



Does equity underpricing affect voluntary disclosure?

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ARTICLE INFO

JEL classification:

M41
G14
G23

Keywords:

Voluntary disclosure
Equity mispricing
Mutual fund flows
Management forecasts

ABSTRACT

We investigate whether equity underpricing affects the frequency, content, and tone of voluntary corporate disclosures. Using mutual fund redemptions as an exogenous source of underpricing, we find that managers respond by issuing more management forecasts, filing more voluntary 8-K items, and adopting a more positive tone in those filings. The specificity of management forecasts, however, does not change. The response is broad-based: it does not vary with litigation risk or CEO compensation sensitivity, is not mediated by investment, and is not substituted by private exploitation of the underpricing through insider trading, option exercises, or reduced equity issuance. The joint pattern, more disclosure and more positive language without a corresponding increase in informational precision, is more consistent with strategic communication and impression management than with full information provision.

1. Introduction

We investigate whether equity underpricing affects corporate disclosures. Managers facing underpricing may disclose more to mitigate it, reduce litigation risk (Skinner, 1994), and alleviate career concerns (Weisbach, 1988). Alternatively, they may withhold information to exploit underpricing for personal gain (Aboody and Kasznik, 2000; Ali et al., 2011), preserve value for existing shareholders (Barth et al., 2021), or remain silent if disclosure is unlikely to correct prices (Zuo, 2016). A disclosure response, if observed, may itself take two distinct forms: managers may provide additional value-relevant information to correct prices, or they may engage in strategic communication aimed at managing investor perception without necessarily improving informational precision (Loughran and McDonald, 2011; Merkl-Davies and Brennan, 2007). Distinguishing these requires examining not only whether disclosure increases, but also how its qualitative content changes.¹

Because share prices and information environments are jointly determined (Healy and Palepu, 2001; Blankespoor et al., 2020), establishing a directional effect requires an exogenous shock to prices. We use mutual fund redemptions: when funds sell large blocks of stock for liquidity reasons unrelated to fundamentals, a price drop follows. This drop has been linked to takeovers, investment, insider trading, and SEO timing (Coval and Stafford, 2007; Edmans et al., 2012; Lou and Wang, 2018; Ali et al., 2011; Khan et al., 2012). The lag between price drop and disclosure further alleviates reverse-causality concerns.

Using a panel of 199,349 firm-quarter observations from 1992 to 2017, we examine four disclosure dimensions: the number of management forecasts, the number of voluntary Form 8-K filings, the textual tone of those filings, and forecast specificity. Managers respond to underpricing by issuing more forecasts, filing more voluntary 8-K items, and adopting more positive tone, while forecast specificity does not change. The joint pattern, in which more disclosure and more positive language occur without a corresponding increase in informational precision, is more consistent with strategic communication and impression management than with full

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¹ We focus on underpricing because it is unclear why managers would correct overpricing; Khan et al. (2012) finds they exploit overpricing to issue equity in SEOs.

information provision, though managerial intent is not directly observable. The response is broad-based: it does not vary with litigation risk or CEO compensation sensitivity, nor is it mediated by investment.

This study's contribution centers on the joint pattern of tone and specificity. Disclosure becomes more frequent and more positively worded, but no more precise. This pattern is not simply a lower-cost version of informative disclosure, adding a specific number to an existing forecast is a small marginal step once a manager has already decided to issue one, so a manager who wanted only to signal more information cheaply had that option available and did not take it. Because that low-cost step was foregone, the pattern is better read as evidence discriminating between information provision and strategic communication than as a report that disclosure "increased" along some channels and not others. Relatedly, the multiple disclosure channels we examine (management forecasts, voluntary Form 8-K filings, and their textual tone) and the continuous MFFlow measure extend Jiang et al. (2021), who document increased earnings guidance in the bottom decile of MFFlow. Together with the tone-specificity result, this extension amounts to a contribution that connects our findings to the literature on impression management in corporate disclosures (Loughran and McDonald, 2011; Davis et al., 2012; Merkl-Davies and Brennan, 2007) and, more loosely, to the literature on the real consequences of fire-sale underpricing (Edmans et al., 2012; Khan et al., 2012; Lou and Wang, 2018), which motivates why managers might respond at all.

2. Related literature

Our study relates to the literature on managerial opportunism in discretionary disclosure. Verrecchia (1983) argues that informed managers with low disclosure costs disclose favorable information. Aboudy and Kasznik (2000) show that managers time disclosures around option grants; Nagar et al. (2003) document that stock-price-sensitive compensation improves disclosure quality; Ali et al. (2011) find that managers trade after non-fundamental price shocks; and Barth et al. (2021) show that firms manage prices to benefit existing shareholders. Discretionary disclosure has been linked to proprietary costs, investor sentiment, institutional holdings, firm performance, and cost of capital (Verrecchia and Weber, 2006; Bergman and Roychowdhury, 2008; Boone and White, 2015; Kasznik and Lev, 1995; Botosan and Plumlee, 2002; Pierini et al., 2025). A related literature studies why managers initiate or stop forecasting (Cheng et al., 2005; Chen et al., 2011; Houston et al., 2010). We extend these insights by showing that managers respond to exogenous underpricing with more intensive and more positively framed disclosure.

