6-2008

Do family firms provide more or less voluntary disclosure?

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Do Family Provide More or Less or Less Voluntary Disclosure?

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ABSTRACT

We examine the voluntary disclosure practices of family firms. We find that, compared to nonfamily firms, family firms provide fewer earnings forecasts and conference calls, but more earnings warnings. Whereas the former is consistent with family owners having a longer investment horizon, better monitoring of management, and lower information asymmetry between owners and managers, the higher likelihood of earnings warnings is consistent with family owners having greater litigation and reputation cost concerns. We also document that family ownership dominates nonfamily insider ownership and concentrated institutional ownership in explaining the likelihood of voluntary disclosure. Using alternative proxies for the founding family's presence in the firm leads to similar results.

1. Introduction

A family firm is a firm where members of the founding family continue to hold positions in top management, are on the board, or are blockholders

of the company. As an important organization form, it accounts for approximately 46% of the Standard and Poor's (S&P) 1500 index firms.[1] Family firms are characterized by the founding family's concentrated ownership and the founding family members' active involvement in the firms' management either as top executives or as directors. On average, founding families hold around 18% of equity and 22% of directorships, and hold the CEO position in 62% of family firms. These distinguishing features can potentially affect such firms' financial disclosure choices. However, despite the prevalence of family firms and the substantial ownership of family members in these firms, our understanding of the financial disclosure choices of this unique organization form is limited.

The voluntary disclosure literature generally treats shareholders as a uniform group and an important maintained assumption is that shareholders prefer more voluntary disclosure to less.[2] However, recent studies find that not all shareholders are alike. In particular, investors with concentrated ownership have different preferences for disclosure from others, but the extant evidence is mixed. On the one hand, Ajinkya, Bhojraj, and Sengupta [2005] and Karamanou and Vafeas [2005] find that firms with large institutional investors and more concentrated insider equity holdings are less likely to provide management forecasts. On the other hand, Ali, Chen, and Radhakrishnan [2007] report evidence that family firms are more likely to provide quarterly forecasts, although only when firm performance is poor. We continue this line of research and investigate the voluntary disclosure practices of family firms.

Family firms' unique ownership structure has important implications for their voluntary disclosure practices. First, family owners have longer investment horizons than other shareholders (e.g., Anderson and Reeb [2003], Villalonga and Amit [2006]). This implies that: (1) the benefits of accelerating timely information documented in prior research (e.g., McNichols and Trueman [1994]), such as trading profits, accrue less to family owners, and (2) family owners stand to bear the potential costs, such as proprietary costs or costs arising from managers' emphasis on short-term rather than long-term performance. Second, family owners' active involvement in firms' management results in lower information asymmetry between themselves and managers. Moreover, because of the better monitoring of managers by family owners, the demand for information from nonfamily owners to monitor managers is lower due to the substitutive relation between direct monitoring and public disclosure (Bushman et al. [2004]). The above arguments thus imply that family owners prefer *less* public voluntary disclosure.

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[1] Our definition of a family firm is consistent with the definition used in the family firm literature (see, e.g., Anderson and Reeb [2003]). The percentage of family firms in our paper is larger than that reported in prior research due to our inclusion of S&P MidCap 400 firms and S&P SmallCap 600 firms.

[2] See, for example, Ajinkya and Gift [1984], Amihud and Mendelson [1986], Diamond and Verrecchia [1991], Nagar, Nanda, and Wysocki [2003], Brown, Hillegeist, and Lo [2004].

However, founding families' concentrated, and usually underdiversified, equity holdings in their firms imply that they are more likely to internalize both the benefits of voluntary disclosure and the costs of nondisclosure, which leads them to prefer *more* voluntary disclosure than other owners. Prior research (e.g., Welker [1995], Botosan [1997]) finds that voluntary disclosure can reduce the cost of capital. Also, it has been well documented in the literature that firms have incentives to voluntarily disclose bad news so as to preempt litigation (e.g., Skinner [1994], Field, Lowry, and Shu [2005]). Litigation is costly not only because of attorney fees and potential monetary settlements, but also because of the opportunity costs of managers' time and effort taken away from value-adding activities. Withholding bad news also imposes reputation costs, since investors dislike negative earnings surprises (Skinner [1994]). Family owners' concentrated and underdiversified holdings suggest that the benefits of disclosure (reduced cost of capital) and the costs of withholding bad news are more important to family owners than to other shareholders, leading to family owners' preference of more disclosures.

Lastly, in the case of bad news disclosure, managers' career concerns may come into play. As discussed above, family owners have greater litigation and reputation cost concerns. But such concerns may be offset by the greater career concerns of nonfamily managers: Managers in nonfamily firms can face greater job security threats if the firm is sued due to withholding bad news. This can give nonfamily firms stronger incentives to voluntarily give out bad news earnings warnings than family firms.

To sum up, the unique characteristics of family ownership imply that family owners have different preferences for voluntary disclosure from other owners.[3] Since family owners are influential over corporate decisions, by serving as CEO and/or by holding directorship, they can tilt firms' disclosure toward their preferences. However, as discussed above, it is unclear, ex ante, whether family owners prefer more, or less, voluntary disclosure. Thus, whether family firms on average provide more or less voluntary disclosure is ultimately an empirical question.[4]

As in many other studies of voluntary disclosure, in this paper we use the likelihood of management forecasts to proxy for voluntary disclosure. We adopt a multiple logit regression approach to control for the effects of other aspects of ownership structure (such as institutional ownership and the

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[3] Another implication of founding families' concentrated equity ownership is the potential entrenchment of founding families. However, as discussed in detail in section 2, we do not believe that entrenchment has significant implications for family firms' voluntary disclosure practices.

[4] We focus on family owners' preferences for voluntary disclosure, or the net impact of family ownership on voluntary disclosure practices, without distinguishing whether the net result is driven by supply of, or demand for, voluntary disclosure. Depending on their positions in the firms, family owners' preferences for voluntary disclosure are reflected in their demand for information as investors (i.e., when they do not serve as managers) or their supply of information when they serve as managers.

existence of outside blockholders), corporate governance, the information environment, litigation risk, firm size, growth opportunities, performance, demand for external capital, and industry membership.

Based on 4,415 firm-years from the S&P 1500 index firms in the period 1996–2000, we find that family firms exhibit a lower likelihood of providing management forecasts than nonfamily firms. Specifically, the likelihood of providing management forecasts is 8.1 percentage points lower for family firms than for nonfamily firms, ceteris paribus. The lower propensity of voluntary disclosure in family firms is evident in both good news forecasts (9.0 percentage points lower) and bad news forecasts (5.4 percentage points lower). This is economically significant given that only 36% (44%) of the sample voluntarily disclose good news (bad news). These results suggest that the preferences for less voluntary disclosure arising from family owners' longer investment horizon and active involvement in management outweigh family owners' cost of capital considerations.

We document qualitatively similar results when using family equity ownership or an alternative family firm definition requiring greater than 5% family ownership to capture the founding family's presence. We also find that, compared to nonfamily firms, family firms are less likely to hold conference calls, another important channel of voluntary disclosure.[5]

Since the incentives for providing management forecasts likely vary with forecast horizon, we separately examine earnings warnings, short-run forecasts, and long-run forecasts. Earnings warnings refer to forecasts disclosed between fiscal period-ends and earnings announcements, short-run forecasts refer to forecasts of earnings to be announced within a quarter excluding earnings warnings, and long-run forecasts refer to forecasts with a horizon longer than a quarter.[6] We document that, relative to nonfamily firms, family firms are less likely to issue long-run forecasts and short-run good news forecasts, but interestingly, they are *more* likely to issue bad news earnings warnings. This latter finding is consistent with family owners being more concerned with the litigation-related costs and reputation costs of withholding bad news.

Our paper contributes to the voluntary disclosure literature by providing evidence on the impact of ownership structure on voluntary disclosure practices. In contrast to the conventional wisdom that all shareholders prefer more voluntary disclosure of timely information, we find that family owners on average prefer less voluntary disclosure. This result extends Ajinkya,

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[5] Since we examine public voluntary disclosure, our results do not speak to private managerial earnings guidance given to analysts and institutional investors. Also, private guidance is no longer feasible in the post-Regulation Fair Disclosure period (i.e., after October 2000) and public voluntary disclosure may have changed as a result; thus our results may not hold in the post-Regulation Fair Disclosure period.

[6] Note that the term "long-run" is in a relative sense. Most long-run forecasts in our sample have a forecast horizon less than one year and therefore still reveal timely information about firm performance.

Bhojraj, and Sengupta [2005] and Karamanou and Vafeas [2005], who find that firms with concentrated institutional holdings and concentrated insider equity holdings have a tendency to disclose less. Compared to large institutional owners or nonfamily insiders, family owners not only have greater incentives but also have more direct means to influence disclosure practices, due to their long investment horizon and active involvement in management. Thus, family owners likely play a more dominant role in affecting firms' voluntary disclosure. Consistent with this argument, we document that founding family ownership *subsumes* nonfamily insider ownership and concentrated institutional holdings in explaining firms' voluntary disclosure behavior.

Furthermore, we extend Ali, Chen, and Radhakrishnan [2007] by separately examining earnings warnings and earnings forecasts. We find that family firms are more likely to give out bad news earnings warnings, but are less likely to provide earnings forecasts. These results are consistent with family owners' incentives to lower expected litigation and reputation costs in the case of earnings warnings and to reduce the costs of disclosing timely information in the case of earnings forecasts.

Our paper also complements recent studies on the implications of family ownership for earnings quality and sheds light on the underlying reason for their results. Both Wang [2006] and Ali, Chen, and Radhakrishnan [2007] find that family firms have higher earnings quality relative to nonfamily firms. Their finding seems to be at odds with ours as higher quality mandatory disclosure improves, but less voluntary disclosure arguably reduces, the quality of firms' information environment. One potential explanation for these seemingly conflicting results is the lower short-term capital market pressure faced by family firms due to family owners' long investment horizon. This is also substantiated by the fact that, in our sample, family firms have lower institutional holdings, lower analyst coverage, and fewer issuances of public debt and equity than other firms. With weaker incentives to meet or beat markets' expectations of earnings, family firms are less likely to manage earnings, leading to high quality earnings, and are less likely to guide expectations, leading to less disclosure of timely information. Thus, both sets of results are consistent with the notion that managers subject to less capital market pressure are less likely to place undue emphasis on short-term financial reporting (Stein [1989]).

Unlike extant studies on family firms (e.g., Anderson and Reeb [2003], Ali, Chen, and Radhakrishnan [2007]), we employ a much broader sample: We examine S&P 1500 firms instead of S&P 500 firms. With the inclusion of S&P MidCap and SmallCap index firms, the sample has a larger variation in both family ownership and disclosure behavior. This leads to potentially more powerful tests, and more importantly, it allows us to generalize our inference to a broader segment of the economy.

The rest of the paper is organized as follows. The next section reviews prior literature and develops our hypothesis. Section 3 discusses the sample

and research design. Section 4 presents our empirical results, and section 5 concludes.

2. Prior Literature and Hypothesis Development

2.1 EXTANT LITERATURE ON SHAREHOLDER INTEREST AND VOLUNTARY DISCLOSURE

A long-standing literature shows that voluntary disclosure reduces the cost of capital and supports the conventional wisdom that shareholders, as a uniform group, prefer more voluntary disclosure of timely information. The theoretical literature on voluntary disclosure holds that shareholders benefit from more voluntary disclosure, since voluntary disclosure can reduce the cost of capital by reducing transaction costs (Amihud and Mendelson [1986], Diamond and Verrecchia [1991]) or nondiversifiable estimation risk (Barry and Brown [1985], Coles and Loewenstein [1988], Coles, Loewenstein, and Suay [1995]). Empirical evidence is generally consistent with these theoretical predictions (e.g., Botosan [1997], Healy, Hutton, and Palepu [1999], Brown, Hillegeist, and Lo [2004]).

