



**Forecasts in IPO Prospectuses:  
The Effect of Corporate Governance on Earnings Management**

Denis Cormier, *ESG-UQAM*

Pascale Lapointe-Antunes, *Brock University\**

Bruce J. McConomy, *Wilfrid Laurier University*

**January 2012**

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\*Corresponding author's address:  
Faculty of Business, Brock University,  
St. Catharines, Ontario, Canada, L2S 3A1.  
e-mail: [plapointe@brocku.ca](mailto:plapointe@brocku.ca)  
Phone (905) 688-5550 x5251; fax (905) 688-9779

**Acknowledgements:** We thank the CA/Laurier Centre for the Advancement of Accounting Research and Education, fund for education and good governance of the Autorité des marchés financiers (Québec) and PWC for financial support. We also thank Mandeep Singh for excellent research assistance. Information, opinions and views expressed in this article are the sole responsibility of the authors. The content of this article does not necessarily reflect the opinion of the Authority and PWC; any errors are the responsibility of the authors.

## **Forecasts in IPO Prospectuses: The Effect of Corporate Governance on Earnings Management**

### Abstract

Prior research suggests that managers may use earnings management to meet voluntary earnings forecasts. We document the extent of earnings management undertaken within Canadian Initial Public Offerings (IPOs) and study the extent to which companies with better corporate governance systems are less likely to use earnings management to achieve their earnings forecasts. In addition, we test other factors that differentiate forecasting from non-forecasting firms, and assess the impact of forecasting and corporate governance on future cash flow prediction. We find that firms with better corporate governance are more likely to include a voluntary earnings forecast in their IPO prospectus. In addition, we find that corporate governance factors have an impact on the use of accruals management to meet forecasts, and on the predictive value of discretionary accruals.

### **Prévisions dans les prospectus d'introduction en bourse : L'effet de la gouvernance d'entreprise sur la gestion des résultats**

### Résumé

Des recherches antérieures suggèrent que les dirigeants d'entreprises peuvent gérer les résultats dans le but d'atteindre les prévisions de résultats. Nous analysons l'étendue de la gestion des résultats des entreprises canadiennes suivant leur introduction en bourse dans le but d'atteindre les prévisions de résultats de même que l'impact de la gouvernance en cette matière. De plus, nous testons d'autres facteurs qui différencient les firmes qui émettent des prévisions de résultats de celles qui n'en émettent pas et l'impact de la gestion des résultats sur la prédiction des flux de trésoreries. Nos résultats montrent que les entreprises ayant une meilleure gouvernance sont plus susceptibles d'inclure des prévisions de résultats dans leurs prospectus. En outre, nous constatons que les facteurs de gouvernance ont un impact sur l'utilisation de la gestion des résultats pour l'atteinte des prévisions, et sur la valeur prédictive de la gestion des résultats.

## **Introduction**

In Canada, IPO firms have the option of including an earnings forecast in their prospectus, which provides a unique environment for assessing earnings management. Non-IPO research indicates that managers' may manage earnings to achieve their earnings forecasts, particularly where expected earnings have been overestimated. Prior research has also provided some evidence regarding the propensity for IPO firms to manage earnings to achieve management earnings forecasts. However, there is little evidence regarding the impact of corporate governance on the IPO forecast decision, and on the subsequent behaviour of firms as they strive to meet the earnings targets they have established. We focus on the influence of corporate governance factors to assess the voluntary forecast decision. We then evaluate differences in the extent of earnings management undertaken during the year following the public offering, after taking into account differences in corporate governance structure.

Specifically, we address the following research questions: (a) do corporate governance factors help differentiate forecasting IPO firms from non-forecasting firms; (b) do IPO firms manage earnings in the year after going public, and if so (c) is earnings management by IPO firms affected by the extent to which actual earnings deviate from the amount forecast; (d) is earnings management lower for IPO firms with stronger corporate governance environments; and (e) is the predictive value of discretionary accruals higher for firms with better corporate governance.

## **Literature Review**

### **2.1 The Management Earnings Forecast Decision**

Prior research has investigated the factors that influence firms' provision of management earnings forecasts. Hirst, Koonce and Venkataraman (2008) provide a summary of managements' motivations for providing forecasts, and characteristics of forecasters vs. non-forecasters. For example, managers are motivated to provide earnings forecasts to reduce information asymmetry (Verrecchia 2001). Private firms considering an IPO are particularly susceptible to information asymmetry problems because owner-managers know their financial outlook and the likelihood of successful post IPO results much better than potential investors (Leland and Pyle 1977). Managers with more equity based compensation have also been found to issue forecasts more frequently, to avoid equity mispricing that could negatively influence their wealth (Hirst et al., 2008 and Nagar, Nanda and Wysocki 2003).

Hirst et al. (2008) note that the legal and regulatory environment influences the decision to issue a management earnings forecast (p. 321). Therefore, firms in Canada are more likely to issue a forecast than firms in more litigious environments such as the U.S., but regulatory penalties for misrepresentation via a forecast still imply that many Canadian IPO firms remain reluctant to issue forecasts (Li and McConomy, 2004).

Firms are more likely to forecast during periods of rising earnings (Miller 2002), and when the forecast helps IPO firms share "good news" in the sense of improved earnings expectations (Clarkson, Dontoh, Richardson and Sefcik, 1992). It would be costly for firms with poor earnings prospects to mimic firms with better prospects, due to the impact of the firm's credibility and the increased probability of litigation.

Other factors that have been shown to be associated with the decision to provide an earnings forecast include earnings history, and the length of time covered by the forecast. For example, while firms with more extensive earnings history may find it easier and less costly to provide a forecast, firms with less earnings history may benefit more from providing a forecast as they have higher information asymmetry (Mak 1996). Recent research suggests that the benefit to firms forecasting over shorter forecasts also may be more significant, as such forecasts could be perceived as being more credible to market participants (Hartnett, 2010).

The quality of a firm's corporate governance environment could also affect the propensity to make an earnings forecast. For example, Karamanou and Vafeas (2005) find, in a non-IPO setting, that firms with more effective boards of director and audit committees are more likely to forecast. They also find that corporate governance factors are associated with higher quality forecasts. Having more independent directors has also been shown to be positively related to forecast propensity in a non-IPO setting (Ajinka, Bhojraj and Sengupta, 2005). However in an IPO setting, it is unclear whether firms with better corporate governance would be more or less likely to forecast. Ajinka et al. (2005) suggest that outside directors can "mitigate managerial self-interest and influence the issuance and properties of earnings forecasts" (p. 348). Therefore, for IPOs, where there are clear benefits to managers from forecasting, greater independence of the board may reduce the probability of a forecast being issued. Specifically, independent directors may prefer that managers not forecast to reduce the risk of personal litigation and reputation costs (ibid).

