***
Non Venture-Backed	54	0.085640			0.068426			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 18.1 (continued)

All Board Members' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	441	0.057922			0.039994			
Corporate Investors	159	0.030782	-0.042442	7.6836***	0.017329	-0.042984	8.1467***	51.8967***
No Corporate Investors	282	0.073224			0.060313			
1st Size Quartile								
All Firms	110	0.060246			0.041409			
Corporate Investors	37	0.023797	-0.054924	4.7981***	0.012025	-0.063475	5.2068***	25.4535***
No Corporate Investors	73	0.078721			0.075500			
2nd Size Quartile								
All Firms	108	0.054581			0.035324			
Corporate Investors	40	0.033220	-0.033926	3.0045***	0.026550	-0.019423	3.1969***	5.7176**
No Corporate Investors	68	0.067146			0.045973			
3rd Size Quartile								
All Firms	111	0.053887			0.043942			
Corporate Investors	40	0.035113	-0.029350	2.9753***	0.020609	-0.028208	3.6208***	7.2719***
No Corporate Investors	71	0.064463			0.048817			
4th Size Quartile								
All Firms	107	0.061511			0.037749			
Corporate Investors	41	0.030239	-0.050699	4.3500***	0.017048	-0.052324	4.0209***	8.4489***
No Corporate Investors	66	0.080938			0.069372			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 18.2

All Board Members' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	441	0.091562			0.083064			
Venture-Backed	218	0.078028	-0.026764	5.6053***	0.072552	-0.023069	4.9132***	18.7850***
Non Venture-Backed	223	0.104792			0.095621			
1st Size Quartile								
All Firms	110	0.090528			0.076111			
Venture-Backed	45	0.075660	-0.025161	2.4095**	0.068455	-0.024378	2.3953**	4.5504**
Non Venture-Backed	65	0.100821			0.092833			
2nd Size Quartile								
All Firms	108	0.086343			0.075853			
Venture-Backed	61	0.072443	-0.031941	3.3188***	0.062800	-0.029033	3.1603***	10.8866***
Non Venture-Backed	47	0.104384			0.091833			
3rd Size Quartile								
All Firms	111	0.089127			0.083601			
Venture-Backed	57	0.078001	-0.022870	2.6700***	0.079682	-0.012405	2.0384**	2.5974
Non Venture-Backed	54	0.100871			0.092087			
4th Size Quartile								
All Firms	107	0.098760			0.094116			
Venture-Backed	53	0.085637	-0.026003	2.5817**	0.082856	-0.023839	2.1527**	4.1259**
Non Venture-Backed	54	0.111640			0.106695			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 18.2 (continued)

All Board Members' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	441	0.091562			0.083064			
Corporate Investors	159	0.072764	-0.029396	5.9366***	0.066781	-0.025675	5.8940***	21.3845***
No Corporate Investors	282	0.102160			0.092456			
1st Size Quartile								
All Firms	110	0.090528			0.076111			
Corporate Investors	37	0.066762	-0.035812	3.3754***	0.062139	-0.035026	3.9984***	21.5439***
No Corporate Investors	73	0.102574			0.097165			
2nd Size Quartile								
All Firms	108	0.086343			0.075853			
Corporate Investors	40	0.073503	-0.020394	2.0012**	0.063127	-0.020600	1.9054*	3.9706**
No Corporate Investors	68	0.093897			0.083727			
3rd Size Quartile								
All Firms	111	0.089127			0.083601			
Corporate Investors	40	0.074783	-0.022425	2.5055**	0.082902	-0.006138	2.2081**	0.5178
No Corporate Investors	71	0.097208			0.089040			
4th Size Quartile								
All Firms	107	0.098760			0.094116			
Corporate Investors	41	0.075707	-0.037374	3.7224***	0.074167	-0.033504	3.3930***	8.4489***
No Corporate Investors	66	0.113081			0.107671			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 19.1

Management Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	441	0.116519			0.085140			
Venture-Backed	218	0.083273	-0.065747	5.9967***	0.049851	-0.066224	6.062***	43.8248***
Non Venture-Backed	223	0.149020			0.116075			
1st Size Quartile								
All Firms	110	0.120187			0.091045			
Venture-Backed	45	0.065636	-0.092316	4.4979***	0.034000	-0.102000	4.7724***	23.5043***
Non Venture-Backed	65	0.157952			0.136000			
2nd Size Quartile								
All Firms	108	0.116409			0.081903			
Venture-Backed	61	0.078966	-0.086040	4.1005***	0.050000	-0.082500	3.9969***	15.0680***
Non Venture-Backed	47	0.165006			0.132500			
3rd Size Quartile								
All Firms	111	0.109605			0.084700			
Venture-Backed	57	0.093777	-0.032534	1.4315	0.061933	-0.049593	2.2479**	7.5686***
Non Venture-Backed	54	0.126311			0.111526			
4th Size Quartile								
All Firms	107	0.118102			0.077000			
Venture-Backed	53	0.089752	-0.056174	2.3008**	0.057129	-0.046300	1.2929	1.5820
Non Venture-Backed	54	0.145926			0.103429			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 19.1 (continued)

Management Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	441	0.116519			0.085140			
Corporate Investors	159	0.073376	-0.067469	5.9030***	0.042294	-0.074127	7.2519***	36.1664***
No Corporate Investors	282	0.140845			0.116421			
1st Size Quartile								
All Firms	110	0.120187			0.091045			
Corporate Investors	37	0.053432	-0.100589	4.7526***	0.028900	-0.124138	4.9031***	21.5439***
No Corporate Investors	73	0.154021			0.153038			
2nd Size Quartile								
All Firms	108	0.116409			0.081903			
Corporate Investors	40	0.075727	-0.064613	2.8945***	0.042066	-0.062667	3.3305***	7.7824***
No Corporate Investors	68	0.140340			0.104733			
3rd Size Quartile								
All Firms	111	0.109605			0.084700			
Corporate Investors	40	0.093296	-0.025497	1.0732	0.048250	-0.052234	3.0435***	5.2956**
No Corporate Investors	71	0.118793			0.100484			
4th Size Quartile								
All Firms	107	0.118102			0.077000			
Corporate Investors	41	0.068976	-0.079643	3.2465***	0.045700	-0.077908	3.0662***	4.4574**
No Corporate Investors	66	0.148619			0.123608			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 19.2

