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Chenchuramaiah T. Bathala
Cleveland State University

Oswald D. Bowlin
Texas Tech University

William P. Dukes
Texas Tech University

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Corporate Governance, Illiquidity, and Valuation Issues in Privately-Owned Corporations[*]

Chenchuramaiah T. Bathala[+]
Cleveland State University,

Oswald D. Bowlin[++]
Texas Tech University

and

William P. Dukes[+++]
Texas Tech University

Investors in private corporations face unique problems relating to corporate control, illiquidity and valuation of securities. In this research, we survey a large sample of US corporations. Our sample includes both private and public firms. Major findings of our research are as follows: Private firms use written shareholder agreements for safeguarding ownership interests and dividend payments. Family owned firms dominate the ownership structure of private firms. Insiders of private firms own a much larger proportion of common stock than insiders in public firms, and the CEOs of private firms often happen to be the largest stockholders.

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[+] **Chenchuramaiah T. Bathala**, CFA, earned MS and Ph.D. degrees from Texas Tech University. He is an Associate Professor of Finance at Cleveland State University and his current research interests are in small business finance, institutional investing behavior, and issues in corporate ownership and governance. Dr. Bathala's research has been published in Financial Management, Journal of Financial Research, Financial Review, Journal of Business Finance & Accounting, Managerial & Decision Economics, and Journal of Small Business Finance, among others.

[++] **Oswald D. Bowlin** earned BA and MA degrees in Economics from Texas A&M University and a Ph.D. from the University of Illinois. He is a Professor of Finance at Texas Tech University. Areas of interest include business finance, investments, and capital markets. He has published in many journals, including publications in Journal of Finance, Journal of Monetary Economics, Financial Management, Journal of Portfolio Management, Financial Analysts Journal, and he is a co-author of two books.

[+++] **William P. Dukes** holds an MBA (with high distinction) from the University of Michigan and a Ph.D. from Cornell University. He is a Professor of Finance at Texas Tech University. His current research interests are in the areas of small business valuation, stock valuation, investment case development, and mutual fund operations and functions. He has multiple publications in journals such as Business Valuation Review, Journal of Financial Research, Journal of Portfolio Management, and Journal of Small Business Finance.

The size of executive teams and boards are smaller in private firms than in public firms. However, the proportion of executives and board members who are also stockholders of the firm is larger in public firms. We find that a greater percentage of members on boards of private firms are outsiders, consistent with the arguments about the need for outside board members for objectivity and resolving conflicts among the closely-related stockholders. Our research also documents evidence relating to illiquidity of stock ownership and the different valuation approaches used in private firms.

Introduction

Privately-held (or private) firms comprise a vast majority of for-profit business enterprises in the United States, and they are vital for the well being of U.S. economy. According to a report by the U.S. Small Business Administration, during the period 1990-95 small firms (employees <=500) accounted for 90.1 percent of new establishments and 76.5 percent of net new jobs. Nevertheless, research on small firms is scant, probably for want of readily available data or less enthusiasm on the part of academicians. Further, the findings from research on large, public corporations are for the most part inadequate to explain the agency relationships and corporate control issues in small, private firms for several reasons.

The issues relating to agency problems and corporate governance issues in large corporations have been widely discussed in the financial literature [For example, see Jensen and Meckling (1976), Myers (1977), Smith and Warner (1979), Fama (1980), Fama and Jensen (1983), Easterbrook (1984), and Barnea et al. (1985)]. Primarily, the research emphasizes the agency relationships between i) managers and equity holders, and ii) equity and debt holders. Managers of large corporations, with very little or no equity interests in the firm but with control over the firm's resources, would have incentives to expropriate wealth from equity holders at large through shirking, excessive perk consumption, and expense preference behavior.

The nature of agency problems and issues relating to corporate governance in private firms are substantially different from that in large corporations. In private firms, those who contribute most or a major part of equity capital hold control over the firm’s affairs and the minority shareholders, having little control over the firm’s affairs, tend to be in a disadvantageous position. Furthermore, stockholders face liquidity problems because of the small number of investors, lack of a ready market for the firm's stock, and information limitations. The mechanisms for disciplining the managers of large corporations, i.e., capital market resolutions, regulatory discipline, and takeover possibilities are not generally available to the stockholders of private firms.

Owing to these peculiarities in private firms, it is apparent that researchers should examine issues relating to corporate control, distribution of cash flows, and valuation of securities in those firms apart from the widely available research findings on large corporations. Extant literature on small business finance so far has largely focused on examination of corporate financial policies (e.g., capital structure and working capital management) compared to issues concerning corporate governance, shareholder agreements, and valuation of common stock. This paper attempts to fill the gap by examining the data generated from a nation-wide survey of private firms conducted during the year 1998. Our paper is unique in several ways. First, it examines the role and importance of written shareholder agreements as a mechanism for establishing shareholder rights in private firms. Second, it ties in the corporate governance structure (composition of executive teams and boards of directors) to ownership differences and CEO profiles in private firms. Third, the paper makes a detailed examination of illiquidity and valuation of common stock in private firms. Although our emphasis is on private firms, we will make comparisons with public firms using the data on public firms obtained in the same survey. The rest of the paper is organized as follows. Section I contains a review of relevant literature. In Section II we will

present a description of the survey data and results. Section III will provide a summary of the paper and our concluding remarks.

I. Literature Review

In this section we will review the literature pertaining to shareholder agreements, corporate governance (management teams and board composition), illiquidity of corporate securities, and methods for valuation of common stock in close corporations.

A. Shareholder Agreements

Typically, the corporate structure of large, publicly owned corporations provides for control of the firm's affairs by the charter and bylaws, proxy system, and majority voting. However, shareholders in close corporations often like to act as partners without being constrained by the majority vote limitations of corporate structure. Thus, shareholders' agreements similar to partnership deeds have come into vogue. Myers (2000) has developed a model in which he makes one important assumption, i.e., outsiders cannot prevent insiders from capturing part or all of operating cash flow. His model as it applies to partnerships shows that the agreements typically cover items such as specify ownership shares, dividends, and the commitment of assets to the firm. When viewed from the perspective of a closely-held corporation, the shareholder agreements provide for a low cost negotiating tool for the equity holders, both inside and outside. The stockholders' agreements are generally drawn at the time the firm is organized, and they cover such items as employment and compensation of stockholder-employees, dividend policy, protection against dilution of ownership interests, sale of stock to outsiders, and amendments to charter or bylaws.

Hand, Lloyd, and Rogow (1982), Buchholz, Crane, and Nager (1999), Bennedsen and Wolfenzon (2000), and O'Neal and Thompson (2000), among others, discuss the usefulness of written stockholders' agreements in resolving conflicts between shareholders of close corporations. Hand, Lloyd, and Rogow state that their purpose is to limit powers normally vested in corporate stockholders and the board of directors. According to O'Neal and Thompson (2000), the primary objective of shareholders' agreements is to protect the minority shareholder against the power vested in the majority by the principle of majority rule and permit the minority shareholder to obtain membership on the board of directors or some other voice in the management of the corporation. This view is further strengthened by Shleifer and Vishny (1997) who argue that the issue concerning expropriation of minority shareholders by controlling shareholders is even more important than the issue of agency costs associated with expropriation of all shareholders by managers.