Hughes (1986) provides a bivariate signaling model whereby two signals (retained ownership and a direct disclosure about future cash flows) are needed to convey managers' private information. Consistent with Hughes' intuition, Li and McConomy (2004) find evidence

that the retained ownership and forecast signals act as substitutes, with forecasting firms being less likely to signal via retained ownership (and vice versa). Titman and Trueman (1986) suggest that the choice of auditor and investment banker can be used to signal IPO firm value, therefore similar to retained ownership, they could act as substitutes for a forecast signal (Li and McConomy, 2004).

Hartnett (2010) investigates the relationship between forecasting and firm value, and finds that forecast disclosures (for forecasts of < 12 months) are significant, whereas longer range forecasts are considered to have “less (or no) relevance to the IPO valuation process” (p. 1827). In particular, forecasts beyond the “normal” forecast period of the first fiscal period after listing are subject to heavily discounted value relevance. We limit the forecast horizon in our study to a maximum of 12 months.

## **2.2 Accruals Management by IPO Firms**

The use of discretionary accruals to meet various earnings targets such as positive earnings, earnings increases and analysts’ forecasts has been documented extensively (e.g. Matsumoto, 2002; Philips, Pincus and Rego, 2003). Two groups of studies investigate the use of discretionary accruals in the context of IPOs.

The first group examines accruals management in anticipation of going public. There is generally little to no information available to the market about issuing firms other than that contained in their prospectuses. Reported earnings are therefore a significant factor in determining the issue price of the initial offering (Ritter, 1984). Because issuers directly benefit from a higher offering price, this provides them with an incentive to manage earnings prior to the IPO to maximize their wealth. Consistent with this prediction, Aharony, Lin, and Loeb (1993),

Friedlan (1994), and DuCharme, Malatesta and Sefcik (2001) show that IPO firms manage their earnings prior to the IPO. In addition, DuCharme et al. (2001) show that initial firm value is positively related to cash flow from operations, normal accruals and discretionary accruals, and that discretionary accruals are as highly valued as normal accruals (and more valued than cash flow from operations). They also find that post-issue returns are negatively related to pre-IPO discretionary accruals. Overall, this suggests that accruals management in anticipation of going public increases IPO proceeds and decreases subsequent returns to investors, thereby shifting wealth to the issuers.

A second group of studies examines accruals management during the IPO year. Teoh, Wong and Rao (1998) and Teoh, Welch and Wong (1998), respectively, find that discretionary accruals for the IPO year are negatively related with post-issue earnings performance and post-issue stock returns. Again, this suggests that accruals management during the IPO year decreases subsequent returns to investors.

In addition to Australia and Canada, some other jurisdictions such as France and the United Kingdom allow IPO firms to voluntarily disclose earnings forecasts in their prospectus. The forecast provides investors with a benchmark against which to evaluate future earnings performance, creating an implicit contract between the issuers and investors. Failure to perform in accordance with the terms of the implicit contract can be costly to IPO firms because it can impair management's credibility in its future dealings with investment bankers, commercial lenders, underwriters and investors, and hinder the firm's ability to raise additional funds. Therefore, the voluntary inclusion of earnings forecasts by IPO firms can create an additional incentive to manage earnings for the IPO year so that reported earnings do not fall short of the forecast. Kasznik (1999), Magnan and Cormier (1997), Gramlich and Sorensen (2004), and

Cormier and Martinez (2006) find support for this prediction, suggesting that managers who voluntarily release earnings forecasts use discretionary accruals in the IPO year to meet their forecasts.

While existing research documents the existence of accruals management prior to and following the IPO, little is known regarding constraints to IPO earnings management. Morsfield and Tan (2006) find that discretionary accruals in the IPO year are lower for IPOs backed by venture capitalists. Cormier and Martinez (2006) examine the role played by an external board of directors in reducing accruals management to meet voluntary earnings forecast by French IPO firms. They do not find any evidence that having a majority of independent directors on the board reduces the extent of accruals management to meet forecasts. Therefore, the role played by monitors, other than venture capitalists, remains largely unexplored. Our study contributes to the IPO and earnings management literatures by examining the role played by better corporate governance in the voluntary forecasting disclosure decision, and in constraining accruals management to meet earnings forecasts included in prospectuses.

## **Hypotheses**

### **3.1 The Management Earnings Forecast Decision**

As detailed above, prior research suggests that inclusion of a management earnings forecast in a prospectus is positively (+) (negatively (-)) related to the likelihood of firms having good news to share (+), earnings history (+/-), forecast horizon (-), retained ownership (-), compensation arrangements (+), and underwriter quality (-), therefore we control for these variables while focusing on the corporate governance factors outlined below.



Prior non-IPO research suggests that propensity to forecast is also affected by the quality of corporate governance, however whether the relationship is positive or negative is not well known (Karamanou and Vafeas, 2005; Ajinka et al., 2005). In the Canadian context it has been argued that the quality of monitoring may decrease if the company does not have an independent Chair. For example, the Toronto Stock Exchange (TSX) requires that public companies disclose whether or not the chair of the board is an independent director, and if not they should “describe what the board does to provide leadership for its independent directors” (TSX, 2005). Another key corporate governance factor in the Canadian environment is the independence of the audit committee. While the audit committee independence has long been recognized as an important corporate governance matter (Dey, 1994), its importance was reiterated after several U.S. reporting scandals and the implementation of the Sarbanes-Oxley Act in 2002. The TSX responded by requiring that all members of the audit committee be independent, while providing an “exemptions for a period of up to one year following an issuer's initial public offering”. Therefore independence of the audit committee is seen to be important, but the exemption for IPOs of up to one year after going public provides an opportunity to examine empirically the impact of the level of independence of the audit committee on factors such as the decision to include a forecast in the prospectus. Specifically, we test the following corporate governance related hypotheses in the IPO context:

*H<sub>1</sub>: The probability of forecasting is related to the quality of IPO firms' corporate governance.*

