

Corporate disclosures by family firms

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ABSTRACT

Compared to non-family firms, family firms face less severe agency problems due to the separation of ownership and management, but more severe agency problems that arise between controlling and non-controlling shareholders. These characteristics of family firms affect their corporate disclosure practices. We show that for U.S. family firms and non-family firms in the S&P 500, reported earnings of family firms are of better quality. Also, the likelihood of family firms issuing management earnings forecasts increases more rapidly with the magnitude of bad news. However, family firms make less voluntary disclosures about their corporate governance practices. Consistent with family firms making better financial disclosure, we find that family firms have larger analyst following, lower dispersion in analysts' earnings forecasts, smaller forecast errors, less volatile forecast revisions, and smaller bid-ask spreads.

1. Introduction

Firms that are managed or controlled by founding families, hereafter, referred to as family firms, constitute about one-third of the S&P 500, and operate in a broad array of industries (Anderson and Reeb 2003a). On average, families own nearly 18% of their firms' outstanding equity, representing a significant proportion of the U. S. stock market capitalization. In their survey of corporate governance literature, Shleifer and Vishny (1997) emphasize the importance of studying the characteristics of firms with concentrated ownership, such as family firms, to better understand the economic efficiency of different corporate governance mechanisms. As such, several recent papers have examined various aspects of U.S. family firms.¹

Compared to non-family firms, family firms face less severe agency problems that arise from the separation of ownership and management. However, they are characterized by more severe agency problems that arise between controlling and non-controlling shareholders (Gilson and Gordon 2003). These characteristics of family firms raise interesting issues about their corporate disclosure practices. In this paper, we develop conjectures on how these agency problem differences across family and non-family firms influence corporate disclosures. We consider the following aspects of corporate disclosures: quality of reported earnings, likelihood of voluntary disclosure of bad news through management earnings forecasts, and voluntary disclosure of corporate governance practices in regulatory filings.

¹ Anderson and Reeb (2003a) show that family firms in the S&P 500 are more profitable than non-family firms. Compared to non-family firms, family firms are also shown to exhibit lower cost of debt financing (Anderson, Mansi, and Reeb 2003), less diversification, and similar level of debt (Anderson and Reeb 2003b). These studies classify a company as a family firm if the founders and descendants continue to hold positions in the top management or on the board, or are among the company's largest shareholders.

First, we predict that reported earnings of family firms are likely to be of better quality than those of non-family firms. Family firms face less severe agency problems from separation of ownership because of their ability to directly monitor the managers (Demsetz and Lehn 1985). This enables family firms to tie less of management compensation to accounting based performance measures (Chen 2005), thus their reported numbers are less likely to be manipulated by managerial opportunism. Moreover, better knowledge of the firm's business activities by family owners (Anderson and Reeb 2003a) enables them to detect manipulation of reported numbers, thereby keeping this activity in check. We measure earnings quality by the ability of its components to predict future cash flows and by earnings response coefficient. Our analysis provides results consistent with our prediction.

Second, we predict that compared to that of non-family firms, the likelihood of family firms issuing management earnings forecasts increases more rapidly with the magnitude of bad news. Firms having the reputation of withholding bad news are penalized by the market in terms of reduced stock price (Skinner 1994). Since families have concentrated equity holdings with long-term investment horizon (James 1999), such adverse reputation can have a substantial detrimental effect on their wealth. Thus, family owners will use the knowledge of their firms' business activities and their direct monitoring to promote disclosure of bad news through management earnings forecasts. Our empirical results support this prediction.

Third, we predict that compared to non-family firms, family firms are less likely to make voluntary disclosures about their corporate governance practices. Family firms are likely to have more severe agency problems from conflicts between controlling and

non-controlling shareholders, where controlling shareholders (families) seek private benefits at the expense of non-controlling shareholders. Family firms may disclose less of their corporate governance practices to facilitate their private rent seeking. Family firms may also maintain lack of transparency in their corporate governance practices to prevent outside shareholders' interference, which they may view as counter-productive to enhancing firm value. We find that family firms tend to disclose less information about their corporate governance practices in their proxy statements.

Finally, we predict that better disclosure of financial performance (reported earnings and voluntary disclosure of bad news) would benefit family firms in terms of better analyst following, better analysts' earnings forecasts, and better market liquidity of their stocks. Consistent with this prediction, we find that compared to non-family firms, family firms have larger analyst following, lower dispersion of analysts' forecasts, smaller forecast errors, less volatile forecast revisions, and smaller bid-ask spreads.

Our findings contribute to the literature on corporate disclosures. There is very little evidence on how agency problems affect corporate disclosures (Healy and Palepu 2001 and Bushman and Smith 2001). Our comparison of family and non-family firms provides an opportunity to examine the effect of different types of agency problems on different types of corporate disclosures.

Our results that compared to non-family firms, family firms are characterized by better financial disclosure practices and better liquidity has implications for prior studies on family firms. Anderson and Reeb (2003a) attribute greater profitability of family firms to "better management." Alternatively, these results could be due to higher cost of capital associated with family firms. Our results suggest that family firms' cost of capital is

likely to be lower, reducing the likelihood of the alternative explanation. Also, Anderson, Mansi, and Reeb (2003) document lower cost of debt financing for family firms. Our results suggesting more informative disclosures by family firms provide an additional explanation for their finding.

The rest of the paper is organized as follows. Section 2 discusses our hypotheses. We describe the agency problems associated with family firms and predict their effects on different types of corporate disclosures. Section 3 discusses the sample and Section 4 presents the results from our empirical analyses. Section 5 concludes the paper.

2. Hypotheses development

2.1 Family firms and agency problems

There are two main types of agency problems in public corporations. The first type of agency problem arises from the separation of ownership and management. The separation of corporate managers from shareholders may lead to managers not acting in the best interest of shareholders. The second type of agency problem arises from conflicts between controlling and non-controlling shareholders. Controlling shareholders may seek private benefits at the expense of non-controlling shareholders. Below, we discuss how these two types of agency problems differ across family and non-family firms.

2.1.1 Separation of ownership and management

There are several characteristics of family firms that reduce the likelihood of managers not acting in the best interest of shareholders. First, families tend to hold undiversified and concentrated equity position in their firms. Thus unlike the free rider problem inherent with small atomistic shareholders, families are likely to have strong

incentives to monitor managers (Demsetz and Lehn 1985). Second, families have good knowledge about their firms' activities, which enables them to provide superior monitoring of managers (Anderson and Reeb, 2003a). Third, families tend to have much longer investment horizons than other shareholders. Thus, families help mitigate myopic investment decisions by managers (James 1999, Kwak 2003, Stein 1988, 1989). In summary, compared to non-family firms, family firms face less severe hidden-action and hidden-information agency problems due to the separation of ownership and management.

2.1.2 Controlling and non-controlling shareholders

Concentrated ownership of founding families gives them power to seek private benefits at the expense of other shareholders. Controlling shareholders can seek such private benefits by freezing out minority shareholders (Gilson and Gordon, 2003), by taking a disproportionate share of corporate earnings in the form of special dividends (DeAngelo and DeAngelo 2000), by engaging in related-party transactions (Anderson and Reeb, 2003a), and through managerial entrenchment (Shleifer and Vishny 1997). All of these factors lead to family firms facing more severe agency problems from the conflict between controlling and non-controlling shareholders.

However, when families engage in private rent seeking their activities may get revealed to the market and they may incur a substantial cost in the form of lower equity value, especially since families have concentrated ownership and tend to hold their firms' equities for long periods. In addition, significant legal protection is accorded to non-controlling shareholders in the U.S. (Shleifer and Vishney 1997, La Porta et al. 1997, 1998, 2000). These two factors act as disciplining mechanisms that mitigate excessive rent expropriation by family owners.

2.2 Family firms and corporate disclosures

Does the difference in agency problems across family and non-family firms cause their corporate disclosure practices to differ? In this study, we consider the following types of disclosures. First, we consider the quality of financial statement numbers, specifically that of earnings. Second, we consider the likelihood of voluntary disclosure of bad news through management earnings forecasts. Finally, we consider voluntary disclosures of corporate governance practices in regulatory filings.

2.2.1 Earnings quality

The quality of reported earnings is affected primarily by the agency problems arising from the separation of ownership and management. As discussed earlier, compared to family firms, non-family firms have more severe hidden-action and hidden-information agency problems. To mitigate this problem, non-family firms are more likely to compensate their managers based on observable performance measures (Demski 1994, and Healy and Palepu 2001). Founding families being more effective monitors of management can reward their managers based on information about managers' effort obtained through direct monitoring. Also, when family members are managers the problem of separation of ownership and management is moot. Thus, compared to non-family firms, family firms are less likely to compensate their managers based on observable performance measures. Consistent with the above argument, Anderson and Reeb (2003a) and Chen (2005) provide evidence that performance based CEO pay is significantly smaller for family firms, both in terms of absolute amount as well as in terms of percentage of total compensation.

When management compensation is tied to performance measures, managers are more likely to manipulate the performance measures in order to increase their compensation (Healy and Palepu, 2001, and Fields et al. 2001). Since management compensation of family firms is less likely to be tied to performance measures, family firms' performance measures are less likely to be manipulated.

Direct monitoring by the families and their better knowledge of the firms' business are additional reasons why managers' opportunistic behavior is less likely to affect the performance measures of family firms. For example, the family members' knowledge of business conditions and relationship with suppliers and customers will enable them to more effectively detect whether goods have been shipped early to inflate revenues or unjustified cuts have been made to certain discretionary spending.

The accounting performance measure commonly used in compensation contracts is reported earnings. Thus we expect that compared to non-family firms, family firms' earnings are less likely to be managed and would be therefore of higher quality. We assess the quality of earnings in two ways. We consider the ability of earnings components to predict future cash flow (Barth et al. 2001, and Cohen 2004) and earnings' association with contemporaneous stock returns. The following hypothesis summarizes our expectations.

H1: Reported earnings of family firms are likely to be of better quality than those of non-family firms.

An alternative view to H1 is that since shareholders of non-family firms face more severe agency problems from separation of ownership and management and cannot directly monitor management actions, they would demand higher quality of reported

earnings. To meet this demand, non-family firms could disclose higher quality accounting numbers.² These factors would bias our results against H1.³

Agency problems arising from conflicts between controlling and non-controlling shareholders could lead to a greater incentive for family firms as compared to non-family firms to manipulate performance measures. This manipulation may be done, for example, to hide the adverse effect of a related party transaction or to ensure family members' entrenchment. Given the high level of influence family owners have on their firms, if they decide to engage in earnings manipulation they can easily do it. However, if such activities get revealed, they might incur substantial costs in the form of legal actions and reduced stock prices.⁴ Reduced stock prices can have a substantial wealth effect because of families' concentrated holding in their firm. Given that in the U.S., the laws are rigorously enforced and the legal penalties are severe, family firms in the U.S. are less likely to engage in private benefit seeking activities. The evidence in Anderson and Reeb (2003a) that family firms outperform non-family firms and the evidence in Anderson, Mansi and Reeb (2003) that family firms' cost of debt is lower than that of non-family

² Theoretical research argue that earnings management could help mitigate agency problems. Specifically, earnings management could mitigate agency problems by (a) enabling the manager to signal his expertise (Demski, 1998), (b) communicating effectively when there is incomplete verifiability (Evans and Sridhar, 1996), (c) conveying information on permanence of earnings (Fukui, 1996), and (d) delaying bad news information such that the managers are not fired and/or the owner's do not intervene too often (Arya, Glover, and Sunder, 1998). All of these explanations for earnings management have an important common element: the earnings management component of reported earnings must convey information about future cash flows. Thus, more severe agency problems could be associated with higher quality reported earnings.