However, findings of several recent studies question this conventional wisdom and suggest that not all shareholders have the same preferences. Ajinkya, Bhojraj, and Sengupta [2005] find that concentrated institutional ownership is associated with a lower likelihood of management forecasts. Karamanou and Vafeas [2005] document that the likelihood of management forecasts decreases with insider ownership. If these results extend to family ownership, one might expect that family owners, being insiders and having concentrated ownership, prefer less disclosure as well. However, a more recent paper, Ali, Chen, and Radhakrishnan [2007], finds that, among S&P 500 firms, family firms are *more*, rather than *less*, likely to provide quarterly forecasts than nonfamily firms when firm performance is poor.

Thus, whereas the majority of voluntary disclosure research maintains that shareholders prefer more voluntary disclosure of timely information, recent studies document a differential association between concentrated stock ownership and voluntary disclosure. In this paper, we use a unique setting, family versus nonfamily firms, to further examine the effect of ownership structure, specifically family ownership, on voluntary disclosure choices.[7] Compared to other shareholders, family owners have a longer investment horizon, better monitoring of management, better access to information, and concentrated ownership. In the next section, we discuss the implication of these characteristics for family firms' voluntary disclosure practices. Since founding family members have the means—serving as the CEO and/or holding

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[7] To our knowledge, the study of Ali, Chen, and Radhakrishnan [2007] is the only study that has examined the differences in voluntary disclosure practices between family and nonfamily firms. Karamanou and Vafeas [2005] do not distinguish insider holdings along the family versus nonfamily dichotomy; therefore, they do not directly examine the impact of founding family presence on firms' voluntary disclosure behavior.

directorship—to influence firms' disclosure practices toward their preferences, we use family owners' preferences for voluntary disclosure and family firms' disclosure practices interchangeably.

2.2 HYPOTHESIS DEVELOPMENT

Compared to other shareholders, family owners have a longer investment horizon. Existing research (e.g., Casson [1999], Anderson, Mansi, and Reeb [2003]) argues that founding families view their ownership as an asset to pass on to their descendents, rather than wealth to consume during their lifetimes. McNichols and Trueman [1994] show that disclosure of timely information is of no value to long-term shareholders in terms of trading profits. In addition, long-horizon shareholders have to bear the potential costs arising from voluntary disclosure of timely information. Prominent investors and researchers, such as Warren Buffet and Fuller and Jensen [2002], argue that the practice of disclosing short-term earnings can induce managers to manage earnings and/or invest in projects with short-term gains while sacrificing long-term performance. Indeed, Kasznik [1999] finds that managers engage in earnings management in order to meet or beat their own forecasts of earnings. Voluntary disclosure can also be costly if it divulges valuable information to competitors and attracts competition by disclosing the profitability of a particular business.[8] To sum up, this discussion suggests that founding families, with longer investment horizons, likely face more potential costs than benefits from disclosure of timely information, and as a result, they prefer less disclosure.

Furthermore, compared to other owners, family owners are usually more actively involved in firm management by serving as executives and/or directors. Thus, family owners have better access to information and can better monitor management, reducing the agency problem between management and shareholders. As direct monitoring and corporate disclosure are substitutes in alleviating agency problems, as shown in Bushman et al. [2004], other shareholders can free ride on family owners' monitoring of managers and have lower demand for public information. This again implies that family firms disclose less.

Relative to other shareholders, family owners usually have large concentrated equity holdings and are less diversified—their fortunes are disproportionately tied up in their ownership of the firm. This implies that they

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[8] Management forecasts, our main proxy for voluntary disclosure, are usually issued in the form of a detailed press release, which contains not only forecasts of future earnings but also other information, such as new contracts, new product lines, and segment profitability. Consistent with this argument, Hutton, Miller, and Skinner [2003] find that managers generally provide supplemental information to accompany their management forecasts, increasing the probability of disclosing proprietary information. We also investigate an alternative measure of voluntary disclosure, conference calls, which likely also contains proprietary information since conference calls are usually detailed and include a question-and-answer session between executives and analysts.

are more likely to internalize both the benefits of voluntary disclosure and the costs of nondisclosure. Prior research demonstrates that voluntary disclosure leads to lower bid–ask spreads, lower information risk, and lower cost of raising capital (Welker [1995], Bostosan [1997], Healy, Hutton, and Palepu [1999]). This suggests that family owners, who stand to gain greater benefits, prefer more public disclosure.

In addition, Skinner [1994] and Kasznik and Lev [1995] document that firms with bad news have greater incentives to warn investors in order to preempt potential litigation and reduce litigation-related costs.[9] Litigation-related costs include not only direct costs, such as attorney fees and settlement costs, but also indirect costs, such as opportunity costs of managers' time and effort spent on dealing with the litigation, rather than on value-adding activities (Dabrowski [1994]). In addition, not disclosing bad news can lead to reputation costs, since investors and analysts dislike negative earnings surprises and may impose costs on firms withholding bad news (e.g., Skinner [1994, 1997]; Hutton [2007]). Although direct litigation costs may be immaterial, both opportunity costs and reputation costs can be substantial.[10] Family owners, with large and underdiversified equity holdings that usually span multigenerations, are arguably more concerned with the negative impact on firm value of such costs, and are more likely to give out earnings warnings. Lastly, CEOs' career concerns can also play a role in the setting of disclosing bad news. There is some evidence that CEOs are more likely to be fired after involvement in disclosure-related lawsuits (Niehaus and Roth [1998]). To the extent that CEOs in nonfamily firms face greater job security concerns than CEOs in family firms, managers in nonfamily firms are more motivated to give earnings warnings, a prediction opposite to the one above.

Thus, ex ante, it is unclear whether family firms disclose more than nonfamily firms, or less. Therefore, our hypothesis is nondirectional and we address this issue empirically:

> *H1*: The likelihood of voluntary disclosure is systematically different between family and nonfamily firms.

Another implication of founding families' concentrated equity holdings and active involvement in management is that founding families might be entrenched. We do not examine this potential agency conflict for two reasons. First, extant studies in both finance and accounting find no evidence of severe entrenchment of founding families in U.S. family firms, likely due to the better shareholder protection and law enforcement in the United States

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[9] However, empirical evidence on whether firms can successfully preempt litigation by disclosing bad news is mixed (Francis, Philbrick, and Schipper [1994], Skinner [1997], Field, Lowry, and Shu [2005].

[10] For example, based on data in the period 1988–1994, Skinner [1997] documents that the majority of disclosure-related lawsuits are settled and that the median value of settlement is $5.28 million, about 3% of annual sales.

(La Porta et al. (1998, 2000)). They find that, compared to their nonfamily counterparts, U.S. family firms exhibit better accounting and stock performance (e.g., Anderson and Reeb [2003]) and higher earnings quality (Wang [2006], Ali, Chen, and Radhakrishnan [2007]). Second, unlike in other settings (e.g., investment decisions, security pricing), entrenchment may not have a significant impact on voluntary disclosure decisions. It is unlikely that voluntary disclosure of timely information, either through management forecasts or conference calls, can help reveal or hide evidence of entrenchment (e.g., related party transaction, excessive executive compensation).

3. Sample and Research Design

3.1 SAMPLE AND DATA

Our sample consists of 4,415 firm-years from 1,311 firms in the S&P 1500 index (S&P 500, S&P MidCap 400, and S&P SmallCap 600 indices) covering the period 1996–2000. These are the firms that have the required data from Compustat (for financial accounting information), the Center for Research in Security Prices (CRSP) (for stock return information), I/B/E/S (for analyst coverage information), ExecuComp, and the Investor Responsibility Research Center (IRRC) (for ownership and board information).

Following prior research (e.g., Anderson and Reeb [2003]), family firms refer to firms in which founders or their family members (by either blood or marriage) are key executives, directors, or blockholders.[11] While widely used in the literature, this definition might be viewed as rather "lenient," particularly due to the lack of restriction on the level of family ownership. Thus, in our empirical analysis, we also use two more proxies to capture an economically significant presence of founding families: (1) continuous family ownership and (2) an alternative classification of family firms—firms where the members of the founding family have an equity ownership of 5% or higher.

Our collection of ownership and founding family–related information involves several steps. First, we start with the ExecuComp and IRRC databases to identify key insiders (top executives and directors) for each company and compile ownership of each insider. Second, for each firm-year, we collect information about the founding family: the identity of founders, whether founders or their family members are actively involved (e.g., holding key executive positions, being directors, or being blockholders), and if they are actively involved, the ownership of the founding family. This step is completed through examining Hoover's Company Records, company proxy statements, or Web sites. Third, based on proxy statements, we compile the

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[11] Note that our family firm classification is verified and updated every year. In contrast, some prior studies rely on *Business Week* classifications of S&P 500 in one year and extend this classification to other years; this approach leads to misclassification for firms that change their status during the sample period.

identities and ownership of blockholders other than insiders and founding family members. Lastly, we merge the above information with firm performance and characteristics data from Compustat, CRSP, and I/B/E/S. Additional information about corporate governance and institutional ownership is collected from IRRC and CDA Spectrum, respectively.

As is common in the literature, we use management forecasts as our primary proxy for voluntary disclosure. We obtain the data from First Call's Company Issued Guidelines database, which has comprehensive coverage of management forecasts since 1995.[12] Because our interest is on the relation between firm type and voluntary disclosure in general, we include all types of management forecasts: annual and quarterly forecasts of earnings, cash flows, or other performance measures (such as revenues); they can all potentially reveal managers' private information. Also, we treat multiple forecasts by the same firm on the same day as one forecast; these forecasts are generally issued in the same press release, for example, one for next quarter and one for next year, or one for earnings and one for revenue.[13]

3.2 RESEARCH DESIGN

To test our hypothesis, we regress the probability of management forecasts on a family firm indicator and control variables, using the following logit regression:

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\begin{aligned}
PROB(VD_{i,t+1} = 1) = {} & \alpha + \beta_1 FOWN_{i,t} + \beta_2 INST_{i,t} + \beta_3 BLOCK_{i,t} \\
& + \beta_4 AC_{i,t} + \beta_5 DISP_{i,t} + \beta_6 RVOL_{i,t} + \beta_7 BDIND_{i,t} \\
& + \beta_8 BDSIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} SIZE_{i,t} + \beta_{11} MTB_{i,t} \\
& + \beta_{12} D\_CAP_{i,t+1} + \beta_{13} ROA_{i,t+1} + \beta_{14} B\_AR_{i,t+1} \\
& + \sum_{dummies}^{year} + \sum_{dummies}^{industry} + \varepsilon_{i,t}
\end{aligned}
\tag{1}
$$

where:

$VD =$ the voluntary disclosure indicator variable, coded as 1 if there are one or more management forecasts in year $t+1$, and 0 otherwise;

$FOWN =$ a dummy variable with a value of 1 for family firms and 0 otherwise;

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[12] To address the concern that family firms may be less likely to be covered by First Call because of their smaller size, in an untabulated analysis we only include firms with at least one management forecast in the sample period. The results are qualitatively similar.

[13] In a later analysis, we also separately analyze management forecasts of different horizons. For that analysis, we separately count the number of earnings warnings, short-run forecasts, and long-run forecasts, even if they are issued on the same day.

$INST$ = percentage institutional ownership in year t;

$BLOCK$ = the blockholder indicator variable, defined as 1 if there is an outside blockholder (i.e., a nonmanagement, nondirector, non–founding family blockholder) in year t;

AC = the number of financial analysts following the firm in year t;

$DISP$ = analyst forecast dispersion in year t, measured as the standard deviation of one-year-ahead earnings per share (EPS) forecasts scaled by the absolute mean forecast; we use the most recent consensus forecast before the end of year t;

$RVOL$ = return volatility, measured as the standard deviation of daily stock returns in year t;

$BDIND$ = the board independence indicator in year t, measured as 1 if more than 60% of the directors are independent, and 0 otherwise; as in prior research, independent directors refer to those who are not corporate executives and have no business relationship with the company;

$BDSIZE$ = board size in year t, measured as the number of directors on the board;

LIT = a high litigation risk indicator, coded as 1 for industries with high litigation risk (Standard Industrial Classification (SIC) codes 2833–2836, 3570–3577, 7370–7374, 3600–3674, 5200–5961, 8731–8734), and 0 otherwise;

$SIZE$ = natural log of year t total assets;

MTB = the year t market-to-book ratio;

D_CAP = an indicator variable coded as 1 if firms issue any debt or equity offering (per Securities Data Company (SDC)) in year $t+1$;

ROA = return on assets in year $t+1$, measured as income before extraordinary items divided by total assets;

B_AR = a poor performance indicator, defined as 1 if the market-adjusted stock return in year $t+1$ is lower than the sample median, and 0 otherwise; this variable is included only when explaining the likelihood of good or bad news disclosure;

i,t = firm i in year t.