*H<sub>1a</sub>: The probability of forecasting is related to independence of the Chair of the Board of Directors.*

*H<sub>1b</sub>: The probability of forecasting is related to the percentage of independent members on the audit committee.*

### **3.2 Constraints on Accruals Management to Meet Forecast**

As the starting point to our investigation of accruals management by Canadian IPO firms, consistent with existing evidence, we expect IPO firms to use discretionary accruals to meet their voluntary earnings forecasts. As such, our second research hypothesis is:

*H<sub>2</sub>: IPO firms use discretionary accruals to meet their earnings forecast.*

Many parties are involved in the preparation of the prospectus and financial statements, including management, the board of directors, the audit committee, underwriters, lawyers, and auditors. Governance agents are expected to play a monitoring role regarding management so that these documents better reflect the economic reality of the firm. Several papers support this prediction and present evidence that better corporate governance reduces accruals management in non-IPO contexts. For instance, a higher percentage of independent directors on the audit committee reduces the likelihood of belonging to a high discretionary accruals group (Bedard et al., 2004); and the level of discretionary accruals (Klein, 2002; Xie et al., 2003). This would also suggest that a more independent chair would reduce the magnitude of discretionary accruals. However, in the context of a forecasting IPO firm, the CEO-chair might also wish to use discretionary accruals to signal his private information and limit their magnitude to that needed to convey the proper signal. Hence our third research hypothesis:

*H<sub>3</sub>: IPO firms' ability to use discretionary accruals to meet their earnings forecasts decreases as the quality of corporate governance increases.*

*H<sub>3a</sub>: IPO firms' ability to use discretionary accruals to meet earnings forecasts is related to independence of the Chair of the Board of Directors.*

*H<sub>3b</sub>: IPO firms' ability to use discretionary accruals to meet earnings forecasts decreases as the percentage of independent members on the audit committee increases.*

### **3.3 Predictive Value**

Prior research on discretionary accruals is consistent with two alternative scenarios: 1) they improve the ability of earnings to reflect economic value (Sloan, 1996; Dechow, 1994; Subramanyam, 1996); or 2) they are seen as an opportunistic distortion of earnings and value irrelevant but priced (unpriced) by an inefficient (efficient) market (Teoh and Rao, 1998; Balsam, Bartov and Marquardt, 2002). The first scenario suggests that managers improve the value relevance of earnings by managing accruals to communicate private information about the future profitability of the firm. The second scenario instead suggests that discretionary accruals are seen as an opportunistic distortion of earnings but that investors can be functionally fixated on earnings.

We use the following hypothesis to examine the predictive value of discretionary accruals, and whether better governance has an influence. Our hypothesis is stated in the null form, as prior research does not allow us to make any directional prediction.

*H<sub>4</sub>: The predictive value of discretionary accruals is not influenced by the quality of corporate governance.*

*H<sub>4a</sub>: The predictive value of discretionary accruals is not related to independence of the Chair of the Board of Directors.*

*H<sub>4b</sub>: The predictive value of discretionary accruals is not related to the percentage of independent members on the audit committee.*

## **Method**

### **4.1 Sample**

The sample consists of Toronto Stock Exchange (TSX) IPOs that satisfy the following criteria:

1. The firm applied for initial listing on the TSX between January 1992 and December 2005 (based on listings from the Toronto Stock Exchange Review).
2. The firm issued equity shares that were not previously publicly traded (i.e., IPOs) and whose fiscal year end was prior to or on December 31, 2005.
3. Limited life investment funds, limited partnerships, mining firms, income trusts, and firms issuing only preferred shares were excluded.
4. IPOs that issued units (e.g., common shares plus warrants) were excluded, as the individual components of units are generally not separately priced in IPOs.

A total of 301 firms met these criteria and had the necessary data available to complete our testing.

### **4.2 The Management Earnings Forecast Decision**

The following probit model is used to assess the earnings forecast decision and to examine whether the quality of corporate governance affects the probability that an earnings forecast is included in the prospectus.

$$FORECAST_i = \beta_0 + \beta_1 ACINDEP_i + \beta_2 CEOCHAIR_i + \beta_3 RETOWN_i + \beta_4 GNEWS_i + \beta_5 HISTORY_i + \beta_6 HORIZON_i + \beta_7 UW-PRESTIGE_i + \beta_8 COMPENSATION_i + \beta_9 SIZE_i + \varepsilon_i \quad (1)$$

Where:

<i>FORECAST</i>	=	Indicator variable taking on the value of 1 if the firm voluntarily includes an earnings forecast in its prospectus; 0 otherwise
<i>ACINDEP</i>	=	Percentage of independent directors on the audit committee at the IPO date
<i>CEOCHAIR</i>	=	Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise
<i>RETOWN</i>	=	Natural logarithm of alpha calculated as [the absolute value] of [(N-Np-Ns)/N]
<i>GNEWS</i>	=	Indicator variable taking on the value of 1 if actual earnings in the first period ending after the IPO are greater than prior period earnings (i.e., “good news” based on a random walk model), 0 otherwise
<i>HISTORY</i>	=	Indicator variable taking on the value of 1 if earnings history is provided in the IPO for at least 5 periods, 0 otherwise
<i>HORIZON</i>	=	Number of months from the end of the latest interim period results included in the prospectus to the IPO’s fiscal year end (i.e., forecast horizon)
<i>UW-PRESTIGE</i>	=	Indicator variable taking on the value of 1 for IPOs with a prestigious underwriter, 0 otherwise
<i>COMPENSATION</i>	=	Indicator variable taking on the value of 1 if the firm has a bonus or option plan in place at the IPO date; 0 otherwise
<i>SIZE</i>	=	Natural logarithm of lagged total assets

### 3 Constraints on Accruals Management to Meet Forecast

The following regression models are used to measure discretionary accruals and examine whether better corporate governance constrains managers’ ability to use discretionary accruals to meet their earnings forecasts:

$$ACCRUALS_i = \beta_0 + \beta_1 CHSALES_i + \beta_2 PPE_i + \beta_3 ROA_i + \varepsilon_i \quad (2)$$

$$DACCRUALS_i = \beta_0 + \beta_1 (EBDA-FCST)_i + \beta_2 (EBDA-FCST)_i * ACINDEP_i + \beta_3 (EBDA-FCST)_i * CEOCHAIR_i + \beta_4 ACINDEP_i + \beta_5 CEOCHAIR_i + \beta_6 LEVERAGE_i + \beta_8 SIZE_i + \varepsilon_i \quad (3)$$