Buchholz, Crane, and Nager (1999) argue that shareholder agreements are critical for documenting shareholder rights for maintaining smooth relationships among shareholders of family businesses and that the agreement can "assure continued family ownership and provide an 'escape' mechanism for disgruntled owners" (p.166). Further, they state, "If any owner decides that he cannot tolerate the way business is being run, that agreement will provide the terms under which he can sell his stock. Co-owners and co-managers must not be held hostage to each other if relationships go south. A buy-sell agreement is the ultimate pressure relief valve that can keep the family from blowing up"(p. 158).

The question of legal validity of shareholders' agreements has been widely discussed by O'Neal and Thompson (2000). From their discussion, prior to 1960 courts generally invalidated shareholders' agreements on the basis of their inconsistency with the statutory provisions conferred on the board of directors. However, since 1960 'courts and legislators have shown an increased sensitivity to the need of closed corporations to depart from the traditional statutory norms. In discussing the veto powers of

shareholders in close corporations, O'Neal and Thompson state that in several states veto arrangements in shareholders' agreements are enforceable.

In accepting shareholders' agreements as valid contracts, courts seem to have taken the approach of (1) permitting participants in close corporations to depart from traditional statutory norms, and (2) protecting minority shareholders. As examples of legal validation for shareholders' agreements, we refer to some court cases described in O'Neal and Thompson. In an Illinois case, Galler vs. Galler (1964), the shareholders' agreement called for, among other things, declaration of dividends if the firm earned surplus in excess of $500,000. Another provision required the company to purchase a sufficient number of shares from a deceased participant's estate in order to pay for the estate and inheritance taxes. The intermediate appellate court decided against the agreement but it was subsequently upheld by the Illinois Supreme Court. In the case of Weber v. Sidney (1963) the court held an oral agreement about division of the earnings and profits of a corporation between two shareholders to be valid and enforceable. In another case, Wasserman v. Rosengarden (1980) 'court upheld the validity of an oral agreement among all the shareholders of a close corporation providing for election of the parties there to as directors and officers and for an equal distribution of salaries and profits as long as the parties remained shareholders or the corporation remained in existence.' In Adler v. Svingos (1981), the court upheld an agreement requiring unanimous consent of all shareholders on all corporate matters to be valid, and did not violate the provisions of the New York Business Corporate Law.

B. Corporate Control and Governance

In corporations, control is vested in two bodies in a firm, i.e., the board of directors and the top management. According to Neubauer and Lank (1998), the key elements of a typical corporate governance structure in family-controlled businesses are the family (and its institutions), the board of directors, and top management. In large, public corporations the board of directors has the important role of monitoring and controlling the firm's top management with the objective of protecting the shareholders' interests, in addition to fulfilling its statutory obligations as required by corporate laws. The board's monitoring role is vital for mitigating agency problems between managers and stockholders as discussed, for example, in Jensen and Meckling (1976). In private corporations, however, the board's role is different in nature. There is very little need for the board to monitor the performance of top management for two reasons. First, the management teams consist mostly of the stockholders themselves, and outsiders, if any, on management teams are few. Second, more often than not, the members on the board are the same as those of the management team. Third, the board's primary purpose in small firms would, therefore, be to fulfill the statutory requirements and involve itself in the firm's affairs in several other ways.

Empirical studies using data from large publicly owned corporations, for example Bathala and Rao (1995), have found that outside directors on the board play an important role in mitigating agency conflicts between management and shareholders. Contrary to this, according to Mace (1948) board members of small firms advise more on the operational areas than play a major role in the formulation of higher level strategies or monitoring of top management. Outside members on boards, not restricted by family or personal loyalties, were found to be extremely effective in training the presidents of their firms to be better administrators. The outside board members were also helpful to firms in matters such as helping in management succession, raising bank loans, interviewing candidates for jobs, or offering suggestions for improving the firm's operating performance. Outside directors were also seen to play a valuable role in pacifying the differences among major stockholders or key executives who, most often, happen to be the members of the same family or close relatives. Further, firms with minority shareholders often elected one or more outsiders with unquestionable character as members of their boards. Mace

states, "the presence of such a person or persons on the board constituted considerable assurance to the minority stockholders that the enterprise would be operated on a plane of high standards."

Castaldi and Wortman (1984) identify five attributes of board members which are especially valuable to small firms. These factors are equity ownership, technical expertise, management experience, special economic service, and broad economic specification. Neubauer and Lank (1998) observe that outside members in family businesses are a valuable resource in several ways. They refer to a seminar with participants from 141 family-controlled firms. The responses from the seminar participants showed that 79 percent of the firms had mixed boards. The responses further indicated that family-controlled businesses value outside directors for their expertise, consultancy, objectivity, neutrality, and outside view, among others. In contrast to this, on the basis of a survey of Inc. 500 companies, Ford (1988) concluded that outside directors are of less value than inside directors. He conjectured that it could be due to the outsiders' lack of knowledge about the firm and its environment, and their lack of availability for consulting except during meetings.

The literature reviewed above touches upon just one limitation of the small firms' management teams, i.e., their deficiencies in management aspects. Other important attributes of management teams such as the size, composition, and roles of majority vs. minority stockholders on management teams, and their implications to agency and corporate control have not been examined. This research attempts to fill the void in that respect.

C. Illiquidity and Valuation Issues

With about 25 million businesses in operation in the USA and less than one-half of one percent traded in any meaningful way, the need for valuation and a review of the issues as they pertain to small and/or privately-held businesses is large and increasing. Traditional equity valuation models (e.g., the Capital Asset Pricing Model and Dividend Discount Models) rely upon past prices, dividends, and historical growth rates in order to evaluate risk-return potentials in valuing common stocks. Those valuation models cannot be used for private firms that have no trading in common stock. Further, as Damodaran (1996) points out, even historical earnings, growth rates, and cash-flow estimations of private firms are often unreliable because of the difficulty in distinguishing between management compensation and return on capital. Owing to these limitations, comparative valuations or use of independent appraisers are likely to serve as suitable approaches for valuing privately owned stock.

In a survey of members of the American Society of Appraisers (ASA) and the Institute of Business Appraisers (IBA), Dukes, Bowlin, and Ma (DBM) (1996) identified ten approaches which were reported to be used in the process of valuing privately-held businesses. The numerous methods of valuation and the lack of consistency in valuations have been addressed in the Central Trust Case (1962), by Hubbard and Waldron (1988), Waldron and Hubbard (1991), and Dukes (2001). The issues of non-marketability and control premiums have been addressed in different ways by different authors but with the same intent - that of explaining why a closely-held firm should be valued in ways that show the illiquid nature of the small firm. Emory (1995) has made and published seven studies covering the overall time period of 1985-1995. The research on small-firm valuations, however, has not related the approaches to the differences in ownership and corporate governance. Further, the underlying corporate governance and control factors as they relate to the illiquidity of the ownership in private companies have also not been fully explored. This research will seek to determine if agency relationships, differences in ownership structure, and corporate governance issues have a bearing on the stock valuation methods and liquidity of ownership interests in private firms.