Because the incentives to disclose good news can be different from those to disclose bad news, we estimate the above equation separately for voluntary disclosure defined based on (1) all management forecasts, (2) good news management forecasts, and (3) bad news management forecasts. For the second (third) case, the dependent variable VD is one if there is one or more good (bad) news management forecasts in year $t+1$ and zero otherwise, where good (bad) news is defined based on the sign of the three-day size-adjusted abnormal returns centered on the forecast date (Noe [1999]). Because some firms appear multiple times in our sample and firms' voluntary disclosure behavior tends to be sticky over time, observations for the same firm might be correlated. Accordingly, we report the p-values corrected

for within-firm correlations (through adjusting standard errors for firm-level clustering in logit regressions).[14]

We control for other important relevant factors impacting voluntary disclosure as documented by prior research. Prior studies (e.g., Ajinkya, Bhojraj, and Sengupta [2005], Karamanou and Vafeas [2005]) find that the likelihood of voluntary disclosure is positively correlated with institutional ownership (*INST*), blockholder presence (*BLOCK*), board independence (*BDIND*), and board size (*BDSIZE*). In addition, firms with greater analyst following (*AC*) and greater information asymmetry, proxied by higher forecast dispersion (*DISP*) and higher return volatility (*RVOL*), face a greater demand for information and are more likely to disclose (Hutton [2005], Ajinkya and Gift [1984]). Prior research (e.g., Skinner [1994]) also finds that firms with a high litigation risk (*LIT*) are more likely to voluntarily disclose bad news. We further control for firm size (*SIZE*) and growth (*MTB*). Frankel, McNichols, and Wilson [1995] document that firms with a greater need for external capital might voluntarily disclose more information to reduce information asymmetry; hence, we include an indicator variable (*D_CAP*) for firms having any debt or equity offering in year $t+1$.[15] We control for contemporaneous accounting performance (*ROA*) because it can affect the voluntary disclosure decision (Miller [2002]) and differs between family and nonfamily firms (Anderson and Reeb [2003]). In addition, we follow Cheng and Lo [2006] and include a dichotomous firm performance variable (*B_AR*) when explaining the likelihood of issuing a good or bad news management forecast. Lastly, we include year and industry dummies (per Fama and French [1997]) to control for the variation of disclosure over time and across industries. Note that except for *D_CAP*, *ROA*, and *B_AR*, which are measured contemporaneously with the dependent variable, all other independent variables are lagged by one year.

4. Empirical Results

4.1 DESCRIPTIVE STATISTICS ON FIRM CHARACTERISTICS

Panel A of table 1 reports the composition of our sample. In contrast to prior family firm studies that focus on S&P 500 or Fortune 500 firms, our sample includes 1,690 firm-years from the S&P 500 (39% of the sample), 1,194 firm-years from the S&P MidCap 400, and 1,494 firm-years from the

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[14] We also estimate the regressions by year and the inferences are the same.

[15] In an untabulated robustness check, we use an ex ante proxy, which is based on the relative magnitude of a firm's free cash flow to its current assets, to capture the need for external capital, as in prior research (e.g., Dechow, Sloan, and Sweeney [1996]). The results on the family firm indicator remain the same. In addition, we also use alternative measures for other variables, such as using stock price at the beginning of year t as the deflator for forecast dispersion and using the litigation probability calculated based on the Rogers and Stocken [2005] model to proxy for litigation risk, and find qualitatively similar results.

TABLE 1

Sample Composition and Descriptive Statistics

Panel A: Sample composition

	Number of firm-years	Percent	Number of firms	Percent
Total	4,415	100%	1,311	100%
Composition by S&P index[a]				
S&P 500	1,690	38.6%	384	30.1%
S&P MidCap 400	1,194	27.3%	362	28.4%
S&P SmallCap 600	1,494	34.1%	528	41.4%
Composition by firm type				
Family firms	2,043	46.3%	618	47.1%
Nonfamily firms	2,372	53.7%	693	52.9%

Panel B: Descriptive statistics on firm characteristics, by firm type

The last two columns report the two-sided p-value for the difference between family and nonfamily firms in means and medians, respectively. t-tests (Wilcoxon rank tests) are used to test the difference in means (medians).

	Family firms (N = 2,043)					Nonfamily firms (N = 2,372)					p-values of the difference	
	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median
Ownership structure and corporate governance												
Family ownership (%)	17.70	10.90	3.52	24.70	19.54	0.00	0.00	0.00	0.00	0.00	0.001	0.001
Institutional ownership (%)	57.35	57.22	44.60	69.70	18.86	63.05	65.16	51.55	75.42	17.43	0.001	0.001
Outside blockholder ownership (%)	13.34	11.10	0.00	21.00	11.87	16.30	14.74	5.60	25.00	13.73	0.001	0.001
Outside blockholder indicator	0.74	1.00	0.00	1.00	0.44	0.78	1.00	1.00	1.00	0.41	0.002	0.002
Board size	9.35	9.00	7.00	11.00	2.98	10.43	10.00	8.00	12.00	3.05	0.001	0.001
Board independence	0.62	0.56	0.43	0.67	0.18	0.69	0.71	0.60	0.80	0.15	0.001	0.001
Information environment												
Analyst coverage	10.52	9.00	5.00	14.00	7.36	13.31	12.00	7.00	18.00	7.93	0.001	0.001
Forecast dispersion	0.07	0.02	0.01	0.04	0.47	0.06	0.02	0.01	0.03	0.29	0.171	0.004
Return volatility	0.031	0.03	0.02	0.04	0.01	0.026	0.02	0.02	0.03	0.01	0.001	0.001
Firm size, performance, and demand for external capital												
Market value of equity ($ million)	6,266	1,150	524	3,687	23,951	9,999	2,374	886	7,550	28,979	0.001	0.001
Log of total assets ($ million)	7.05	6.89	6.01	7.95	1.42	8.04	7.87	6.77	9.22	1.69	0.001	0.001
Market to book ratio	4.31	2.64	1.71	4.52	15.56	3.81	2.41	1.64	4.01	13.52	0.251	0.001
Contemporaneous market adj. returns	0.11	0.01	−0.26	0.33	0.58	0.07	−0.00	−0.24	0.30	0.48	0.016	0.075
Contemporaneous return on assets	0.05	0.06	0.02	0.10	0.12	0.04	0.04	0.01	0.08	0.09	0.033	0.001
Indicator for debt/equity issuance	0.14	0.00	0.00	0.00	0.35	0.26	0.00	0.00	1.00	0.44	0.001	0.001
Litigation risk												
Litigation risk indicator	0.36	0.00	0.00	1.00	0.48	0.19	0.00	0.00	0.00	0.40	0.001	0.001

(Continued)

TABLE 1 — *Continued*

Panel C: Industry distribution of sample firm-years, by firm type

Industry (per Fama and French [1997])	Nonfamily firms frequency	Family firms frequency	% of family firms
Food products	41	37	47%
Recreational products	5	20	80%
Printing and publishing	22	57	72%
Consumer goods	54	42	44%
Apparel	27	54	67%
Health care	20	21	51%
Medical equipment	58	44	43%
Pharmaceutical products	64	109	63%
Chemicals	84	59	41%
Rubber and plastic products	12	16	57%
Textiles	0	27	100%
Construction materials	56	44	44%
Construction	28	36	56%
Steel works, etc.	71	29	29%
Machinery	125	57	31%
Electrical equipment	29	30	51%
Automobile and trucks	65	40	38%
Petroleum and gas	116	67	37%
Utilities	248	24	9%
Telecommunications	35	30	46%
Business services	168	190	53%
Computers	76	78	51%
Electronic equipment	100	174	64%
Measuring and control equipment	42	27	39%
Business supplies	75	45	38%
Shipping containers	15	10	40%
Transportation	64	97	60%
Wholesale	40	82	67%
Retail	97	191	66%
Restaurants, hotel, motel	35	58	62%
Banking	210	63	23%
Insurance	121	78	39%
Trading	27	31	53%
Other[b]	142	76	35%

This table reports the composition and characteristics of our sample, which consists of 4,415 firm-years from 1,311 firms in the S&P 1500 index (S&P 500, S&P MidCap 400, and S&P SmallCap 600 indices) covering the period 1996–2000.

[a]A small number of observations (included in the analyses) have missing index classification value in Compustat.

[b]Other industries include those industries that have less than 25 observations: Agriculture, Aircraft, Alcoholic beverages, Candy and soda, Defense, Entertainment, Fabricated products, Miscellaneous, Nonmetallic mining, Personal services, Precious metals, Real estate, Shipbuilding and railroad equipment, and Tobacco products.

S&P SmallCap 600 indices. Of these, 46% of the firm-years are from family firms. This percentage is higher than that reported in prior family firm studies, because family firms on average are smaller and thus comprise a larger proportion of the S&P 400 and S&P 600 firms than of the S&P 500 firms.

Panel B of table 1 reports summary statistics on firm characteristics separately for family firms and nonfamily firms. The average family ownership in family firms is close to 18%. In addition, the founding family is a blockholder in 70% of the family firms (not tabulated). Statistical tests reveal that nonfamily firms have significantly greater institutional ownership (63% vs. 57%) and higher outside blockholder ownership (16% vs. 13%), and that a greater proportion of nonfamily firms have outside blockholders (78% vs. 74%). A typical board has 10 members and 6 of them are independent. Family firms have slightly smaller boards and lower board independence than nonfamily firms. Perhaps because of their different firm sizes (based on either market value of equity or total assets), nonfamily firms have a better information environment than family firms: On average, they have higher analyst coverage, lower forecast dispersion (though only the difference in median is significant), and lower return volatility.[16]

Firm performance, as captured by the market-to-book ratio, return on assets, and market-adjusted returns, is better for family firms than for nonfamily firms. This is consistent with the results reported in prior research (e.g., Anderson and Reeb [2003]) that family firms, on average, outperform nonfamily firms. We also find that family firms are less likely to acquire external capital from the debt or equity market: While 26% of nonfamily firms obtain external capital in the next year, only 14% of family firms do so. This confirms the notion that family firms are subject to less capital market pressure, as discussed earlier.

The bottom of panel B reports that litigation risk, as captured by the industry-based indicator variable, is higher for family firms than for nonfamily firms. The difference in industry composition between family and nonfamily firms is illustrated by the Fama and French [1997] industry classification of sample firm-years, as reported in panel C of table 1. Family firms appear more often than nonfamily firms in high-tech industries (pharmaceutical products, electronic equipment), wholesale and retail, transportation, and printing and publishing. In contrast, nonfamily firms dominate more capital-intensive industries (steel works, machinery, automobile, petroleum and natural gas), regulated industries (utilities, banking and insurance companies), and the business supplies industry. These frequency distributions indicate the importance of controlling for industry effects in our empirical tests.

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[16] This is opposite to the finding in Ali, Chen, and Radhakrishnan [2007] that family firms have more analysts following and lower forecast dispersion. The difference could be due to the fact that Ali, Chen, and Radhakrishnan [2007] study S&P 500 firms whereas our sample includes S&P 400 MidCap and S&P 600 SmallCap firms as well as large firms.

4.2 TESTS OF H1

Table 2 presents the distribution of management forecasts. Panel A shows that over 56% of the sample firm-years provide management forecasts, and more forecasts are bad news than good news: 36% of the sample have good news forecasts and 44% of the sample have bad news forecasts. The majority of the forecasting firm-years have one or two forecasts. Panel B presents the difference in management forecast frequency between family and nonfamily firms. The results show that family firms have lower mean and median management forecast frequency per year, regardless of the nature of the news revealed in the management forecast, with the differences significant at better than 1% levels.