Where:

<i>ACCRUALS</i>	=	Net income in t – cash flow from operations in t
<i>CHSALES</i>	=	Revenue in t – revenue in t-1
<i>PPE</i>	=	Property, plant and equipment in t
<i>ROA</i>	=	Net income in t divided by lagged total assets

And:

*DACCRUALS* = Estimated discretionary accruals for the IPO year, scaled by lagged total assets

*(EBDA-FCST)* = Earnings before discretionary accruals minus forecasted earnings divided by the absolute value of forecasted earnings for the IPO year

*ACINDEP* = Percentage of independent directors on the audit committee at the IPO date

*CEOCHAIR* = Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise

*LEVERAGE* = Total debt at the end of the IPO year divided by shareholders' equity at the end of the IPO year

*SIZE* = Natural logarithm of lagged total assets

All financial variables are scaled by lagged total assets, and  $t$  refers to the IPO year. The first model is used to estimate nondiscretionary and discretionary accruals. Consistent with Collins and Hribar (2002), we measure total accruals (*ACCRUALS*) as the difference between net income and cash flow from operations. Nondiscretionary accruals reflect a firm's economic environment or its underlying level of activity independent of strategic earnings management by its executives. The model implies that a firm's current period total accruals (*ACCRUALS*) are more or less determined in a systematic manner by its current performance ( $\Delta SALES$ ), the level of its property, plant and equipment (*PPE*), and return on its assets (*ROA*). Prior empirical evidence is consistent with such propositions. Change in sales and return on assets are proxies for firm performance. Property, plant and equipment serves to control for other nondiscretionary components, such as the portion of depreciation expenses that is not conditional on the firm's performance or activity level or upon managerial discretion (Jones, 1991).

Prior studies (e.g. Jones 1991) estimate nondiscretionary accruals using time-series observations for each sample firm. Such data is not available for IPO firms. Therefore, we use yearly regressions with industry dummies on firms from the TSX300 to estimate total accruals. The yearly coefficients are then used to compute the predicted values of total accruals in the IPO

year for our sample. The resulting estimated accruals measure is then subtracted from sample firms' actual total accruals to obtain an estimate of discretionary accruals.

$(EBDA - FCST)$  proxies for IPO firms' use of discretionary accruals to meet their earnings forecasts. If firms use discretionary accruals to meet their earnings forecasts when they would otherwise miss the target,  $(EBDA - FCST)$  will be negatively associated with discretionary accruals. We use the percentage of independent directors on the audit committee and the independence of the Chair of the board of directors as our proxies for the quality of corporate governance.  $(EBDA-FCST)*ACINDEP$  and  $(EBDA-FCST)*CEOCHAIR$  are used to test for H<sub>3</sub>. If IPO firms' ability to use discretionary accruals to meet their forecasts decreases as the quality of corporate governance increases, then  $(EBDA-FCST)*ACINDEP$  will be positive and significant and  $(EBDA-FCST)*CEOCHAIR$  will be negative and significant. However, if the CEO-chair limits the magnitude of discretionary accruals to signal private information, then  $(EBDA-FCST)*CEOCHAIR$  will be positive and significant.

Two control variables are added to the model. Firms with higher leverage may attempt to improve earnings by selecting income-increasing accounting methods to meet their debt covenants (Watts and Zimmerman, 1990). However, higher leverage can also be associated with less reliance on equity financing for IPO firms, and less incentive to manage discretionary accruals to meet investors' expectations (Cormier and Martinez, 2006). Hence, no directional prediction is made for *LEVERAGE*. Firm size is added as a control variable to be consistent with most prior research on earnings management. No directional prediction is made for *SIZE*.

#### 4.4 Future Cash Flow Prediction

Consistent with Subramanyam (1996), the following models are used to test for the predictive value of discretionary accruals:

$$LEADCFLOW_i = \beta_0 + \beta_1 CFLOW_i + \beta_2 NORMACCRUALS_i + \beta_3 DACCRUALS_i + \beta_4 DACCRUALS * ACINDEP_i + \beta_5 DACCRUALS * FCSTMISSE_i + \beta_6 FCSTMISSE * ACINDEP_i + \beta_8 DACCRUALS * FCSTMISSE * ACINDEP_i + \beta_9 FCSTMISSE_i + \beta_{10} ACINDEP_i + \varepsilon_i \quad (5)$$

$$LEADCFLOW_i = \beta_0 + \beta_1 CFLOW_i + \beta_2 NORMACCRUALS_i + \beta_3 DACCRUALS_i + \beta_4 DACCRUALS * CEOCHAIR_i + \beta_5 DACCRUALS * FCSTMISSE_i + \beta_6 FCSTMISSE * CEOCHAIR_i + \beta_8 DACCRUALS * FCSTMISSE * CEOCHAIR_i + \beta_9 FCSTMISSE_i + \beta_{10} CEOCHAIR_i + \varepsilon_i \quad (6)$$

Where:

<i>LEADCFLOW</i>	=	Cash flow from operations for the year following the IPO year, scaled by lagged total assets
<i>CFLOW</i>	=	Cash flow from operations for the IPO year, scaled by lagged total assets
<i>DACCRUALS</i>	=	Estimated discretionary accruals, scaled by lagged total assets
<i>NORMACCRUALS</i>	=	Accruals for the IPO year – estimated discretionary accruals for the IPO year, scaled by lagged total assets
<i>FCSTMISSE</i>	=	Indicator variable taking on the value of 1 if ( <i>EBDA-FCST</i> ) is negative; 0 otherwise
<i>ACINDEP</i>	=	Percentage of independent directors on the audit committee
<i>CEOCHAIR</i>	=	Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise

All financial variables are scaled by lagged total assets and t refers to the IPO year.

Subramanyam (1996) decomposes earnings into three components: cash flows from operations, normal accruals and discretionary accruals. He shows that current values of discretionary accruals are associated with future cash flows from operations, after controlling for current cash flows from operations and normal accruals. His results are consistent with managers using discretionary accruals to communicate private information about future profitability to investors. Consistent with Subramanyam (1996), we expect current cash flows from operations and normal accruals to be positively associated with future cash flows from operations. We add two variables (*ACINDEP* and *CEOCHAIR*) to the model and use interaction terms with discretionary



accruals to test whether better corporate governance improves the predictive value of discretionary accruals. To the extent that better corporate governance can successfully constrain the opportunistic reporting of accruals, the predictive value of discretionary accruals will be enhanced and discretionary accruals reported by firms with better corporate governance will have higher predictive value than accruals reported by other firms.