II. Data and Results

A. Data

The data for the study is obtained using a survey instrument. The firms in the Standard & Poor's Directory of Corporations, 1997, listed in approximately 3,000 pages, formed the initial population of firms for our survey. For our sample, we selected one firm from each page (the first firm at the top of left-hand column). Then, we eliminated certain not-for-profit entities (hospitals, universities, etc.) from the list and ended up with a mailing list of 2,870 firms – 2,251 private firms (78.4 percent) and 619 public firms (21.6 percent). The survey was anonymous and the questionnaire was not marked in order to ensure anonymity of responding firms. The survey instrument was four pages long and it sought information on ownership/governance issues, shareholder agreements, sale/transfer of ownership, and financial policies.

The survey questionnaires were mailed in the month of August, 1998. A total of 275 firms provided responses of which 253 were usable, for a response rate of 8.8 percent. There were 75 envelopes that came back as undeliverable. We suspect that the response rate could be low due to small size and private ownership of firms in the mailing list, and the 4-page questionnaire that we used to elicit information on different topic areas. The President or CEO of the company provided as much as 74.5 percent of the responses, but the proportion of responses provided by them is higher for publicly owned firms (78 percent) than for privately owned firms (61 percent). However, from the data analysis and comparisons presented below, we note that the responding firms are representative of the firms in the population.

Table I contains distributions of sample firms by ownership type (Panel A), business activity (Panel B), and company size in sales (Panel C). Out of the total of 253 responding firms, 202 (79.8 percent) are privately owned and 51 (20.2 percent) are publicly owned. By business activity, a little over 50 percent of the firms are in manufacturing. The firms in trading (wholesale/retail) and service sectors comprise 10.8 percent and 7.6 percent of sample firms, respectively. In size, firms in the smallest size group with sales of $25 million or less formed the largest group (61.7 percent). However, the distribution differs with ownership type -- as much as 70.4 percent of private firms belong to the smallest size group compared to only 27.4 percent of public firms. At the other extreme, we find fewer private firms (7.5 percent) in the group of firms with sales over $100 million, compared to 53.0 percent of firms from the category of public firms. Since a vast majority of sample firms, both private and public, have sales less than $500 million any generalizations we make from the findings in our study would apply primarily to firms in the small business environment.

Next, we examine if the firms that responded to the survey questionnaire are representative of the firms in the mailing list. Table I, Panel D, contains the comparative data of firms in the mailing list (population) and in the survey responses (sample). As can be seen, the distribution of firms by sales (<= $100 million and > $100 million) is quite similar for both the population and the sample. In sales, firms up to $100 million consisted of 87.8 percent of all firms in the population, which compares well with the 83.7 percent of the responding firms belonging to that category. The response rates for private and public firms are also remarkably consistent for the most part. The response rates for private and public firms were 9.0 percent and 8.2 percent, respectively, compared to the overall response rate of 8.8 percent for all firms. On the basis of these observations, we believe that the responding firms are representative of the firms in the population.

B. Results

As mentioned before, our focus in this survey is on private firms but we will make comparisons between private and public firms as appropriate. Further, we present our analysis separating the sample firms into different size and ownership groups. For statistical analyses, we employ Chi-square tests and t-

tests. The survey findings are divided into three major areas – corporate governance and control, illiquidity of ownership interests, and valuation of common stock.

Corporate Control and Governance. We analyze the survey responses relating to questions about corporate control and governance in three different ways. First, we discuss shareholder agreements and the matters covered in those agreements. Second, we analyze the differences in shareholder agreements by the ownership type, ownership dispersion, inside ownership differences, and the CEO profiles. Third, we examine the differences in the composition of management teams and boards of directors.

Shareholder Agreements. In private firms, ownership and management are generally concentrated in a few individuals. Discussion in prior literature (e.g., Hand, Lloyd, and Rogow, 1982) suggests that written shareholder agreements provide a foundation for corporate control and governance in private firms. They are helpful in establishing shareholder rights and in reducing agency and information problems relating to equity investments in private firms. We gathered information relating to shareholder agreements using two questions in our survey instrument. The first question asked whether or not the company has a written 'shareholders' agreement' covering matters that impact the rights and privileges of common stockholders. The second question asked the firms to indicate if they have written or established guidelines (procedures) for specific matters relating to shareholders' interests. The responses to these questions relating to shareholder agreements are summarized in Table II (Panels A, B, and C).

The summary data in Table II (Panel A) show that a total of 120 firms (49.8 percent of responses) have written shareholder agreements. Out of those 120 firms having written shareholder agreements, 102 firms are private (52 percent of private firms) and 18 firms are public (40 percent of public firms). The differences are not statistically significant (Chi-square = 2.12; p-value = 0.1452).

Panel B (Table II) provides a summary of responses relating to the various matters covered in shareholder agreements. In case of private firms, matters intended to protect shareholders' equity stakes and cash-flow rights are most prominent in shareholder agreements. In the order of declining importance, they are (1) sale, transfer, or buy-back of stock (107 firms, 74.3 percent), (2) proxy and voting procedures (71 firms, 49.3 percent), (3) valuation of company stock (71 firms, 49.3 percent), and (4) preemptive rights in equity offerings or when someone is selling (52 firms, 36.1 percent). In case of public firms, the top four items in their order of importance are: (1) proxy and voting procedures (44 firms, 97.8 percent), (2) payment of dividends (23 firms, 51.1 percent), (3) sale, transfer, or buy-back of stock (17 firms, 37.8 percent), and (4) mergers, reorganization, or sale of the firm (13 firms, 28.9 percent). Clearly, with the market pricing mechanism in place, agreements concerning valuation of common stock is not important for stockholders of public firms compared to their high importance for stockholders of private firms. Agreements relating to dividend payments seem to be more important for investors in public firms than for investors in private firms.

In Panel C (Table II), we focus on private firms and conduct further analysis of the differences in shareholder agreements according to ownership type, insider ownership, and the CEO's profile. We concentrate on three items that are prominent in shareholder agreements – sale/transfer of common stock, dividend payments, and proxy/voting procedures. On the basis of the Chi-square statistics, we find that the group differences are statistically significant in most cases.

Agreements relating to sale/transfer of common stock are most common in closely-held firms (89.1 percent) followed by family-owned firms (69.1 percent) and widely-held firms (57.1 percent). The differences are statistically significant (Chi-square = 8.67; p-value = 0.0131). This suggests that having control over ownership rights is more critical for stockholders in family-owned and closely-held businesses than for the shareholders of widely-held firms. Contrary to this, agreements relating to dividend payments and proxy/voting procedures are more common in widely-held firms than in either

closely-held or family-owned businesses. In widely-held firms, not every owner can expect to be an executive or employee of the firm and derive monetary compensation in the form of salaries or perks. Therefore, ensuring rights to cash flows and their distribution seems to be more critical for shareholders of widely-held firms. Further, following the analysis in Rozeff (1982), it can be argued that firms with widely dispersed stock ownership would attempt to mitigate equity agency costs by establishing shareholder rights to dividends through agreements written in advance. In widely-held firms, because of the diffused ownership, it appears that stockholders' main concern is protecting their interests by safeguarding the procedures relating to proxy and voting rights rather than through agreements about sale/transfer of common stock.