Management Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	441	0.131574			0.106467			
Venture-Backed	218	0.085884	-0.090355	9.1718***	0.060133	-0.086772	8.9979***	69.4627***
Non Venture-Backed	223	0.176239			0.146905			
1st Size Quartile								
All Firms	110	0.134041			0.104013			
Venture-Backed	45	0.075036	-0.099854	4.9163***	0.046497	-0.113109	5.1494***	19.8940***
Non Venture-Backed	65	0.174890			0.159606			
2nd Size Quartile								
All Firms	108	0.125147			0.102185			
Venture-Backed	61	0.080295	-0.103063	5.0849***	0.051001	-0.100348	4.9946***	23.5438***
Non Venture-Backed	47	0.183358			0.151349			
3rd Size Quartile								
All Firms	111	0.125365			0.107000			
Venture-Backed	57	0.088135	-0.076529	5.0777***	0.084411	-0.052808	4.8085***	21.6243***
Non Venture-Backed	54	0.164664			0.137219			
4th Size Quartile								
All Firms	107	0.139772			0.114648			
Venture-Backed	53	0.097049	-0.084655	3.5389***	0.073450	-0.071469	3.0375***	7.8663***
Non Venture-Backed	54	0.181704			0.144919			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 19.2 (continued)

Management Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	441	0.131574			0.106467			
Corporate Investors	159	0.083124	-0.075767	7.1495***	0.057129	-0.085146	8.0028***	51.8967***
No Corporate Investors	282	0.158891			0.142275			
1st Size Quartile								
All Firms	110	0.134041			0.104013			
Corporate Investors	37	0.070752	-0.095366	4.4344***	0.040668	-0.118938	4.6880***	21.5439***
No Corporate Investors	73	0.166118			0.159606			
2nd Size Quartile								
All Firms	108	0.125147			0.102185			
Corporate Investors	40	0.077445	-0.075761	3.4420***	0.042066	-0.085508	3.9921***	12.8647***
No Corporate Investors	68	0.153206			0.127574			
3rd Size Quartile								
All Firms	111	0.125365			0.107000			
Corporate Investors	40	0.103207	-0.034642	2.0224**	0.091409	-0.027094	2.5644**	5.2956**
No Corporate Investors	71	0.137849			0.118503			
4th Size Quartile								
All Firms	107	0.139772			0.114648			
Corporate Investors	41	0.079803	-0.097222	4.0115***	0.072640	-0.077812	4.3029***	13.7058***
No Corporate Investors	66	0.177025			0.150452			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 20.1

Outside Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	412	0.007596			0.000589			
Venture-Backed	217	0.005154	-0.005160	2.4621**	0.000894	0.000761	1.7633*	3.5149*
Non Venture-Backed	195	0.010314			0.000133			
1st Size Quartile								
All Firms	108	0.007168			0.000282			
Venture-Backed	45	0.003692	-0.005959	1.8179*	0.000601	0.000601	1.3262	1.8667
Non Venture-Backed	63	0.009651			0.000000			
2nd Size Quartile								
All Firms	102	0.004738			0.000731			
Venture-Backed	61	0.004481	-0.000638	0.3927	0.000799	0.000136	0.2569	0.0408
Non Venture-Backed	41	0.005119			0.000663			
3rd Size Quartile								
All Firms	104	0.009506			0.000938			
Venture-Backed	56	0.007100	-0.005213	1.2707	0.000938	-0.000020	0.2964	0.0000
Non Venture-Backed	48	0.012313			0.000958			
4th Size Quartile								
All Firms	94	0.009275			0.000483			
Venture-Backed	53	0.005086	-0.009603	1.4212	0.000899	0.000840	1.4099	2.1197
Non Venture-Backed	41	0.014689			0.000059			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 20.1 (continued)

Outside Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	412	0.007596			0.000589			
Corporate Investors	259	0.008119	0.000832	0.3860	0.001486	0.001303	4.3066***	17.4773***
No Corporate Investors	153	0.007287			0.000183			
1st Size Quartile								
All Firms	108	0.007168			0.000282			
Corporate Investors	37	0.006183	-0.001498	0.4337	0.001743	0.001743	2.6582***	6.9478***
No Corporate Investors	71	0.007681			0.000000			
2nd Size Quartile								
All Firms	102	0.004738			0.000731			
Corporate Investors	39	0.007996	0.005275	3.3967***	0.002404	0.002138	2.6971***	9.3407***
No Corporate Investors	63	0.002721			0.000266			
3rd Size Quartile								
All Firms	104	0.009506			0.000938			
Corporate Investors	37	0.011485	0.003071	0.7151	0.001478	0.001008	1.4460	1.0488
No Corporate Investors	67	0.008414			0.000470			
4th Size Quartile								
All Firms	94	0.009275			0.000483			
Corporate Investors	39	0.006819	-0.004197	0.6118	0.000761	0.000660	1.6982*	1.0956
No Corporate Investors	55	0.011016			0.000101			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 20.2