## **Results**

### **5.1 Descriptive Statistics**

Table 1 provides a description of the sample and compares the forecasting vs. non-forecasting subsamples. As Panel A indicates, non-forecast firms have a higher proportion of independent members on their audit committees (*ACINDEP* of 74.48% vs. 61.77% with the difference significant at the 0.01 level) and the Chair of their board of directors is significantly less likely to be independent for forecasting firms (at 0.01). Non-forecasting firms have higher retained ownership on average than forecasting firms (*RETOWN* significant at 0.01), consistent with prior research that suggests that these two signals operate as substitutes rather than complements (Li and McConomy 2004). As expected forecasting firms are more likely to have good news to share with post IPO earnings being greater than pre-IPO earnings (*GNEWS* significant at 0.01), and forecasters also have longer earnings history making the provision of a forecast somewhat easier for such firms (*HISTORY* significant at 0.001). Leverage is marginally higher for forecasting firms (at 0.10). All other differences in Panel A are not significant.

{Insert Table 1 here}

## 5.2 The Management Earnings Forecast Decision

Table 2 provides the results regarding the forecasting model and is used to assess the results of hypotheses 1a and 1b regarding the influence of corporate governance factors on the provision of voluntarily forecasts of earnings in IPO prospectus. The results indicate that firms with a higher percentage of independent directors (and better corporate governance) are less likely to forecast (significant at the 5% level). Firms whose CEO also acts as Chair of the board of directors are more likely to forecast (significant at the 10% level). These results suggest that firms with more independent audit committees and more independent Chairs (better corporate governance) are more reluctant to provide an earnings forecast. Such firms may be acting more conservatively to limit the risk of litigation should a forecast be provided and not achieved.

The results of the other variables in Table 2 are consistent with our univariate results and prior research. In particular, forecasters have significantly lower retained ownership than non-forecasters, consistent with these two signals of value operating as substitutes (*RETOWN* significant at 1% level). Forecasters are significantly more likely to have good news to share and have more earnings history to draw upon, on average (*GNEWS* and *HISTORY* both significant at 1% level). They are also more likely to have a bonus or option compensation plan in place (*COMPENSATION* significant at the 10% level). Other variables are not significant.

{Insert Table 2 here}

## 5.2 Constraints on Accruals Management to Meet Forecast

Table 3 presents the results of the OLS regressions examining the use of discretionary accruals to meet voluntary earnings forecasts in prospectuses. Coefficient column 1 shows the results for forecasters, whereas column 2 shows the results for the full sample. The first model is

significant ( $p < 0.001$ ) with a  $R^2$  of 40.44%.<sup>1</sup> Consistent with  $H_2$ , (*EBDA-FCST*) is negatively associated with the magnitude of discretionary accruals (1% level). This suggests that IPO firms are using discretionary accruals to meet their earnings forecast when their real earnings deviate from the forecast. Consistent with  $H_3$ , the interaction term between (*EBDA-FCST*) and the percentage of independent directors on the audit committee (*ACINDEP*) is positive and significant (10% level). This is consistent with a more independent audit committee constraining accruals management for firms trying to meet voluntary earnings forecasts. Similarly, (*EBDA-FCST*)\**CEOCHAIR* is negative and significant (1% level). Hence, less independent chairs seem to reduce the use of discretionary accruals to meet earnings forecast. Leverage is negative and significant, consistent with the assumption of a lower reliance on equity financing and incentives to manage discretionary accruals to meet investors' expectations. The other variables are not significant. Results from the second model are consistent with those of the first model.

{Insert Table 3 here}

The accruals management behaviour of forecasting firms with real earnings that fall short of forecasted earnings (i.e. firms that would “miss” the forecast) might differ from that of forecasting firms with real earnings in excess of forecasted earnings (i.e. firms that would “beat” the forecast) because the consequences of missing the forecast are more likely to be detrimental to the firm. To examine whether such is the case, we isolate firms that would have missed the forecast (*FCSTMIS*) and repeat our analysis. Table 4 presents the results of the additional OLS regression. The model is significant ( $p < 0.001$ ) with a  $R^2$  of 7.42%. *FCSTMIS* is positively associated with the magnitude of discretionary accruals (5% level). This suggests that IPO firms specifically use discretionary accruals to meet their earnings forecast when their earnings would

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<sup>1</sup> We exclude all observations with standardized residuals greater than 2 in all tables, to reduce the impact of outliers on the results. The regressions were then re-estimated with the coefficient tests being based on White's t-statistics( for regressions in all tables).

have fallen short of the forecast. The interaction term between *FCSTMISS* and the percentage of independent directors on the audit committee (*ACINDEP*) is negative and significant (10% level). This suggests that a more independent audit committee constrains accruals management to meet voluntary earnings forecasts. However, *FCSTMISS\*CEOCHAIR* is not significant, suggesting that having a less independent chair does not appear to affect the extent of discretionary accruals when the firm would miss the forecast.

Our results could be driven by selection bias since many IPO firms choose not to issue a forecast. We use the Heckman procedure to test for the potential effects of selection bias. This involves using residuals from Model (1) to calculate a selection bias variable, the Inverse Mills ratio. The ratio is then added to Model (3) as an additional independent variable to control for selection bias, with the model being ran on the full sample as in Column 2 of Table 3. Results (untabulated) show that even after controlling for the forecasting decision, (EBDA-FCST) is a significant determinant of the magnitude of discretionary accruals (negative and significant at the 1% level). (EBDA-FCST)\**CEOCHAIR* remains positive and significant (at the 1% level). However, (EBDA-FCST)\**ACINDEP* loses its significance, suggesting that the forecasting decision is the most important one for the audit committee. All other results are unchanged.