Table 3 presents the Pearson correlation matrix of voluntary disclosure likelihood and its determinants. The management forecast indicator variable, *VD*, is negatively correlated with the family firm indicator variable, suggesting that family firms are less likely to provide forecasts, consistent

TABLE 2
Management Forecast Frequency

Panel A: Management forecast frequency for the full sample

	All management forecasts		Good news forecasts		Bad news forecasts	
	N	Percent	N	Percent	N	Percent
0	1,916	43.4	2,812	63.7	2,461	55.7
1	963	21.8	896	20.3	1,028	23.3
2	566	12.8	371	8.4	493	11.2
3	346	7.8	182	4.1	248	5.6
4	227	5.1	87	2.0	109	2.5
5	169	3.8	28	0.6	49	1.1
6	94	2.1	21	0.5	15	0.3
7	56	1.3	12	0.3	11	0.3
8	35	0.8	2	0.1	1	0.0
9	23	0.5	2	0.1	0	0.0
10 and above	20	0.5	2	0.1	0	0.0
Total	4,415	100.0	4,415	100.0	4,415	100.0

Panel B: Comparisons of management forecast frequency across firm types

	Family firms (N = 2,043)			Nonfamily firms (N = 2,372)			p-value of the difference*	
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Mean	Median
All management forecasts	1.344	1.883	1	1.605	2.049	1	0.001	0.001
Good news forecasts	0.586	1.098	0	0.734	1.230	0	0.001	0.001
Bad news forecasts	0.758	1.148	0	0.871	1.246	0	0.002	0.001

This table reports the descriptive statistics of management forecast frequency of our sample, which consists of 4,415 firm-years from 1,311 firms in the S&P 1500 index covering the period 1996–2000. Multiple management forecasts issued on the same day by the same firm are treated as one forecast. Management forecast frequency is the number of management forecasts over the firm-year. Good (bad) news forecasts are forecasts that experience positive (negative) three-day CARs centered on the forecast date.

[a]The differences in means and medians between family and nonfamily firms are tested based on *t*-tests and Wilcoxon rank tests, respectively. *p*-values are two-sided.

	VD	FOWN	INST	BLOCK	AC	DISP	RVOL	BDIND	BDSIZE	LIT	SIZE	MTB	D_CAP	ROA
FOWN	−0.075													
	(0.001)													
INST	0.130	−0.127												
	(0.001)	(0.001)												
BLOCK	0.032	−0.047	0.271											
	(0.034)	(0.002)	(0.001)											
AC	0.128	−0.179	0.128	−0.180										
	(0.001)	(0.001)	(0.001)	(0.001)										
DISP	−0.095	0.027	−0.071	0.055	−0.086									
	(0.001)	(0.071)	(0.001)	(0.001)	(0.001)									
RVOL	0.141	0.184	0.075	0.118	−0.109	0.159								
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)								
BDIND	0.107	−0.422	0.161	0.082	0.152	−0.030	−0.111							
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.049)	(0.001)							
BDSIZE	0.014	−0.179	−0.115	−0.191	0.360	−0.076	−0.423	0.165						
	(0.354)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)						
LIT	0.102	0.191	0.074	0.036	0.112	0.029	0.405	−0.094	−0.267					
	(0.001)	(0.001)	(0.001)	(0.018)	(0.001)	(0.056)	(0.001)	(0.001)	(0.001)					
SIZE	0.076	−0.298	0.038	−0.200	0.644	−0.108	−0.343	0.222	0.632	−0.202				
	(0.001)	(0.001)	(0.011)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)				
MTB	0.085	0.040	0.087	−0.082	0.284	−0.111	0.121	−0.035	0.000	0.203	0.023			
	(0.001)	(0.008)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.021)	(0.985)	(0.001)	(0.128)			
D_CAP	0.056	−0.150	0.011	−0.097	0.257	−0.044	−0.189	0.094	0.269	−0.100	0.392	0.020		
	(0.001)	(0.001)	(0.446)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.189)		

(Continued)

TABLE 3 —*Continued*

	VD	FOWN	INST	BLOCK	AC	DISP	RVOL	BDIND	BDSIZE	LIT	SIZE	MTB	D_CAP	ROA
ROA	-0.009	0.054	0.109	-0.038	0.110	-0.212	-0.223	-0.057	-0.025	0.031	-0.075	0.326	-0.039	
	(0.564)	(0.001)	(0.001)	(0.011)	(0.001)	(0.001)	(0.001)	(0.001)	(0.098)	(0.037)	(0.001)	(0.001)	(0.010)	
B_AR	0.015	-0.010	-0.011	-0.033	-0.020	0.023	-0.076	-0.012	0.008	-0.029	-0.038	0.052	-0.006	-0.120
	(0.329)	(0.520)	(0.451)	(0.029)	(0.191)	(0.123)	(0.001)	(0.432)	(0.614)	(0.057)	(0.011)	(0.001)	(0.709)	(0.001)

Variable definitions:

VD = the voluntary disclosure indicator variable, coded as 1 if there are one or more management forecast in year *t*+1, and 0 otherwise;

FOWN = a dummy variable with value of 1 for family firms and 0 otherwise;

INST = institutional ownership in year *t*;

BLOCK = the blockholder indicator variable, defined as 1 if there is an outside blockholder in year *t*;

AC = number of financial analysts following the firm in year *t*;

DISP = analyst forecast dispersion in year *t*, measured as the standard deviation of one-year-ahead EPS forecasts scaled by absolute mean forecast; we use the most recent consensus forecast before the end of year *t*;

RVOL = return volatility in year *t*, measured as the standard deviation of daily stock returns in year *t*;

BDIND = board independence indicator in year *t*, measured as 1 if more than 60% of the directors on the board are independent, and 0 otherwise; as in prior research, independent directors refer to those who are not corporate executives and have no business relationship with the company;

BDSIZE = board size in year *t*, measured as the number of directors on the board;

LIT = a litigation risk proxy, measured using a dummy variable indicating the high litigation industries (SIC codes 2833–2836, 3570–3577, 7370–7374, 3600–3674, 5200–5961, 8731–8734);

SIZE = natural log of year *t* total assets;

MTB = year *t* market-to-book ratio;

D_CAP = a dummy variable with value of 1 for firms with external capital financing (including both debt and equity financing per SDC) in year *t*+1;

ROA = year *t*+1 return on assets;

B_AR = a poor performance indicator, defined as 1 if the market-adjusted stock return in year *t*+1 is lower than the sample median, and 0 otherwise.

with the results in panel B of table 2. The signs of the correlations between *VD* and control variables are largely consistent with results in prior research. Consistent with what is reported in table 1, family firms differ from nonfamily firms along several dimensions. These significant pairwise correlations indicate the need to control for these factors in testing the association between firm type and voluntary disclosure.

We present our tests of H1 in panel A of table 4. Column 1 reports the logit regression results for the likelihood of all management forecasts, and

TABLE 4

Testing the Hypothesis: Logit Regression of the Probability of Management Forecast on Founding Family Presence and Control Variables

Panel A: *FOWN* = family firm indicator, coded as 1 for firms where the founding family members continue to hold positions in top management, are on the board, or are blockholders, 0 otherwise.

	1 All management forecasts		2 Good news forecasts		3 Bad news forecasts	
	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)
Intercept	−2.615	n/a	−3.699	n/a	−4.309	n/a
	(0.001)		(0.001)		(0.001)	
FOWN	−0.335	−8.07	−0.409	−8.99	−0.222	−5.43
	(0.002)		(0.001)		(0.028)	
INST	0.485	3.03	0.286	1.65	0.330	2.10
	(0.061)		(0.273)		(0.186)	
BLOCK	0.048	1.15	0.208	4.52	−0.028	−0.69
	(0.658)		(0.068)		(0.787)	
AC	0.074	19.46	0.062	14.97	0.048	12.76
	(0.001)		(0.001)		(0.001)	
DISP	−1.724	−1.23	−1.099	−0.74	−2.176	−1.61
	(0.001)		(0.009)		(0.001)	
RVOL	9.189	3.32	2.321	0.77	12.725	4.66
	(0.094)		(0.664)		(0.014)	
BDIND	0.582	3.49	0.307	1.70	0.658	4.03
	(0.033)		(0.272)		(0.016)	
BDSIZE	0.027	2.63	0.005	0.41	0.041	4.01
	(0.192)		(0.825)		(0.043)	
LIT	−0.091	−2.19	−0.062	−1.36	−0.288	−6.97
	(0.686)		(0.754)		(0.178)	
SIZE	−0.034	−1.86	0.071	3.58	0.039	2.17
	(0.546)		(0.182)		(0.435)	
MTB	0.004	0.23	0.010	0.56	−0.019	−1.21
	(0.790)		(0.474)		(0.156)	
D_CAP	0.289	6.82	0.353	8.07	0.186	4.59
	(0.004)		(0.001)		(0.054)	
ROA	−2.327	−3.86	0.742	1.14	−1.721	−2.91
	(0.001)		(0.219)		(0.008)	
B_AR			−0.198	−4.38	0.959	23.09
			(0.015)		(0.001)	
Year dummies	Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes	
Pseudo R^2	0.300		0.298		0.313	
N	4,415		4,415		4,415	

(*Continued*)

Panel B: *FOWN* = family equity ownership

| | 1 | | 2 | | 3 | |
| | All management forecasts | | Good news forecasts | | Bad news forecasts | |
	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)
Intercept	−2.242	n/a	−3.699	n/a	−3.962	n/a
	(0.001)		(0.001)		(0.001)	
FOWN	−1.904	−4.98	−1.349	−3.33	−1.764	−4.78
	(0.001)		(0.001)		(0.001)	
INST	0.481	3.01	0.325	1.88	0.231	1.47
	(0.067)		(0.220)		(0.355)	
BLOCK	−0.124	−2.95	0.123	2.70	−0.193	−4.76
	(0.252)		(0.288)		(0.069)	
AC	0.069	18.22	0.060	14.45	0.043	11.45
	(0.001)		(0.001)		(0.001)	
DISP	−1.702	−1.22	−1.014	−0.68	−2.144	−1.59
	(0.001)		(0.014)		(0.001)	
RVOL	7.977	2.88	2.423	0.81	11.603	4.25
	(0.147)		(0.652)		(0.024)	
BDIND	0.435	2.62	0.370	2.05	0.438	2.68
	(0.104)		(0.179)		(0.095)	
BDSIZE	0.022	2.09	−0.000	−0.00	0.040	3.91
	(0.289)		(0.996)		(0.046)	
LIT	−0.224	−5.44	−0.156	−3.41	−0.398	−9.59
	(0.291)		(0.426)		(0.049)	
SIZE	−0.036	−1.95	0.080	3.99	0.044	2.47
	(0.521)		(0.131)		(0.371)	
MTB	0.005	0.28	0.009	0.51	−0.017	−1.05
	(0.753)		(0.519)		(0.234)	
D_CAP	0.294	6.93	0.366	8.38	0.170	4.18
	(0.004)		(0.001)		(0.078)	
ROA	−2.206	−3.66	0.599	0.92	−1.776	−3.00
	(0.001)		(0.323)		(0.007)	
B_AR			−0.207	−4.59	0.960	23.11
			(0.010)		(0.001)	
Year dummies	Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes	
Pseudo R^2	0.307		0.297		0.319	
N	4,415		4,415		4,415	

columns 2 and 3 report the results for the likelihood of good news forecasts and bad news forecasts, respectively. We find that, relative to nonfamily firms, family firms are less likely to issue management forecasts, and this holds for both good news and bad news management forecasts. The coefficient on *FOWN* in all models is significantly negative at better than the 5% level (two-sided).