³ Skinner (1993) examines the effect of ex ante accounting choice, due to efficient contracting perspective, and ex post accounting choice, due to managerial opportunism, and finds that observed accounting choices are primarily influenced by managerial opportunism. H1 is consistent with this finding that managerial opportunism dominates efficient contracting in explaining the difference in the quality of reported earnings between family and non-family firms.

⁴ Adelphia corporation is an example of family owners very aggressively inflating the firm's reported earnings to afford Adelphia's continued access to commercial credit and the capital market, while some of the family members engaged in extensive self-dealing at the expense of other Adelphia stakeholders (SEC Litigation Release No. 17627). However, these activities were discovered and the family owners were subjected to severe penalties, causing loss of most of their wealth. (Wall Street Journal June 21, 2005)

firms seem to support this conjecture. Thus, we do not expect that greater earnings manipulation by family firms arising from the controlling shareholders trying to seek private benefits at the expense of other shareholders will be dominant.

2.2.2 Management forecasts of earnings

Skinner (1994) notes that firms may incur reputation costs if they fail to disclose bad news in a timely manner. He argues that firms with reputation for withholding bad news are less likely to be followed by analysts and money managers, thus reducing the price and /or liquidity of the firms' stocks. Consistent with this argument, Skinner (1994) and Kasznik and Lev (1995) show that the likelihood of management earnings forecasts increases with the magnitude of bad news. We argue that compared to non-family firms, the likelihood of family firms issuing management forecast would increase more rapidly with the magnitude of bad news. Families have concentrated equity holdings with long-term investment horizon. If family firms acquire the adverse reputation of withholding bad news, it can have a substantial detrimental effect on the family owners' wealth. Thus, families would have a strong incentive to monitor management behavior regarding timely disclosure of bad news. Moreover, family members' knowledge of business conditions and firm activities enable them to more effectively detect if managers are engaging in opportunistic behavior with regards to voluntary disclosure of bad news.

H2: Compared to non-family firms, the likelihood of family firms issuing management earnings forecasts increases more rapidly with the magnitude of bad news.

Agency problems arising from conflicts between controlling and non-controlling shareholders could lead to a greater incentive for family firms as compared to non-family firms to delay bad earnings news. This withholding of bad news may be done to delay

scrutiny of their private rent seeking activities or to facilitate entrenchment. However, as argued before, if such behavior gets revealed, family owners in the U.S. may incur substantial long-term costs in the form of legal actions and lower value of their concentrated equity holding in the firm. Thus, we do not expect this alternative view to hypothesis H2 to dominate.

2.2.3 Corporate governance related disclosures

Compared to non-family firms, family firms are likely to have more severe agency problems of controlling shareholders seeking private benefits at the expense of non-controlling shareholders. Family firms may maintain lack of transparency in their corporate governance practices to facilitate this activity. Hence private rent seeking may motivate family firms to make less voluntary disclosures about their corporate governance practices. However, this motivation may be somewhat muted for U.S. family firms. As discussed earlier, it could be very costly for U.S. family firms to seek private benefits at the expense of non-controlling shareholders because of the legal liabilities and reduced stock prices that may result from it.

Another reason why family firms may maintain lack of transparency of corporate governance is to prevent interference of outside shareholders in the firms' governance activities. Families may view such interference as counter-productive to enhancing firm value. For example, family owners prefer to have family members as directors because they tend to be proactive. Moreover, family members have a collective desire to preserve their wealth. Maintaining lack of transparency of corporate governance practices may facilitate getting family members on board without much interference from outside shareholders. The resulting concern that the outside shareholders may have about the lack

of transparency in corporate governance practices of family firms would be reduced to some extent by these firms' record of superior performance (Anderson and Reeb 2003a).

Regulatory filings, such as the proxy statement, contain disclosures on corporate governance practices. However, firms have some discretion on the extent of disclosure related to some corporate governance practices. Thus, we propose the following hypothesis:

H3: Compared to non-family firms, family firms are less likely to make voluntary disclosures about their corporate governance practices in their regulatory filings.

An alternative view to H3 is that other shareholders of family firms are affected more severely by the agency problems arising from conflict between controlling and non-controlling shareholders. Thus, they would demand more detailed information about corporate governance practices than would the shareholders of non-family firms. To meet this higher demand for information, family firms could disclose more detailed information about their governance practices. This factor would bias our results against hypothesis H3.

2.2.4 Benefits of better financial disclosures by family firms

Skinner (1994) argues that firms try to acquire a reputation of preempting negative earnings news so as to increase the following by analysts and money managers, as well as to increase the liquidity of the firms' stocks. Given that family firms are more likely to make management forecasts of bad news (hypothesis H2), we expect that these types of benefits are likely to accrue to a greater extent to family firms as compared to non-family firms. Also, better earnings quality that we predict for family firms (hypothesis H1) should also lead to larger analyst following, better analysts' forecasts

and better liquidity. These predictions of capital market benefits from better disclosures are also consistent with the findings of Welker (1995), Lang and Lundholm (1996), and Healy, Hutton, and Palepu (1999). These studies show that firms with more informative disclosures (measured using analysts' surveys) have larger analyst following, lower dispersion of analysts' earnings forecasts, smaller forecast errors, less volatile forecast revisions, and smaller bid-ask spreads.⁵ The following hypothesis summarizes our expectations:

H4: Compared to non-family firms, family firms are like to have larger analyst following, lower dispersion of analysts' forecasts, smaller forecast errors, less volatile forecast revisions, and smaller bid-ask spreads.

In hypothesis H3, we predict that family firms are less likely to make voluntary disclosures about their corporate governance practices. These types of disclosures are not related to financial performance and are therefore unlikely to affect analyst following and analysts' earnings forecast properties, but they may adversely affect bid-ask spreads. This factor would bias our results against hypothesis H4.

Figure 1 summarizes our discussion on hypotheses development. For brevity, it presents only the primary reasons behind our hypotheses and not the alternative views that we have discussed in this section.

⁵ These prior studies argue that more informative disclosures attract more analysts because information acquisition becomes less costly, and superior earnings forecasts and buy-sell recommendations increase the demand for analysts' services. Better disclosure results in lower forecast dispersion because analysts put more weight on public as compared to private information in forming their forecasts. More informative disclosures systematically improve analyst forecast accuracy. Also, more timely disclosures result in less extreme revisions. Finally, more disclosure reduces information asymmetry among market participants, thereby reducing the adverse selection problem and increasing market liquidity.

3. Sample

For our analyses, we use the Standard and Poor's 500 firms, because for year 2002, BusinessWeek classifies these companies into family and non-family firms. 177 of these firms are family firms and remaining are non-family firms. A firm is considered as a family firm if the founders and/or their descendents hold positions in the top management or on the board or are among the companies' largest shareholders.⁶

Table 1 provides descriptive statistics on the salient characteristics of family firms. We obtain this data from the 2002 proxy statements for firms classified by BusinessWeek as family firms.⁷ Family members and/or descendants own 11% of cash flow rights and 18% of voting rights in family firms. Family members and/or descendants are top level managers in 63% of family firms and sit on the board of directors in 99% of family firms.⁸ This suggests that on average family members exert a non-trivial influence on the firms that we consider as family firms, and provides a certain degree of validity to the BusinessWeek classification procedure especially from the notion of the two types of agency problems that family firms represent.

We consider S&P 500 firms for our analyses because classification of family firms was readily available and because recent studies on U.S. family firms also use S&P500 firms for their analyses. Considering only S&P 500 firms has the benefit of

⁶ BusinessWeek adopts this definition of family firms from Anderson and Reeb (2003a). In using this definition for our analyses, we do not try to exclude firms with limited influence of founding family. There are several benefits of staying with the BusinessWeek classification. First, it is free of any subjective assessment of family influence, thus making the results more reliable. Second, to the extent that a firm that is classified as a family firm has only a weak family influence, it would introduce a conservative bias in our results. Finally, this definition of family firm has been used by several recent academic studies on family firms (Anderson and Reeb, 2003a, 2003b, and 2004, and Anderson, Mansi, and Reeb 2003), thus it makes comparison of our results with these other studies easier.

⁷ By definition for non-family firms the value of each item in Table 1 is zero.

⁸ Eli Lilly, and Medtronic are the only family firms with no family member and/or descendant representation on the board of directors.

making the sample somewhat homogeneous with respect to size. However, there are some disadvantages to using only the S&P 500 firms for our analyses. First, it is likely to reduce the generalizability of our findings. Table 2 reports that family firms in our sample operate in a broad array of industries, which should help alleviate to some extent concerns about the generalizability of our results. Also, the small sample reduces power of our results and may prevent us from detecting certain effects. We address this issue by using five years of data, 1998 to 2002, under the assumption that family firm classification is likely to be sticky. That is, we assume that the year 2002 classification applies to the previous four years as well.⁹

Finally, the test of each of our hypotheses requires data for different sets of variables. For each test, we include in the sample all firm-year observations spanning from 1998 to 2002 for which required data are available on Compustat, CRSP or First Call's Company Issued Guidance databases. For the test of hypothesis 3, we use the data available from the Standard and Poor's Transparency and Disclosure data. These data are available for only year 2002.

4. Results

4.1 Earnings quality

4.1.1 Predictability of cash flows

Following Cohen (2004), we assess the quality of reported earnings by examining the ability of its components to predict future cash flows. Specifically, we use the residuals obtained from a regression of future cash flow from operations on prior period's

⁹ We examine the proxy statements of years 2000 and 2001 and find that firms classified as family firms in 2002 are family firms in years 2000 and 2001 as well.

earnings components (also see Fairfield, Sweeney, and Yohn, 1996; Barth, Cram, and Nelson, 2001). Specifically, we estimate the following equation.

$$CFO_{it+1} = a_0 + a_1CFO_{it} + a_2\Delta AR_{it} + a_3\Delta INV_{it} + a_4\Delta AP_{it} + a_5DEPR_{it} + a_6OTHER_{it} + e_{it+1} \quad (1)$$

where CFO_{it} is the cash flow from operations for firm i in year t (Compustat data item #308) minus the accrual portion of extraordinary items and discontinued operations per the statement of cash flows (Compustat annual data item #124); ΔAR_{it} is change in accounts receivable account per the statement of cash flows (Compustat annual data item #302); ΔINV_{it} is change in inventory account per the statement of cash flow (Compustat annual data item #303); ΔAP_{it} is change in accounts payable and accrued liabilities account per the statement of cash flows (Compustat annual data item #304); $DEPR_{it}$ is depreciation and amortization expense (Compustat annual data item #125); and $OTHER_{it}$ is net of all other accruals, calculated as $(EARN - (CFO + \Delta AR + \Delta INV - \Delta AP - DEPR))$, where $EARN$ is income before extraordinary items and discontinued operations (Compustat annual data item #18).