### **5.3 Predictive Value**

Table 5 presents the results of the OLS regression examining the predictive value of discretionary accruals. The first column presents the results of the model including *ACINDEP* as the proxy for the quality of corporate governance, whereas the second column presents the results of the model including *CEOCHAIR* as the proxy for the quality of corporate governance. The model from the first column is significant ( $p < 0.000$ ) with a  $R^2$  of 89.14%. Consistent with

Subramanyam (1996), current cash flows, and normal accruals are positively associated with future cash flows and the association is significant. Discretionary accruals are also positively associated with future cash flows, suggesting that managers use discretionary accruals to communicate private information about future profitability. The interaction term between *DACCRUALS* and *ACINDEP* is negative and significant. This suggests that a more independent committee reduces the predictive value of discretionary accruals. This might be a result of the audit committee reducing the magnitude of discretionary accruals, regardless of whether those accruals have information content. The interaction term between *DACCRUALS*, *ACINDEP* and *FCSTMIS* is positive and marginally significant. This suggests that a more independent committee enhances the predictive value of discretionary accruals, when these accruals are used to meet forecasts that would otherwise have been missed. Overall, the results are largely consistent with discretionary accruals being used to communicate private information about the future profitability of the firm with a more independent audit committee reducing the quality of the signal, albeit more so for forecasting firms that would have otherwise missed the forecast.

The model from the second column is significant ( $p < 0.000$ ) with a  $R^2$  of 83.56%. Consistent with Subramanyam (1996), current cash flows, and normal accruals are positively associated with future cash flows and the association is significant. Discretionary accruals are also positively associated with future cash flows, suggesting that managers are able to use discretionary accruals to communicate private information about future profitability. The interaction term between *DACCRUALS* and *CEOCHAIR* is positive and significant. This suggests that firms with CEOs that also act as Chair of the board have higher predictive value of discretionary accruals. These discretionary accruals may be taken as a signal regarding future prospects with the board of directors. The interaction term between *DACCRUALS*, *CEOCHAIR*

and *FCSTMIS* is negative and marginally significant. This suggests that firms with a less independent chair have lower predictive value for discretionary accruals that are used to meet forecasts (that would otherwise have been missed), such that in those circumstances the discretionary accruals may be seen as opportunistic. Overall, the results are largely consistent with discretionary accruals being used to communicate private information about the future profitability of the firm with a less independent chair improving the quality of the signal, albeit less so for forecasting firms that would have otherwise missed the forecast.

{Insert Table 5 here}

## **Conclusion**

We investigate the following research questions: (a) do corporate governance factors help differentiate forecasting IPO firms from non-forecasting firms; (b) do IPO firms manage earnings in the year after going public, and if so (c) is earnings management by IPO firms affected by the extent to which actual earnings deviate from the amount forecast; (d) is earnings management lower for IPO firms with stronger corporate governance environments; and (e) is the predictive value of discretionary accruals higher for firms with better corporate governance.

Our results indicate that firms with a higher percentage of independent directors (and better corporate governance) are less likely to forecast, whereas less independent chairs increase the probability of issuing a forecast. These results suggest that an improved corporate governance environment in the IPO context is associated with reluctance to provide an earnings forecast. Such firms may be acting more conservatively to limit the risk of litigation should a forecast be provided and not achieved.

Second, consistent with our expectations, we find IPO firms use discretionary accruals in the year after the IPO, and they use these discretionary accruals to meet their earnings forecast. We also show that a more independent audit committee and CEO-chairs constrain accruals management to meet voluntary earnings forecasts.

Third, we find that discretionary accruals are positively associated with future cash flows, suggesting that managers use discretionary accruals to communicate private information about future profitability. A more independent committee reduces the predictive value of discretionary accruals. However, they improve the predictive value of discretionary accruals reported by firms that would have missed their forecast. Interestingly, CEO-chairs have the opposite effect on the predictive value of discretionary accruals. Overall, the results are largely consistent with discretionary accruals being used to communicate private information about the future profitability of the firm.

Our paper contributes to the IPO earnings management literature by examining the role played by better corporate governance in constraining accruals management to meet voluntary earnings forecasts included in prospectuses, and the consequences of this better monitoring on the predictive value of discretionary accruals reported by IPO firms in the year of the IPO.

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**Table 1**  
**Descriptive Statistics<sup>(1)</sup>**

Variable <sup>(2)</sup>	Total (N = 301)		Forecasting (N = 111)		Non-forecasting (N =190)		Diff. in mean s P >   t   <sup>(3)</sup>
<b>Panel A – Firm Characteristics</b>							
	<b>Mean</b>	<b>Median</b>	<b>Mean</b>	<b>Median</b>	<b>Mean</b>	<b>Median</b>	
<i>ACINDEP</i>	0.6981	0.6667	0.6177	0.6667	0.7448	0.7750	***
<i>CEOCHAIR</i>	0.6107	1.0000	0.7431	1.0000	0.5344	1.0000	***
<i>RETOWN</i>	0.5177	0.4685	0.4350	0.3942	0.5667	0.5564	***
<i>GNEWS</i>	0.6511	1.0000	0.8378	1.0000	0.5421	1.0000	***
<i>HISTORY</i>	0.4013	0.0000	0.5946	1.0000	0.2872	0.0000	***
<i>HORIZON</i>	7.8820	9.0000	7.6820	9.0000	8.0000	9.0000	
<i>UW-PRESTIGE</i>	0.7567	1.0000	0.8018	1.0000	0.7302	1.0000	
<i>COMPENSATION</i>	0.6212	1.0000	0.6667	1.0000	0.5947	1.0000	
<i>LEVERAGE</i>	0.7308	0.7047	0.8485	0.7578	0.6628	0.5760	*
<i>SIZE</i>	10.2834	10.1802	10.3721	10.3234	10.2313	10.0924	
<b>Panel B - Accruals and other items</b>							
<i>DACCRUALS</i>	0.0538	0.0091	0.0593	0.0058	0.0507	0.0117	
<i>(EBDA – FCST)<sup>(4)</sup></i>	-1.6969	0.0000	-4.6015	-0.0040	0.0000	0.0000	**
<i>FCSTMISS<sup>(4)</sup></i>	0.1894	0.0000	0.5135	1.0000	0.0000	0.0000	***
<i>LEADCFLOW</i>	0.1051	0.1004	0.2811	0.1641	0.0053	0.0553	
<i>CFLOW</i>	0.1760	0.0913	0.0813	0.1195	0.2293	0.0351	
<i>NORMACCRUALS</i>	-0.3096	-0.0482	-0.0747	-0.0411	-0.4437	-0.0571	

(1) This table presents mean and median values for the variables included in the regression models. Tests of differences in means are performed to compare forecasting firms and non-forecasting firms.