The results on the control variables are largely consistent with predictions and prior research. Management forecast likelihood increases with institutional ownership, analyst coverage, return volatility, board independence, and demand for external capital. The coefficient on the litigation risk dummy is insignificant, due to our inclusion of industry dummies. While

TABLE 4 — *Continued*

Panel C: *FOWN* = family firm indicator, coded as 1 if family ownership ≥5%, 0 otherwise.

	1 All management forecasts		2 Good news forecasts		3 Bad news forecasts	
	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)	Coef. (*p*-value)	Marginal Δ in prob. (%)
Intercept	−2.567 (0.001)	n/a	−3.770 (0.001)	n/a	−4.071 (0.001)	n/a
FOWN	−0.344 (0.003)	−8.36	−0.364 (0.001)	−7.89	−0.411 (0.001)	−9.92
INST	0.459 (0.080)	2.86	0.262 (0.320)	1.51	0.201 (0.425)	1.28
BLOCK	0.025 (0.815)	0.61	0.196 (0.086)	4.27	−0.069 (0.508)	−1.71
AC	0.071 (0.001)	18.71	0.060 (0.001)	14.47	0.046 (0.001)	12.22
DISP	−1.751 (0.001)	−1.25	−1.133 (0.007)	−0.76	−2.155 (0.001)	−1.60
RVOL	8.920 (0.106)	3.23	2.344 (0.665)	0.78	11.332 (0.028)	4.15
BDIND	0.574 (0.035)	3.45	0.386 (0.166)	2.14	0.495 (0.070)	3.03
BDSIZE	0.022 (0.294)	2.08	−0.002 (0.939)	−0.14	0.036 (0.071)	3.56
LIT	−0.073 (0.741)	−1.76	−0.089 (0.647)	−1.97	−0.294 (0.160)	−7.11
SIZE	−0.026 (0.639)	−1.44	0.084 (0.116)	4.20	0.045 (0.363)	2.52
MTB	0.001 (0.930)	0.08	0.010 (0.481)	0.56	−0.017 (0.199)	−1.09
D_CAP	0.288 (0.004)	6.79	0.369 (0.001)	8.45	0.182 (0.059)	4.48
ROA	−2.221 (0.001)	−3.69	0.697 (0.250)	1.07	−1.712 (0.008)	−2.89
B_AR			−0.193 (0.017)	−4.28	0.962 (0.001)	23.16
Year dummies	Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes	
Pseudo R^2	0.300		0.296		0.317	
N	4,415		4,415		4,415	

Model:

$$PROB(VD_{i,t+1} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 INST_{i,t} + \beta_3 BLOCK_{i,t} + \beta_4 AC_{i,t} + \beta_5 DISP_{i,t}$$

$$+ \beta_6 RVOL_{i,t} + \beta_7 BDIND_{i,t} + \beta_8 BDSIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} SIZE_{i,t}$$

$$+ \beta_{11} MTB_{i,t} + \beta_{12} D\_CAP_{i,t+1} + \beta_{13} ROA_{i,t+1} + \beta_{14} B\_AR_{i,t+1}$$

$$+ \sum_{dummies}^{year} + \sum_{dummies}^{industry} + \varepsilon_{i,t} \qquad (1)$$

The dependent variable, *VD*, in column 1 (2, 3) equals 1 if the firm issued at least one management forecast (one good news forecast, one bad news forecast) in year *t*+1. Management forecasts with positive (negative) three-day CARs centered on the forecast date are classified as good (bad) news forecasts.

FOWN is defined as follows for each panel:

  1) Panel A, *FOWN* = an indicator variable, coded as 1 for firms where the founding family members continue to hold positions in top management, are on the board, or are blockholders of the firms;

  2) Panel B, *FOWN* = equity ownership by founding family members;

  3) Panel C, *FOWN* = an indicator variable, coded as 1 if family ownership is at least 5%.

All other variables are as defined in table 3. Year dummies and industry dummies are included in each specification, and for the sake of brevity, the results for these dummies are not reported. For each variable, the coefficient estimate (the two-sided *p*-value) is reported in the top (bottom) row. All *p*-values are based on standard errors adjusted for firm-level clustering. Marginal change in probability is calculated as the change in the likelihood of having a management forecast when the underlying variable changes from the first to the third quartile of the sample distribution, or from 0 to 1 in the case of dummy variables, holding all other independent variables at their respective means.

contemporaneous *ROA* does not affect the probability of issuing good news forecasts, it is significantly negatively associated with the probability of issuing bad news forecasts. Naturally, when the performance is poor (*B_AR* equal to one), firms are more likely to disclose bad news and less likely to disclose good news forecasts.

To gauge the economic significance of the impact of founding family presence on voluntary disclosure, we estimate the marginal change in the probability of voluntary disclosure for each of the independent variables. It is calculated as the change in the likelihood of having a management forecast when the underlying variable changes from the first to the third quartile of the sample distribution, or from zero to one in the case of dummy variables, holding all other independent variables at their respective means. Results in panel A show that the probability of providing management forecasts is 8.07 percentage points lower for family firms than for nonfamily firms. This impact is higher than that of other variables, with the exception of analyst coverage. The probability of providing good (bad) news forecasts is 8.99 (5.43) percentage points lower for family firms than for nonfamily firms; this effect is economically significant considering that only 36% (44%) of the sample have good (bad) news forecasts.

The above analysis is based on the widely used definition of family firm—firms where founding family members serve as top executives, a director, *or* a blockholder. Panels B and C report the regression results using two alternative proxies to capture the presence of founding families: (1) continuous family ownership and (2) a family blockholder indicator (family ownership of 5% or higher), respectively. As indicated in the two panels, the proxy for family presence, *FOWN*, has significantly negative coefficients in all models. The marginal change in management forecast probability is also qualitatively similar to those reported in panel A.

To sum up, the results in table 4 suggest that, relative to nonfamily firms, family firms are less likely to provide voluntary disclosure, regardless of the nature of the news. This result suggests that the combined effects of family owners' longer investment horizon, better monitoring of management, better access to information, and concerns with the cost of providing timely information outweigh the potential lower cost of capital benefits to family owners through voluntary disclosure, and that family owners' influence in the firm can tilt firms' disclosure practices toward their preferences.

4.3 ANALYSIS OF MANAGEMENT FORECASTS OF DIFFERENT HORIZONS

Managers likely issue forecasts of different horizons for different reasons. For example, short-run forecasts might be mainly driven by period-specific performance (e.g., Skinner [1994], Miller [2002]). In addition, litigation cost concerns apply more to a short-run setting because failing to warn investors of potential upcoming bad news is easier to confirm when earnings are soon to be released (Skinner [1994], Kasznik and Lev [1995]). In contrast, issuing long-run management forecasts is motivated more by reducing

information asymmetry. Thus, in this section we investigate whether the lower likelihood of management forecasts in family firms as reported above holds for management forecasts of different forecast horizons, specifically, earnings warnings, short-run management forecasts, and long-run management forecasts. Like prior research (e.g., Miller [2002]), we refer to forecasts issued after the fiscal period-end but before the earnings announcement date of the forecasted period as earnings warnings, forecasts with horizons (the number of days between the management forecast issuance date and earnings announcement date) longer than a quarter as long-run forecasts, and all other forecasts as short-run forecasts.

Table 5 presents the regression results, panel A for earnings warnings and panel B for short-run and long-run earnings forecasts. The model specification is similar to equation (1), except that we add a short-run performance variable, seasonal change in earnings per share scaled by beginning-of-quarter stock price (ΔEPS), in the analysis of earnings warnings and short-run forecasts because they are more likely to be driven by period-specific performance. Also, since the decision to issue an earnings warnings or a short-run forecast is made within a quarter, we examine observations at the quarterly level, leading to 16,253 firm-quarter observations for the analysis of earnings warnings and short-run forecasts.[17]

This analysis yields some very interesting results. While family firms are less likely to issue good news, regardless of the horizon, their behavior in the case of bad news varies with forecast horizon. In panel A, column 3, we document a *positive* coefficient on the family firm indicator, *FOWN*. That is, family firms are more likely to give out bad news earnings warnings than nonfamily firms, consistent with family owners having greater litigation cost and reputation cost concerns. In contrast, the coefficient on *FOWN* continues to be *negative* for long-run forecasts in the case of bad news (insignificant for short-run forecasts).

By separately examining forecasts of different horizons, we significantly extend the results in Ali, Chen, and Radhakrishnan [2007]: While family firms are less likely to issue long-run management forecasts, regardless of the news contents, they are more likely to give out earnings warnings when firm performance is bad. This indicates that both forces, that is, (1) family owners' preferences for less disclosure arising from their long investment horizon and effective monitoring of managers and (2) their incentives to reduce litigation and reputation costs of not disclosing bad news, are important in shaping family firms' disclosure practices. These results are consistent with family owners acting in their own best interests, and they do not necessarily indicate that family owners reduce agency problems via more disclosures.

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[17] We use the family firm indicator variable in table 5 as we are primarily interested in the different disclosure behavior between family and nonfamily firms. Using alternative family presence proxies, as in section 4.2, yields qualitatively similar results.

TABLE 5
Analysis of Management Forecasts of Different Horizons

Panel A: Logistic regression results for earnings warnings

	1	2	3
	All management forecasts	Good news forecasts	Bad news forecasts
Intercept	−5.222	−7.432	−7.181
	(0.001)	(0.001)	(0.001)
FOWN	−0.092	−0.824	0.305
	(0.418)	(0.001)	(0.023)
INST	0.774	0.928	1.020
	(0.010)	(0.035)	(0.006)
BLOCK	−0.005	0.048	0.063
	(0.965)	(0.804)	(0.670)
AC	0.043	0.054	0.044
	(0.001)	(0.001)	(0.001)
DISP	−0.940	−0.740	−1.250
	(0.018)	(0.278)	(0.029)
RVOL	25.491	31.548	19.833
	(0.001)	(0.001)	(0.002)
BDIND	0.402	−0.381	0.794
	(0.188)	(0.398)	(0.032)
BDSIZE	−0.001	−0.102	0.045
	(0.951)	(0.009)	(0.095)
LIT	0.342	0.784	−0.006
	(0.075)	(0.009)	(0.979)
SIZE	−0.127	0.027	−0.182
	(0.016)	(0.762)	(0.005)
MTB	−0.056	−0.076	−0.056
	(0.001)	(0.002)	(0.001)
D_CAP	0.063	−0.107	0.087
	(0.562)	(0.536)	(0.556)
ROA	−2.797	−0.282	−4.216
	(0.001)	(0.746)	(0.001)
ΔEPS	−21.095	17.879	−52.989
	(0.001)	(0.006)	(0.001)
B_AR		−0.577	0.837
		(0.001)	(0.001)
Year dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Pseudo R^2	0.181	0.262	0.223
N	16,253	16,253	16,253

(*Continued*)

4.4 CONTRASTING THE IMPACT OF FAMILY OWNERSHIP ON VOLUNTARY DISCLOSURE WITH THAT OF CONCENTRATED INSTITUTIONAL HOLDINGS AND NONFAMILY INSIDER OWNERSHIP

As discussed above, Ajinkya, Bhojraj, and Sengupta [2005] and Karamanou and Vafeas [2005] find a negative impact on voluntary disclosure of concentrated ownership of institutional investors and insiders, without separating family insiders from nonfamily insiders. Family owners differ from nonfamily insiders and institutional owners with concentrated

TABLE 5 —*Continued*

Panel B: Logistic regression results for short-run and long-run management forecasts