The relative importance of shareholder agreements also seems to vary with differences in insider ownership levels. Agreements about sale/transfer of ownership are slightly more prominent in firms with high concentrations of insider ownership (over 50 percent) than in firms with low concentrations of insider ownership (50 percent or less). This finding lends support to the earlier finding that owners with greater concentrations of stock ownership tend to safeguard their control over the firm by means of agreements relating to sale/transfer of common stock.

Agreements relating to dividend payments and proxy/voting procedures are less important in firms in which the CEO happens to be the largest shareholder compared to those in which the CEO is not the largest shareholder. The differences between the groups are statistically significant. This appears to be contrary to the intuition that, in order to protect minority interests, shareholder agreements relating to dividends and proxy/voting procedures should be more prevalent in firms with CEOs entrenched in both ways, through ownership and power. A finding contrary to this expectation suggests that minority shareholders have fewer rights and less protection for their interests in firms.

Ownership Differences. The survey responses relating to ownership differences and CEO profiles are summarized in Table III. In Panel A we present a summary of responses relating to the dispersion of stock ownership in our sample firms. For the entire sample, family owned corporations comprise the largest proportion (52.2 percent), but the proportion is significantly higher for private firms compared to the proportion for public firms (64.2 percent versus 2.1 percent). At the other extreme, in the category of widely-held firms, a meager 7.2 percent of firms are private compared to a staggering 72.9 percent of public firms. The Chi-square statistic of 111.44 (p-value < 0.0001) indicates that the ownership differences are statistically significant. This evidence confirms the private firms' need for keeping corporate control in just a few hands. Corroborating this evidence, in Panel B, we present data on the percentage of stock owned by corporate insiders. Corporate insiders own 50 percent or more of the firm's equity in 145 private firms (75.1 percent) compared to just 5 firms (10 percent) in public firms. At the lower end, only in 48 private firms (24.9 percent) the insider ownership is less than or equal to 50 percent compared to 45 firms (90 percent) in public firms. The inside ownership differences between private and public companies are also statistically significant (Chi-square = 73.49; p-value < 0.0001).

Next, we analyze the ownership profiles of CEOs. From Panel C, we note that in 120 private firms (62.8 percent) the CEO is the largest stockholder whereas in only 11 public firms (22.5 percent) the CEO is the largest stockholder. The differences across the two groups, private vs. public, are statistically significant (Chi-square = 25.65; p-value < 0.0001). This finding further strengthens our priors that ownership and control go hand-in-hand in private firms. In response to the question whether the CEO is a founding member of the company, a total of 77 firms (32.1 percent) answered in the affirmative. The breakdown for private and public firms shows no significant differences between them (Chi-square = 0.4965; p-value = 0.7502). We anticipated to see a larger proportion of founders to be the firms' CEOs in private firms compared to public firms. The finding of no significant differences between private and public firms in the founder being the firm's CEO came as a surprise. It is conceivable that more younger firms may have founding members as CEOs compared to older firms.

In order to verify our conjecture, we separated the sample firms into two groups by their age – young firms in the age group of < = 25 years (52 firms) and old firms in the age group of 25 years and older (188 firms) and examined the frequency distributions (frequency tables not provided in the paper). Founders are CEOs in 35 young firms (67.3 percent) compared to 41 old firms (21.8 percent) belonging to the older group. The differences are statistically significant (Chi-square = 38.97; p-value < 0.0001). The differences are even more dramatic in private firms than in public firms. In private firms, founders are CEOs in 21 out of 27 firms (77.8 percent) belonging to the category of younger firms compared to 38 out of 164 firms (23.2 percent) belonging to the category of older firms. The differences are statistically significant (Chi-square = 32.38; p-value < 0.0001). In public firms, the founders are CEOs in 14 out of 25 firms (56.0 percent) belonging to the category of younger firms compared to 3 out of 24 firms (12.5 percent) belonging to the category of older firms. The differences are statistically significant (Chi-square = 10.226; p-value = 0.0014). These findings do show that more often than not, we will find founder-CEOs in younger firms, and more so in private firms than in public firms.

In a recent article, Bennedsen and Wolfenzon (1999) analyze a model of closely held corporations. The authors show that founders of firms can optimally choose an ownership structure with several large shareholders to force them to form coalitions to obtain control. According to their model, the initial owners may in their own interests dilute their own power by distributing votes among several large shareholders, and this dilution of power commits them to form a coalition to obtain control. Further, the analysis in the paper implies that allowing the shareholders to freely trade shares will render an ownership structure with many significant owners unstable. Thus, initial owners seem to distribute voting rights only to those who are less likely to take control away from their hands.

We have analyzed the survey responses in order to verify the validity of the results shown in Bennedsen and Wolfenzon's model of privately held corporations. If founders prefer an ownership structure that provides a strong coalition among shareholders, then one would expect to observe a dominance of family owned ownership structure in firms with founders as CEOs. The survey data (frequency table not included in the paper) show that 61.0 percent of founder-CEO companies are family owned compared to 65.6 percent of nonfounder-CEO companies. If allowing shareholders to freely trade shares renders an ownership structure unstable, then one would expect to find a higher degree of restrictions or prohibition on stock trading in founder-CEO companies than in nonfounder-CEO companies. We find 33.3 percent of founder-CEO firms to have total prohibition on sale/transfer of common stock compared to 16.5 percent of nonfounder-CEO firms. At the other extreme, only 7.8 percent of founder-CEO firms allow for unrestricted sale/transfer of common stock compared to 26.5 percent of firms with nonfounder-CEOs. These differences are statistically significant (Chi-square = 11.58; p-value = 0.009). Another dimension for keeping the coalition together is by requiring approvals for sale/transfer of company's stock. Our data show that every sale/transfer of common stock requires approval in 76.2 percent of founder-CEO firms, compared to 53.6 percent of nonfounder-CEO firms. At the other extreme, only 9.5 percent of founder-CEO firms do not require an approval compared to 33.0 percent of nonfounder-CEO firms. The group differences are statistically significant (Chi-square = 8.976; p-value = 0.0112).

The above findings are generally consistent with the results shown by the model in Bennedsen and Wolfenzon's article. The founders of private firms seem to be concerned about keeping the coalition together by placing restrictions/prohibition on trading in the company's common stock and also by requiring approval for sale/transfer of stock ownership.

Composition of Management Teams of Boards of Directors. In Table IV, we present summary data relating to our survey questions about management teams (Panel A) and board composition (Panel B). On average, the size of management teams is much smaller in private firms compared to public firms (5.02 versus 11.84). Further, the proportion of executives who are also stockholders of the company is

much smaller in private firms compared to public firms (57.0 percent versus 95.0 percent). The mean differences between private and public firms are statistically significant (p-values < 0.0001). What is surprising is the finding that the proportion of stockholder-executives is smaller in private firms than in public firms. This could be due to a couple of reasons – (1) private firms could be hiring outsiders in managerial positions for want of talent within among stockholders, and (2) executives in private firms may not receive stock options or stock ownership as a part of their compensation which is often the case with the executive compensation in public firms. In order to verify this, we looked into the existence of stock option plans for executives in private and public firms. Out of the 47 firms which have stock option plans for the firms' managers, 33 (70.2 percent) are public firms.