We estimate equation (1) for fiscal years from 1998 to 2002 for each two-digit SIC industry code with at least 15 observations, and use the estimated coefficients to calculate firm-specific residuals. The empirical measure of reporting quality is the absolute value of these residuals: $RES = |e_{it+1}|$. These residuals reflect the magnitude of future operating cash flows unrelated to current disaggregated earnings. Lower absolute values of the residuals indicate a higher quality financial reporting.

To examine the impact of family firms on earnings quality, we estimate the following equation. The control variables in this model are from Cohen (2004).

$$\begin{aligned}
QUALITY = & \alpha + \beta_1 FAMILYFIRM + \beta_2 OWNER + \beta_3 CAPITAL + \beta_4 HERFINDEX \\
& + \beta_5 SALESGROW + \beta_6 MARGIN + \beta_7 LEVERAGE + \beta_8 OC \\
& + \beta_9 SEGMENT + \beta_{10} SIZE + \sum r_i INDUSTRY_i + error
\end{aligned} \tag{2}$$

where the dependent variable, *QUALITY*, is a binary variable which equals 1 if *RES* is less than the median value of *RES*. *FAMILYFIRM* is a binary variable which equals 1 if the firm is a family-firm and 0 otherwise. Recall that a company is classified as a family firm if the founders and descendants continue to hold positions in the top management, on the board or are among the company's largest shareholders. *OWNER* is the natural log of the number of shareholders of a firm (Compustat item #100) minus the natural log of median number of shareholders for the same two-digit SIC code; *CAPITAL* is net plant, property and equipment (Compustat annual data item #8) divided by total assets (Compustat annual data item #6); *HERFINDEX* is the Herfindahl Index, calculated as the sum of squares of market shares of the firms in the industry (two-digit SIC code); *SALESGROW* is current year's growth in sales, calculated as net sales for year t (Compustat annual data item #12) less net sales of year t-1, scaled by net sales for year t-1; *MARGIN* is gross margin percentage, calculated as the year t net sales (Compustat annual data item #12) less cost of goods sold for the year (Compustat annual data item #41) divided by net sales; *LEVERAGE* is long term debt (Compustat annual data item #9) plus debt in current liabilities (Compustat annual data item #34) divided by total assets (Compustat annual data item #6); *OC* is operating cycle (in days) and is calculated as $[(AR_t + AR_{t-1})/2 \div (SALES/360)] + [(INV_t + INV_{t-1})/2 \div (COGS/360)]$ where *AR* is the firm's accounts receivable (Compustat annual data item # 2), *INV* is the firm's inventory (Compustat annual data item # 3), and *COGS* is the firm's cost of goods sold (Compustat

annual data item #41); *SEGMENT* is the number of two-digit SIC industry codes the firm operates in; *SIZE* is natural logarithm of market capitalization at the end of the fiscal year (Compustat annual data item #199 times Compustat annual data item #25). *INDUSTRY* is a dummy variable for industry membership. We use the 12 industry groups in Fama and French (1997).

Cohen (2004) provides the following arguments for the explanatory variables in equation (2). Number of shareholders (*OWNER*) captures the higher demand for firm-specific information when investor base is highly dispersed. *CAPITAL* and *HERFINDEX* proxy for barriers to entry. If a product market's barrier to entry is high then the associated proprietary costs of disclosures should be relatively low. *SALESGROW* and *MARGIN* proxy for firm's profitability. Greater profitability implies that proprietary costs of disclosures should be relatively high. Leverage (*LEVERAGE*) captures the greater demand for information associated with higher agency costs of highly levered firms. Leverage could also act as a disciplining mechanism to alleviate agency problems associated with large amounts of free cash flow. Operating cycle (*OC*) captures the predictability of future cash flows resulting from the length of operating cycle. Number of segments (*SEGMENT*) captures the effect of the complexity of the firm's operating environment on information quality. Finally, firm size (*SIZE*) captures the difference in firms' information environment among other aspects.¹⁰

Table 3, Panel A provides the descriptive statistics of the sample of all the variables in equation (2). The results of estimating equation (2) are presented in Table 3,

¹⁰ Based on Cohen (2004), the predicted signs on the control variables are indicated in Panel B of Table 1.

Panel B.¹¹ The coefficient on the family firm indicator variable is 0.26, which is significant at the 5% level.¹² This result suggests that compared to non-family firms, family firms' reported earnings components are significantly better at predicting future cash flows.

4.1.2 Earnings response coefficient

When we measure earnings quality in terms of next period's predictability of cash flows, one limitation is that the measure does not completely incorporate the predictability of long-term cash flows. Examining the earnings response coefficient (ERC) would address this concern because stock returns will capture the effect on future cash flows of all periods. To test the difference between ERCs of family and non-family firms, we estimate the following equation.

$$\begin{aligned}
 RETURN = & \alpha + \beta_1 EARNING + \beta_2 EARNING * FAMILYFIRM + \beta_3 EARNING * VAR \\
 & + \beta_4 EARNING * LEVERAGE + \beta_5 EARNING * MB + \beta_6 EARNING * SIZE \\
 & + \beta_7 EARNING * BETA + \sum \beta_8 EARNINGS * INDUSTRY_i + error \quad (3)
 \end{aligned}$$

where *RETURN* is the cumulative abnormal return for the 12-month period ending three months after the fiscal year end; *FAMILYFIRM* is a dummy variable which equals one for family firms, and zero otherwise; *EARNING* is the annual change in earnings per share deflated by the price at the beginning of the return accumulation period; *VAR* is the standard deviation of quarterly earnings from 1998 to 2002; *LEVERAGE* is the ratio of total debt to total assets at the beginning of the fiscal period; *MB* is market-to-book ratio at the beginning of the fiscal period; *SIZE* is the log of market value of equity at the beginning of the fiscal period; *BETA* is the company's systematic risk. *INDUSTRY* is a

¹¹ For all model estimations in the paper, we use Huber-White procedure to control for heteroscedasticity and correlations in the error terms. Also, throughout the paper, our conclusions about the effect of family firms are robust to outlier deletions as well as the use of binary transformation of control variables.

¹² The coefficients on the control variables when significant have the predicted sign.

dummy variable for industry membership where we use 12 industry groups as in Fama and French (1997).

We predict that the coefficient β_2 will be positive, indicating that the ERC of family firms is greater than that of non-family firms. Other interaction variables in equation (3) control for previously identified determinants of ERCs. Prior studies find that ERCs are negatively related to earnings predictability (*VAR*), negatively related to leverage (*LEVERAGE*), positively related to growth (*MB*), positively related to size (*SIZE*), and negatively related to systematic risk (*BETA*) (Collins and Kothari 1989, and Kothari 2001).

The descriptive statistics of the variables in equation (3) are presented in Panel A of Table 4 and the regression results are presented in Panel B of Table 4. The ERC of family firms is significantly higher than that of non-family firms both with and without the control variables. For the full model, the coefficient on the interaction term, *EARNING*FAMILY* is 1.08 (t-statistic = 4.01).¹³ This result is consistent with that in Table 3, suggesting that as compared to non-family firms, family firms' reported numbers in the financial statements are of higher quality, and thereby providing support to hypothesis H1.

4.2 Management forecasts of earnings

We examine the likelihood of management issuing quarterly earnings forecasts across family and non-family firms. For this purpose, we use the data on quarterly earnings guidance obtained from Thompson First Call's, Company Issued Guidance (CIG) file.

¹³ The coefficients on the control variables when significant have the predicted sign, except for the coefficient on *EARNINGS*BETA*.

Following Kasznik and Lev (1995), we estimate the following model.

$$\begin{aligned}
 MGMT_FORECAST = & \alpha + \beta_1 CHEPS + \beta_2 FAMILYFIRM + \beta_3 CHEPS * FAMILYFIRM \\
 & + \beta_4 SIZE + \beta_5 BM + \beta_6 HIGHTECH + \beta_7 REGULATION \\
 & + error
 \end{aligned}
 \tag{4}$$

where *MGMT_FORECAST* is an indicator variable that is one if the managers make an earnings forecast of quarterly earnings, and zero otherwise, *CHEPS* is the change in earnings per share from that of the same quarter in the previous fiscal year, deflated by stock price at the beginning of the quarter; *SIZE* is the natural log of market capitalization at the beginning of the fiscal quarter; *BM* is the natural log of the book-to-market ratio, computed using the book value of equity at the beginning of the quarter divided by the market capitalization at the beginning of the quarter; *HIGHTECH* is an indicator variable that takes on a value of one if the firm operates in any of the following SIC codes, 2833-2836 (Drugs), 3570-3577(Computers), 3600-3674 (Electronics), 7371-7379 (Programming), 8731-8734 (R&D services), and is zero otherwise; *REGULATION* is an indicator variable that takes on a value of one if the firm operates in any of the following SIC codes 4812-4813 (Telephone), 4833 (TV), 4841 (Cable), 4811-4899 (Communications), 4922-4924 (Gas), 4931 (Electricity), 4941(Water), 6021-6023, 6035-6036, 6141, 6311, 6321, 6331, and is zero otherwise.

Kasznik and Lev (1995) estimate their model (equation (4) without the *FAMILYFIRM* and *CHEPS*FAMILYFIRM* variables) separately for good news (positive *CHEPS*) and bad news (negative *CHEPS*) firms. They find that for bad news the likelihood of management earnings forecasts increases with the magnitude of the bad news. In other words, they obtain a significantly negative coefficient on *CHEPS* for bad

news firms. Moreover, they do not find a significant coefficient on *CHEPS* for good news firms. They conclude that managers are more likely to make a forecast as the magnitude of the bad news increases. We predict that this relation between the likelihood of management forecast and the magnitude of bad news is stronger for family firms than for non-family firms (hypothesis H3). Thus, we expect that the coefficient β_3 will be negative when equation (4) is estimated using observations with $CHEPS < 0$.

The other variables in equation (4) are control variables, similar to that used in Kasznik and Lev (1995). *SIZE* is found to be positively related to the likelihood of management forecasts, probably because of economies of scale (Lang and Lundholm, 1993). *BM* is included to control for risk as well as growth. *HIGHTECH* is expected to have a positive coefficient, reflecting exposure to larger risk of shareholder lawsuits due to larger price fluctuations. Finally, *REGULATION* is expected to have a negative coefficient, reflecting a smaller demand for management forecasts because of regulated firms' practice of providing considerable amount of information to the regulatory body and therefore indirectly to the investors.

The descriptive statistics of the variables in equation (4) are presented in Panel A of Table 5 and the regression results are presented in Panel B of Table 5. We first estimate the models without the *FAMILYFIRM* variables and obtain results similar to that in Kasznik and Lev (1995). Coefficient on *CHEPS* is insignificant for the good news case and is negative and significant for the bad news case, -1.97 (p-value < 0.01). For bad news firms, the results of the full model show that the coefficient on *CHEPS*FAMILYFIRM* is negative and significant, -2.38 (p-value < 0.01).¹⁴ This result suggests that compared to non-family firms, family firms' likelihood of making

¹⁴ Coefficients on the control variables when significant have the predicted signs.

management forecast of earnings is more strongly related to the magnitude of bad news. This result is consistent with hypothesis H3.