Studies using mutual fund redemptions as an instrument for exogenous underpricing include Coval and Stafford (2007) and Edmans et al. (2012). Subsequent work documents real and financial consequences: insiders trade on this pressure (Ali et al., 2011), affected firms cut investment (Lou and Wang, 2018), analysts respond (Sulaeman and Wei, 2012), managers do not learn fundamentals from the pressure (Zuo, 2016), and firms increase share repurchases (Bourveau et al., 2023). Jiang et al. (2021) show firms respond by increasing earnings guidance, while underperformers resort to earnings management. Mercado et al. (2025) find accounting quality mitigates fire-sale discounts. We extend this line by examining multiple disclosure channels across the full continuous distribution of price pressure and by characterizing the qualitative nature of the response.

Two studies provide the closest precedents for our analysis but differ in identification and scope. Sletten (2012) shows that after negative price changes managers disclose more positive information; we differ by exploiting an exogenous shock and including content measures. Li and Zhang (2015) find that lifting short-selling restrictions reduces bad-news forecasts; we differ by examining underpricing exogenous to firm fundamentals rather than to managerial information. Our findings connect most closely to the impression-management literature on the strategic framing of disclosures (Merkl-Davies and Brennan, 2007; Henry, 2008; Davis et al., 2012; Allee and DeAngelis, 2015; Berkovitch et al., 2025): that literature typically infers strategic framing from tone alone, whereas the joint behavior of tone and specificity that we document lets us also rule out the alternative that positive tone simply accompanies genuinely more informative disclosure.

3. Predictions and identification strategy

The literature identifies two opposing forces. Costs of disclosure include proprietary costs (Verrecchia, 1983; Verrecchia and Weber, 2006), litigation risk (Skinner, 1994), and commitments to maintain disclosure (Einhorn and Ziv, 2008). Benefits stem from the documented real costs that fire-sale-induced underpricing imposes on firms and managers: effects on SEO timing and financing (Khan et al., 2012), takeovers (Edmans et al., 2012), investment (Lou and Wang, 2018), and liquidity and index assignment (Schoenfeld, 2017); chief financial officers explicitly identify these costs and treat them as motivation to respond (Trentmann, 2021; Wursthorn and Rudegeair, 2021). We take these costs as the well-documented motivation for the disclosure response and turn to whether managers respond and how.

The net effect on the level of disclosure depends on the balance of these forces. Managers may instead remain silent and exploit underpricing for personal gain through insider trading (Ali et al., 2011); our analysis is conditional on managers choosing disclosure rather than silence.

A similar tension applies to the content of disclosure, and the qualitative pattern of content adjustments discriminates between two interpretations. Under information provision, we expect more positive tone (since the firm is undervalued) and more specific forecasts, since precision elicits faster price correction (Holthausen and Verrecchia, 1988; Kim and Verrecchia, 1991; Barth et al., 2026). Under impression management, we expect more positive tone but no increase in specificity, since precision raises accountability without serving the perception-management objective (Merkl-Davies and Brennan, 2007; Henry, 2008). The joint behavior of tone and specificity offers a discriminating test.