Outside Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	412	0.047446			0.041791			
Venture-Backed	217	0.071895	0.051656	14.0587***	0.068333	0.066857	12.9609***	137.8786***
Non Venture-Backed	195	0.020239			0.001476			
1st Size Quartile								
All Firms	108	0.039789			0.026256			
Venture-Backed	45	0.071980	0.055184	8.2695***	0.071706	0.071706	7.0874***	41.4857***
Non Venture-Backed	63	0.016796			0.000000			
2nd Size Quartile								
All Firms	102	0.050176			0.047642			
Venture-Backed	61	0.068027	0.044410	6.4871***	0.061518	0.055613	5.7527***	25.4898***
Non Venture-Backed	41	0.023617			0.005905			
3rd Size Quartile								
All Firms	104	0.048726			0.038733			
Venture-Backed	56	0.072608	0.051744	5.7792***	0.062685	0.059828	6.5047***	44.7262***
Non Venture-Backed	48	0.020864			0.002857			
4th Size Quartile								
All Firms	94	0.052236			0.050672			
Venture-Backed	53	0.075312	0.052905	7.2762***	0.075550	0.074823	5.9569***	27.0364***
Non Venture-Backed	41	0.022407			0.000727			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 20.2 (continued)

Outside Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	412	0.047446			0.041791			
Corporate Investors	153	0.062250	0.023549	5.2638***	0.058832	0.035221	6.6205***	33.7797***
No Corporate Investors	259	0.038701			0.023611			
1st Size Quartile								
All Firms	108	0.039789			0.026256			
Corporate Investors	37	0.054328	0.022115	2.5631**	0.055097	0.051697	3.5664***	11.8812***
No Corporate Investors	71	0.032213			0.003400			
2nd Size Quartile								
All Firms	102	0.050176			0.047642			
Corporate Investors	39	0.070374	0.032702	4.3282***	0.070824	0.042592	4.2944***	14.9866***
No Corporate Investors	63	0.037672			0.028232			
3rd Size Quartile								
All Firms	104	0.048726			0.038733			
Corporate Investors	37	0.054303	0.008657	0.8085	0.053273	0.020788	1.8380*	3.3981*
No Corporate Investors	67	0.045646			0.032485			
4th Size Quartile								
All Firms	94	0.052236			0.050672			
Corporate Investors	39	0.069611	0.029694	3.4336***	0.065943	0.036102	3.4173***	9.8601***
No Corporate Investors	55	0.039917			0.029841			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 21.1
Outside Directors Not Representing Investors' Average Ownership,
Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	370	0.010209			0.000727			
Venture-Backed	182	0.010751	0.001067	0.3969	0.002037	0.002037	3.7943***	20.9352***
Non Venture-Backed	188	0.009684			0.000000			
1st Size Quartile								
All Firms	103	0.011326			0.000000			
Venture-Backed	42	0.011240	-0.000144	0.0263	0.001250	0.001250	2.3070**	11.9360***
Non Venture-Backed	61	0.011384			0.000000			
2nd Size Quartile								
All Firms	89	0.007083			0.001057			
Venture-Backed	48	0.006410	-0.001462	0.4778	0.001646	0.001116	1.1139	0.9320
Non Venture-Backed	41	0.007872			0.000530			
3rd Size Quartile								
All Firms	95	0.015548			0.001954			
Venture-Backed	50	0.017966	0.005105	0.6630	0.003592	0.003042	1.1257	1.7986
Non Venture-Backed	45	0.012861			0.000550			
4th Size Quartile								
All Firms	79	0.005802			0.000459			
Venture-Backed	40	0.005845	0.000087	0.0273	0.002120	0.002120	2.8667***	7.9219***
Non Venture-Backed	39	0.005758			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 21.1 (continued)
Outside Directors Not Representing Investors' Average Ownership,
Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	370	0.010209			0.000727			
Corporate Investors	134	0.011191	0.001540	0.5505	0.002626	0.002619	3.7138***	15.1632***
No Corporate Investors	236	0.009651			0.000007			
1st Size Quartile								
All Firms	103	0.011326			0.000000			
Corporate Investors	35	0.015327	0.006061	1.0738	0.002747	0.002747	2.8806***	8.5131***
No Corporate Investors	68	0.009266			0.000000			
2nd Size Quartile								
All Firms	89	0.007083			0.001057			
Corporate Investors	31	0.009226	0.003288	1.0321	0.003961	0.003234	1.7236*	2.6732
No Corporate Investors	58	0.005938			0.000727			
3rd Size Quartile								
All Firms	95	0.015548			0.001954			
Corporate Investors	35	0.010869	-0.007408	0.9319	0.003801	0.003124	0.8868	1.3039
No Corporate Investors	60	0.018277			0.000677			
4th Size Quartile								
All Firms	79	0.005802			0.000459			
Corporate Investors	32	0.007931	0.003579	1.1210	0.001839	0.001795	1.6231	1.0194
No Corporate Investors	47	0.004352			0.000044			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 21.2
Outside Directors Not Representing Investors' Average Voting Power,
Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	370	0.011392			0.001028			
Venture-Backed	182	0.011364	-0.000056	0.0194	0.002428	0.002428	3.4701***	15.6149***
Non Venture-Backed	188	0.011420			0.000000			
1st Size Quartile								
All Firms	103	0.013348			0.000014			
Venture-Backed	42	0.011502	-0.003117	0.4932	0.001776	0.001776	1.8722*	8.3463***
Non Venture-Backed	61	0.014619			0.000000			
2nd Size Quartile								
All Firms	89	0.008916			0.001590			
Venture-Backed	48	0.007508	-0.003056	0.7833	0.001942	0.000942	1.0115	0.2916
Non Venture-Backed	41	0.010564			0.001000			
3rd Size Quartile								
All Firms	95	0.015890			0.002362			
Venture-Backed	50	0.018246	0.004974	0.6458	0.003592	0.002787	0.9006	0.8651
Non Venture-Backed	45	0.013272			0.000805			
4th Size Quartile								
All Firms	79	0.006234			0.000492			
Venture-Backed	40	0.006691	0.000926	0.2859	0.002428	0.002428	3.0195***	5.5908**
Non Venture-Backed	39	0.005765			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 21.2 (continued)
Outside Directors Not Representing Investors' Average Voting Power,
Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	370	0.011392			0.001028			
Corporate Investors	134	0.011962	0.000893	0.2977	0.003656	0.003609	3.8715***	18.7200***
No Corporate Investors	236	0.011069			0.000048			
1st Size Quartile								
All Firms	103	0.013348			0.000014			
Corporate Investors	35	0.015839	0.003773	0.5758	0.005160	0.005160	2.8858***	10.1845***
No Corporate Investors	68	0.012066			0.000000			
2nd Size Quartile								
All Firms	89	0.008916			0.001590			
Corporate Investors	31	0.010996	0.003192	0.7820	0.004819	0.003791	1.9754**	4.3264**
No Corporate Investors	58	0.007804			0.001028			
3rd Size Quartile								
All Firms	95	0.015890			0.002362			
Corporate Investors	35	0.011631	-0.006743	0.8471	0.004836	0.004159	1.1742	1.3039
No Corporate Investors	60	0.018374			0.000677			
4th Size Quartile								
All Firms	79	0.006234			0.000492			
Corporate Investors	32	0.008055	0.003061	0.9321	0.001839	0.001795	1.4157	2.1552
No Corporate Investors	47	0.004994			0.000044			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 22.1