4.3 Voluntary disclosure of corporate governance practices

To examine whether family firms are less likely to make voluntary disclosures related to corporate governance practices (hypothesis H3), we use the Transparency and Disclosure (T&D) database.¹⁵ It provides transparency and disclosure scores collected by Standard and Poor's for S&P 500 firms. The scores are computed using the company's annual report and the regulatory filings, such as the 10-K and proxy statements. The scores are available for 98 questions organized in 12 groups (Patel and Dallas 2002). For each question that is answered in the affirmative the company receives a score of one, and receives a score of zero otherwise. In general, an affirmative answer to a question indicates the presence of a disclosure item. These questions are listed in Appendix A.

In Panel A of Table 6, we consider those groups that are related to shareholder rights and corporate governance structure and practices. The score for each group indicates the average number of questions answered in the affirmative within that group. For two of these groups, Information on Auditors (#8) and Board Structure and Composition (#9), almost all firms have an affirmative answer, probably because there is no discretion available, i.e., information pertaining to these aspects are mandatory. For the remaining groups, firms seem to have some discretion. For four of these groups, Concentration of Ownership (#2), Voting and Shareholder Meeting Procedures (#3), Role of Board (#10), and Director Training and Compensation (#11), the scores for family firms are significantly different than that for non-family firms, with t-statistics of 4.51,

¹⁵ Khanna, Palepu, and Srinivasan (2004) use this database to examine differences in disclosure practices of companies across countries.

-4.42, -4.69 and -2.61, respectively. To better understand the reasons for these differences, we list the scores of all the questions in each of these four groups (Panel B of Table 3).

The category, Concentration of Ownership, have higher scores for family firms than non-family firms. However, this may simply reflect that these questions are more relevant for family firms, and so these companies are more likely to respond. Thus, family firms end up getting a higher score than non-family firms in this category. In other words, this result does not indicate greater voluntary disclosure of concentration of ownership by family firms.¹⁶

For the other three groups related to corporate governance practices, the disclosure scores are significantly less for family firms than for non-family firms. For the group Voting and Shareholder Meeting Procedures, the questions to which family firms provide significantly less disclosure are: how shareholders convene an extraordinary general meeting ($t = -1.86$), how shareholders nominate directors to board ($t = -2.76$) and does the annual report refer to or publish the corporate governance charter ($t = -3.49$). For the group Role of the Board, the questions for which family firms provide significantly less disclosures are: is there a list of board committees ($t = -1.86$), is there a nomination committee ($t = -3.31$), disclosure of names on nomination committee ($t = -3.40$), other internal audit function besides audit committee ($t = -2.38$), and is there a strategy/investment/finance committee ($t = -2.35$). For the group Director Training and Compensation, the questions for which family firms provide significantly less disclosure

¹⁶ It is possible that the response to questions in some of the other categories may also be affected by whether the particular issue is relevant for the firm or not. For example, the group Related Party Structure and Transaction is more relevant for family firms and less so for non-family firms. In Panel A of Table 6, we find that the score is not significantly different across the family and non-family firms. The insignificant difference could be due to the offsetting effect of family firms' unwillingness to voluntarily disclose information about these transactions. It is difficult to control for this type of problem in our analyses of the T&D data. Our results should therefore be interpreted with caution.

are: discuss decision-making process of directors' pay ($t = -1.71$) and are specifics of directors' salaries disclosed ($t = -1.91$). Overall, the results in Table 6 suggest that family firms provide less disclosure about their corporate governance practices. This evidence supports hypothesis H3.

4.4 Analyst following, analysts' forecast properties and bid-ask spreads

For hypothesis H4, we investigate how family and non-family firms differ on analyst coverage, dispersion in analysts' forecasts, analyst forecast accuracy, volatility in forecast revisions, and bid-ask spread. For this examination, we adopt the models used in Lang and Lundholm (1996) and Healy, Hutton, and Palepu (1999).

4.4.1 Analyst following

We estimate the following equation.

$$COVERAGE = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5INVPRICE + a_6RETVAR + a_7RD + a_8EFFORT + a_9BROKER + error, \quad (5)$$

The dependent variable analyst coverage, *COVERAGE*, is defined as the 12-month average of the number of analysts who issued annual earnings forecasts in IBES. Our main independent variable, family firm membership, is denoted by *FAMILYFIRM*.

Following Lang and Lundholm (1996), we include the following control variables. *SIZE*, defined as the natural logarithm of market value of equity at the beginning of the fiscal year, is predicted to have a positive coefficient. Bhushan (1989) argues that larger firms are more widely held with more potential transaction business for analysts' brokerage houses. *STDROE*, defined as the standard deviation of return-on-equity during the preceding 10-year period, is predicted to have a positive coefficient. Bhushan (1989) explains that expected trading benefits based on private information is higher for a firm with higher return variability because it increases the conditional expected returns. *CORR*,

defined as the Pearson correlation between ROE and annual stock return in the preceding 10-year period, is predicted to have a positive coefficient. Bhushan (1989) argues that it is easier for analysts to predict future stock price for firms with higher return-earnings correlations.

We include the following additional control variables beyond those included in Lang and Lundholm (1996). *INVPRICE*, defined as the inverse of stock price at the beginning of the year, is predicted to have a positive coefficient. Brennan and Hughes (1991) argue that inverse of stock price proxies for the rate of the brokerage commission and the higher the brokerage commission the greater will be analysts' incentive to follow the firm. *RETVAR*, defined as daily stock return variance estimated over the last 200 days prior to end of the year, is predicted to have a positive coefficient. *RETVAR* is an additional measure for return variability and hence the reason for the prediction is the same as that discussed above for *STDROE*.¹⁷ *RD*, defined as the annual research and development expense divided by total assets at the beginning of the fiscal year, is predicted to have a positive coefficient. Barth et al. (2001) argue that intangible assets typically are not recognized, making financial statements less informative and providing greater incentive for analysts to follow firms with greater research and development expenses. *EFFORT* is defined as the negative of the average number of firms followed by the firm's analysts in a particular year divided by the number of analysts covering the firm in that year. This variable captures the notion that if a particular firm requires more effort to cover it, then the firm's analysts will cover fewer firms (Barth, Cram, and Nelson 2001). *BROKER* is defined as the average number of analysts employed by the

¹⁷ We include both the variables because Lang and Lundholm [1996] obtain an insignificant coefficient on *STDROE*, whereas Brennan and Hughes [1991] obtain a positive and significant coefficient on *RETVAR*.

brokerage houses that employ the firm's analysts. Larger brokerage houses have greater resources and can therefore follow more firms. The inclusion of *BROKER* in the model controls for cross-sectional difference in *EFFORT* that is related to the size of the brokerage houses, thereby making the *EFFORT* variable more effective (Barth et al., 2001).

4.4.2 Forecast dispersion, forecast accuracy, and revision volatility

To investigate how family and non-family firms differ in terms of dispersion in analysts' earnings forecasts, forecast accuracy, and volatility in forecast revisions, we use the following equations.

$$DISP = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error, \quad (6)$$

$$FERROR = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error, \quad (7)$$

$$REVISION = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error, \quad (8)$$

In equation (6), the dependent variable, *DISP*, is dispersion in individual analyst earnings forecasts, defined as 12-month average of the standard deviation of analysts' forecasts. In equation (7), the dependent variable, *FERROR*, is the absolute value of 12-month average of analyst forecast error defined as actual earnings minus the median analyst forecast. For both *DISP* and *FERROR*, we compute a simple average across the twelve months corresponding to the firm's fiscal year. We also deflate both the variables by beginning of fiscal year stock price. In equation (8), the dependent variable, *REVISION*, is volatility

in forecast revisions, defined as the standard deviation of monthly forecast revisions over the fiscal year, deflated by the beginning of fiscal year price, where forecast revision is defined as current month median forecast minus previous month median forecast.

Equations (6) to (8) include *SIZE*, *STDROE*, *CORR*, and *RD* as control variables. As discussed before, these variables represent factors that affect analysts' incentives to collect information and are therefore likely to affect the properties of their forecasts. In these models, we also control for *ACHEPS*, defined as the absolute value of annual change in earnings per share deflated by the beginning of fiscal year price. It controls for the fact that dispersion in analysts' earnings forecasts, forecast errors, and volatility in forecast revisions are likely to increase with the magnitude of the forthcoming earnings information.

4.4.3 Bid-ask spread

Finally, to examine the difference in bid-ask spread between family and non-family firms, we use the following equation.

$$SPREAD = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3LTURNOVER + a_4LPRICE + error \quad (9)$$

Equation (9) is similar to that in Healy, Hutton, and Palepu (1999). *SPREAD* is defined as the annual average of the daily closing bid-ask spread as a percentage of daily closing price. *SIZE* and *LTURNOVER*, defined as the natural logarithm of the annual median value of daily trading volume divided by total shares outstanding, are included to control for the possibility that bid-ask spreads are narrower for larger firms or for firms whose shares are traded more often. *LPRICE*, defined as the natural logarithm of the beginning of year stock price, is included because fixed order costs are spread across more dollars in

stocks that have a higher price and consequently the percentage spread is lower for these stocks (Stoll (1978)).

4.4.4 Results

Panel A of Table 7 presents descriptive statistics for all the dependent and independent variables in equations (5) to (9) and Panel B presents the regression estimates of these models. The coefficient on *FAMILYFIRM* is positive and significant for the analyst coverage model (0.91, t-statistics = 3.42), suggesting that family firms enjoy greater analyst coverage than non-family firms. The coefficient on *FAMILYFIRM* is negative and significant for the forecast dispersion model (-0.07, t-statistics = -5.14), suggesting that for family firms there is less disagreement on earnings forecasts among analysts. The coefficient on *FAMILYFIRM* is negative and significant for the forecast error model (-0.12, t-statistics = -2.47), suggesting that for family firms analysts' forecasts tend to be more accurate. The coefficient on *FAMILYFIRM* is negative and significant for the volatility of forecast revision model (-0.06, t-statistics = -3.34), suggesting that forecast revisions for family firms are less extreme. The coefficient on *FAMILYFIRM* is negative and significant for the bid-ask spread model (-0.67, t-statistics = -3.05), suggesting that family firms enjoy greater liquidity.^{18,19}

Overall, the results in Table 7 are consistent with hypothesis H4, suggesting that family firms enjoy larger analyst following, better analysts' forecast properties and greater liquidity, probably due to their reputation of disclosing bad news through management forecasts and because of better quality of their reported earnings.

¹⁸ The control variables in all the models if significant have the predicted signs, except in two cases. The coefficients on *CORR* and *RD* have the opposite signs in the forecast dispersion, forecast error and forecast revision models.

¹⁹ We repeat the analysis in Panel B of table 6 after introducing industry membership variables. The results remain qualitatively the same.

5. Conclusions

In this paper, we examine the corporate disclosures of U.S. family and non-family firms in the S&P 500. Compared to non-family firms, family firms face less severe agency problems from the separation of ownership and management; but more severe agency problems from conflicts between controlling and non-controlling shareholders. We predict that these agency problem differences influence certain corporate disclosure practices across family and non-family firms. We consider the following aspects of corporate disclosures: quality of reported earnings, voluntary disclosure of bad news through management earnings forecasts, and voluntary disclosures of corporate governance practices in regulatory filings.