In Panel B (Table IV), we present data to analyze the differences in board composition between private and public firms. The size of boards is smaller in private firms compared to public firms (4.53 versus 8), and the difference is statistically significant (T-ratio = 7.77; p-value <0.0001). Further, on average, the proportion of board members who are also the firm's stockholders is smaller in private firms than in public firms (70.8 percent versus 94.7 percent) and the mean difference is statistically significant (T-ratio = 5.23; p-value < 0.0001). This is consistent with the previous finding of a smaller proportion of executives who are also stockholders for private firms. Further, the proportion of board members who are also on the firm's management team is higher in private firms compared to the proportion in public firms (62.1 percent versus 29.8 percent) and the difference between the two groups is statistically significant (T-ratio = 7.48; p-value < 0.0001). This finding concurs with the general expectation that power in private firms would be concentrated in a few individuals who are on both the executive team and the board of directors. However, the proportion of board of directors who are neither stockholders nor on the management team (outside board members) is larger in private firms compared to the proportion in public firms (19.5 percent versus 8.1 percent) and the difference is statistically significant (T-ratio = 2.93; p-value = 0.0037). This could be due to a need in private firms (which are generally smaller) for seeking outsiders for talent that is lacking in stockholders or managers. It could also be due to having close affiliates of major shareholders who are neither shareholders nor on the firm's management team on the firm's board.

Both Mace (1948) and Neubauer and Lank (1998) emphasized the need for outside directors in family-controlled business for their expertise, objectivity, and outside perspective. We examined the data to verify if family-owned private firms have a larger proportion of outside directors than those which are widely-held. The data (frequency table not included in the paper) show that family-owned firms have the highest proportion of outside directors (22.0 percent), compared to 14.7 percent in closely-owned firms and 19.1 percent in widely-held firms. These differences seem to provide support for the contention that family-controlled firms prefer to have outside directors. Although it sounds paradoxical, potential serious conflicts among family members could be a reason why family-owned firms have the highest proportion of outside directors. This finding contrasts the evidence reported in Bathala and Rao (1995) where they found a negative relationship between inside ownership and outside directors on the board in support of the argument that they are substitute mechanisms for controlling agency problems in firms.

Illiquidity of Stock Ownership. Lack of active market and restrictions on sale or transfer of ownership are two aspects of illiquidity associated with the equity investment in private firms. In our survey, we sought information about the liquidity of stock ownership and summarized the responses in Table V. The questions referred to both sale and transfer of common stock holdings in eliciting responses from firms.

The summary data in Panel A (Table V) indicate the magnitude of illiquidity in the common stock of private firms. As many as 95 of a total of out of 232 firms that have responded to the question do not have any trading in common stock, and not surprisingly all of them are private firms. They comprise

52.2 percent of private firms. In an additional 45.6 percent of private firms stock trading is infrequent. Compared to this, in only 6 percent for public firms the stock trading is infrequent. In only four out of 182 private firms (2.2 percent) the stock trading is frequent. Daily trading takes place in the common stock of 41 firms, which are all public firms. It translates to 17.7 percent of all responding firms or 82 percent of public firms. The differences in trading between the groups are statistically significant (Chi-square = 200.68; p-value < 0.0001).

We conducted further analysis of illiquidity of stock ownership in private firms according to ownership differences and firm size. On the basis of frequency distributions and Chi-square statistics (tables not presented), we find group differences to be statistically significant according to ownership differences but not according to the classification by firm size. Out of the four private firms with 'Frequent' trading, two are closely-held and two are widely-held. In size, two firms have sales in the smallest size category ($25 million or less), and the other two firms are in the sales range of $50 - $250 million.

The summary data presented in Panel B reveal that restrictions on sale or transfer of common stock are widely prevalent in private firms. Unrestricted sale or transfer of common stock is allowed in only 37 private firms (21.1 percent), compared to 46 public firms (92 percent). As many as 101 private firms (57.7 percent) have restrictions on sale or transfer of common stock to varying degrees, and in the other 37 private firms (21.1 percent) there exists a prohibition on sale or transfer of common stock is prohibited. In those firms which have prohibition against sale or transfer; the stock can only be sold back to the company. The differences in restrictions on sale or transfer of common stock are statistically significant (Chi-square = 85.53; p-value < 0.0001). We further examined the frequency distributions of private firms according to firm size and ownership differences (frequency tables not presented). On the basis of Chi-squares, we find that the group differences are statistically significant according to ownership differences, but not according to firm size differences. In the 'Unrestricted' group, only 54 percent of the firms are family owned, compared to approximately 70 percent of the firms in the 'Prohibited' group.

The data in Panel C (Table V) provide information about the requirement of company approval for sale or transfer of common stock. Every sale or transfer requires company approval in 92 firms, all of which are private firms (45.3 percent of all firms or 59.3 percent of private firms). In 23 firms only sale or transfer of stock to non-affiliates require company approval, of which 21 are private firms. No approval is required in 88 firms of the entire sample. Of those firms, 42 are private (27.1 percent of private firms) and 46 are public (95.8 percent of public firms). These differences are statistically significant (Chi-square = 71.28; p-value < 0.0001). Further analysis shows no statistically significant differences according to either firm size or ownership differences (frequency tables not presented). However, it would be pertinent to note that 66.3 percent of the 92 private firms in which every sale/transfer requires approval are family owned, compared to 58.5 percent of the 42 private firms in which no approvals are required.

The frequency of trading in private firms is probably associated with the restrictions on sale or transfer of stock ownership in those firms, i.e., the more the restrictions the less the frequency of trading. In order to verify if there is such a relationship, we examine the frequency distribution between trading frequency and restrictions on sale or transfer of stock ownership presented in Panel D (Table V). As can be seen, stock trading has never occurred in a total of 88 private firms. Of those firms, 63 (71.6 percent) have high restrictions or prohibition on sale/ transfer of stock ownership. At the other extreme, firms in which frequent trading occurs do not have either high restrictions or prohibition on sale/transfer of common stock. The group differences are statistically significant (Chi-square statistic = 20.96; p-value = 0.0019).

A similar analysis of the frequency distribution between trading frequency and the requirement of approval for sale or transfer of common stock (frequency table not provided) shows a similar pattern. Every sale/transfer of common stock requires company approval in as high as 71.6 percent of firms which had no trading in common stock, compared to about 50 percent of firms in the other two groups (firms requiring no approval or an approval is required only for sale/transfer to outsiders). The group differences are statistically significant (Chi-square = 12.20; p-value = 0.0159).

Two out of the 48 public firms reported that only sale/transfer of stock to outsiders requires approval. We examined the characteristics of those two firms to discern more about this requirement which is uncharacteristic of firms whose stock trade publicly. Both firms are closely-held. One of them has two classes of common stock that differ in voting rights, whereas the other has cumulative voting for the election of board of directors. The executive teams and boards of directors have a similar composition in both firms. All executives and board members own stock in their company and neither company has outside directors. However, they differ significantly in size, one with sales over $1 billion and the other with sales under $25 million. In the smaller firm the CEO is a founding member as well as the largest stockholder whereas in the larger company the CEO is neither a founding member nor the largest stockholder.

Valuation of Common Stock. In Table VI we present a summary of responses relating to the methods of common stock valuation. In private firms, the top three methods of valuing common stock are -- (1) independent appraisers/arbitrators (79 firms; 52.3 percent), (2) multiple of book-value approach (63 firms; 41.7 percent), and (3) discounted cash-flow approach (10 firms; 6.6 percent) -- in that order. In public firms, as anticipated, all 41 firms that have responded to the question reported market price as the method of valuation of their firms' common stock.