Independent Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	329	0.004433			0.000253			
Venture-Backed	162	0.004989	0.001095	0.9400	0.000947	0.000947	3.6105***	16.1947***
Non Venture-Backed	167	0.003894			0.000000			
1st Size Quartile								
All Firms	92	0.004660			0.000000			
Venture-Backed	39	0.005281	0.001077	0.4413	0.000629	0.000629	2.6840***	10.7993***
Non Venture-Backed	53	0.004204			0.000000			
2nd Size Quartile								
All Firms	82	0.003172			0.000508			
Venture-Backed	46	0.003411	0.000546	0.3135	0.000626	0.000538	0.7305	0.7923
Non Venture-Backed	36	0.002865			0.000088			
3rd Size Quartile								
All Firms	86	0.006071			0.000785			
Venture-Backed	46	0.006934	0.001810	0.7137	0.001692	0.001439	1.1550	2.2840
Non Venture-Backed	41	0.005124			0.000253			
4th Size Quartile								
All Firms	66	0.003085			0.000149			
Venture-Backed	30	0.002978	-0.000196	0.0825	0.001214	0.001214	2.4686**	6.1111**
Non Venture-Backed	36	0.003174			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 22.1 (continued)

Independent Directors' Average Ownership, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	329	0.004433			0.000253			
Corporate Investors	117	0.005675	0.001928	1.5891	0.001190	0.001190	3.6239***	14.7576***
No Corporate Investors	212	0.003747			0.000000			
1st Size Quartile								
All Firms	92	0.004660			0.000000			
Corporate Investors	32	0.007287	0.004027	1.6104	0.001269	0.001269	2.8071***	7.0303***
No Corporate Investors	60	0.003260			0.000000			
2nd Size Quartile								
All Firms	82	0.003172			0.000508			
Corporate Investors	29	0.004981	0.002800	1.5715	0.000933	0.000440	1.4655	0.4802
No Corporate Investors	53	0.002181			0.000493			
3rd Size Quartile								
All Firms	86	0.006071			0.000785			
Corporate Investors	31	0.005416	-0.001025	0.3878	0.001762	0.001637	1.2480	4.0856**
No Corporate Investors	55	0.006441			0.000125			
4th Size Quartile								
All Firms	66	0.003085			0.000149			
Corporate Investors	24	0.003150	0.000102	0.0412	0.000493	0.000493	1.2741	4.1905**
No Corporate Investors	42	0.003048			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 22.2

Independent Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	329	0.004847			0.000430			
Venture-Backed	162	0.005276	0.000844	0.6961	0.001114	0.001114	3.4211***	12.8390***
Non Venture-Backed	167	0.004432			0.000000			
1st Size Quartile								
All Firms	92	0.005458			0.000000			
Venture-Backed	39	0.005529	0.000123	0.0456	0.000629	0.000629	2.2575**	8.5392***
Non Venture-Backed	53	0.005406			0.000000			
2nd Size Quartile								
All Firms	82	0.003651			0.000642			
Venture-Backed	46	0.004002	0.000799	0.4376	0.000742	0.000492	1.0401	0.7923
Non Venture-Backed	36	0.003203			0.000250			
3rd Size Quartile								
All Firms	86	0.006306			0.000871			
Venture-Backed	45	0.007050	0.001560	0.6137	0.001692	0.001420	0.9194	2.2840
Non Venture-Backed	41	0.005490			0.000272			
4th Size Quartile								
All Firms	66	0.003138			0.000149			
Venture-Backed	30	0.003131	-0.000012	0.0049	0.001214	0.001214	2.5774***	6.1111**
Non Venture-Backed	36	0.003143			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 22.2 (continued)

Independent Directors' Average Voting Power, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	329	0.004847			0.000430			
Corporate Investors	117	0.006026	0.001829	1.4472	0.001308	0.001308	3.7382***	11.4304***
No Corporate Investors	212	0.004197			0.000000			
1st Size Quartile								
All Firms	92	0.005458			0.000000			
Corporate Investors	32	0.007619	0.003313	1.1966	0.002297	0.002297	2.8310***	7.7268***
No Corporate Investors	60	0.004306			0.000000			
2nd Size Quartile								
All Firms	82	0.003651			0.000642			
Corporate Investors	29	0.005399	0.002704	1.4443	0.001205	0.000675	1.3178	0.4802
No Corporate Investors	53	0.002695			0.000530			
3rd Size Quartile								
All Firms	86	0.006306			0.000871			
Corporate Investors	31	0.005974	-0.000520	0.1962	0.001788	0.001663	1.5785	6.1032**
No Corporate Investors	55	0.006494			0.000125			
4th Size Quartile								
All Firms	66	0.003138			0.000149			
Corporate Investors	24	0.003194	0.000088	0.0357	0.000545	0.000545	1.3023	4.1905**
No Corporate Investors	42	0.003106			0.000000			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 23.1