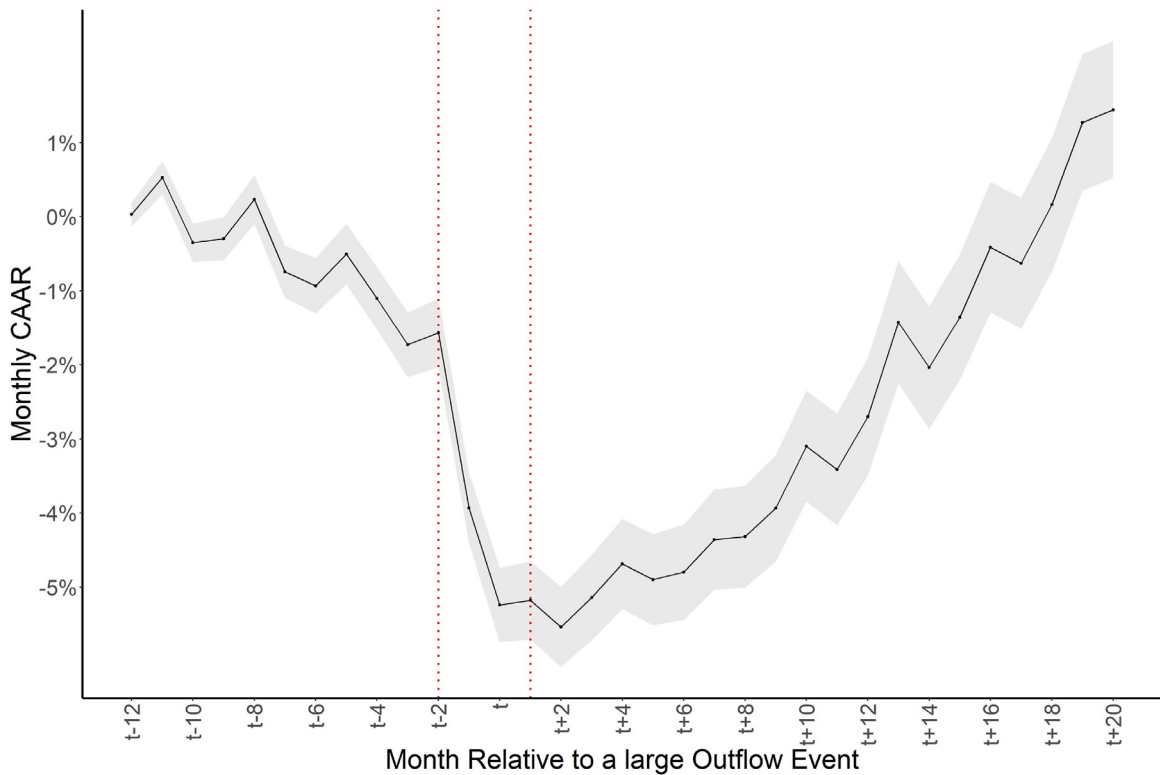


Fig. 1. Effect of mutual fund outflows on stock returns. The figure plots the monthly cumulative average abnormal returns (CAAR) of stocks around event months, where we define an event as a firm-month observation in which *MFFlow* falls within the top percentile value of the full sample. We compute CAAR over the benchmark of the CRSP equal-weighted index from 12 months before the event to 20 months after. There are three event months because we observe holdings at the quarterly level while we observe returns at a monthly frequency. The gray shaded area denotes 95% confidence intervals.

3.1. Mutual fund outflows and equity underpricing

We identify the effect of stock prices on disclosure using *MFFlow*, the price pressure from fund-flow-induced trading (Coval and Stafford, 2007; Edmans et al., 2012). Following Edmans et al. (2012), we obtain quarterly mutual fund holdings from CDA Spectrum/Thomson and fund flows from CRSP, exclude funds specializing in a single industry, and compute, for each fund j in quarter t , $Outflow_{j,t} = -F_{j,t}/TA_{j,t-1}$, where $F_{j,t}$ is the fund's total flow and $TA_{j,t-1}$ its lagged total assets. We then construct

$$MFFlow_{i,t} = \sum_{j=1}^m \frac{F_{j,t} \times SHARES_{i,j,t-1} \times PRC_{i,t-1}}{TA_{j,t-1} \times VOL_{i,t}}, \quad (1)$$

where the summation is over funds with $Outflow_{j,t} \geq 5\%$, multiplied by -1 for interpretability. *MFFlow* reflects hypothetical orders projected from previously disclosed portfolios rather than realized trades (Edmans et al., 2012), and because funds release holdings only several weeks after quarter-end, managers are unlikely to identify the relevant sales and respond directly (Wursthorn and Rudegeair, 2021). Unlike Jiang et al. (2021), who focus on the bottom decile of *MFFlow*, we use it as a continuous variable.

Fig. 1 traces cumulative abnormal returns (CAAR) over the CRSP equal-weighted index from 12 months before to 20 months after an “event”, defined as a firm-month in the top percentile of *MFFlow* (Coval and Stafford, 2007). There is no significant pre-event decline; the price impact is significant and persistent, and the flows are uninformative to managers (Zuo, 2016; Sulaeman and Wei, 2012).

4. Data and research design

We compute *MFFlow* from CDA Spectrum/Thomson and CRSP and match firm-quarter observations to Compustat fundamentals, CRSP returns, I/B/E/S analyst data, and ExecuComp compensation data. We match 85,515 management forecasts from I/B/E/S (averaging 822 per quarter) and 305,796 Form 8-K filings scraped from EDGAR (averaging 2940 per quarter). After removing observations with missing variables and restricting to NASDAQ/NYSE firms, the sample contains 199,349 firm-quarter observations on 7840 unique firms from 1992Q1 through 2017Q4.

Table 1
Descriptive statistics.

Statistic	N	Mean	St. Dev.	Pctl(25)	Median	Pctl(75)
<i>MFFlow</i>	199,349	0.691	1.886	0.006	0.186	0.628
<i>ForecastInd</i>	199,349	0.320	0.467	0	0	1
<i>NumForecast</i>	199,349	0.429	0.727	0	0	1
<i>Num8K</i>	199,349	1.534	1.870	0	1	2
<i>Item202</i>	199,349	0.493	0.604	0	0	1
<i>Item701</i>	199,349	0.282	0.816	0	0	0
<i>lmNegative</i>	75,558	0.015	0.010	0.008	0.013	0.019
<i>lmPositive</i>	75,558	0.012	0.005	0.008	0.011	0.014
<i>lmTone</i>	75,558	−0.003	0.011	−0.008	−0.002	0.003
<i>Specificity</i>	47,671	2.256	0.444	2.000	2.000	2.500
<i>LnMVE</i>	199,349	6.054	1.667	4.840	5.980	7.182
<i>BTM</i>	199,349	0.562	1.588	0.268	0.467	0.752
<i>Loss</i>	199,349	0.225	0.418	0	0	0
<i>Leverage</i>	199,349	0.630	74.931	0.005	0.255	0.770
<i>LnNumAnalysts</i>	199,349	3.583	4.665	0	2	5
<i>SUE</i>	199,349	0.026	0.323	−0.091	0.027	0.151
<i>SUENeg</i>	199,349	0.398	0.489	0	0	1
<i>Return_t</i>	199,349	0.053	0.283	−0.091	0.028	0.158
<i>Return_{t−1}</i>	199,349	0.055	0.289	−0.091	0.029	0.159
<i>Volatility_{t−1}</i>	199,349	0.030	0.018	0.018	0.026	0.037
<i>NetTrades_t</i>	43,423	−0.357	0.754	−1	−0.714	0.200
<i>OptionExcer_t</i>	87,159	2.833	3.686	0	0	6.729
<i>EquityIssuance_t</i>	191,509	0.036	0.294	0	0.001	0.007

This table reports descriptive statistics for the main variables. Our sample consists of 199,348 firm-quarter observations (7840 unique firms) between the first quarter of 1992 and the fourth quarter of 2017.