As noted above, the use of independent appraisers is the single most commonly used valuation approach in private firms. We surmise that private firms' preference for appraisers could be due to the limitations faced by them in applying quantitative approaches to valuation of common stock. Further, we suspect that stockholders of private firms could be preferring independent appraisers over other approaches with the expectation that they will have expertise and will be unbiased in their estimations. Alternatively, the preference for valuations by appraisers could be due to issues relating to the ownership and governance in private firms.

In order to verify which of our above contentions hold, we have examined the differences in the use of independent appraisers according to ownership groups, firm size, and CEO profiles. The comparisons are presented in Panel B (Table VI). Among ownership groups, the use of appraisers is most common in closely-held firms followed by family-owned businesses. Probably, firms in those groups rely more upon independent appraisers in order to avoid misunderstandings among owners who belong to the same family or members of closely related families. In size groups, mid-size firms (sales in the range of $26 to $100 million) are the predominant users of independent appraisers, followed by the firms in the smallest size group (sales <= $25 million). With regard to the CEO profiles, firms in which CEOs are the largest shareholders and those in which founders are CEOs have less preference for independent appraisers than the firms in which CEOs are neither largest shareholders nor founders.

Next, we have examined the 'Other valuation approaches' specifically stated by the responding firms. The following are the 'Other valuation approaches' indicated by one firm for each – (1) An asset based approach, (2) A formula based on revenue and profits for the last three years, (3) Self assessment by the single owner, (4) A formula value updated at the fiscal year end by the CPA firm, (5) A multiple of EBITDA, and (6)As determined by a majority of shareholders.

III. Summary

In this research, we survey a large sample of US corporations to investigate corporate governance, illiquidity, and valuation issues in privately owned firms. We also make comparisons with publicly owned firms. The major findings are as follows.

Written shareholder agreements, although they are important for establishing shareholder rights and privileges in private firms, are not as common as we expected. Of the corporate matters included in shareholder agreements, the most prominent ones are those relating to safeguarding equity ownership interests and dividend payments – (1) sale, transfer, or buy-back of equity owned by shareholders, (2) proxy and voting procedures, (3) valuation of the company's stock, (4) pre-emptive rights, and (5) dividend payments. On further analysis, we find that in family owned and closely held firms (or in firms with high concentrations of insider ownership) agreements relating to sale/transfer of stock ownership are more important. Contrary to this, for stockholders in widely held firms (or in firms with low concentrations of insider ownership), agreements relating to dividend payments and proxy/voting are more important.

Family owned firms dominate the ownership structure of private firms compared to the dominance of widely held ownership structure in public firms. Insiders of a vast majority of private firms own over 75 percent of the firm's common stock compared to just 2.0 percent of the public-firms in which insider ownership is in excess of 75 percent. The CEOs of private firms more often than not tend to be the largest stockholders of their companies which is not the case with public firms (62.8 percent of private firms versus 22.5 percent of public firms). The sizes of management teams are smaller in private firms than in public firms. However, the proportion of executives who are also stockholders of the firm is smaller in private firms than in public firms. This difference appears be due to the availability of stock option/ownership plans for executives of public firms.

As with the size of management teams, the average size of boards is also smaller in private firms than in public firms. The proportions of directors who are also on the management team are significantly larger in private firms, which is indicative of greater inter-linkage between executive teams and board memberships in private firms and concentration of corporate power in fewer hands. Another interesting finding is that privately owned firms have a greater percentage of outside directors which is consistent with the arguments about having outside board members for objectivity and resolving conflicts among the closely-related stockholders.

Our research also documents the magnitude of illiquidity of stock ownership in private firms. No trading and infrequent trading of common stock was reported by 97.8 percent of private firms which signifies the high magnitude of illiquidity problems in privately owned common stock. Restrictions on sale or transfer of ownership interests confound the problem of illiquidity in common stock of private firms. In close to 60 percent of private firms, stock trading is either prohibited or highly restricted. Also, in a similar percentage of private firms every sale or transfer of common stock requires approval. At the other extreme, unrestricted sale/transfer or sale/transfer without the requirement of approvals exist in slightly more than 20 percent of the private firms. Overall, these findings provide ample evidence not only about the prevalence of illiquidity of stock ownership in private firms which is fairly well known but also about its magnitude which is a new contribution of this paper.

In valuing common stock, most private firms seem to rely upon the valuation by independent appraisers/arbitrators rather than valuations based on earnings or cash flow based methods. The use of a multiples of book-value is the second most popular method in private firms. Further, in privately-owned firms, valuation by independent appraisers is the predominant method especially in family-owned and closely-held firms than in widely-held firms. The prominence of valuations by independent appraisers overall, and more importantly in family-owned and closely-held firms, is consistent with the arguments

concerning the issues related to the reliability of information in financial statements of private firms and the objectivity provided by independent appraisers.

In addition to providing valuable empirical evidence on various issues relating to privately-owned corporations, this research offers guidance for further research in the area and implications for practitioners. One avenue of further research could focus on soliciting shareholder agreements from privately-owned corporations and evaluating them from the stand point of corporate governance issues. Another interesting piece of evidence for further investigation relates to our evidence that outside directors comprise a larger proportion of directors in family-owned firms than in more broadly owned private firms or public corporations. Although we rationalized this as a result of the need rely upon outside talent for the qualities lacking in privately-owned corporations, more research needs to be done in order to have a better appreciation of this phenomenon. Another interesting evidence concerns the magnitude of illiquidity in privately-owned firms and valuation of a majority of those firms by independent appraisers. This finding has immense implications for situations involving sale of businesses, ESOP purposes as required by ERISA, estate taxes, gift taxes, and litigations of all types. To further show the importance of our findings in the paper, out of the more than 25 million businesses in the USA, only 10,000 or so are publicly traded which leaves the vast majority of businesses being valued by independent appraisers. An interesting extension of this study would to be to conduct a survey of certified appraisers to examine the approaches used in their evaluations.

In sum, this survey provides some useful insights into the corporate control, illiquidity, and valuation issues in private firms. While the results are revealing in several ways, the low response rate may have introduced some bias into the findings reported in the paper. However, the bias does not seem to be serious since the firms in the mailing list and those responding to the survey are found to be similar in terms of firm size and the proportion of private versus public firms. Further, we find a high degree of consistency in responses to questions that are related to each other which is indicative of the diligence exercised by the individuals responding to the survey in filling out the questionnaire. Yet, findings in this research are prone to the limitations of any study that relies on survey data for the purpose of empirical analysis.