Underpricing, Differences in Means and Medians by Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	458	0.186794			0.122284			
Venture-Backed	215	0.218141	0.059082	(2.5659)***	0.125000	0.007353	(1.3060)	(0.2192)
Non Venture-Backed	243	0.159059			0.117647			
1st Size Quartile								
All Firms	115	0.099962			0.041667			
Venture-Backed	45	0.045459	-0.089540	(2.9973)***	0.000000	-0.079713	(3.0427)***	(5.8044)**
Non Venture-Backed	70	0.134999			0.079713			
2nd Size Quartile								
All Firms	114	0.173370			0.110703			
Venture-Backed	60	0.174009	0.001350	(0.0331)	0.100000	-0.025000	(0.1677)	(0.5630)
Non Venture-Backed	54	0.172659			0.125000			
3rd Size Quartile								
All Firms	114	0.190217			0.137709			
Venture-Backed	57	0.236650	0.092867	(2.1239)**	0.187500	0.093750	(2.4607)***	(4.2456)**
Non Venture-Backed	57	0.143783			0.093750			
4th Size Quartile								
All Firms	114	0.284183			0.198719			
Venture-Backed	53	0.394813	0.206750	(3.6526)***	0.250000	0.086207	(2.9553)***	(2.8562)*
Non Venture-Backed	61	0.188063			0.163793			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 23.1 (continued)

Underpricing, Differences in Means and Medians with Firm Size Quartiles

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel B : Firms with and without Corporate Investors Involved								
All Firms	458	0.186794			0.122284			
Corporate Investors	158	0.168522	-0.027895	(1.1474)	0.083333	-0.043270	(2.0452)**	(3.1306)*
No Corporate Investors	300	0.196417			0.126603			
1st Size Quartile								
All Firms	115	0.099962			0.041667			
Corporate Investors	37	0.062239	-0.055616	(1.7379)*	0.019231	-0.036966	(1.4195)	(0.8722)
No Corporate Investors	78	0.117855			0.056197			
2nd Size Quartile								
All Firms	114	0.173370			0.110703			
Corporate Investors	40	0.139577	-0.052060	(1.2292)	0.069444	-0.055556	(2.0424)**	(3.8514)**
No Corporate Investors	74	0.191637			0.125000			
3rd Size Quartile								
All Firms	114	0.190217			0.137709			
Corporate Investors	40	0.146923	-0.066695	(1.4406)	0.101141	-0.068072	(1.2326)	(2.4649)
No Corporate Investors	74	0.213618			0.169213			
4th Size Quartile								
All Firms	114	0.284183			0.198719			
Corporate Investors	41	0.313746	0.046166	(0.7436)	0.176652	-0.024241	(0.3426)	(0.3428)
No Corporate Investors	73	0.267580			0.200893			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 23.2

Underpricing, Differences in Means and Medians by Industry Affiliation

	N	Mean	Difference in Means	t-test	Median	Difference in Medians	Wilcoxon/ Mann-W.	Chi-Square
Panel A : Venture-Backed and Non Venture-Backed Firms								
All Firms	458	0.186794			0.122284			
Venture-Backed	215	0.218141	0.059082	(2.5659)***	0.125000	0.007353	(1.3060)	(0.2192)
Non Venture-Backed	243	0.159059			0.117647			
High Tech Firms								
All Firms	202	0.202047			0.108879			
Venture-Backed	134	0.211667	0.028577	(0.7186)	0.100000	-0.015557	(0.2438)	(0.0887)
Non Venture-Backed	68	0.183090			0.115557			
Low Tech Firms								
All Firms	256	0.174758			0.125000			
Venture-Backed	81	0.228851	0.079130	(2.5788)***	0.163462	0.045815	(2.0658)**	(2.4441)
Non Venture-Backed	175	0.149721			0.117647			
Panel B : Corporate Investors versus No Corporate Investors								
All Firms	458	0.186794			0.122284			
Corporate Investors	158	0.168522	-0.027895	(1.1474)	0.083333	-0.043270	(2.0452)**	(3.1306)*
No Corporate Investors	300	0.196417			0.126603			
High Tech Firms								
All Firms	202	0.202047			0.108879			
Corporate Investors	89	0.177418	-0.044028	(1.1656)	0.073000	-0.052000	(2.1301)**	(3.3945)*
No Corporate Investors	113	0.221446			0.125000			
Low Tech Firms								
All Firms	256	0.174758			0.125000			
Corporate Investors	69	0.157047	-0.024246	(0.7450)	0.122520	-0.005685	(0.7595)	(0.1202)
No Corporate Investors	187	0.181293			0.128205			

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 24.1
Underpricing, OLS Regressions with Operating Performance Measures in the IPO Year

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1.5194 (-5.4242)***	-1.5166 (-5.4137)***	-1.5085 (-5.3437)***	-1.6248 (-5.9836)***	-1.6175 (-5.9514)***	-1.6092 (-5.8962)***
OIS (IPO Year)	0.0202 (1.1737)	0.0168 (0.9656)	0.0199 (1.1360)			
ROA (IPO Year)				0.0153 (0.2690)	0.0066 (0.1136)	0.0125 (0.2156)
VCs' Ownership	0.1394 (1.6789)*		0.1944 (1.1803)	0.0880 (1.1125)		0.2003 (1.3022)
Number of VCs Involved		0.0111 (1.2935)	-0.0065 (-0.3846)		0.0044 (0.5531)	-0.0133 (-0.8525)
Corporate Investors' Ownership	-0.1966 (-1.7154)*		-0.1770 (-0.8959)	-0.2159 (-1.9779)**		-0.2242 (-1.1836)
Number of Corporate Investors Involved		-0.0212 (-1.5499)	-0.0023 (-0.0992)		-0.0212 (-1.6150)	0.0020 (0.0887)
Subsidiary Dummy	-0.0950 (-1.7190)*	-0.0996 (-1.7985)*	-0.0957 (-1.7230)*	-0.0903 (-1.6898)*	-0.0949 (-1.7720)*	-0.0906 (-1.6893)*
High-Tech Dummy	0.0038 (0.1352)	0.0090 (0.3198)	0.0052 (0.1844)	-0.0090 (-0.3379)	-0.0018 (-0.0667)	-0.0070 (-0.2388)
Firm Size	0.0926 (6.1652)***	0.0927 (6.1819)***	0.0921 (6.0846)***	0.0986 (6.7660)***	0.0983 (6.7579)***	0.0977 (6.6764)***
Debt	-0.2441 (-3.4798)***	-0.2472 (-3.5120)***	-0.2435 (-3.4573)***	-0.2601 (-3.8257)***	-0.2651 (-3.8920)***	-0.2571 (-3.7671)***
ADJUSTED R^2	0.1164	0.1117	0.1121	0.1176	0.1124	0.1148
SUM SQ. RESIDUAL	21.7840	21.8993	21.7743	24.4282	22.5610	22.3873
SAMPLE	387	387	387	408	408	408