We find that reported earnings are of better quality for family firms as compared to non-family firms. We measure earnings quality by the ability of its components to predict future cash flows and by earnings response coefficient. This finding is consistent with family firms facing less severe agency problems from separation of ownership and management. Family owners' ability to directly monitor the managers results in less management compensation being tied to accounting performance measures. Thus, these measures are less affected by managerial opportunism. Also family owners direct monitoring enables them to more easily prevent manipulation of reported numbers by managers.

We also find that compared to non-family firms, the likelihood of family firms issuing management earnings forecasts increases more rapidly with the magnitude of bad news. This finding is consistent with the notion that the reputation of withholding bad news can lead to lower stock price and lower liquidity. Since families have concentrated

equity holdings with long-term investment horizon, such adverse reputation can be very costly to them. Thus, family owners use their ability of direct monitoring to promote disclosure of bad news in a timely manner.

We also find that compared to non-family firms, family firms make less voluntary disclosures about their corporate governance practices in their regulatory filings. This result is consistent with family firms facing more severe agency problems from conflicts between controlling and non-controlling shareholders. Family firms disclose less of their corporate governance practices so they can more easily extract private rents. Reducing non-value enhancing interference from outside shareholders in their firms' corporate governance may be another reason for maintaining lack of transparency in their corporate governance practices.

Finally, we find that compared to non-family firms, family firms have larger analyst following, lower dispersion in analysts' forecasts, smaller forecast errors, less volatile forecast revisions, and smaller bid-ask spreads. These results are consistent with family firms making better disclosures about their financial performance.

Family ownership is dominant among publicly traded firms throughout the world (Burkart, Panunzi and Shleifer (2003)). Note however that the comparison we provide between the disclosure practices of U.S. family and non-family firms may not apply to firms in other countries. There are many institutional differences across countries that need to be considered. For example, given the strong legal protection of minority shareholders, the salient agency problem in the U.S. is the separation of ownership and management. However, for most of the countries in the world the salient

agency problem is expropriation of outside shareholders by controlling shareholders
(Faccio, Lang and Young, 2001 and Burkart, Panunzi and Shleifer, 2003).

Appendix A: S&P transparency and disclosure practice questions

Transparency of Ownership (11 questions)

1. • Provide a description of share classes?
2. • Provide a review of shareholders by type?
3. • Provide the number of issued and authorized but non-issued ordinary shares? (2 questions)
4. • Provide the par value of issued and authorized but non-issued ordinary shares? (2 questions)
5. • Provide the number of issued and authorized but non-issued shares of preferred, nonvoting,
6. and other classes? (2 questions)
7. • Provide the par value of issued and authorized but non-issued shares of preferred,
8. non-voting, and other classes? (2 questions)
9. • Does the company disclose the voting rights for each class of shares?

Concentration of Ownership (8 questions)

1. • Top 1, 3, 5, or 10 shareholders disclosed? (4 questions)
2. • Shareholders owning more than 10, 5, or 3 percent is disclosed? (3 questions)
3. • Does the company disclose percentage of cross-ownership?

Voting and Shareholder Meeting Procedures (9 questions)

1. • Is there a calendar of important shareholder dates?
2. • Review of shareholder meetings (could be minutes)?
3. • Describe procedure for proposals at shareholder meetings?
4. • How shareholders convene an extraordinary general meeting?
5. • How shareholders nominate directors to board?
6. • Describe the process of putting inquiry to board?
7. • Does the annual report refer to or publish Corporate Governance Charter or Code of
8. Best Practice? (2 questions)
9. • Are the Articles of Association or Charter Articles of Incorporation published?

Business Focus (15 questions)

1. • Is there a discussion of corporate strategy?
2. • Report details of the kind of business it is in?
3. • Does the company give an overview of trends in its industry?
4. • Report details of the products or services produced/provided?
5. • Provide a segment analysis, broken down by business line?
6. • Does the company disclose its market share for any or all of its businesses?
7. • Does the company report basic earnings forecast of any kind? In details? (2 questions)
8. • Disclose output in physical terms?
9. • Does the company give an output forecast of any kind?
10. • Does the company give characteristics of assets employed?
11. • Does the company provide efficiency indicators (ROA, ROE, etc.)?
12. • Does the company provide any industry-specific ratios?
13. • Does the company disclose its plans for investment in the coming years?
14. • Does the company disclose details of its investment plans in the coming years?

Accounting Policy Review (9 questions)

1. • Provide financial information on a quarterly basis?
2. • Does the company discuss its accounting policy?
3. • Does the company disclose accounting standards it uses for its accounts?
4. • Does the company provide accounts according to the local accounting standards?
5. • Does the company provide accounts in alternate internationally recognized
6. accounting method? Does the company provide each of the balance sheet, income

7. statement, and cash-flow statement by internationally recognized methods? (4 questions)
8. • Does the company provide a reconciliation of its domestic accounts to internationally
9. recognized methods?

Accounting Policy Details (3 questions)

1. • Does the company disclose methods of asset valuation?
2. • Does the company disclose information on method of fixed assets depreciation?
3. • Does the company produce consolidated financial statements?

Related party Structure and Transactions (4 questions)

1. • Provide a list of affiliates in which it holds a minority stake?
2. • Does the company disclose the ownership structure of affiliates?
3. • Is there a list/register of related party transactions?
4. • Is there a list/register of group transactions?

Information on Auditors (4 questions)

1. • Does the company disclose the name of its auditing firm?
2. • Does the company reproduce the auditors' report?
3. • Disclose how much it pays in audit fees to the auditor?
4. • Disclose any non-audit fees paid to auditor?

Board Structure and Composition (8 questions)

1. • Is there a chairman listed?
2. • Detail about the chairman (other than name/title)?
3. • Is there a list of board members (names)?
4. • Are there details about directors (other than name/title)?
5. • Details about current employment/position of directors provided?
6. • Are details about previous employment/positions provided?
7. • Disclose when each of the directors joined the board?
8. • Classifies directors as an executive or an outside director?

Role of the Board (12 questions)

1. • Details about role of the board of directors at the company?
2. • Is there disclosed a list of matters reserved for the board?
3. • Is there a list of board committees?
4. • Review last board meeting (could be minutes)?
5. • Is there an audit committee?
6. • Disclosure of names on audit committee?
7. • Is there a remuneration/compensation committee?
8. • Names on remuneration/compensation committee)?
9. • Is there a nomination committee?
10. • Disclosure of names on nomination committee?
11. • Other internal audit function besides audit committee?
12. • Is there a strategy/investment/finance committee?

Director Training and Compensation (6 questions)

1. • Disclose whether they provide director training?
2. • Disclose the number of shares in the company held by directors?
3. • Discuss decision-making process of directors' pay?
4. • Are specifics of directors' salaries disclosed (numbers)?
5. • Form of directors' salaries disclosed (cash, shares, etc.)?
6. • Specifics disclosed on performance-related pay for directors?

Executive Compensation and Evaluation (9 questions)

1. • List of the senior managers (not on the board of directors)?
2. • Backgrounds of senior managers disclosed?
3. • Number of shares held by the senior managers disclosed?
4. • Disclose the number of shares held in other affiliated companies by managers?

5. • Discuss the decision-making of managers' (not board) pay?
6. • Numbers of managers' (not on board) salaries disclosed?
7. • Form of managers' (not on board) salaries disclosed?
8. • Specifics disclosed on performance-related pay for managers?
9. • Details of the CEO's contract disclosed?

References

- Anderson, R., Reeb, D., 2003a. Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 1301-1328.
- Anderson, R., Mansi, S., Reeb, D., 2003. Founding-family ownership and the agency cost of debt. *Journal of Financial Economics* 68, 263-285.
- Anderson, R., Reeb, D., 2003b. Founding-family ownership, corporate diversification, and leverage. *Journal of Law and Economics*, 653-684.
- Anderson, R., Reeb, D., 2004. Board composition: balancing family influence in S&P 500 firms. *Administrative Sciences Quarterly*.
- Arya, A., Glover, J., Sunder, S., 1998. Earnings management and the Revelation Principle. *Review of Accounting Studies* 3, 7-34.
- Barth, M., Cram, D., Nelson, K., 2001. Accruals and the prediction of future cash flows. *The Accounting Review* 76, 27-58.
- Bhushan, R., 1989. Firm characteristics and analyst following. *Journal of Financial Economics* 11, 255-74.
- Brennan, M., Hughes, P., 1991. Stock prices and the supply of information. *Journal of Finance* 46, 1665-91.
- Burkart, M., Panunzi, F., Shleifer, A., 2003. Family firms. *Journal of Finance* 58, 2167-2202.
- Bushman, R., Smith, A., 2001. Financial accounting information and corporate governance. *Journal of Accounting and Economics* 32, 237-333.
- Chen, T., 2005. Executive compensation contracts of family firms. Working paper, University of Texas at Dallas.
- Cohen, D., 2004. Quality of financial reporting choice: Determinants and economic consequences. Working paper, University of Southern California.
- Collins, D., Kothari, S.P., 1989. An analysis of inter-temporal and cross-sectional determinants of earnings Response coefficients. *Journal of Accounting and Economics* 11, 143-181.
- DeAngelo, H., DeAngelo, L., 2000. Controlling stockholders and the disciplinary role of corporate payout policy: A study of the Times Mirror company. *Journal of Financial Economics* 56(2), 153-207.
- Demsetz, H., Lehn, K., 1985. The structure of corporate ownership: Causes and consequences. *Journal of Political Economy* 93, 1155-1177.
- Demski J., 1994. Managerial uses of accounting information, Kluwer Academic Publishers, MA.
- Demski, J., 1998. Performance smoothing incentives. Working paper, University of Florida.
- Evans, J., Sridhar, S., 1996. Multiple control systems, accrual accounting, and earnings management. *Journal of Accounting Research* 34, 45-65.

- Fama, E., French, K., 1997. Industry cost of equity. *Journal of Financial Economics* 43, 153–193.
- Faccio, M., Lang, L.P.H., Young, Y., 2001. Dividends and expropriation, *American Economic Review* 91, 54-78.
- Fairfield, P., Sweeney, R., Yohn, T., 1996. Accounting classification and the predictive content of earnings. *The Accounting Review* 71, 337-355.
- Fields, T.D., Lys, T.C., Vincent, L., 2001. Empirical Research on Accounting Choice. *Journal of Accounting and Economics* 31, 255-307.
- Fukui, Y., 1996. Earnings management: Not for managers but for investors. Working paper, Carnegie Mellon University.
- Gilson R. J. Gordon. J., 2003. Controlling controlling shareholders. Working Paper # 228, Columbia Law School, The Center for Law and Economic Studies, New York.
- Healy, P M., Hutton, A., Palepu. K.G., 1999. Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary Accounting Research* 16, 485-520.
- Healy, P., Palepu. K., 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31, 405-440.
- James, H., 1999. Owner as a manager, extended horizons and the family firm. *International Journal of Economics of Business* 6, 41-56.
- Kasznik, R., Lev, B., 1995. To warn or not to warn: management disclosures in the face of an earnings surprise. *The Accounting Review* 70 (1), 113–134.
- Khanna, T., Palepu, K. G., Srinivasan, K., 2004. Disclosure practices of foreign companies interacting with U.S. markets. *Journal of Accounting Research* 42(2), 475-508.
- Kothari, S.P., 2001. Capital markets research in accounting. *Journal of Accounting and Economics* 31, 105-231.
- Kwak, M., 2003. The advantages of family ownership. *MIT Sloan Management Review* (Winter), 12.
- Lang, M., Lundholm., R., 1993. Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research* 31, 246-271.
- Lang, M. and Lundholm, R., 1996. Corporate disclosure policy and analyst behavior. *The Accounting Review* 71, 467-92.
- LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1997. Legal determinants of external finance, *Journal of Finance* 52, 1131-1150.
- LaPorta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny. 1998. Law and finance, *Journal of Political Economy*, 106, 1113-1155.
- LaPorta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny. 2000. Investor protection and corporate governance, *Journal of Financial Economics* 58, 3-27.