Table 1 reports descriptive statistics. The sample consists predominantly of mid- and large-cap public firms, with an average market capitalization of approximately \$1.9 billion and an average analyst following of 3.6. The average firm has a book-to-market ratio of 0.56, a quarterly stock return of 5.3%, and a prior-quarter daily return volatility of 3.0%. Approximately 22.5% of firm-quarters report a loss.

Our baseline specification relates voluntary disclosure to underpricing:

$$\begin{aligned} VoluntaryDisclosure_{i,t+1} = & \beta_1 Underpricing_{i,t} + \Gamma \cdot Controls_{i,t} \\ & + \theta_y FirmFE_i + \theta_z YearQuarterFE_t + \varepsilon_{i,t}, \end{aligned} \quad (2)$$

where $Underpricing_{i,t}$ is $MFFlow_{i,t}$ and $Controls_{i,t}$ includes lagged disclosure measures, log market value of equity ($LnMVE$), book-to-market (BTM), analyst coverage ($LnNumAnalysts$), leverage, a loss indicator ($Loss$), standardized unexpected earnings following [Livnat and Mendenhall \(2006\)](#) (SUE) and a negative- SUE indicator, current and lagged returns, and prior-quarter return volatility. We expect $\beta_1 > 0$ and cluster standard errors at the firm and year-quarter levels.

The dependent variables capture both the quantity and content of voluntary disclosure. For quantity, $ForecastInd_{i,t+1}$ indicates issuing a forecast in quarter $t+1$, and $NumForecast_{i,t+1}$ is the log of one plus the number of forecasts. Following [He and Plumlee \(2020\)](#), we treat Form 8-K Items 2.02 (results of operations) and 7.01 (Regulation FD) as voluntary and compute $Num8K$, $Item202$, and $Item701$ as the log of one plus the number of filings of each type. For content, $Specificity_{i,t}$ equals 3 for a point forecast, 2 for a closed-range forecast, and 1 for an open-range forecast, averaged across forecasts within a quarter; and we apply the [Loughran and McDonald \(2011\)](#) dictionary to voluntary 8-K filings to compute $lmPositive$, $lmNegative$, and $lmTone$. We estimate Eq. (2) for both contemporaneous (t) and one-quarter-ahead ($t+1$) quantity outcomes; content outcomes are estimated only contemporaneously, since content filed during the underpricing quarter reflects the manager's real-time response.

5. Results

5.1. Disclosure levels

Table 2 reports estimates of Eq. (2) with management forecasts as the dependent variable. The contemporaneous specifications in columns (1)–(2) show no significant relation. The future-period specifications in columns (3)–(4) show a positive and significant relation: a one-standard-deviation increase in Underpricing is associated with a 0.25 percentage-point increase ($\approx 0.8\%$ relative to the unconditional mean) in the probability of issuing a forecast in the following quarter and approximately 0.24% increase in the number of management forecasts issued in the following quarter. These effects are statistically significant but economically small in absolute terms. This modest magnitude is consistent with a low-cost, low-commitment communication response rather than a

Table 2
Equity underpricing and management forecasts.

	<i>ForecastInd_t</i> (1)	<i>NumForecast_t</i> (2)	<i>ForecastInd_{t+1}</i> (3)	<i>NumForecast_{t+1}</i> (4)
<i>MFFlow_t</i>	0.001 (0.0004)	0.0004 (0.0003)	0.001*** (0.0003)	0.001*** (0.0003)
<i>LnMVE</i>	0.011*** (0.002)	0.010*** (0.002)	0.016*** (0.002)	0.017*** (0.002)
<i>BTM</i>	0.001 (0.0002)	0.001 (0.0002)	0.001 (0.0001)	−0.001 (0.0001)
<i>Loss</i>	−0.012*** (0.002)	−0.010*** (0.002)	−0.013*** (0.003)	−0.012*** (0.002)
<i>Leverage</i>	−0.001 (0.001)	0.000 (0.001)	0.001*** (0.001)	0.001* (0.001)
<i>LnNumAnalyst</i>	0.054*** (0.003)	0.050*** (0.003)	0.016*** (0.002)	0.010*** (0.002)
<i>Return_t</i>	−0.031*** (0.004)	−0.026*** (0.003)	−0.014*** (0.003)	−0.012*** (0.003)
<i>Return_{t-1}</i>	−0.008*** (0.003)	−0.006** (0.003)	−0.0004 (0.002)	−0.001 (0.002)
<i>Volatility_{t-1}</i>	−0.284*** (0.078)	−0.258*** (0.064)	−0.140** (0.064)	−0.113** (0.056)
<i>SUE</i>	0.005* (0.003)	0.005* (0.003)	0.010*** (0.003)	0.008*** (0.002)
<i>SUENeg</i>	0.004** (0.002)	0.004** (0.002)	−0.001 (0.002)	0.0001 (0.001)
Lagged Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year-Qtr. FE	Yes	Yes	Yes	Yes
Obs.	199,349	199,349	199,349	199,349
Adjusted R ²	0.690	0.677	0.712	0.695