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 24.2

Underpricing, OLS Regressions with Operating Performance Averaged over Three Years

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1.1600 (-4.1591)***	-1.1655 (-4.1774)***	-1.1721 (-4.1706)***	-1.3597 (-5.0813)***	-1.3660 (-5.1018)***	-1.3625 (-5.0611)***
OIS (Three-Year Average)	0.0355 (1.2782)	0.0377 (1.3244)	0.0385 (1.3501)			
ROA (Three-Year Average)				0.1020 (2.2054)**	0.0959 (2.0131)**	0.1039 (2.1695)**
VCs' Ownership	0.1975 (2.1424)**		0.1012 (0.6079)	0.1572 (1.8483)*		0.1650 (1.0889)
Number of VCs Involved		0.0220 (2.2176)**	0.0124 (0.6972)		0.0130 (1.5164)	-0.0009 (-0.0586)
Corporate Investors' Ownership	-0.2496 (-2.1065)**		-0.2363 (-1.1531)	-0.2041 (-1.8464)*		-0.2426 (-1.2559)
Number of Corporate Investors Involved		-0.0280 (-1.8829)*	-0.0031 (-0.1189)		-0.0196 (-1.4817)	0.0057 (0.2460)
Subsidiary Dummy	-0.0820 (-1.5695)	-0.0838 (-1.6020)	-0.0815 (-1.5508)	-0.0573 (-1.1072)	-0.0614 (-1.1816)	-0.0562 (-1.0765)
High-Tech Dummy	0.0270 (0.9608)	0.0291 (1.0306)	0.0261 (0.9198)	0.0213 (0.7917)	0.0250 (0.9269)	0.0207 (0.7630)
Firm Size	0.0724 (4.8298)***	0.0727 (4.8615)***	0.0730 (4.8387)***	0.0832 (5.7909)***	0.0838 (5.8368)***	0.0834 (5.7675)***
Debt	-0.1846 (-2.5979)***	-0.1791 (-2.4989)***	-0.1814 (-2.5288)***	-0.2236 (-3.3193)***	-0.2286 (-3.3816)***	-0.2246 (-3.3138)***
ADJUSTED R^2	0.1097	0.1063	0.1055	0.1256	0.1189	0.1208
SUM SQ. RESIDUAL	16.1503	16.2119	16.1255	17.6046	17.7401	17.6014
SAMPLE	328	328	328	364	364	364

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 24.3

Underpricing, OLS Regressions with Operating Performance Averaged over Five Years

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.8234 (-2.5678)***	-0.8701 (-2.6086)***	-0.8218 (-2.5227)***	-0.8610 (-2.6773)***	-0.8882 (-2.7563)***	-0.8769 (-2.5980)***
OIS (Five-Year Average)	0.0838 (1.5363)	0.0800 (1.4228)	0.0825 (1.4610)			
ROA (Five-Year Average)				0.1399 (2.1628)**	0.1296 (1.8586)*	0.1290 (1.8781)*
VCs' Ownership	0.1383 (1.3259)		0.1362 (0.6923)	0.1788 (1.6820)*		0.1947 (1.0726)
Number of VCs Involved		0.0136 (1.1633)	0.0003 (0.0135)		0.0153 (1.3333)	-0.0021 (-0.1053)
Corporate Investors' Ownership	-0.1451 (-1.0356)		-0.1272 (-0.5749)	-0.1972 (-1.4477)		-0.1226 (-0.5768)
Number of Corporate Investors Involved		-0.0182 (-0.9583)	-0.0032 (-0.1056)		-0.0271 (-1.5063)	-0.0127 (-0.4522)
Subsidiary Dummy	-0.0650 (-1.0921)	-0.0691 (-1.1529)	-0.0658 (-1.0915)	-0.0426 (-0.6798)	-0.0507 (-0.8052)	-0.0456 (-0.7211)
High-Tech Dummy	0.0433 (1.3590)	0.0462 (1.4553)	0.0433 (1.3554)	0.0490 (1.4921)	0.0546 (1.6683)*	0.0496 (1.5041)
Firm Size	0.0538 (3.1333)***	0.0548 (3.1882)***	0.0537 (3.0861)***	0.0555 (3.2274)***	0.0573 (3.3354)***	0.0550 (3.1530)***
Debt	-0.1649 (-2.0955)**	-0.1604 (-2.0105)**	-0.1635 (-2.0396)**	-0.1420 (-1.8005)*	-0.1391 (-1.7535)*	-0.1373 (-1.7217)*
ADJUSTED R^2	0.0673	0.0640	0.0593	0.0836	0.0787	0.0769
SUM SQ. RESIDUAL	11.3639	11.4032	11.3634	11.7886	11.8519	11.7776
SAMPLE	243	243	243	250	250	250