Patel, S. A., Dallas, G., 2002. Transparency and disclosure: Overview of methodology and study results - United States. Standard and Poor's.

Searcey, D., Yuan, L., 2005. Executives on trial: Adelphia's John Rigas get 15 years. Wall Street Journal.

Securities and Exchange Commission Litigation Release No. 17627, July 24 2002

Shliefer, A., and R. Vishny. 1997. A survey of Corporate Governance. *Journal of Finance* 52, 737-783.

Skinner, D. 1993. The investment opportunity set and accounting procedure choice: Preliminary evidence. *Journal of Accounting and Economics* 16,407-445.

Skinner, D. 1994. Why firms voluntarily disclose bad news? *Journal of Accounting and Economics* 32, 38-60.

Stein, J., 1988. Takeover threats and managerial myopia, *Journal of Political Economy* 96, 61-80.

Stein, J., 1989. Efficient capital markets, inefficient firms: A model of myopic corporate behavior, *Quarterly Journal of Economics* 106, 655-669.

Stoll, H., 1978. The pricing of security dealer services: An empirical study of Nasdaq stocks. *Journal of Finance* 33, 1153-72.

Subramanyam, K.R., 1996. The pricing of discretionary accruals. *Journal of Accounting and Economics* 22, 249-281.

Welker, M., 1995. Disclosure policy, information asymmetry, and liquidity in equity markets. *Contemporary Accounting Research* 11, 801-27.

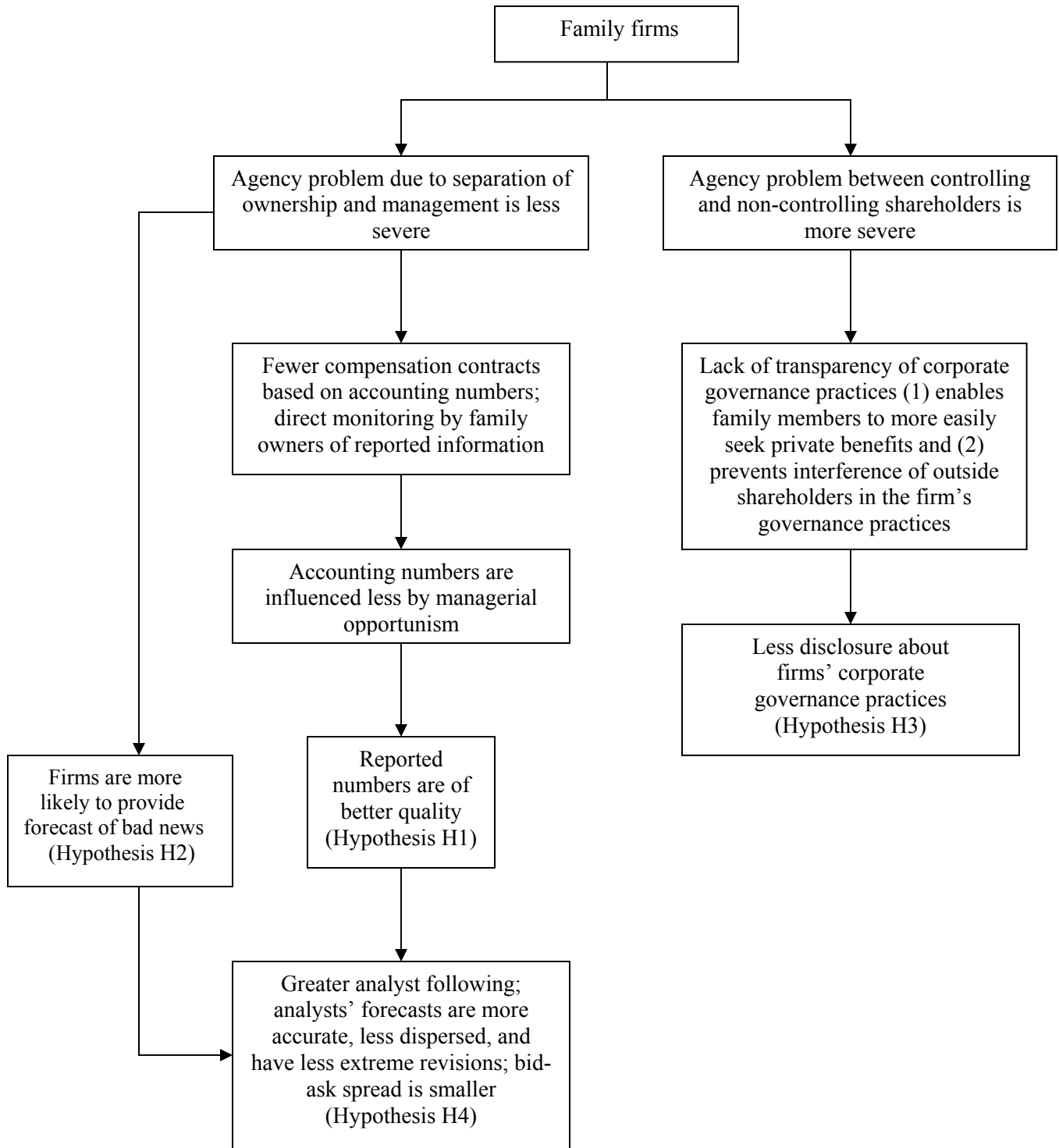


Figure 1: Corporate disclosures by family firms as compared to non-family firms

Table 1
 Ownership and control characteristics of the 177 family firms in S&P 500

Percentage of cash flow rights controlled by the founding family members or descendants	11%
Percentage of voting rights controlled by the founding family members or descendants	18%
Founding family member or descendent serve as the CEO	49%
Founding family member or descendent serve as the top executive (including CEO)	63%
Founding family member or descendent serve as the chair person of the board of directors	67%
Founding family member or descendent serve as the directors (including chair person)	99%

Table 2
Number and percent of family and non-family firms by two-digit SIC code

SIC code	Industry description	Non-family firms (n = 323 firms)	Family firms (n = 177 firms)	Percent of family firms in industry
10	Metal mining	1	1	50%
13	Oil and gas extraction	12	4	33%
14	Manufacturing, quarry nonmaterial minerals	1	0	0%
15	General building contractors	2	1	33%
16	Heavy construction, except buildings	0	1	100%
20	Food and kindred products	11	7	39%
21	Tobacco products	3	0	0%
23	Apparel and other textile products	1	3	75%
24	Lumber and wood products	3	1	25%
25	Furniture and fixtures	1	1	50%
26	Paper and allied products	6	4	40%
27	Printing and publishing	3	7	70%
28	Chemical and allied products	25	11	31%
29	Petroleum and coal products	4	2	33%
30	Rubber and miscellaneous plastic products	3	3	50%
33	Primary metal industries	5	3	38%
34	Fabricated metal products	6	1	14%
35	Industrial machinery and equipment	17	10	37%
36	Electronic and other electrical equipment	18	19	51%
37	Transportation equipment	15	2	12%
38	Instruments and related products	14	9	39%
39	Miscellaneous manufacturing products	1	1	50%
40	Railroad transportation	4	0	0%
42	Trucking and warehousing	1	0	0%
44	Water transportation	0	1	100%
45	Transportation by air	1	2	67%
48	Communications	11	6	55%
49	Electric, gas, and sanitary services	33	4	11%
50	Wholesale trade – durable goods	1	1	50%
51	Wholesale trade – nondurable goods	4	2	33%
52	Building materials and gardening	2	1	33%
53	General merchandise stores	7	5	42%
54	Food stores	3	2	40%
55	Auto dealers and service stations	0	2	100%
56	Apparel and accessory stores	1	3	75%
57	Furniture and home furnishings	2	2	50%
58	Eating and drinking places	4	0	0%
59	Miscellaneous retail	2	5	71%
60	Depositing Institutions	27	7	21%
61	Nondepositing Credit Institutions	6	1	14%
62	Security & Commodity Brokers	7	3	30%
63	Insurance Carriers	23	7	23%
64	Insurance Agents, Brokers & Service	1	1	50%
67	Holding, Other Investment Offices	1	5	83%
70	Hotels and other lodging places	0	3	100%
72	Personal services	0	1	100%
73	Business services	19	17	47%
75	Auto repair, services, and parking	1	0	0%
78	Motion pictures	1	0	0%
79	Amusement and recreation services	2	0	0%
80	Health services	3	2	40%
82	Educational services	0	1	100%
87	Engineering and management services	1	2	67%
99	Nonclassification establishment	3	0	0%

Table 3
Family firms and predictability of future cash flows

Panel A: Descriptive statistics

	Mean	Min.	Q1	Median	Q3	Max.
<i>QUALITY</i>	0.49	0	0	0	1	1
<i>OWNER</i>	2.99	-6.90	1.86	3.02	4.04	8.41
<i>CAPITAL</i>	0.34	0.01	0.16	0.29	0.54	0.94
<i>HERFINDEX</i>	0.06	0.01	0.03	0.04	0.08	0.46
<i>SALESGROW (%)</i>	9.04	-158.79	0.92	7.91	17.72	99.73
<i>MARGIN (%)</i>	39.12	-42.82	25.09	36.26	51.69	98.61
<i>LEVERAGE</i>	0.27	0.01	0.16	0.27	0.37	0.88
<i>OC</i>	200.00	8.00	71.00	107.00	165.00	9131.00
<i>SEGMENT</i>	5.61	1.00	4.00	5.00	7.00	22.00
<i>SIZE</i>	8.97	1.89	8.17	8.83	9.66	13.10

Panel B: Equation (2) estimates

Variables	Predicted sign	Coeff.	Wald Chi-Square
Intercept	?	-0.73	1.96
<i>FAMILYFIRM</i>	+	0.26	4.47**
<i>OWNER</i>	+	-0.02	0.24
<i>CAPITAL</i>	+	1.37	18.21***
<i>HERFINDEX</i>	+ / -	2.21	5.01**
<i>SALESGROW</i>	-	0.49	3.78**
<i>MARGIN</i>	+ / -	-1.61	25.49***
<i>LEVERAGE</i>	+	1.05	7.46***
<i>OC</i>	-	0.01	0.45
<i>SEGMENT</i>	+ / -	0.04	1.37
<i>SIZE</i>	+	0.08	1.25
Likelihood Ratio (p-value)		272.11 0.00	

Notes to Table 3:

- Equation (2): $QUALITY = \alpha + \beta_1 FAMILYFIRM + \beta_2 OWNER + \beta_3 CAPITAL + \beta_4 HERFINDEX + \beta_5 SALESGROW + \beta_6 MARGIN + \beta_7 LEVERAGE + \beta_8 OC + \beta_9 SEGMENT + \beta_{10} SIZE + \sum r_i INDUSTRY_i + error$
- The sample contains 1836 firm-year observations from year 1998 to year 2002 with 671 firm-year observations pertaining to family firms and 1165 firm-year observations pertaining to non-family firms. All firms belong to S&P 500 index.
- *** indicates significance at the 0.01 level, ** indicates significance at 0.05 level, and * indicates significance at the 0.10 level.
- The Chi-Square are corrected using the Huber-White procedure.