This table reports regression summary statistics from estimating Eq. (2) where the outcome variable is either *ForecastInd*, an indicator variable equal to one if the firm issues a forecast during the quarter otherwise, or *NumForecast*, the logarithm of one plus the number of management forecasts issued by the firm during the quarter. Columns (1) and (2) present results for the quarter concurrent with the equity underpricing, t , and Columns (3) and (4) present results for the quarter following the underpricing one, $t+1$. Our sample consists of 199,348 firm-quarter observations from 7840 unique firms between the first quarter of 1992 and the fourth quarter of 2017. Standard errors are clustered at the firm and quarter levels. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

more costly, fully informative disclosure response, though we do not observe managers' costs directly and the small magnitude is also consistent with a genuine, if minor, information-provision response.²

Table 3 repeats the analysis using Form 8-K filings. We find no significant relation for the total number of 8-Ks (columns 1 and 4), consistent with this count mixing voluntary and mandatory items. Among voluntary items, we find no effect on Reg-FD-related 7.01 items but a positive and robust effect on item 2.02, both in the underpricing quarter and in the following quarter.

5.2. Information content of disclosure

Table 4 reports estimates for the three textual measures and for forecast specificity. All four measures are reported contemporaneously, since content is observable only conditional on a relevant disclosure being issued, both for the textual attributes of 8-K filings and for forecast specificity, and reflects the manager's real-time response during the underpricing quarter. Disclosures filed during the underpricing quarter contain more positive words and exhibit a more positive overall tone. By contrast, the coefficient on forecast specificity is statistically indistinguishable from zero and economically small in magnitude, providing little evidence that managers increase the precision of their disclosures in response to underpricing. This null result is corroborated by an untabulated analysis using the same specification: underpricing is also unrelated to disclosure uncertainty, modal-verb intensity, complexity, or litigious language, indicating that the absence of an effect on informational precision is not an artifact of the specificity measure alone. The tone effect attenuates in subsequent periods (untabulated), suggesting that managers first adjust tone during the underpricing quarter and increase disclosure frequency in subsequent quarters.

² We compute economic magnitudes using conventions appropriate to the functional form of each dependent variable. For the binary outcome *ForecastInd*, we report the relative change in probability as $\hat{\beta}_1 \times SD(MFFlow)/\bar{y}$, where $\hat{\beta}_1$ is the estimated coefficient on *MFFlow*, $SD(MFFlow) = 1.886$ (Table 1), and $\bar{y}$ is the unconditional sample mean of the dependent variable. For the log-transformed count outcome *NumForecast*, the coefficient is approximately a semi-elasticity, and we report $\hat{\beta}_1 \times SD(MFFlow) \times 100\%$ as the approximate percentage change in the underlying count. All magnitudes are computed using unrounded regression coefficients; Table 2 reports coefficients rounded to three decimal places. For *ForecastInd*: $0.00133 \times 1.886/0.32 \approx 0.8\%$. For *NumForecast*: $0.00128 \times 1.886 \times 100\% \approx 0.24\%$.

Table 3
Equity underpricing and voluntary disclosure through Form 8-Ks.

	$Num8K_t$ (1)	$Item202_t$ (2)	$Item701_t$ (3)	$Num8K_{t+1}$ (4)	$Item202_{t+1}$ (5)	$Item701_{t+1}$ (6)
$MFFlow_t$	-0.002 (0.001)	0.0003* (0.0002)	-0.001 (0.0004)	0.0004 (0.0005)	0.001** (0.0002)	0.0001 (0.0003)
Lagged Controls	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-Qtr. FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	199,349	199,349	199,349	199,349	199,349	199,349
Adjusted R ²	0.730	0.853	0.565	0.742	0.852	0.568

This table reports regression summary statistics from estimating Eq. (2) where the outcome variable is $Num8K$, natural logarithm of one plus the number of 8K disclosures filed during the quarter, $Item202$, the natural logarithm of one plus the number item 202 issued by the firm during the quarter, or $Item701$, the natural logarithm of one plus the number item 701 issued by the firm during the quarter. Columns (1)–(3) present results for the quarter concurrent with the equity underpricing, t , and Columns (4)–(6) present results for the quarter following the underpricing one, $t+1$. Our sample consists of 199,348 firm-quarter observations from 7840 unique firms between the first quarter of 1992 and the fourth quarter of 2017. Standard errors are clustered at the firm and quarter levels. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4
Equity underpricing and textual attributes of voluntary disclosure.