	Short-run management forecasts			Long-run management forecasts		
	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts
Intercept	−7.344	−9.830	−9.217	−4.344	−4.810	−5.886
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
FOWN	−0.127	−0.166	−0.099	−0.452	−0.495	−0.380
	(0.078)	(0.072)	(0.283)	(0.001)	(0.001)	(0.001)
INST	−0.029	−0.230	0.095	0.780	0.719	0.462
	(0.893)	(0.414)	(0.650)	(0.005)	(0.013)	(0.108)
BLOCK	0.081	0.303	−0.114	0.009	0.122	0.058
	(0.374)	(0.018)	(0.211)	(0.934)	(0.352)	(0.601)
AC	0.040	0.067	0.028	0.058	0.066	0.039
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
DISP	−2.461	−1.696	−3.783	−1.813	−1.183	−2.610
	(0.001)	(0.006)	(0.001)	(0.001)	(0.047)	(0.001)
RVOL	10.402	12.708	10.649	−5.002	−12.285	−0.065
	(0.025)	(0.036)	(0.026)	(0.371)	(0.048)	(0.991)
BDIND	0.545	0.446	0.837	0.447	0.337	0.338
	(0.030)	(0.183)	(0.002)	(0.131)	(0.304)	(0.270)
BDSIZE	0.031	0.062	0.016	0.052	0.028	0.078
	(0.099)	(0.011)	(0.390)	(0.017)	(0.228)	(0.001)
LIT	0.019	−0.095	0.097	−0.363	−0.373	−0.306
	(0.922)	(0.663)	(0.606)	(0.100)	(0.089)	(0.144)
SIZE	0.166	0.165	0.170	0.033	0.039	0.051
	(0.001)	(0.005)	(0.001)	(0.548)	(0.515)	(0.352)
MTB	0.013	0.000	0.010	0.028	0.002	0.023
	(0.221)	(0.974)	(0.365)	(0.042)	(0.914)	(0.075)
D_CAP	0.189	0.092	0.213	0.223	0.367	0.172
	(0.025)	(0.413)	(0.021)	(0.026)	(0.001)	(0.099)
ROA	0.159	0.407	0.615	−0.713	1.132	−0.360
	(0.755)	(0.538)	(0.257)	(0.267)	(0.109)	(0.606)
ΔEPS	−24.306	16.383	−49.639			
	(0.001)	(0.001)	(0.001)			
B_AR		−0.533	0.815		−0.210	0.612
		(0.001)	(0.001)		(0.022)	(0.001)

(*Continued*)

ownership (e.g., pension funds and mutual funds) along several dimensions. First, family owners have longer investment horizons than nonfamily insiders. The founding family tends to hold shares for generations, whereas nonfamily insiders generally do not hold shares beyond their tenure in the firm, which is relatively short.[18] Second, family owners are less diversified and the value of the firm has a larger impact on family owners' investment

[18] For example, Joos, Leone, and Zimmerman [2003] report that the average tenure of CEOs in nonfamily firms is 8 years, while the average tenure for CEOs who are founding family members is over 17 years and the CEO title is often passed from one family member to another.

TABLE 5—*Continued*

Panel B: Logistic regression results for short-run and long-run management forecasts

	Short-run management forecasts			Long-run management forecasts		
	1	2	3	1	2	3
	All management forecasts	Good news forecasts	Bad news forecasts	All management forecasts	Good news forecasts	Bad news forecasts
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.278	0.285	0.274	0.315	0.314	0.300
N	16,253	16,253	16,253	4,415	4,415	4,415

Model for earnings warnings and short-run forecasts, estimated at the firm-quarter level:

$$PROB(VD_{i,t+1,q} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 INST_{i,t} + \beta_3 BLOCK_{i,t} + \beta_4 AC_{i,t} + \beta_5 DISP_{i,t}$$

$$+ \beta_6 RVOL_{i,t} + \beta_7 BDIND_{i,t} + \beta_8 BDSIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} SIZE_{i,t}$$

$$+ \beta_{11} MTB_{i,t} + \beta_{12} D\_CAP_{i,t+1} + \beta_{13} ROA_{i,t+1} + \beta_{14} \Delta EPS_{i,t+1,q}$$

$$+ \beta_{15} B\_AR_{i,t+1} + \sum\nolimits_{dummies}^{year} + \sum\nolimits_{dummies}^{industry} + \varepsilon_{i,t,q}$$

Model for long-run forecasts, estimated at the firm-year level:

$$PROB(VD_{i,t+1} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 INST_{i,t} + \beta_3 BLOCK_{i,t} + \beta_4 AC_{i,t} + \beta_5 DISP_{i,t}$$

$$+ \beta_6 RVOL_{i,t} + \beta_7 BDIND_{i,t} + \beta_8 BDSIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} SIZE_{i,t}$$

$$+ \beta_{11} MTB_{i,t} + \beta_{12} D\_CAP_{i,t+1} + \beta_{13} ROA_{i,t+1}$$

$$+ \beta_{14} B\_AR_{i,t+1} + \sum\nolimits_{dummies}^{year} + \sum\nolimits_{dummies}^{industry} + \varepsilon_{i,t}$$

Definition of *VD* for each panel:

1) For the earnings warning test (panel A), the dependent variable, *VD*, in column 1 (2, 3) equals 1 if the firm issues at least one earnings warning (one good news warning, one bad news warning) in quarter *q* of year *t*+1, where earnings warnings refer to management forecasts issued after the fiscal period end but before the earnings announcement date.
2) For the short-run management forecast test (panel B), the dependent variable, *VD*, in column 1 (2, 3) equals 1 if the firm issues at least one management forecast (one good news forecast, one bad news forecast) with horizons less than 92 days—about the length of a quarter—in quarter *q* of year *t*+1, excluding earnings warnings.
3) For the long-run management forecast test (panel B), the dependent variable, *VD*, in column 1 (2, 3) equals 1 if the firm issues at least one management forecast (one good news forecast, one bad news forecast) with horizons greater than 92 days in year *t* + 1.

For all three panels, *FOWN* refers to the family firm indicator, coded as 1 for firms where the founding family members continue to hold positions in top management, are on the board, or are blockholders of the firms. Management forecasts with positive (negative) three-day CARs centered on the forecast date are classified as good (bad) news forecasts. For the tests of earnings warnings and short-run forecasts, ΔEPS is equal to seasonal change in earnings per share scaled by beginning of quarter stock price. All other variables are as defined in table 3. Year dummies and industry dummies are included in each specification and for the sake of brevity, the results for these dummies are not reported. For each variable, the coefficient estimate (the two-sided *p*-value) is reported in the top (bottom) row. All *p*-values are based on standard errors adjusted for firm-level clustering.

portfolios than on large institutional investors' investment portfolios. Third, unlike family owners, large institutional investors usually do not sit on the board of the firms they are holding and thus have less influence over voluntary disclosure. Thus, compared to large institutional investors and nonfamily insiders, family owners' longer investment horizon, greater commitment

to the firm, and more active involvement in the management can lead to a greater impact on voluntary disclosure practices.

To contrast the impact of family ownership (*FOWN*) on voluntary disclosure with that of nonfamily insider ownership (*NF_INSIDER*) and concentrated institutional holdings (*CON_INST*), we add these two ownership variables into regression equation (1):

$$PROB(VD_{i,t+1} = 1)$$

$$= \alpha + \beta_1 FOWN_{i,t} + \beta_2 NF\_INSIDER_{i,t} + \beta_3 CON\_INST_{i,t}$$

$$+ \beta_4 INST_{i,t} + \beta_5 BLOCK_{i,t} + \beta_6 AC_{i,t} + \beta_7 DISP_{i,t} + \beta_8 RVOL_{i,t}$$

$$+ \beta_9 BDIND_{i,t} + \beta_{10} BDSIZE_{i,t} + \beta_{11} LIT_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} MTB_{i,t}$$

$$+ \beta_{14} D\_CAP_{i,t+1} + \beta_{15} ROA_{i,t+1} + \beta_{16} B\_AR_{i,t+1}$$

$$+ \sum_{Dummies}^{Year} + \sum_{Dummies}^{Industry} + \varepsilon_{i,t} \tag{2}$$

To ensure that our inferences are not driven by one particular measure, we capture concentrated institutional ownership in three ways: (1) ownership of the top five institutional investors (*TOP5_INST*), as in Ajinkya, Bhojraj, and Sengupta [2005], (2) ownership of the dedicated institutional investors per Bushee's [1998] classification (*DED_INST*), and (3) ownership by long-term institutional investors (*LT_INST*), classified using institutional ownership turnover calculated as in Gaspar, Massa, and Matos [2005]. Specifically, we classify firms with an average institutional investor turnover measure in the bottom quartile of the sample distribution as firms with long-term institutional investors, and then define long-term institutional ownership as the total institutional ownership for these firms and zero for other firms. All other variables are defined as in equation (1). To facilitate the comparison across the three types of ownership, we use family ownership, rather than a family firm indicator, in the regressions.

The regression results are reported in table 6. The results on control variables are very similar to those reported before, and for the sake of parsimony, we do not report them here, except for total institutional ownership (*INST*).[19] The results indicate that, after controlling for family ownership, neither nonfamily insider ownership nor concentrated institutional ownership, however measured, has incremental power in explaining good news or bad news disclosure. At the same time, the family ownership variable is significantly negative in all specifications. While our analyses without distinguishing insider ownership by the family/nonfamily dichotomy (not tabulated) yield results that corroborate existing research, the results in table 6

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[19] Note that the coefficient on concentrated institutional ownership captures the incremental impact of concentrated institutional ownership over that of *INST*. The results on *INST* are qualitatively similar to those reported in table 4.

TABLE 6

Analysis Incorporating Nonfamily Insider Ownership and Concentrated Institutional Ownership

	Top 5 institutional ownership			Dedicated institutional ownership (per Bushee)			Long-term institutional ownership (per Gaspar, Massa, and Matos [2005])		
	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts
Intercept	−2.203	−3.797	−3.811	−2.189	−3.733	−3.811	−2.247	−3.777	−3.714
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
FOWN	−1.937	−1.333	−1.822	−1.922	−1.347	−1.894	−1.981	−1.357	−1.813
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)
NF_INSIDER	0.137	0.600	−0.899	0.097	0.564	−0.992	0.103	0.511	−0.841
	(0.922)	(0.672)	(0.514)	(0.944)	(0.689)	(0.469)	(0.940)	(0.718)	(0.538)
TOP5_INST	−0.507	−0.311	−0.389						
	(0.517)	(0.689)	(0.591)						
DED_INST				−0.652	−0.576	−0.092			
				(0.171)	(0.262)	(0.846)			
LT_INST							−0.099	−0.249	−0.111
							(0.496)	(0.103)	(0.433)
INST	0.641	0.439	0.351	0.522	0.381	0.205	0.488	0.374	0.209
	(0.108)	(0.272)	(0.345)	(0.056)	(0.165)	(0.427)	(0.065)	(0.164)	(0.405)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.307	0.297	0.320	0.306	0.298	0.320	0.307	0.298	0.319
N	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415

Model:

$$PROB(VD_{i,t+1} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 NF\_INSIDER_{i,t} + \beta_3 CON\_INST_{i,t} + \beta_4 INST_{i,t} + \beta_5 BLOCK_{i,t} + \beta_6 AC_{i,t} + \beta_7 DISP_{i,t} + \beta_8 RVOL_{i,t} + \beta_9 BDIND_{i,t} + \beta_{10} BDSIZE_{i,t}$$

$$+ \beta_{11} LIT_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} MTB_{i,t} + \beta_{14} D\_CAP_{i,t+1} + \beta_{15} ROA_{i,t+1} + \beta_{16} B\_AR_{i,t+1} + \sum_{Dummies}^{Year} + \sum_{Dummies}^{Industry} + \varepsilon_{i,t} \qquad (2)$$

Where:

VD = 1 if the firm issued at least one management forecast (one good news forecast, one bad news forecast) in year $t+1$ in column 1 (2, 3), and 0 otherwise; management forecasts with positive (negative) three-day CARs centered on the forecast date are classified as good (bad) news forecasts;

$FOWN$ = family ownership in year t;

$NF\_INSIDER$ = ownership by nonfamily insiders in year t;

CON_INST = one of the following three variables: $TOP5\_INST$, DED_INST, LT_INST;

$TOP5\_INST$ = ownership by top five institutional owners in year t;

DED_INST = ownership by dedicated institutional holders classified based on the approach used in Bushee [1998] in year t;

LT_INST = ownership by long-term institutional holders classified based on institutional ownership turnover in year t.