Variable Definition

QUALITY is a binary variable which equals 1 if *RES* is less than the median value of *RES*, where *RES* is the absolute value of the residual obtained from a regression of future cash flow from operation on prior period's earnings components (see equation 1 on page 16); *FAMILYFIRM* is a binary variable which equals 1 if the firm is a family-firm and 0 otherwise. A company is classified as a family firm if the founders and descendants continue to hold positions in the top management, or on the board, or are among the company's largest shareholders. *OWNER* is the natural log of the number of shareholders of a firm minus the natural log of median number of shareholders for the same two-digit SIC code; *CAPITAL* is net plant, property and equipment divided by total assets; *HERFINDEX* is the Herfindahl Index, calculated as the

sum of squares of market shares of the firms in the industry (two-digit SIC code); *SALESGROW* is current year's growth in sales, calculated as net sales for year t less net sales of year t-1, scaled by net sales for year t-1; *MARGIN* is gross margin percentage, calculated as the year t net sales less cost of goods sold for the year divided by net sales; *LEVERAGE* is long term debt plus debt in current liabilities divided by total assets; *OC* is operating cycle (in days) and is calculated as $[(AR_t + AR_{t-1})/2 \div (SALES/360)] + [(INV_t + INV_{t-1})/2 \div (COGS/360)]$ where *AR* is the firm's accounts receivable, *INV* is the firm's inventory, and *COGS* is the firm's cost of goods sold; *SEGMENT* is the number of two-digit SIC industry codes the firm operates in; *SIZE* is natural logarithm of market capitalization at the end of the fiscal year. *INDUSTRY_i* is a dummy variable for industry membership. We use the Fama-French definition of industry.

Table 4
Family firms and earnings response coefficients

Panel A: Descriptive statistics

	Mean	Min.	Q1	Median	Q3	Max.
<i>RETURN</i>	0.01	-2.24	-0.31	-0.05	0.27	3.98
<i>EARNING</i>	-0.01	-1.10	-0.02	0.01	0.02	0.61
<i>VAR</i>	0.53	0.02	0.18	0.32	0.61	3.21
<i>LEVERAGE</i>	0.31	0.02	0.17	0.29	0.41	0.89
<i>MB</i>	4.31	-7.00	1.79	2.91	5.47	32.10
<i>SIZE</i>	9.04	4.78	8.27	8.89	9.67	13.10
<i>BETA</i>	0.92	-1.49	0.45	0.85	1.25	3.45

Panel B: Equation (3) estimates

Variables	Predicted sign	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.
Intercept	?	-0.19	-3.39***	-0.21	-5.18***	-0.21	-5.43***
<i>EARNING</i>	+	0.79	15.51***	0.76	14.21***	0.53	1.11
<i>EARNING*FAMILYFIRM</i>	+	-	-	0.91	3.57***	1.08	4.01***
<i>EARNING*VAR</i>	-	-	-	-	-	-0.07	-1.93*
<i>EARNING*LEVERAGE</i>	-	-	-	-	-	0.64	1.45
<i>EARNING*MB</i>	+	-	-	-	-	0.18	3.12***
<i>EARNING*SIZE</i>	+	-	-	-	-	-0.09	-0.66
<i>EARNING*BETA</i>	-	-	-	-	-	0.12	1.85*
Adjusted R^2 (%)		20.81		21.01		24.19	

Notes to Table 4:

- Equation (3): $RETURN = \alpha + \beta_1 EARNING + \beta_2 EARNING*IFAMILYFIRM + \beta_3 EARNING*VAR + \beta_4 EARNING*LEVERAGE + \beta_5 EARNING*MB + \beta_6 EARNING*SIZE + \beta_7 EARNING*BETA + \sum \beta_{8i} EARNINGS*INDUSTRY_i + error$
- The sample contains 2302 firm-year observations from year 1998 to year 2002, with 852 firm-year observations pertaining to family firms and 1450 observations pertaining to non - family firms. All firms belong to S&P 500 index.
- *** indicates significance at the 0.01 level, ** indicates significance at 0.05 level, and * indicates significance at the 0.10 level.
- The t-statistic are corrected using the Huber-White procedure.

Variable Definition

RETURN is the cumulative abnormal return for the 12-month period ending three months after the fiscal year end; *FAMILYFIRM* is a dummy variable which equals one for family firms, and zero otherwise; *EARNING* is the annual change in earnings per share deflated by the price at the beginning of the return accumulation period; *VAR* is the standard deviation of quarterly earnings from 1997 to 2002; *LEVERAGE* is the ratio of total debt to total assets at the beginning of the fiscal period; *MB* is market-to-book ratio at the beginning of the fiscal period; *SIZE* is the log of market value of equity at the beginning of the fiscal period; *BETA* is the company's systematic risk. $INDUSTRY_i$ is a dummy variable for industry membership.

Table 5
Family firms and voluntary management forecasts

Panel A: Descriptive statistics

I. Good news firms (CHEPS>0)

	Mean	Min.	Q1	Median	Q3	Max.
<i>MGMT_FORECAST</i>	0.13	0.00	0.00	0.00	0.00	1.00
<i>CHEPS</i>	0.01	0.00	0.00	0.01	0.01	1.72
<i>SIZE</i>	9.04	5.64	8.29	8.91	9.67	13.31
<i>BM</i>	0.40	-1.41	0.18	0.35	0.54	4.71
<i>HIGHTECH</i>	0.09	0.00	0.00	0.00	0.00	1.00
<i>REGULATION</i>	0.17	0.00	0.00	0.00	0.00	1.00

II. Bad news firms (CHEPS<0)

	Mean	Min.	Q1	Median	Q3	Max.
<i>MGMT_FORECAST</i>	0.17	0.00	0.00	0.00	0.00	1.00
<i>CHEPS</i>	-0.02	-0.81	-0.01	0.00	0.00	0.00
<i>SIZE</i>	9.00	4.75	8.25	8.83	9.62	13.15
<i>BM</i>	0.43	-0.21	0.18	0.35	0.61	5.87
<i>HIGHTECH</i>	0.10	0.00	0.00	0.00	0.00	1.00
<i>REGULATION</i>	0.16	0.00	0.00	0.00	0.00	1.00

Panel B: Equation (4) estimates

I. Good news firms (CHEPS>0)

Variables	Predicted Sign	Coeff.	Chi-Square	Coeff.	Chi-Square
Intercept	?	-2.61	55.21***	-2.67	55.64***
<i>CHEPS</i>	-	-0.25	0.13	-1.07	0.84
<i>FAMILYFIRM</i>		-	-	0.13	1.54
<i>CHEPS*FAMILYFIRM</i>		-	-	1.91	1.59
<i>SIZE</i>	+	0.08	7.51***	0.11	6.86***
<i>BM</i>	+	0.08	0.17	0.06	0.24
<i>HIGHTECH</i>	+	0.19	2.94***	0.15	1.96**
<i>REGULATION</i>	-	0.07	0.06	0.05	0.11
Likelihood ratio (p-value)			11.38 0.05		15.38 0.03

II. Bad news firms (CHEPS < 0)

Variables	Predicted Sign	Coeff.	Chi-Square	Coeff.	Chi-Square
Intercept	?	-2.88	54.91***	-2.91	53.91***
<i>CHEPS</i>	-	-1.97	6.45***	-0.91	1.41
<i>FAMILYFIRM</i>		-	-	0.03	0.07
<i>CHEPS*FAMILYFIRM</i>		-	-	-2.38	3.21***
<i>SIZE</i>	+	0.11	7.41***	0.12	6.91***
<i>BM</i>	+	0.19	1.49	0.15	1.31
<i>HIGHTECH</i>	+	0.19	3.01***	0.18	1.91*
<i>REGULATION</i>	-	0.07	0.21	0.07	0.18
Likelihood ratio (p-value)			23.15 0.00		28.41 0.00

Notes to Table 5:

1. Equation (4): $MGMT_FORECAST_{i,t} = \alpha + \beta_1 CHEPS_{i,t} + \beta_2 FAMILYFIRM + \beta_3 CHEPS * FAMILYFIRM + \beta_4 SIZE_{i,t} + \beta_5 BM_{i,t} + \beta_6 HIGHTECH_{i,t} + \beta_7 REGULATION_{i,t} + error_{i,t}$
2. The sample contains 9002 firm-quarter observations from year 1998 to year 2002, with 3306 firm-quarter observations pertaining to family firms and 5696 firm-quarter observations pertaining to non-family firms. All firms belong to S&P 500 index.
3. *** indicates significance at the 0.01 level, ** indicates significance at 0.05 level, and * indicates significance at the 0.10 level.
4. The Chi-Square are corrected using the Huber-White procedure.

Variable Definitions

MGMT_FORECAST is an indicator variable that is one if the managers make an earnings forecast of quarterly earnings, and zero otherwise, *CHEPS* is the change in earnings per share from that of the same quarter in the previous fiscal year, deflated by stock price at the beginning of the quarter; *SIZE* is the natural log of market capitalization at the beginning of the fiscal quarter; *BM* is the natural log of the book-to-market ratio, computed using the book value of equity at the beginning of the quarter divided by the market capitalization at the beginning of the quarter; *HIGHTECH* is an indicator variable that takes on a value of one if the firm operates in any of the following SIC codes, 2833-2836 (Drugs), 3570-3577 (Computers), 3600-3674 (Electronics), 7371-7379 (Programming), 8731-8734 (R&D services), and is zero otherwise; *REGULATION* is an indicator variable that takes on a value of one if the firm operates in any of the following SIC codes 4812-4813 (Telephone), 4833 (TV), 4841 (Cable), 4811-4899 (Communications), 4922-4924 (Gas), 4931 (Electricity), 4941 (Water), 6021-6023, 6035-6036, 6141, 6311, 6321, 6331, and is zero otherwise.