	$lmNeg_t$ (1)	$lmPositive_t$ (2)	$lmTone_t$ (3)	$Specificity_t$ (4)
$MFFlow_t$	-0.00003 (0.00002)	0.00002* (0.00001)	0.00005** (0.00002)	-0.001 (0.001)
Lagged Controls	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year-Qtr. FE	Yes	Yes	Yes	Yes
Obs.	75,558	75,558	75,558	47,671
Adjusted R ²	0.605	0.643	0.582	0.433

This table reports regression summary statistics from estimating Eq. (2) where the outcome variable is one of the three textual attributes of the 8-K of the firm (Columns 1–3) or the specificity of the management forecast (Column 4). Our sample consists of 75,558 (47,671) firm-quarter observations between the first quarter of 1992 and the fourth quarter of 2017. Standard errors are clustered at the firm and quarter levels. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

The joint pattern of these findings is the central discriminating evidence in the paper. Managers respond to underpricing by issuing more disclosures and adopting more positive language, but do not commit to more informative forecasts. Under information provision, we would expect both effects: positive tone and greater forecast specificity to elicit faster price correction (Holthausen and Verrecchia, 1988; Kim and Verrecchia, 1991). Under impression management, the prediction is precisely the observed pattern: positive language without precision, since precision raises accountability without serving the perception-management objective (Merkl-Davies and Brennan, 2007; Henry, 2008). The evidence is therefore more consistent with strategic communication, though we cannot fully rule out a contribution from information provision. Moreover, managerial intent is inherently unobservable. Our interpretation relies on the observed pattern of disclosure attributes rather than on a direct measure of impression-management motives. It remains possible that managers provide value-relevant information through dimensions not captured by forecast specificity.

5.3. Additional analyses

Table 5 reports these results in two panels. First, we test whether the response operates through investment by augmenting Eq. (2) with current and lagged $Investment_{i,t}$, capital expenditures scaled by beginning-of-quarter assets (Table 5, Panel A, Columns 1–2). Although prior work finds underpricing reduces investment over longer horizons (Lou and Wang, 2018; Israeli et al., 2021), controlling for investment does not change our inferences. The coefficient on *Underpricing* remains positive and significant, indicating that the disclosure response is not simply a byproduct of contemporaneous changes in investment policy.

Second, we interact *Underpricing* with an indicator for high-litigation industries (Francis et al., 1994; Kim and Skinner, 2012) (Table 5, Panel A, Columns 3–4). The interaction is insignificant. We do not find evidence that litigation risk plays a role in the disclosure response. If managers disclosed more only to pre-empt shareholder litigation, we would expect the response to be concentrated among firms in high-litigation industries. Instead, the response is essentially the same in high- and low-litigation industries, consistent with a general, low-cost communication response rather than disclosure concentrated among a narrow set of incentivized managers.

Table 5
Robustness and additional mechanism tests.

Panel A: Firm investment and Litigation risk						
	<i>ForecastInd_{t+1}</i> (1)	<i>NumForecast_{t+1}</i> (2)	<i>ForecastInd_{t+1}</i> (3)	<i>NumForecast_{t+1}</i> (4)		
<i>MFFlow_t</i>	0.001*** (0.0003)	0.001*** (0.0003)	0.001*** (0.0003)	0.001*** (0.0003)		
<i>Investment_t</i>	−0.012 (0.021)	0.001 (0.019)				
<i>Investment_{t+1}</i>	−0.058** (0.024)	−0.039* (0.022)				
<i>MFFlow_t×Litigation_t</i>			−0.0005 (0.001)	−0.0001 (0.001)		
<i>Litigation_t</i>			−0.106*** (0.027)	−0.059*** (0.021)		
Controls	Yes	Yes	Yes	Yes		
Lagged Controls	Yes	Yes	Yes	Yes		
Firm FE	Yes	Yes	No	No		
Year-Qtr. FE	Yes	Yes	Yes	Yes		
Obs.	182,019	182,019	199,349	199,349		
Adjusted R ²	0.717	0.698	0.712	0.695		
Panel B: Reg FD and Financial Crisis Periods						
	<i>ForecastInd_{t+1}</i> Fin. Crisis (1)	<i>ForecastInd_{t+1}</i> Non Fin. Crisis (2)	<i>NumForecast_{t+1}</i> Fin. Crisis (3)	<i>NumForecast_{t+1}</i> Non Fin. Crisis (4)	<i>ForecastInd_{t+1}</i> Full Sample (5)	<i>NumForecast_{t+1}</i> Full Sample (6)
<i>MFFlow_t</i>	−0.003 (0.002)	0.001*** (0.0003)	−0.002 (0.001)	0.001*** (0.0003)	0.001*** (0.0003)	0.001*** (0.0002)
<i>MFFlow_t×RegFD</i>					−0.001 (0.001)	0.0002 (0.001)
<i>RegFD</i>					0.107*** (0.003)	0.089*** (0.002)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Lagged Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-Qtr. FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5962	193,387	5962	193,387	199,349	199,349
Adjusted R ²	0.757	0.710	0.738	0.693	0.704	0.686

This table reports regression summary statistics from estimating Eq. (2) augmented with the additional mechanism and robustness tests discussed in Section 5.3. In Panel A, Columns (1)–(2) add current and lagged *Investment*, capital expenditures scaled by beginning-of-quarter assets, to test whether the disclosure response operates through investment; Columns (3)–(4) interact *Underpricing* with an indicator for high-litigation industries, *Litigation*, and, because litigation risk is time-invariant within a firm, omit firm fixed effects. In Panel B, Columns (1)–(4) re-estimate the baseline specification separately for the financial crisis period (August 2008–March 2009) and all other quarters, and Columns (5)–(6) interact *Underpricing* with a post-Reg FD indicator equal to one for quarters on or after the passage of Regulation FD in October 2000. Standard errors are clustered at the firm and quarter levels. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Third, we re-estimate Eq. (2) separately for the financial crisis period (August 2008–March 2009) and other periods (Table 5, Panel B, Columns 1–4), and add an interaction with a post-Reg FD indicator (Panel B, Columns 5–6). The coefficient on *Underpricing* is insignificant in the crisis subsample and significant in the non-crisis subsample.³ The interaction with the post-Reg FD indicator in Columns (5) and (6) is likewise insignificant, indicating that the disclosure response to underpricing does not differ systematically before and after the regulation's passage in October 2000. Fourth, in untabulated results, we re-estimate using *FlowToStock* from Wardlaw (2019), an alternative price-pressure measure that removes a return-and-turnover component embedded in *MFFlow*. The results are consistent.