(2) Variable definitions:

- FORECAST* = Indicator variable taking on the value of 1 if the firm voluntarily includes an earnings forecast in its prospectus; 0 otherwise
- ACINDEP* = Percentage of independent directors on the audit committee at the IPO date
- CEOCHAIR* = Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise
- RETOWN* = Natural logarithm of alpha calculated as the absolute value of [(N-Np-Ns)/N]
- GNEWS* = Indicator variable taking on the value of 1 if actual earnings in the first period ending after the IPO are greater than prior period earnings (i.e., “good news” based on a random walk model), 0 otherwise
- HISTORY* = Indicator variable taking on the value of 1 if earnings history is provided in the IPO for at least 5 periods, 0 otherwise
- HORIZON* = Number of months from the end of the latest interim period results included in the prospectus to the IPOs fiscal year end
- UW-PRESTIGE* = Indicator variable taking on the value of 1 for IPOs with a prestigious underwriter, 0 otherwise
- COMPENSATION* = Indicator variable taking on the value of 1 if the firm has a bonus or

	=	option plan in place at the IPO date; 0 otherwise
<i>SIZE</i>	=	Natural logarithm of lagged total assets
<i>DACCRUALS</i>	=	Estimated discretionary accruals, scaled by lagged total assets
<i>(EBDA-FCST)</i>	=	Earnings before discretionary accruals minus forecasted earnings divided by the absolute value of forecasted earnings for the IPO year
<i>FCSTMISS</i>	=	Indicator variable taking on the value of 1 if (EBDA-FCST) is negative; 0 otherwise
<i>LEVERAGE</i>	=	Total debt at the end of the IPO year divided by shareholders' equity at the end of the IPO year
<i>LEADCFLOW</i>	=	Cash flow from operations for the year following the IPO year scaled by lagged total assets
<i>CFLOW</i>	=	Cash flow from operations for the IPO year scaled by lagged total assets
<i>NORMACCRUALS</i>	=	Accruals for the IPO year – estimated discretionary accruals for the IPO year, scaled by lagged total assets

(3) \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level respectively; two-tailed.

(4) As non-forecasting firms do not have a target deviation (by definition since they do not forecast) the significance level is based on the difference from 0 for forecasting firms

**Table 2**  
**Forecast Prediction<sup>(1)</sup>**

Variable <sup>(2)</sup>	Predicted Sign	Coefficient <sup>(3)</sup>
<i>ACINDEP</i>	?	** <i>-0.5677</i>
<i>CEOCHAIR</i>	+	* <i>0.2761</i>
<i>RETOWN</i>	-	*** <i>-0.7378</i>
<i>GNEWS</i>	+	*** <i>0.8300</i>
<i>HISTORY</i>	?	*** <i>0.5872</i>
<i>HORIZON</i>	-	<i>-0.0105</i>
<i>UW-PRESTIGE</i>	-	<i>0.0086</i>
<i>COMPENSATION</i>	+	* <i>0.2622</i>
<i>SIZE</i>	?	<i>-0.0134</i>
<i>Intercept</i>		<i>-0.5362</i>
N		296
Wild Chi <sup>2</sup>		*** <i>72.03</i>
Pseudo R <sup>2</sup>		18.25%
Correctly classified		69.59%

(1) This table presents the results of the probit model examining the determinants of the probability of issuing an earnings forecast by IPO firms. Parameter estimates are based on the following model:  
 $FORECAST_i = \beta_0 + \beta_1 ACINDEP_i + \beta_2 CEOCHAIR_i + \beta_3 RETOWN_i + \beta_4 GNEWS_i + \beta_5 HISTORY_i + \beta_6 HORIZON_i + \beta_7 UW-PRESTIGE_i + \beta_8 COMPENSATION_i + \beta_9 SIZE_i + \varepsilon_i$

(2) Variable definitions:

<i>FORECAST</i>	=	Indicator variable taking on the value of 1 if the firm voluntarily includes an earnings forecast in its prospectus; 0 otherwise
<i>ACINDEP</i>	=	Percentage of independent directors on the audit committee at the IPO date
<i>CEOCHAIR</i>	=	Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise
<i>RETOWN</i>	=	Natural logarithm of alpha calculated as the absolute value of [(N-Np-Ns)/N]
<i>GNEWS</i>	=	Indicator variable taking on the value of 1 if actual earnings in the first period ending after the IPO are greater than prior period earnings (i.e., “good news” based on a random walk model), 0 otherwise
<i>HISTORY</i>	=	Indicator variable taking on the value of 1 if earnings history is provided in the IPO for at least 5 periods, 0 otherwise
<i>HORIZON</i>	=	Number of months from the end of the latest interim period results included in the prospectus to the IPO’s fiscal year end
<i>UW-PRESTIGE</i>	=	Indicator variable taking on the value of 1 for IPOs with a prestigious underwriter, 0 otherwise
<i>COMPENSATION</i>	=	Indicator variable taking on the value of 1 if the firm has a bonus or option plan in place at the IPO date; 0 otherwise
<i>SIZE</i>	=	Natural logarithm of lagged total assets

(3) \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level respectively; one-tailed if directional prediction; two-tailed otherwise.

**Table 3**  
**Discretionary Accruals<sup>(1)</sup>**

		<b>Model (3) – Forecasters</b>	<b>Model (3) – Full sample</b>
<b>Variable<sup>(2)</sup></b>	<b>Pred.</b>	<b>Coefficient<sup>(3)</sup></b>	<b>Coefficient<sup>(3)</sup></b>
<i>(EBDA-FCST)</i>	-	***-0.1327	***-0.1337
<i>(EBDA-FCST)*ACINDEP</i>	+	*0.0091	***0.0135
<i>(EBDA-FCST)*CEOCHAIR</i>	?	***0.1216	***0.1231
<i>ACINDEP</i>	?	-0.0269	0.0603
<i>CEOCHAIR</i>	?	0.0259	0.0250
<i>LEVERAGE</i>	?	*-0.0618	-0.0472
<i>SIZE</i>	?	-0.0140	** -0.0531
<i>Intercept</i>	?	0.2339	**0.5868
N		96	279
F-statistic		***11.27	***29.89
R <sup>2</sup>		40.44%	9.61%
Observations with standardized resids > 2		4	7