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Table 1

Sample Characteristics - Descriptive Statistics

Panel A: By Ownership Type	# of Firms		Percent			
Privately Owned	202		79.8			
Publicly Owned	51		20.2			
Total	253		100.0			
Panel B: By Business Activity	All Firms		Private Firms		Public Firms	
	Number	Percent	Number	Percent	Number	Percent
Manufacturing	130	51.8	112	56.0	18	35.3
Trading (Wholesale/Retail)	27	10.8	25	12.5	2	3.9
Service	19	7.6	15	7.5	4	7.8
Transportation	8	3.2	6	3.0	2	3.9
Agric., Construction, Mining	24	9.5	22	11.0	2	3.9
Banking & Other Fin Services	19	7.6	10	5.0	9	17.7
Other	24	9.5	10	5.0	14	27.5
Total	251	100.0	200	79.7	51	20.3
Panel C: By Company Size in Sales	All Firms		Private Firms		Public Firms	
	Number	Percent	Number	Percent	Number	Percent
$25 million or less	154	61.7	140	70.4	14	27.4
$26 - $100 million	54	21.8	44	22.1	10	19.6
Over $100 million	42	16.5	15	7.5	27	53.0
Total	250	100.0	199	100.0	51	100.0
			Chi-Square = 62.06; p-Value < 0.0001			

Table 1, continued

Sample Characteristics - Descriptive Statistics

Panel D: Population vs. Sample									
	All Firms			Private Firms			Public Firms		
Sales	Popul-ation	Sample	Resp. Rate	Popul-ation	Sample	Resp. Rate	Popul-ation	Sample	Resp. Rate
<= $100 m	2,522	211	8.4%	2,137	187	8.7%	385	24	6.2%
Column %	*87.8*	*83.4*		*94.9*	*92.6*		*62.2*	*47.0*	
> $100 m	348	42	12.1%	114	15	13.2%	234	27	11.5%
Column %	*12.2*	*16.6*		*4.1*	*7.4*		*37.8*	*53.0*	
Total	2,870	253	8.8%	2,251	202	9.0%	619	51	8.2%
Column %	*100.0*	*100.0*		*100.0*	*100.0*		*100.0*	*100.0*	

Table 2

Written Shareholder Agreements in Firms

Panel A: Question: "Does the company have a 'written shareholders' agreement?"			
	All Firms	Private Firms	Public Firms
Yes	120 (49.8%)	102 (52.0%)	18 (40.0%)
No	121 (50.2%)	94 (48.0%)	27 (60.0%)
Column Totals	241 (100.0%)	196 (100.0%)	45 (100.0%)
		Chi-Square = 2.12 (p-value = 0.1452)	

Panel B: Question: Please indicate if the company has written or established guidelines/procedures relating to:							
	All Firms (N=189)		Private Firms (n=144)		Public Firms (n=45)		Chi-Sq/ (p-value)
	Yes	No	Yes	No	Yes	No	
Sale, transfer, or buy-back of equity owned by shareholders. *(Row %)*	124 *(65.6)*	65 *(34.4)*	107 *(74.3)*	37 *(25.7)*	17 *(37.8)*	28 *(62.2)*	20.27 (<.0001)
Proxy and voting procedures. *(Row%)*	115 *(60.9)*	74 *(39.1)*	71 *(49.3)*	73 *(50.7)*	44 *(97.8)*	1 *(2.2)*	33.81 (<.0001)
Valuation of the company's stock.	77 *(40.7)*	112 *(59.3)*	71 *(49.3)*	73 *(50.7)*	6 *(13.3)*	39 *(86.7)*	18.38 (<.0001)
Payment of dividends to stockholders. *(Row %)*	73 *(38.6)*	116 *(61.4)*	50 *(34.7)*	94 *(65.3)*	23 *(51.1)*	22 *(48.9)*	3.88 (0.049)
Pre-emptive rights in equity offerings or when someone is selling. *(Row %)*	62 *(32.8)*	127 *(67.2)*	52 *(36.1)*	92 *(63.9)*	10 *(22.2)*	35 *(77.8)*	3.00 (0.083)
Hiring, compensation, and dismissal of shareholder-employees. *(Row %)*	41 *(21.7)*	148 *(78.3)*	29 *(20.1)*	115 *(79.9)*	12 *(26.7)*	33 *(73.3)*	0.86 (0.354)
Mergers, reorganization, or sale of the firm. *(Row %)*	38 *(20.1)*	151 *(79.9)*	25 *(17.4)*	119 *(82.6)*	13 *(28.9)*	32 *(71.1)*	2.84 (0.092)
Protection of interests of minority shareholders of the firm. *(Row%)*	19 *(10.1)*	170 *(89.9)*	13 *(9.0)*	131 *(91.0)*	6 *(13.3)*	39 *(86.7)*	0.703 (0.402)

Table 2, continued

Written Shareholder Agreements in Firms

Panel C: Private Firms – Further Analysis						
	Written agreements or established procedures relating to:					
	Sale/Transfer of stock		Dividend Payments		Proxy / Voting	
By Ownership Type	% of Firms	Chi-square (p-value)	% of Firms	Chi-square (p-value)	% of Firms	Chi-square (p-value)
Family Owned (n=84)	69.1	8.67 (0.0131)	25.0	9.03 (0.0109)	39.3	9.79 (0.0075)
Closely Held (n=46)	89.1		45.7		58.7	
Widely Held (n=14)	57.1		57.1		78.6	
By Insider Ownership						
<= 50 percent (n=34)	55.9	7.79 (0.0204)	50.0	4.73 (0.0952)	73.5	9.91 (0.0070)
51 - 75 percent (n=24)	83.3		75.0		41.7	
Over 75 percent (n=84)	78.6		32.1		42.9	
Is CEO the largest owner?						
No (n=54)	72.2	0.196 (0.6580)	46.3	6.38 (0.0115)	61.1	5.53 (0.0187)
Yes (n=86)	75.6		25.6		40.7	

Table 3

Ownership Characteristics

Panel A: **Ownership Dispersion**	All Firms		Private Firms		Public Firms	
	# of Firms	% of Firms	# of Firms	% of Firms	# of Firms	% of Firms
Family Owned	130	52.2	129	64.2	1	2.1
Closely Held	69	27.9	57	28.4	12	25.0
Widely Held	50	20.1	15	7.4	35	72.9
Total	249	100.0	199	100.0	48	100
			Chi-Square = 111.44; p-value <0.0001			

Panel B: **Inside Ownership (%)**	All Firms		Private Firms		Public Firms	
	# of Firms	% of Firms	# of Firms	% of Firms	# of Firms	% of Firms
< = 50 percent	93	38.3	48	24.9	45	90.0
51 - 75 percent	31	12.7	27	14.0	4	8.0
> 75 percent	119	49.0	118	61.1	1	2.0
Total	243	100.0	193	100.0	50	100.0
			Chi-Square = 73.49; p-value <0.0001			

Table 3, continued

Ownership Characteristics

Panel C: **Is CEO the Largest Shareholder?**	All Firms		Private Firms		Public Firms	
	# of Firms	% of Firms	# of Firms	% of Firms	# of Firms	% of Firms
Yes	131	54.6	120	62.8	11	22.5
No	109	46.4	71	37.2	38	77.5
Total	240	100.0	191	100.0	49	100.0
			Chi-Square = 25.65; p-value <0.0001			

Panel D: **Is CEO a Founding Member?**	All Firms		Private Firms		Public Firms	
	# of Firms	% of Firms	# of Firms	% of Firms	# of Firms	% of Firms
Yes	77	32.1	60	31.4	17	34.7
No	163	67.9	131	68.6	32	65.3
Total	240	100.0	191	100.0	49	100.0
			Chi-Square = 0.4965; p-value = 0.7502			