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 25.1

Underpricing, OLS Regressions with Operating Performance Growth in the IPO Year

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1.4965 (-5.2783)***	-1.4810 (-5.2108)***	-1.4721 (-5.1356)***	-1.6291 (-6.1585)***	-1.6202 (-6.1089)***	-1.6130 (-6.0577)***
OIS Growth (IPO Year)	-0.0011 (-0.3260)	-0.0010 (-0.2948)	-0.0009 (-0.2799)			
ROA Growth (IPO Year)				-0.0012 (-0.3566)	-0.0009 (-0.2655)	-0.0012 (-0.3366)
VCs' Ownership	0.1144 (1.3797)		0.2095 (1.2374)	0.1003 (1.3172)		0.2210 (1.4616)
Number of VCs Involved		0.0081 (0.9351)	-0.0112 (-0.6324)		0.0054 (0.6940)	-0.0143 (-0.9272)
Corporate Investors' Ownership	-0.2072 (-1.7637)*		-0.1526 (-0.7567)	-0.2057 (-1.9621)**		-0.2239 (-1.1993)
Number of Corporate Investors Involved		-0.0235 (-1.6487)*	-0.0070 (-0.2860)		-0.0193 (-1.5578)	0.0037 (0.1692)
Subsidiary Dummy	-0.0910 (-1.6135)	-0.0969 (-1.7162)*	-0.0925 (-1.6829)*	-0.0591 (-1.0900)	-0.0640 (-1.1771)	0.0592 (-1.0888)
High-Tech Dummy	0.0076 (0.2679)	0.0147 (0.5101)	0.0112 (0.3888)	-0.0026 (-0.0975)	0.0056 (0.2091)	0.0000 (0.0000)
Firm Size	0.0916 (6.0225)***	0.0910 (5.9832)***	0.0903 (5.8786)***	0.0984 (6.9413)***	0.0980 (6.9142)***	0.0974 (6.8349)***
Debt	-0.2443 (-3.4622)***	-0.2464 (-3.4816)***	-0.2422 (-3.4191)***	-0.2552 (-3.8317)***	-0.2596 (-3.8856)***	-0.2516 (-3.7615)***
ADJUSTED R^2	0.1125	0.1086	0.1088	0.1240	0.1179	0.1214
SUM SQ. RESIDUAL	20.4645	20.5537	20.4344	20.7195	20.8619	20.6733
SAMPLE	367	367	367	399	399	399

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 25.2

Underpricing, OLS Regressions with Operating Performance Growth Averaged over Four Years

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.8740 (-2.5789)***	-0.8705 (-2.5585)***	-0.8492 (-2.4523)***	-0.8964 (-2.8491)***	-0.9135 (-2.9174)***	-0.8559 (-2.7031)***
OIS Growth (Four-Year Aver.)	-0.0038 (-0.3860)	-0.0051 (-0.5040)	-0.0052 (-0.5197)			
ROA Growth (Four-Year Aver.)				-0.0111 (-1.2143)	-0.0113 (-1.2365)	-0.0125 (-1.3650)
VCs' Ownership	0.1111 (1.0665)		0.1165 (0.5596)	0.1590 (1.6119)		0.2244 (1.2755)
Number of VCs Involved		0.0117 (1.0088)	0.0002 (0.0090)		0.0144 (1.3203)	-0.0061 (-0.3119)
Corporate Investors' Ownership	-0.2378 (-1.7113)*		-0.1030 (-0.4603)	-0.2765 (-2.2137)**		0.0074 (0.0362)
Number of Corporate Investors Involved		-0.0350 (-1.8581)*	-0.0233 (-0.7667)		-0.0471 (-2.8733)***	-0.0448 (-1.6630)*
Subsidiary Dummy	-0.0676 (-1.0754)	-0.0737 (-1.1721)	-0.0714 (-1.1286)	-0.0321 (-0.5257)	-0.0457 (-0.7529)	-0.0389 (-0.6372)
High-Tech Dummy	0.0326 (0.9781)	0.0354 (1.0686)	0.0332 (0.9927)	-0.0044 (-0.1398)	0.0064 (0.2041)	0.0019 (0.0595)
Firm Size	0.0573 (3.1642)***	0.0574 (3.1662)***	0.0562 (3.0424)***	0.0585 (3.4713)***	0.0599 (3.5793)***	0.0565 (3.3374)***
Debt	-0.1699 (-2.1099)**	-0.1584 (-1.9483)**	-0.1603 (-1.9594)**	-0.1535 (-1.9641)**	-0.1367 (-1.7384)*	-0.1314 (-1.6638)*
ADJUSTED R^2	0.0625	0.0628	0.0564	0.0722	0.0783	0.0768
SUM SQ. RESIDUAL	10.8248	10.8219	10.7954	9.8295	9.7641	9.6937
SAMPLE	227	227	227	234	234	234

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 26

Underpricing, OLS Regressions with Growth of Sales

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1.5882 (-5.7866)***	-1.5738 (-5.7149)***	-1.5747 (-5.6977)***	-0.8456 (-2.7440)***	-0.8264 (-2.6753)***	-0.8089 (-2.5980)***
Sales Growth (IPO Year)	0.0051 (1.2763)	0.0051 (1.2858)	0.0052 (1.3040)			
Sales Growth (Four-Year Aver.)				0.0080 (0.5634)	0.0087 (0.6021)	0.0103 (0.7103)
VCs' Ownership	0.0804 (1.0091)		0.1890 (1.1999)	0.0467 (0.4908)		0.1711 (0.9389)
Number of VCs Involved		0.0042 (0.5120)	-0.0128 (-0.7995)		0.0007 (0.0669)	-0.0149 (-0.7818)
Corporate Investors' Ownership	-0.2206 (-1.9761)**		-0.2200 (-1.1447)	-0.2441 (-1.9607)**		-0.1606 (-0.7706)
Number of Corporate Investors Involved		-0.0215 (-1.6095)	0.0008 (0.0362)		-0.0305 (-1.8401)*	-0.0117 (-0.4238)
Subsidiary Dummy	-0.0912 (-1.6961)*	-0.0957 (-1.7742)*	-0.0918 (-1.6990)*	-0.0779 (-1.3979)	-0.0839 (-1.5041)	-0.0799 (-1.4261)
High-Tech Dummy	-0.0051 (-0.1866)	0.0022 (0.0798)	-0.0030 (-0.1081)	0.0293 (0.9670)	0.0345 (1.1419)	0.0307 (1.0089)
Firm Size	0.0963 (6.5401)***	0.0957 (6.4880)***	0.0956 (6.4491)***	0.0553 (3.3549)***	0.0545 (3.3037)***	0.0534 (3.2041)***
Debt	-0.2530 (-3.6772)***	-0.2570 (-3.7273)***	-0.2501 (-3.6209)***	-0.1758 (-2.3985)**	-0.1676 (-2.2671)**	-0.1666 (-2.2370)**
ADJUSTED R^2	0.1208	0.1160	0.1177	0.0589	0.0564	0.0546
SUM SQ. RESIDUAL	22.0789	22.1990	22.0424	11.8530	11.8842	11.8129
SAMPLE	397	397	397	262	262	262