All other variables are as defined in table 3. Year dummies and industry dummies are included in each specification and for the sake of brevity, the results for these dummies and control variables are not reported. For each variable, the coefficient estimate (the two-sided *p*-value) is reported in the top (bottom) row. All *p*-values are based on standard errors adjusted for firm-level clustering.

indicate that family ownership dominates concentrated institutional ownership and nonfamily insider ownership in explaining the voluntary disclosure propensity.

4.5 WITHIN-SAMPLE VARIATION: THE INCREMENTAL IMPACT OF FAMILY CEO, HIGH FAMILY OWNERSHIP, AND BOARD OF DIRECTORS REPRESENTATION

Not all family firms are the same: We observe considerable variation of families' involvement in management, equity ownership, and board representations across family firms, and family firms' voluntary disclosure practices might vary with these characteristics. Specifically, it is likely that founding families with family members being CEOs, with high family ownership, or with large representation on the board of directors have a longer investment horizon, greater influence in corporate management, and more insider information about the firm. If so, it then follows that these family firms prefer even less public disclosure than other family firms.[20] In this section we explore whether this is the case.

As reported in panel A of table 7, about 62% of our family firms are managed by family CEOs (1,271 of 2,043 firm-years) whereas the rest are managed by professional CEOs. There is large variation in family ownership. About 70% of family firms have family ownership of 5% or higher and about 25% of family firms have family ownership of 25% or higher. Panel A of table 7 also shows that over 98% of the families have at least one family member sitting on the board of directors, and about 23% have at least three family members on the board. Panel B of table 7 presents logistic regression results. We estimate equation (1) after adding, alternatively, a family CEO indicator (*F_CEO*), a high equity ownership indicator for firms with family ownership greater than 25% (which coincides with the third quartile of family ownership distribution) (*H_FOWN*), and a high board presence indicator coded as one for firms with at least three family members sitting on the board (*H_FDIR*). The coefficients on these indicator variables capture the incremental impact of family CEO, high family ownership, and high family board representation on management forecasts, on top of the impact of family equity ownership. We use family equity ownership in this set of analyses because these characteristics are correlated with family ownership and we wish to capture their incremental effect over family ownership. For parsimony, we do not report the results on control variables.

Results show that the family equity ownership variable continues to be significantly negative in all specifications. We find a significantly negative coefficient on *F_CEO* for good news forecasts, and all other coefficients on

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TABLE 7

Variation within Family Firms: The Incremental Impact of Family CEO, High Family Ownership, and Large Presence on the Board of Directors

Panel A: Control and ownership characteristics of the family firms ($N = 2,043$)	
	Percentage of family firms
Family control or ownership characteristics	
Family executives	
Percentage of family firms in which a founding family member	62.2%
(a founder or a descendant) is the CEO	
Family ownership	
Percentage of families with at least 5% ownership	69.5%
Percentage of families with at least 25% ownership	24.7%
Representation of family members on the board of directors	
Percentage of families with at least one member on the board of directors	98.4%
Percentage of families with at least two members on the board of directors	54.6%
Percentage of families with at least three members on the board of directors	22.9%

Panel B: Logistic regression results

	Incremental impact of family CEO			Incremental impact of high ownership (≥25%)			Incremental impact of board presence (≥3)		
	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts	1 All management forecasts	2 Good news forecasts	3 Bad news forecasts
Intercept	−2.146	−3.588	−3.890	−2.246	−3.715	−3.928	−2.239	−3.677	−3.945
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
FOWN	−1.728	−1.001	−1.656	−1.653	−1.007	−2.007	−1.843	−1.209	−1.746
	(0.001)	(0.024)	(0.001)	(0.010)	(0.073)	(0.001)	(0.001)	(0.007)	(0.001)
F_CEO	−0.174	−0.302	−0.114						
	(0.155)	(0.009)	(0.317)						
HJFOWN				−0.132	−0.178	0.145			
				(0.638)	(0.531)	(0.552)			
HJFDIR							−0.111	−0.269	−0.077
							(0.538)	(0.142)	(0.641)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.308	0.299	0.319	0.307	0.298	0.320	0.307	0.298	0.319
N	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415	4,415

Model:

$$PROB(VD_{i,t+1} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 IND_{i,t} + \beta_3 INST_{i,t} + \beta_4 BLOCK_{i,t} + \beta_5 AC_{i,t} + \beta_6 DISP_{i,t} + \beta_7 RVOL_{i,t} + \beta_8 BDIND_{i,t} + \beta_9 BDSIZE_{i,t} + \beta_{10} LIT_{i,t} + \beta_{11} SIZE_{i,t} + \beta_{12} MTB_{i,t}$$

$$+ \beta_{13} D\_CAP_{i,t+1} + \beta_{14} ROA_{i,t+1} + \beta_{15} B\_AR_{i,t+1} + \sum\nolimits_{dummies}^{year} + \sum\nolimits_{dummies}^{industry} + \varepsilon_{i,t}$$

$$(3)$$

Where:

VD = 1 if the firm issued at least one management forecast (one good news forecast, one bad news forecast) in year $t+1$ in column 1 (2, 3), and 0 otherwise; management forecasts with positive (negative) three-day CARs centered on the forecast date are classified as good (bad) news forecasts;

$FOWN$ = family ownership in year t;

IND = one of the following three variables: F_OWN, HF_OWN, HF_DIR;

F_CEO = an indicator variable for family firms that have a founding family member serving as CEO in year t;

HF_OWN = an indicator variable for family firms with at least 25% family ownership in year t;

HF_DIR = an indicator variable for family firms with at least three founding family members serving as directors on the board in year t.

All other variables are as defined in table 3. The model specification includes year and industry dummies. For the sake of brevity, the results for these dummies and the results for control variables are not reported. For each variable, the coefficient estimate (the two-sided p-value) is reported in the top (bottom) row. All p-values are based on standard errors adjusted for firm-level clustering.

F_CEO, *H_FOWN*, and *H_FDIR* are insignificant. These results indicate that the relationship between management forecasts and family equity ownership is linear, with family CEO having some incremental effect on good news forecasts.

4.6 USING CONFERENCE CALLS AS AN ALTERNATIVE PROXY OF VOLUNTARY DISCLOSURE

In this section we use the probability of holding conference calls as an alternative measure of voluntary disclosure. Compared to management forecasts, conference calls, which are usually held together with or immediately after earnings announcements, generally contain a richer information set, ranging from detailed explanations of current performance to predictions of industry trends and firm performance. The question-and-answer session between management and analysts in conference calls can further reveal valuable information about the firm. On the other hand, the fact that conference calls are often jointly held with earnings announcements makes it difficult to classify the nature of the news in conference calls, unlike in the case of management forecasts. Also, since conference calls are more "sticky" than management forecasts, managers have less discretion on the decision to hold conference calls.

We present our analysis using conference calls to proxy for voluntary disclosure in table 8. Panel A shows that over 79% of the sample observations have conference calls; many firms have multiple conference calls per year. Panel B shows that, at the univariate level, family firms have fewer conference calls than nonfamily firms. Panel C presents the regression results using the same three proxies for family presence as in table 4, a family firm indicator, family equity ownership, and a family blockholder indicator, and using the same model specification as for total management forecasts.[21] *FOWN* is significantly negative in all three models, confirming our results documented in table 4. This result suggests that the propensity of less voluntary disclosure in family firms applies to conference calls as well.

4.7 ADDITIONAL SENSITIVITY TESTS

4.7.1. Controlling for Firm Age. In this section, we examine whether the reported results are driven by firm age. Firm age can conceivably be correlated with both firm type and firms' voluntary disclosure, since family firms are on average younger than nonfamily firms and a firm's disclosure practice likely varies with the maturity of its public relation. For this purpose, we conduct two separate tests: (1) adding the log transformation of firm age into equation (1), and (2) running equation (1) by firm age quartile.

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[21] As we do not classify conference calls into good news or bad news, we do not include *B_AR* in the logit regressions on conference calls, consistent with the model specification for total management forecasts. Including this variable leads to very similar inferences.

TABLE 8

Testing Hypothesis: Using Conference Calls to Proxy for Voluntary Disclosure

Panel A: Conference call frequency for the full sample

Number of conference calls	Number of observations	Percent
0	921	20.86
1	357	8.09
2	379	8.58
3	617	13.98
4	951	21.54
5	701	15.88
6	279	6.32
7	102	2.31
8	47	1.06
9	24	0.54
10 and above	37	0.82
Total	4,415	100.0

Panel B: Comparison of conference call frequency across firm types

The last two columns report the two-sided p-value for the difference between family and nonfamily firms in means and medians, respectively. t-tests (Wilcoxon tests) are used to test the difference in means (medians).

	Family firms (N = 2,043)			Nonfamily firms (N = 2,372)			p-value of the difference	
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Mean	Median
Number of conference calls	2.995	2.412	3	3.198	2.221	4	0.004	0.001

Panel C: Logistic regression using conference call indicator as dependent variable

	1 FOWN = family firm indicator	2 FOWN = family equity ownership	3 FOWN = alternative family firm indicator (family ownership ≥ 5%)
Intercept	−7.921	−7.650	−7.457
	(0.001)	(0.001)	(0.001)
FOWN	−0.239	−1.398	−0.578
	(0.082)	(0.012)	(0.001)
INST	2.100	1.990	1.900
	(0.001)	(0.001)	(0.001)
BLOCK	0.286	0.224	0.307
	(0.066)	(0.170)	(0.053)
AC	0.102	0.098	0.098
	(0.001)	(0.001)	(0.001)
DISP	−0.494	−0.462	−0.628
	(0.183)	(0.205)	(0.075)
RVOL	43.441	41.572	43.985
	(0.001)	(0.001)	(0.001)
BDIND	1.403	1.282	1.045
	(0.001)	(0.003)	(0.018)
BDSIZE	−0.032	−0.037	−0.030
	(0.323)	(0.261)	(0.358)
LIT	−0.343	−0.274	−0.334
	(0.376)	(0.479)	(0.394)
SIZE	0.436	0.448	0.433
	(0.001)	(0.001)	(0.001)
MTB	0.039	0.037	0.035
	(0.148)	(0.170)	(0.189)

(*Continued*)

TABLE 8—*Continued*

Panel C: Logistic regression using conference call indicator as dependent variable

	1 *FOWN =* family firm indicator	2 *FOWN =* family equity ownership	3 *FOWN =* alternative family firm indicator (family ownership ≥5%)
D_CAP	0.861	0.812	0.806
	(0.001)	(0.001)	(0.001)
ROA	0.708	1.088	0.872
	(0.473)	(0.271)	(0.368)
Year dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Pseudo R^2	0.553	0.552	0.554
N	4,415	4,415	4,415

Model:

$$PROB(VD\_CC_{i,t+1} = 1) = \alpha + \beta_1 FOWN_{i,t} + \beta_2 INST_{i,t} + \beta_3 BLOCK_{i,t} + \beta_4 AC_{i,t} + \beta_5 DISP_{i,t}$$

$$+ \beta_6 RVOL_{i,t} + \beta_7 BDIND_{i,t} + \beta_8 BDSIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} SIZE_{i,t} + \beta_{11} MTB_{i,t}$$

$$+ \beta_{12} D\_CAP_{i,t+1} + \beta_{13} ROA_{i,t+1} + \sum\nolimits_{dummies}^{year} + \sum\nolimits_{dummies}^{industry} + \varepsilon_{i,t} \qquad (4)$$

The dependent variable *VD_CC* equals 1 if the firm holds at least one conference call in year $t+1$. The definition of *FOWN* is as follows for each column:

1) *FOWN* = an indicator variable coded as 1 for firms where the founding family members continue to hold positions in top management, are on the board, or are blockholders of the firms;
2) *FOWN* = equity ownership by founding family members;
3) *FOWN* = an indicator variable, coded as 1 if family ownership is at least 5%.

All other variables are as defined in table 3. Year dummies and industry dummies are included in each specification, and for the sake of brevity, the results for these dummies are not reported. For each variable, the coefficient estimate (the two-sided *p*-value) is reported in the top (bottom) row. All *p*-values are based on standard errors adjusted for firm-level clustering.