Table 4

Composition of Management Teams and Board of Directors

Panel A: Management Teams						
Private Versus Public Firms (Paired T-Tests)	# of Executives on Management Team		# of Executives who are also Stockholders		% of Executives who are also Stockholders	
	n	Mean	n	Mean	n	Mean
Private Firms	196	5.02	189	2.72	189	57.0
Public Firms	49	11.84	48	10.63	48	95.0
All Firms	245	6.38	237	4.32	237	64.7
Mean Diff: Public - Private	6.82		7.91		38.0	
F-Ratio (Pooled F Method)	15.73		12.45		4.04	
T-Ratio (Pooled & Eq. Var.)	6.36		8.30		7.48	
P-Value	<0.0001		<0.0001		<0.0001	

Table 4, continued

Composition of Management Teams and Board of Directors

Panel B: Composition of Board of Directors								
Private Versus Public Firms (Paired T-Tests)	Total # of Directors		Directors who are also Stockholders		Directors who are also Executives		# of Outside Directors	
	n	Mean	n	Mean	n	Mean	n	Mean
Private Firms	196	4.53	193	3.13	194	2.47	202	0.96
Public Firms	51	8.00	50	7.66	51	2.20	51	0.55
All Firms	247	5.24	243	4.06	245	2.42	253	0.88
Mean Diff: Public - Private	3.47		4.53		-0.27		-0.41	
F-Ratio (Pooled F Method)	1.56		2.74		1.90		1.77	
T-Ratio (Pooled & Eq. Var.)	7.77		6.83		-1.25		-1.33	
p-Value	<0.0001		<0.0001		0.2118		0.1853	

	% of Directors who are also Stockholders		**% of Directors who are also Executives**		**% of Outside Directors**	
	n	Mean	n	Mean	n	Mean
Private Firms	191	70.8	192	62.1	195	19.5
Public Firms	50	94.7	51	29.8	51	8.1
All Firms	241	75.8	243	55.3	246	17.2
Mean Diff: Public - Private	23.9		-32.3		-11.4	
F-Ratio (Pooled F Method)	4.72		4.55		1.79	
T-Ratio (Pooled & Eq. Var.)	5.23		-7.48		-2.93	
P-Value	<0.0001		<0.0001		0.0037	

Table 5

Liquidity of Common Stock Ownership – Trading Frequency, Restrictions, and Approvals

Panel A: Trading Frequency	Never Firms *(Row %)*	Infrequent Firms *(Row %)*	Frequent Firms *(Row %)*	Daily Firms *(Row %)*	Row Total Firms *(Row %)*
Private	95 *(52.2)*	83 *(45.6)*	4 *(2.2)*	0 *(0.0)*	182 *(100.0)*
Public	0 *(0.0)*	3 *(6.0)*	6 *(12.0)*	41 *(82.0)*	50 *(100.0)*
Column Total	95 *(40.9)*	86 *(37.1)*	10 *(4.3)*	41 *(7.7)*	232 *(100.0)*
Chi-Square = 200.68; p-Value <0.0001					

Panel B: Sale/Transfer Restrictions	Unrestricted Firms *(Row %)*	Somewhat Restricted Firms *(Row %)*	Highly Restricted Firms *(Row %)*	Prohibited Firms *(Row %)*	Row Total Firms *(Row %)*
Private	37 *(21.1)*	36 *(20.6)*	65 *(37.1)*	37 *(21.1)*	175 *(100.0)*
Public	46 *(92.0)*	4 *(8.0)*	0 *(0.0)*	0 *(0.0)*	50 *(100.0)*
Column Total	83 *(36.9)*	40 *(17.8)*	65 *(28.9)*	37 *(16.4)*	225 *(100.0)*
Chi-Square = 85.53; p-Value <0.0001					

Table 5, continued

Liquidity of Common Stock Ownership – Trading Frequency, Restrictions, and Approvals

Panel C: Sale/Transfer Approvals	Every Sale/Transfer Requires Approval Firms *(Row %)*	Only Sale/Transfers to Outsiders Requires Approval Firms *(Row %)*	No Approval Required for Sale/Transfer of Stock Firms *(Row %)*	Row Total Firms *(Row %)*
Private	92 *(59.3)*	21 *(13.6)*	42 *(27.1)*	155 *(100.0)*
Public	0 *(0.0)*	2 *(4.2)*	46 *(95.8)*	48 *(100.0)*
Column Total	92 *(45.3)*	23 *(11.3)*	88 *(43.4)*	203 *(100.0)*
Chi-Square = 71.28; p-Value <0.0001				

Panel D: Private Firms - Restrictions on Sale or Transfer of Stock Ownership and Trading Frequency					
Trading Frequency	Unrestricted Firms *(Row %)*	Somewhat Restricted Firms *(Row %)*	Highly Restricted Firms *(Row %)*	Prohibited Firms *(Row %)*	Row Total Firms *(Row %)*
Never	10 *(11.4)*	15 *(17.0)*	36 *(40.9)*	27 *(30.7)*	88 *(100.0)*
Infrequent	25 *(30.1)*	19 *(22.9)*	29 *(34.9)*	10 *(12.1)*	83 *(100.0)*
Frequent	2 *(50.0)*	2 *(50.0)*	0 *(0.00)*	0 *(0.00)*	4 *(100.0)*
Column Total	37 *(21.1)*	36 *(20.6)*	65 *(37.2)*	37 *(21.1)*	175 *(100.0)*
Chi-Square = 20.96; p-Value = 0.0019					

Table 6

Stock Valuation Approaches in Firms

Panel A: **Private Vs. Public Firms**	All Firms (N=192)	Private Firms (n=151)	Public Firms (n=41)	Chi-Square (p-value)
Multiples of Book Value	63 *(32.8)*	63 *(41.7)*	0 *(0.0)*	25.46 (<0.0001)
Multiples of Earnings	8 *(4.2)*	8 *(5.3)*	0 *(0.0)*	2.27 (0.1322)
Discounted Cash Flow	10 *(5.2)*	10 *(6.6)*	0 *(0.0)*	2.86 (0.0906)
Independent Appraisers	79 *(41.2)*	79 *(52.3)*	0 *(0.0)*	36.45 (<0.0001)
Market Price	41 *(21.4)*	0 *(0.00)*	41 *(100.0)*	191.00 (<0.0001)
Other Approaches	10 *(5.21)*	10 *(6.6)*	0 *(0.0)*	2.86 (0.0906)

Note: Cell values are the number of firms and % of firms within that category.
# of firms in the category are not the column totals as the firms indicated use of more than one approach.

Panel B: Private Firms: Use of Independent Appraisers					
Ownership Groups	Firms Using Appraisers		***Size Groups***	Firms Using Appraisers	
	# of Firms	% of Firms		# of Firms	% of Firms
Family Owned (n=94)	49	52.1	Sales <= $25 m (n=102)	52	51.0
Closely Held (n=47)	26	55.3	Sales $26 to $100 m (n=37)	21	56.8
Widely Held (n=9)	4	44.4	Sales > $100 m (n=12)	6	50.0
Is CEO the Largest Shareholder?			**Is CEO the Founder?**		
Yes (n=93)	47	50.5	Yes (n=45)	21	46.7
No (n=57)	32	56.1	No (n=106)	58	54.7