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 27
Underpricing, OLS Regressions with Board Structure

	(1)	(2)	(3)	(4)
Intercept	-1.7660 (-6.4581)***	-1.7861 (-6.5326)***	-1.7693 (-6.4852)***	-1.7674 (-6.4344)***
Board Size	-0.0089 (-1.3303)	-0.0066 (-0.9916)	-0.0064 (-0.9494)	-0.0055 (-0.8041)
Proportion of Outside Directors	0.1358 (2.4040)**	0.1581 (2.1469)**	0.1672 (2.3337)**	0.1660 (2.2237)**
Proportion of Independent Directors	0.0638 (0.9673)	0.0257 (0.3405)	0.0240 (0.3227)	0.0167 (0.2185)
VCs' Ownership		0.0228 (0.2511)		0.1312 (0.8356)
Number of VCs Involved			-0.0010 (-0.1084)	-0.0133 (-0.8506)
Corporate Investors' Ownership		-0.2715 (-2.3002)**		-0.2456 (-1.3126)
Number of Corporate Investors Involved			-0.0283 (-2.0443)**	-0.0043 (-0.1940)
Subsidiary Dummy		-0.0565 (-1.0487)	-0.0582 (-1.0783)	-0.0570 (-1.0553)
High-Tech Dummy	-0.0218 (-0.8653)	-0.0243 (-0.9394)	-0.0177 (-0.6782)	-0.0214 (-0.8162)
Firm Size	0.1043 (7.1758)***	0.1054 (7.2551)***	0.1043 (7.1915)***	0.1040 (7.1058)***
Debt	-0.2752 (-4.2196)***	-0.2714 (-4.1684)***	-0.2714 (-4.1660)***	-0.2684 (-4.1118)***
ADJUSTED R^2	0.1200	0.1280	0.1244	0.1255
SUM SQ. RESIDUAL	23.4883	23.1097	23.2049	23.0668
SAMPLE	430	430	430	430

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 28.1

Underpricing, OLS Regressions with Directors' Average Ownership

	(1)	(2)	(3)	(4)	(5)
Intercept	-1.8085 (-6.4500)***	-3.8558 (-8.0059)***	-2.6806 (-5.4089)***	-1.1256 (-2.2424)**	-1.9889 (-5.3963)***
Management Directors' Ownership	0.1592 (1.5477)				
VC Directors' Ownership		-1.3490 (-1.5299)			
Corporate Investor Directors' Ownership			-0.2677 (-0.6451)		
Related Directors' Ownership				-1.1311 (-0.7369)	
Independent Directors' Ownership					1.1572 (0.8556)
High-Tech Dummy	-0.0016 (-0.0611)	-0.0356 (-0.9197)	-0.0056 (-0.1245)	0.0250 (0.5454)	-0.0158 (-0.5088)
Firm Size	0.1073 (7.1736)***	0.2194 (8.5978)***	0.1546 (5.8984)***	0.0709 (2.6273)***	0.1186 (5.9701)***
Debt	-0.3115 (-4.5776)***	-0.4883 (-4.5677)***	-0.4015 (-3.7284)***	-0.1520 (-1.3667)	-0.3417 (-3.9391)***
ADJUSTED R^2	0.1304	0.2779	0.2301	0.0354	0.1201
SUM SQ. RESIDUAL	22.8451	12.2534	5.8888	8.8056	18.9402
SAMPLE	408	207	126	140	307

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively

Table 28.2
Underpricing, OLS Regressions with Directors' Average Voting Power

	(1)	(2)	(3)	(4)	(5)
Intercept	-1.8140 (-6.4663)***	-3.8122 (-7.8908)***	-2.7151 (-5.5780)***	-1.0803 (-2.1319)**	-1.9998 (-5.4216)***
Management Directors' Voting Power	0.1803 (1.6166)				
VC Directors' Voting Power		0.2383 (0.8043)			
Corporate Investor Directors' Voting Power			-0.4722 (-1.6552)*		
Related Directors' Voting Power				0.0708 (0.3756)	
Independent Directors' Voting Power					0.9639 (0.7447)
High-Tech Dummy	0.0003 (0.0109)	-0.0348 (-0.8948)	-0.0027 (-0.0621)	0.0194 (0.4082)	-0.0157 (-0.5074)
Firm Size	0.1073 (7.1761)***	0.2154 (8.3856)***	0.1588 (6.1358)***	0.0682 (2.4990)***	0.1192 (6.0008)***
Debt	-0.3153 (-4.6565)***	-0.4829 (-4.4242)***	-0.3936 (-3.6919)***	-0.1593 (-1.4357)	-0.3440 (-3.9723)***
ADJUSTED R^2	0.1309	0.2719	0.2445	0.0325	0.1196
SUM SQ. RESIDUAL	22.8328	12.3558	5.7783	8.8318	18.9514
SAMPLE	408	207	126	140	307

*, **, and *** refer to 10%, 5%, and 1% significance levels respectively