Table 6
Family firms and Standards & Poor's Transparency and Disclosure data

Panel A: Transparency and Disclosure groups related to corporate governance practices

(T&D group#) T & D group name	Number of questions	Mean of number of questions answered (Mean of percentage of questions answered)			
		All firms (N=451)	Family firms (N=161)	Non-family firms (N=290)	Difference t-statistics
(1). <i>Transparency of Ownership</i>	11	8.02 (73%)	7.96 (72%)	8.06 (72%)	-0.77
(2). <i>Concentration of Ownership</i>	8	2.48 (31%)	2.90 (36%)	2.24 (28%)	4.51**
(3). <i>Voting and Shareholder Meeting Procedures</i>	9	3.68 (41%)	3.34 (37%)	3.87 (43%)	-4.42***
(7). <i>Related Party Structure and Transaction</i>	4	1.03 (26%)	1.07 (27%)	1.01 (25%)	0.69
(8). <i>Information on Auditors</i>	4	4.00 (100%)	4.00 (100%)	4.00 (100%)	.
(9). <i>Board Structure and Composition</i>	8	7.93 (99%)	7.93 (99%)	7.94 (99%)	-0.41
(10). <i>Role of the Board</i>	12	9.19 (77%)	8.81 (73%)	9.39 (78%)	-4.69***
(11). <i>Director Training and Compensation</i>	6	3.10 (52%)	3.02 (50%)	3.15 (53%)	-2.61***
(12). <i>Executive Compensation and Evaluation</i>	9	7.25 (81 %)	7.17 (80%)	7.30 (81%)	-1.60

Panel B: Details of T&D groups with significantly different response across family and non-family firms

T & D group	Question	Fraction of firms that answer the question			
		All firms (N=451)	Family firms (N=161)	Non-family firms (N=290)	Difference t-statistics
<i>(2). Concentration of Ownership</i>	Top 1 shareholders disclosed?	0.82	0.89	0.78	3.01***
	Top 3 shareholders disclosed?	0.40	0.50	0.34	2.96***
	Top 5 shareholders disclosed?	0.09	0.15	0.05	3.57***
	Top 10 shareholders disclosed?	0.02	0.03	0.01	1.12
	Shareholders owning more than 3 % is disclosed?	0.06	0.12	0.03	3.64***
	Shareholders owning more than 5 % is disclosed?	0.72	0.77	0.69	1.57
	Shareholders owning more than 10 % is disclosed?	0.45	0.54	0.41	2.45**
	Does the company disclose percentage of cross-ownership?	0.02	0.02	0.03	0.92
<i>(3). Voting and Shareholder Meeting Procedures</i>	Is there a calendar of important shareholder dates?	0.97	0.96	0.97	-0.95
	Review of shareholder meetings (could be minutes)?	0.03	0.01	0.04	-1.31
	Describe procedure for proposals at shareholder meetings?	0.97	0.95	0.97	-0.91
	How shareholders convene an extraordinary general meeting?	0.13	0.10	0.16	-1.86*
	How shareholders nominate directors to board?	0.74	0.66	0.79	-2.76***
	Describe the process of putting inquiry to board?	0.08	0.06	0.09	-0.82
	Does the annual report refer to or publish Corporate Governance Charter?	0.56	0.46	0.61	-3.49***
	Does the annual report refer to or publish Code of Best Practice?	0.09	0.08	0.09	-0.47
Are the Articles of Association or Charter Articles of Incorporation published?	0.20	0.15	0.23	-1.51	

Panel B: Details of T&D Groups with significantly different response across family and non-family firms (cont'd)

T & D Group	Question	Mean			Difference t-statistics
		All Firms (N=451)	Family firms (N=161)	Non-Family firms (N=290)	
<i>(10). Role of the Board</i>	Details about role of the board of directors at the company?	0.95	0.93	0.96	-1.25
	Is there disclosed a list of matters reserved for the board?	0.13	0.11	0.14	-0.98
	Is there a list of board committees?	0.99	0.99	1.00	-1.86*
	Review last board meeting (could be minutes)?	0.02	0.02	0.02	-0.04
	Is there an audit committee?	1.00	1.00	1.00	.
	Disclosure of names on audit committee?	1.00	1.00	1.00	.
	Is there a remuneration/compensation committee?	0.99	0.99	1.00	-1.31
	Names on remuneration/compensation committee)?	0.99	0.99	0.99	-0.38
	Is there a nomination committee?	0.83	0.74	0.87	-3.31***
	Disclosure of names on nomination committee?	0.81	0.72	0.87	-3.40***
<i>(11). Director Training and Compensation</i>	Other internal audit function besides audit committee?	0.84	0.89	0.96	-2.38**
	Is there a strategy/investment/finance committee?	0.50	0.42	0.55	-2.35**
	Disclose whether they provide director training?	0.00	0.00	0.00	-0.75
	Disclose the number of shares in the company held by directors?	0.98	0.98	0.98	-0.34
	Discuss decision-making process of directors' pay?	0.09	0.06	0.11	-1.71*
	Are specifics of directors' salaries disclosed (numbers)?	0.97	0.94	0.98	-1.91*
	Form of directors' salaries disclosed (cash, shares, etc.)?	0.98	0.97	0.99	-1.12
Specifics disclosed on performance-related pay for directors?	0.07	0.06	0.08	-0.95	

Notes to Table 6:

1. In panel A, for T&D Group 1, 8.02 (73%) represents the mean across all firms of the number (percentage) of 11 questions to which they provide an answer.
2. Appendix A lists all the S&P transparency and disclosure practice questions.
3. The difference column provides the t-statistic of the difference across family firms and non-family firms.
4. The sample includes all S&P 500 firms.
5. *** indicates significance at the 0.01 level, ** indicates significance at 0.05 level, and * indicates significance at the 0.10 level.

Table 7

Family firms, analyst following, forecast dispersion, forecast accuracy, variability of forecast revisions, and bid-ask spreads

Panel A: Descriptive statistics

	N	Mean	Min.	Q1	Median	Q3	Max.
<i>COVERAGE</i>	1905	16.60	1.10	11.17	15.92	20.92	43.58
<i>DISP</i>	1905	0.19	0.00	0.04	0.09	0.22	2.25
<i>FERROR</i>	1905	0.53	0.00	0.05	0.17	0.56	16.95
<i>REVISION</i>	1905	0.32	0.00	0.10	0.18	0.37	4.46
<i>SPREAD</i>	1639	4.85	0.03	1.72	4.81	6.99	13.75
<i>SIZE</i>	1905	8.94	4.78	8.14	8.76	9.55	13.13
<i>STDROE</i>	1905	0.19	0.01	0.04	0.07	0.12	6.21
<i>CORR</i>	1905	0.13	-1.00	-0.13	0.16	0.40	1.00
<i>INVPRICE</i>	1905	0.03	0.01	0.02	0.03	0.04	0.28
<i>RETVAR</i> × 10 ²	1905	0.10	0.01	0.04	0.06	0.12	1.34
<i>ACHEPS</i>	1905	0.04	0.00	0.01	0.02	0.04	1.24
<i>RD</i>	1905	0.03	0.00	0.00	0.01	0.05	0.42
<i>EFFORT</i>	1905	-14.95	-48.53	-17.21	-13.91	-11.42	-3.33
<i>BROKER</i>	1905	85.38	10.60	71.54	81.58	96.11	181.86
<i>LTURNOVER</i>	1639	1.64	0.32	1.12	1.51	1.89	4.44
<i>LPRICE</i>	1639	3.58	2.01	3.21	3.71	4.02	6.09

Panel B: Estimates of equations (5) to (9)

	Equation (4) Dependant var. = <i>COVERAGE</i>			Equation (5) Dependant var. = <i>DISP</i>			Equation (6) Dependant var. = <i>FERROR</i>			Equation (7) Dependant var. = <i>REVISION</i>			Equation (8) Dependant var. = <i>SPREAD</i>		
	Pred. sign	Coeff.	t-stat.	Pred. sign	Coeff.	t-stat.	Pred. sign	Coeff.	t-stat.	Pred. sign	Coeff.	t-stat.	Pred. sign	Coeff.	t-stat.
Intercept	?	-4.43	-2.82**	?	0.55	11.49***	?	0.84	4.45***	?	0.57	8.14***	?	7.18	8.54***
<i>FAMILYFIRM</i>	?	0.91	3.42***	-	-0.07	-5.14***	-	-0.12	-2.47**	-	-0.06	-3.34***	-	-0.67	-3.05***
<i>SIZE</i>	+	3.34	25.80***	-	-0.04	-7.81***	-	-0.09	-4.21***	-	-0.05	-6.15***	-	-0.07	-1.02
<i>STDROE</i>	+	-0.02	-1.17	+	0.06	0.28	+	-0.03	-0.45	+	0.02	0.94	-	-	-
<i>CORR</i>	+	-0.23	-0.82	-	0.06	2.35**	-	0.06	1.02	-	0.05	2.03**	-	-	-
<i>INVPRICE</i>	+	28.02	3.93***	-	-	-	-	-	-	-	-	-	-	-	-
<i>RETVAR</i> ×10 ²	+	1.18	0.81	-	-	-	-	-	-	-	-	-	-	-	-
<i>ACHEPS</i>	-	-	-	+	1.22	14.32***	+	5.44	15.69***	+	2.39	18.33***	-	-	-
<i>RD</i>	+	11.53	3.79***	+	-0.55	-4.50***	+	-1.23	-2.49***	+	-0.32	-1.67*	-	-	-
<i>EFFORT</i>	-	-0.03	-1.02	-	-	-	-	-	-	-	-	-	-	-	-
<i>BROKER</i>	-	-0.13	-16.96***	-	-	-	-	-	-	-	-	-	-	-	-
<i>LTURNOVER</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-1.37	-7.97***
<i>LPRICE</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.71	-2.91***
Adjusted R ² (%)	54.48			19.68			16.85			22.82			16.33		
N	1905			1905			1905			1905			1639		

Notes to Table 7:

- Equation (5): $COVERAGE = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5INVPRICE + a_6RETVAR + a_7RD + a_8EFFORT + a_9BROKER + error$
Equation (6): $DISP = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error$
Equation (7): $FERROR = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error$
Equation (8): $REVISION = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3STDROE + a_4CORR + a_5ACHEPS + a_6RD + error$
Equation (9): $SPREAD = a_0 + a_1FAMILYFIRM + a_2SIZE + a_3LTURNOVER + a_4LPRICE + error$
- *** indicates significance at the 0.01 level, ** indicates significance at 0.05 level, and * indicates significance at the 0.10 level.
- The t-statistic are corrected using the Huber-White procedure.
- The sample includes all S&P 500 firms.

Variable Definition

COVERAGE is 12-month average of number of analysts who issued annual earnings forecasts in IBES. *DISP* is 12-month average of standard deviation of analysts' forecasts, deflated by stock price at the beginning of fiscal year. *FERROR* is the absolute value of 12-month average of forecast errors defined as actual earnings minus median forecast, deflated by stock price at the beginning of fiscal year. *REVISION* is the standard deviation of forecast revisions deflated by stock price at the beginning of fiscal year, where forecast revision is defined as current month median forecast minus previous month median forecast. *SPREAD* is the annual average of daily closing bid-ask spread as a

percentage of daily closing price. *FAMILYFIRM* equals 1 if the firm is a family-firm and 0 otherwise. *SIZE* is the natural logarithm of market value of equity at the beginning of the fiscal year. *STDROE* is the standard deviation of ROE in the preceding 10-year period. *CORR* is the Pearson correlation between *ROE* and annual stock return in the preceding 10-year period. *INVPRICE* is the inverse of stock price at the beginning of the fiscal year. *RETVAR* is daily stock return variance estimated over the 200 days prior to the year end. *ACHEPS* is absolute value of annual change in earnings per share deflated by stock price at the beginning of the fiscal year. *RD* is research and development expense deflated by total assets at the beginning of the fiscal year. *EFFORT* is the negative of the average number of firms followed by the firm's analysts in a particular year divided by the number of analysts covering the firm in that year. *BROKER* is the average number of analysts employed by the brokerage houses that employ the firm's analysts. *LTURNOVER* is the natural logarithm of the annual median value of daily trading volume divided by total shares outstanding. *LPRICE* is the natural logarithm of stock price at the beginning of the fiscal year.