5.4. Disclosure versus private exploitation of underpricing

A manager facing underpricing can also respond by staying silent and privately exploiting the mispricing, for instance through personal share purchases or option exercises, rather than by disclosing (Ali et al., 2011). Table 6 examines this alternative directly. Columns (1)–(3) regresses firm-year insider net trading (aggregated from Thomson Reuters insider-filing data), CEO option-exercise value (ExecuComp), and a shares-outstanding-growth proxy for equity issuance on *Underpricing*, using the same specification as Eq. (2), to test whether underpricing predicts these private-exploitation behaviors in our sample. *Underpricing* is unrelated to insider

³ The crisis window contains only 5962 firm-quarter observations against 193,387 in the remainder of the sample, so this difference is also consistent with substantially lower power during the crisis rather than a true change in managerial behavior, and we do not read it as evidence that the response is crisis-specific.

Table 6
Disclosure versus private exploitation of underpricing.

	$NetTrades_t$ (1)	$OptionExcer_t$ (2)	$EquityIssuance_t$ (3)	$ForecastInd_{t+1}$ (4)	$NumForecast_{t+1}$ (5)
$MFFlow_t$	0.002 (0.002)	−0.003 (0.015)	−0.001*** (0.0003)	0.001*** (0.0003)	0.001*** (0.0003)
$MFFlow_t \times Breadth_t$				0.0001 (0.002)	0.0002 (0.002)
$Breadth_t$				0.001 (0.002)	−0.0003 (0.002)
Controls	Yes	Yes	Yes	Yes	Yes
Lagged Controls	No	No	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Year-Qtr. FE	Yes	Yes	Yes	Yes	Yes
Obs.	43,423	87,159	191,509	192,849	192,849
Adjusted R ²	0.467	0.321	0.197	0.713	0.696

This table reports regression summary statistics from estimating Eq. (2), augmented as described below, to test whether managers privately exploit equity underpricing rather than, or in addition to, disclosing more. In Columns (1)–(3), the dependent variable is $NetTrades_t$, a firm-year measure of net insider trading aggregated from Thomson Reuters insider-filing data; the logarithm of one plus the dollar value of CEO option exercises from ExecuComp; or a proxy for equity issuance based on growth in shares outstanding, respectively; these columns test whether *Underpricing* itself predicts private-exploitation behavior. In Columns (4)–(5), the dependent variable is $ForecastInd_{t+1}$ or $NumForecast_{t+1}$, as in Table 2, and *Underpricing* is interacted with $Breadth_t$, the change in institutional-ownership breadth (Lehavy and Sloan, 2008), used as a proxy for arbitrage capacity in the spirit of Chen et al. (2002); these columns test whether the disclosure response is attenuated among firms with greater institutional monitoring and arbitrage capacity. All specifications include firm and year-quarter fixed effects; Columns (4)–(5) additionally include the lagged disclosure controls used in Table 2. Standard errors are clustered at the firm and quarter levels. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

net trading and to the value of CEO option exercises, providing no evidence that managers privately trade on, or exercise options around, underpricing in our sample. *Underpricing* is negatively associated with subsequent equity issuance, more consistent with managers avoiding issuing equity while their shares are undervalued than with private exploitation. Columns (4) and (5) interact *Underpricing* with institutional-ownership breadth ($Breadth_t$, following Lehavy and Sloan (2008)), used as a proxy for arbitrage capacity in the spirit of Chen et al. (2002)) in the forecast regressions of Table 2.⁴ The interaction is insignificant for both the likelihood and the frequency of forecasts, and the main effect of *Underpricing* remains positive and significant in both specifications. The disclosure response therefore does not vary with a firm's institutional-ownership breadth, indicating that it is not concentrated among firms with limited arbitrage capacity or institutional monitoring. Taken together, these results provide no evidence that disclosure and private exploitation of underpricing substitute for one another across firms in our sample. Instead, the disclosure response documented in Tables 2–4 appears broad-based and largely independent of managers' opportunities for private exploitation.

6. Conclusion

We study the effect of equity underpricing on voluntary disclosure. Using mutual fund redemptions to identify underpricing exogenous to fundamentals, we find that managers respond by issuing more forecasts, filing more voluntary 8-K items, and adopting a more positive textual tone, while the specificity of management forecasts does not change. These effects are economically small but robust to firm and quarter fixed effects, an alternative measure of underpricing, and are not driven by investment, litigation risk, or CEO compensation sensitivity.