<sup>(1)</sup> This table presents the results of the OLS regression examining the use of discretionary accruals to meet voluntary earnings forecasts included in prospectuses. Parameter estimates are based on the following model:  

$$DACCRUALS_i = \beta_0 + \beta_1(EBDA-FCST)_i + \beta_2(EBDA-FCST)*ACINDEP_i + \beta_3(EBDA-FCST)*CEOCHAIR_i + \beta_4ACINDEP_i + \beta_5CEOCHAIR_i + \beta_6LEVERAGE_i + \beta_7SIZE_i + \varepsilon_i$$
(3)

<sup>(2)</sup> Variable definitions:

*DACCRUALS* = Estimated discretionary accruals for the IPO year, scaled by lagged total assets

*(EBDA-FCST)* = Earnings before discretionary accruals minus forecasted earnings divided by the absolute value of forecasted earnings for the IPO year

*ACINDEP* = Percentage of independent directors on the audit committee at the IPO date

*CEOCHAIR* = Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise

*LEVERAGE* = Total debt at the end of the IPO year divided by shareholders' equity at the end of the IPO year

*SIZE* = Natural logarithm of lagged total assets

<sup>(3)</sup> \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level respectively; one-tailed if directional prediction; two-tailed otherwise.

**Table 4 – Additional Analyses  
Discretionary Accruals<sup>(1)</sup>**

Variable <sup>(2)</sup>	Pred.	Coefficient <sup>(3)</sup>
<i>FCSTMISS</i>	+	**0.2301
<i>FCSTMISS*ACINDEP</i>	-	*-0.1550
<i>FCSTMISS*CEOCHAIR</i>	?	0.0169
<i>ACINDEP</i>	?	0.1124
<i>CEOCHAIR</i>	?	0.0117
<i>LEVERAGE</i>	?	-0.0395
<i>SIZE</i>	?	***-0.0564
<i>Intercept</i>	?	**0.5594
N		279
F-statistic		***6.01
R <sup>2</sup>		7.42%
Observations with standardized resids > 2		7

\* This table presents the results of the OLS regression examining the use of discretionary accruals to meet voluntary earnings forecasts included in prospectuses. Parameter estimates are based on the following model:

(2) Variable definitions:

*DACCRUALS* = Estimated discretionary accruals for the IPO year, scaled by lagged total assets

*FCSTMISS* = Indicator variable taking on the value of 1 for firms that would miss their forecast based on earnings before discretionary accruals (i.e., if (EBDA-FCST) is negative); 0 otherwise

*ACINDEP* = Percentage of independent directors on the audit committee at the IPO date

*CEOCHAIR* = Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise

*LEVERAGE* = Total debt at the end of the IPO year divided by shareholders' equity at the end of the IPO year

*SIZE* = Natural logarithm of lagged total assets

(3) \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level respectively; one-tailed if directional prediction; two-tailed otherwise.

**Table 5**  
**Future Cash Flow Prediction<sup>(1)</sup>**

	<b>Model (a)</b>	<b>Model (b)</b>
<b>Variable<sup>(2)</sup></b>	<b>Coefficient<sup>(3)</sup></b>	<b>Coefficient<sup>(3)</sup></b>
<i>CURRENTCFLOW</i>	***1.1423	***1.1643
<i>NORMACCRUALS</i>	***0.6067	***0.3171
<i>DACCRUALS</i>	***1.2135	**0.2636
<i>DACCRUALS*ACINDEP</i>	***-0.9333	
<i>DACCRUALS*CEOCHAIR</i>		***0.4977
<i>DACCRUALS*FCSTMISS</i>	-0.4036	*0.7281
<i>FCSTMISS*ACINDEP</i>	0.0376	
<i>FCSTMISS*CEOCHAIR</i>		-0.1269
<i>DACCRUALS*FCSTMISS*ACINDEP</i>	*0.9490	
<i>DACCRUALS*FCSTMISS*CEOCHAIR</i>		*-0.8147
<i>FCSTMISS</i>	-0.1307	0.0139
<i>ACINDEP</i>	*-0.1604	
<i>CEOCHAIR</i>		0.0627
<i>Intercept</i>	***0.2077	0.0214
N	271	271
F-statistic	***76.19	***94.82
R <sup>2</sup>	89.14%	83.56%
Observations with standardized residuals > 2	14	15

(1) This table presents the results of the OLS regressions examining the predictive value of discretionary accruals and the influence of better corporate governance on the latter. Parameter estimates are based on the following models:

$$(a) LEADCFLOW_i = \beta_0 + \beta_1 CFLOW_i + \beta_2 NORMACCRUALS_i + \beta_3 DACCRUALS_i + \beta_4 DACCRUALS*ACINDEP_i + \beta_5 DACCRUALS*FCSTMISS_i + \beta_6 FCSTMISS*ACINDEP_i + \beta_8 DACCRUALS*FCSTMISS*ACINDEP_i + \beta_9 FCSTMISS_i + \beta_{10} ACINDEP_i + \varepsilon_i$$

$$(b) LEADCFLOW_i = \beta_0 + \beta_1 CFLOW_i + \beta_2 NORMACCRUALS_i + \beta_3 DACCRUALS_i + \beta_4 DACCRUALS*CEOCHAIR_i + \beta_5 DACCRUALS*FCSTMISS_i + \beta_6 FCSTMISS*CEOCHAIR_i + \beta_8 DACCRUALS*FCSTMISS*CEOCHAIR_i + \beta_9 FCSTMISS_i + \beta_{10} CEOCHAIR_i + \varepsilon_i$$

(2) Variable definitions:

<i>LEADCFLOW</i>	=	Cash flow from operations for the year following the IPO year, scaled by lagged total assets
<i>CFLOW</i>	=	Cash flow from operations for the IPO year, scaled by lagged total assets
<i>DACCRUALS</i>	=	Estimated discretionary accruals, scaled by lagged total assets
<i>NORMACCRUALS</i>	=	Accruals for the IPO year – estimated discretionary accruals for the IPO year, scaled by lagged total assets
<i>FCSTMISS</i>	=	Indicator variable taking on the value of 1 if ( <i>EBDA-FCST</i> ) is negative; 0 otherwise
<i>ACINDEP</i>	=	Percentage of independent directors on the audit committee
<i>CEOCHAIR</i>	=	Indicator variable taking on the value of 1 if the CEO also is the Chairman of the board of directors; 0 otherwise

(3) \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level respectively; one-tailed if directional prediction; two-tailed otherwise