The average firm age, the number of years from the founding year to the current year, is 48 for family firms, but 73 for nonfamily firms. After firm age is added as an additional control, our results show that the family firm indicator is still significantly negative in all specifications. The coefficient on firm age is negative, consistent with younger firms being less likely to issue management forecasts. When estimating equation (1) by age quartile, we find that the family firm indicator is significantly negative in all models except in two cases of bad news disclosure (of 12 models, i.e., 3 models × 4 age quartiles). Based on these results, we conclude that our results are robust to controlling for firm age.[22]

4.7.2. Management Forecasts Concurrent with Earnings Announcements. Recall that we classify the news contained in management forecasts based on

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[22] Because the founding year is only available for 85% of our sample (i.e., 3,768 observations), we also measure firm age as the number of years the firm has been covered by CRSP, a common practice in the literature. The coefficients on the family firm dummy are significantly negative throughout, but the coefficient on the CRSP firm age is insignificant.

the sign of the three-day abnormal returns centered on forecast date. This classification is confounded if forecasts are issued concurrently with earnings announcements. We conduct two tests: (1) classifying news based on the comparison between management forecasts and the latest analyst forecasts and (2) excluding such management forecasts, and find that the inferences remain the same.

4.7.3. Analysis of Subsamples: S&P 500 versus S&P 400 and S&P 600 Firms. To gauge whether our main results are driven by larger or smaller firms in our sample, we repeat the analyses by separately analyzing large firms (S&P 500 firms) and small firms (S&P MidCap 400 and S&P SmallCap 600 firms). The results for these two subsamples are similar to those for the full sample.

5. Conclusion

In this paper, we study the impact of founding family ownership on voluntary disclosure practices. Family firms account for 46% of S&P 1500 firms and family ownership averages as high as 18% in family firms. The unique characteristics of family owners imply that family owners have different preferences for voluntary disclosure than other owners, but the direction of the prediction is unclear ex ante. The longer investment horizon, better monitoring of management, and better access to information of family owners leads to the prediction of less voluntary disclosure in family firms, but at the same time the benefits of voluntary disclosure, through the reduction in the cost of capital, leads to the prediction of more voluntary disclosure in family firms.

Using management forecasts as the proxy for voluntary disclosure, we find that relative to nonfamily firms, family firms tend to disclose less, regardless of whether the disclosure reveals good news or bad news. The lower likelihood of voluntary disclosure holds for two alternative proxies of family presence (family equity ownership and the existence of a family blockholder) and for an alternative empirical proxy for voluntary disclosure—conference calls.

Our results extend recent studies on the association between firms' ownership structure and voluntary disclosure. Ajinkya, Bhojraj, and Sengupta [2005] and Karamanou and Vafeas [2005] document that the likelihood of management forecasts decreases with concentrated institutional holdings and insider ownership. We find that the impact of these two variables is no longer significant once family ownership is controlled for, indicating that family owners play a more dominant role in influencing firms' voluntary disclosure practices than other investors with concentrated ownership.

Ali, Chen, and Radhakrishnan [2007] find that, among S&P 500 firms, family firms are more likely to provide quarterly forecasts than nonfamily firms when firm performance is poor. We extend their study by separately

examining earnings warnings and earnings forecasts. We document that family firms are *more* likely to provide bad news earnings warnings but are *less* likely to provide earnings forecasts. While the former result is consistent with family owners' greater litigation and reputation cost concerns, the latter result is consistent with the lower information asymmetry between owners and managers in family firms and family owners' concerns with the potential cost of providing timely information.

Overall, our research contributes to the literature by providing further evidence on the relationship between ownership structure and voluntary disclosure. Our finding suggests that family owners' long investment horizon, the lower information asymmetry between family owners and managers, and family owners' litigation and reputation cost concerns influence firms' voluntary disclosure practices in systematic ways.

REFERENCES

AJINKYA, B.; S. BHOJRAJ; AND P. SENGUPTA. "The Association between Outside Directors, Institutional Investors and the Properties of Management Earnings Forecasts." *Journal of Accounting Research* 43 (2005): 343–76.

AJINKYA, B., AND M. J. GIFT. "Corporate Managers' Earnings Forecasts and Symmetrical Adjustment of Market Expectations." *Journal of Accounting Research* 22 (1984): 425–44.

ALI, A.; T. CHEN; AND S. RADHAKRISHNAN. "Corporate Disclosures by Family Firms." *Journal of Accounting & Economics* 44 (2007):238–86.

AMIHUD Y., AND H. MENDELSON. "Asset Pricing and the Bid-Ask Spread." *Journal of Financial Economics* 17 (1986): 223–49.

ANDERSON, R.; S. MANSI; AND D. REEB. "Founding Family Ownership and the Agency Cost of Debt." *Journal of Financial Economics* 68 (2003): 263–85.

ANDERSON, R., AND D. REEB. "Founding-Family Ownership and Firm Performance: Evidence from the S&P 500." *Journal of Finance* 58 (2003): 1301–28.

BARRY, C., AND S. BROWN. "Differential Information and Security Market Equilibrium." *Journal of Financial and Quantitative Analysis* 20 (1985): 407–22.

BOTOSAN, C. "Disclosure Level and Cost of Equity Capital." *The Accounting Review* 72 (1997): 323–50.

BROWN, S.; S. A. HILLEGEIST; AND K. LO. "Conference Calls and Information Asymmetry." *Journal of Accounting & Economics* 37 (2004): 343–66.

BUSHEE, B. "The Influence of Institutional Investors on Myopic R&D Investment Behavior." *The Accounting Review* 73 (1998): 305–33.

BUSHMAN, R.; Q. CHEN; E. ENGEL; AND A. SMITH. "Financial Accounting Information, Organizational Complexity and Corporate Governance Systems." *Journal of Accounting & Economics* 37 (2004): 167–201.

CASSON, M. "The Economics of Family Firms." *Scandinavia Economic History Review* 47 (1999): 10–23.

CHEN, X.; Q. CHENG; AND Z. DAI. "Are US Family Firms Subject to Agency Problems? Evidence from CEO Turnover and Firm Valuation." Working paper, University of British Columbia and UT Dallas, 2007.

CHENG, Q., AND K. LO. "Insider Trading and Voluntary Disclosures." *Journal of Accounting Research* 44 (2006): 815–48.

COLES, J., AND U. LOEWENSTEIN. "Equilibrium Pricing and Portfolio Composition in the Presence of Uncertain Parameters." *Journal of Financial Economics* 22 (1988): 279–303.

COLES, J.; U. LOEWENSTEIN; AND J. SUAY. "On Equilibrium Pricing under Parameter Uncertainty." *Journal of Financial and Quantitative Analysis* 30 (1995): 347–64.

DABROWSKI, R. A. "Proportionate Liability in 10b:5 Reckless Fraud Cases." *Duke Law Journal* 44 (1994): 571–611.

DECHOW, P.; R. SLOAN; AND A. SWEENEY. "Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC." *Contemporary Accounting Research* 13 (1996): 1–36.

DEFOND, M., AND C. PARK. "Smoothing Income in Anticipation of Future Earnings." *Journal of Accounting & Economics* 23 (1997): 115–39.

DIAMOND, D., AND R. VERRECCHIA. "Disclosure, Liquidity and the Cost of Equity Capital." *Journal of Finance* 46 (1991): 1325–60.

FAMA, E., AND K. FRENCH. "Industry Cost of Equity." *Journal of Financial Economics* 43 (1997): 153–93.

FIELD, L.; M. LOWRY; AND S. SHU. "Does Disclosure Deter or Trigger Litigation?" *Journal of Accounting & Economics* 39 (2005): 487–507.

FRANCIS, J.; D. PHILBRICK; AND K. SCHIPPER. "Shareholder Litigation and Corporate Disclosure." *Journal of Accounting Research* 32 (1994): 137–64.

FRANKEL, R.; M. MCNICHOLS; AND P. WILSON. "Discretionary Disclosure and External Financing." *The Accounting Review* 70 (1995): 135–50.

FUDENBERG, K., AND J. TIROLE. "A Theory of Income and Dividend Smoothing Based on Incumbency Rents." *Journal of Political Economy* 103 (1995): 75–93.

FULLER, J., AND M. C. JENSEN. "Just Say No to Wall Street: Putting a Stop to the Earnings Game." *Journal of Applied Corporate Finance* 14 (2002): 41–46.

GASPAR, J.; M. MASSA; AND P. MATOS. "Shareholder Investment Horizons and the Market for Corporate Control." *Journal of Financial Economics* 76 (2005): 135–67.

HEALY, P.; A. HUTTON; AND K. PALEPU. "Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure." *Contemporary Accounting Research* 16 (1999): 485–520.

HUTTON, A. "Determinants of Managerial Earnings Guidance Prior to Regulation Fair Disclosure and Bias in Analysts' Earnings Forecasts." *Contemporary Accounting Research* 22 (2005): 867–914.

HUTTON, A. "A Discussion of 'Corporate Disclosure by Family Firms'." *Journal of Accounting & Economics* 44 (2007): 287–97.

HUTTON, A.; G. S. MILLER; AND D. J. SKINNER. "The Role of Supplementary Statements with Management Earnings Forecasts." *Journal of Accounting Research* 41 (2003): 867–90.

JOOS, P.; A. LEONE; AND J. ZIMMERMAN. "Selecting CEOs: Matching the Person to the Job." Working paper, University of Rochester, 2003.

KARAMANOU, R., AND N. VAFEAS. "The Association between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis." *Journal of Accounting Research* 43 (2005): 453–73.

KASZNIK, R. "On the Association between Voluntary Disclosure and Earnings Management." *Journal of Accounting Research* 37 (1999): 57–82.

KASZNIK, R., AND B. LEV. "To Warn or Not to Warn: Management Disclosures in the Face of an Earnings Surprise." *The Accounting Review* 70 (1995): 113–34.

LA PORTA, R.; F. LOPEZ-DE-SILANES; A. SHLEIFER; AND R. VISHNY. "Law and Finance." *Journal of Political Economy* 106 (1998): 1113–55.

LA PORTA, R.; F. LOPEZ-DE-SILANES; A. SHLEIFER; AND R. VISHNY. "Agency Problems and Dividend Policies Around the World." *Journal of Finance* 55 (2000): 1–33.

MCNICHOLS, M., AND B. TRUEMAN. "Public Disclosure, Private Information Collection, and Short-Term Trading." *Journal of Accounting & Economics* 17 (1994): 69–94.

MILLER, G. "Earnings Performance and Discretionary Disclosure." *Journal of Accounting Research* 40 (2002):173–204.

NAGAR, V.; D. NANDA; AND P. WYSOCKI. "Discretionary Disclosure and Stock-Based Incentives." *Journal of Accounting & Economics* 34 (2003): 283–309.

NIEHAUS, G., AND G. ROTH. "Insider Trading, Equity Issues, and CEO Turnover in Firms Subject to Securities Class Action." *Financial Management* 28 (1998): 52–72.

NOE, C. F. "Voluntary Disclosures and Insider Transactions." *Journal of Accounting & Economics* 27 (1999): 305–26.

ROGERS, J., AND P. STOCKEN. "Credibility of Management Forecasts." *The Accounting Review* 80 (2005): 1233–60.

SKINNER, D. "Why Firms Voluntarily Disclose Bad News." *Journal of Accounting Research* 32 (1994): 38–60.

SKINNER, D. "Earnings Disclosures and Stockholder Lawsuits." *Journal of Accounting & Economics* 23 (1997): 249–82.

STEIN, J. "Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior." *Quarterly Journal of Economics* 103 (1989): 655–69.

VILLALONGA, B., AND R. AMIT. "How Do Family Ownership, Control, and Management Affect Firm Value?" *Journal of Financial Economics* 80 (2006): 385–417.

WANG, D. "Founding Family Ownership and Earnings Quality." *Journal of Accounting Research* 44 (2006): 619–56.

WELKER, M. "Disclosure Policy, Information Asymmetry and Liquidity in Equity Markets." *Contemporary Accounting Research* 11 (1995): 801–28.