The joint pattern, more disclosure, more positive language, but no change in informational precision, is more consistent with strategic communication and impression management than with full information provision, though we do not directly observe managers' motives. We find no evidence that disclosure and private exploitation of underpricing, through insider trading, option exercises, or reduced equity issuance, substitute for one another across firms: private exploitation is largely unrelated to underpricing in our sample, and the disclosure response does not vary with institutional-ownership breadth. Whether these disclosures reach investors and move prices remains an open question that we leave for future work.

CRedit authorship contribution statement

Jonathan Berkovitch: Writing – review & editing, Writing – original draft, Formal analysis, Data curation, Conceptualization.
Lucia Pierini: Writing – review & editing, Writing – original draft, Data curation, Conceptualization.

⁴ In untubulated analyses, we interact *Underpricing* with $CompensationDelta_{i,t}$, the sensitivity of the CEO's compensation portfolio to a 1% stock price change (Core and Guay, 2002; Coles et al., 2006). The interaction is insignificant across all disclosure measures.

Appendix. Variable definitions

Variable	Definition
$Breadth_{i,t}$	The change in the breadth of institutional ownership of firm i 's stock from quarter $t - 1$ to quarter t , following Lehavy and Sloan (2008) ; used as a proxy for arbitrage capacity, in the spirit of Chen et al. (2002) . Higher values indicate a larger increase in the base of institutional monitoring and arbitrage capital.
$BTM_{i,t}$	Firm i 's book-to-market ratio at the end of quarter t .
$EquityIssuance_{i,t}$	The quarter-over-quarter growth in firm i 's common shares outstanding, used as a proxy for equity issuance activity.
$Forecast_Ind_{i,t}$	An indicator variable equal to one if firm i issues a management earnings forecast in quarter t , and zero otherwise.
$Investment_{i,t}$	Firm i 's capital expenditures during quarter t , scaled by total assets at the beginning of the quarter.
$Item202_{i,t}$	The logarithm of one plus the number of voluntary Form 8-K Item 2.02 (results of operations) filings made by firm i in quarter t , following He and Plumlee (2020) .
$Item701_{i,t}$	The logarithm of one plus the number of voluntary Form 8-K Item 7.01 (Regulation FD) filings made by firm i in quarter t , following He and Plumlee (2020) .
$Leverage_{i,t}$	Firm i 's total debt scaled by total assets at the end of quarter t .
$Litigation_{i,t}$	An indicator variable equal to one if firm i operates in a high-litigation-risk industry (SIC codes 2833–2836, 3570–3577, 3600–3674, 5200–5961, 7370–7374, or 8731–8734), and zero otherwise, following Francis et al. (1994) and Kim and Skinner (2012) .
$LnMVE_{i,t}$	The natural logarithm of firm i 's market value of equity at the end of quarter t .
$lmNegative_{i,t}$	The proportion of negative words in firm i 's Form 8-K filings in quarter t , based on the Loughran and McDonald (2011) dictionary.
$LnNumAnalyst_{i,t}$	The natural logarithm of one plus the number of analysts following firm i in quarter t .
$lmPositive_{i,t}$	The proportion of positive words in firm i 's Form 8-K filings in quarter t , based on the Loughran and McDonald (2011) dictionary.
$lmTone_{i,t}$	The net tone of firm i 's Form 8-K filings in quarter t (positive words less negative words, scaled by total words), based on the Loughran and McDonald (2011) dictionary.
$Loss_{i,t}$	An indicator variable equal to one if firm i reports a net loss in quarter t , and zero otherwise.
$MFFlow_{i,t}$	The price pressure on firm i 's stock in quarter t from mutual-fund-flow-induced trading, following Edmans et al. (2012) : $MFFlow_{i,t} = \sum_{j=1}^m \frac{F_{j,t} \times SHARE_{i,j,t-1} \times PRC_{i,t-1}}{TA_{j,t-1} \times VOL_{i,t}}$, summed over funds j with outflows of at least 5% of lagged total assets, multiplied by -1 for interpretability. Our main proxy for <i>Underpricing</i> .
$NetTrades_{i,t}$	A firm-year measure of net insider trading for firm i in year t , aggregated from Thomson Reuters insider-filing data; positive values indicate net insider buying and negative values indicate net insider selling.
$Num8K_{i,t}$	The logarithm of one plus the number of Form 8-K filings made by firm i in quarter t .
$Num_Forecast_{i,t}$	The logarithm of one plus the number of management earnings forecasts issued by firm i in quarter t .
$OptionExercise_{i,t}$	The logarithm of one plus the dollar value of stock options exercised by firm i 's CEO in year t , from ExecuComp.
$RegFD_t$	An indicator variable equal to one for quarters on or after the passage of Regulation FD in October 2000, and zero otherwise.
$Return_{i,t}$	Firm i 's stock return during quarter t .
$Return_{i,t-1}$	Firm i 's stock return during quarter $t - 1$.
$Specificity_{i,t}$	The average precision of management forecasts issued by firm i in quarter t , equal to 3 for a point estimate, 2 for a closed-range estimate, and 1 for an open-range estimate.
$SUE_{i,t}$	Standardized unexpected earnings for firm i in quarter t , following Livnat and Mendenhall (2006) .
$SUENeg_{i,t}$	An indicator variable equal to one if $SUE_{i,t}$ is negative, and zero otherwise.
$Volatility_{i,t-1}$	The standard deviation of firm i 's daily stock returns during quarter $t - 1$.

Data availability

Data will be made available on request.

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