

Torpedo Your Competition: Strategic Reporting and Peer Firm IPO

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Current Version: January 2019

Abstract

We show that firms manage their earnings downwards when their industry peers file for initial public offerings (IPOs). The downward accruals reverse in a following period. This effect is stronger if peers pose a bigger threat to the incumbents, if industries are more competitive or informationally opaque, or if the incumbents are more long-term oriented. When incumbents engage in more aggressive downward earnings management, peer firms suffer from lower offer prices, raise smaller amount of capital, and are more likely to withdraw from the offering. They also invest less, hoard more cash, and experience lower profitability post IPO. Our results highlight the role of strategic reporting on product market competition. Endogeneity of going-public activity and choice of proxies for earnings management and industry classifications do not appear to drive our findings.

Key words: Earnings management, product market competition, disclosure, initial public offerings

* We thank Matt Billet, Daniel Carvalho, Mei Feng, Mariassunta Giannetti, Bob Jennings, Khim Kelly, Christian Larsen, Feng Li, Xiaoyang Li, Alexander Ljungqvist, Jun Pan, Lin Peng, Scott Smart, Per Strömberg, Wenyu Wang, participants at Baruch College of the City University of New York, City University of Hong Kong, Hong Kong Polytechnic University, Indiana University, Peking University, Renmin University of China, Shanghai Advanced Institute of Finance at Shanghai Jiao Tong University, Stockholm School of Economics, Tsinghua University PBC School of Finance, University of Central Florida, University of Pittsburgh, and Washington Area Symposium for valuable comments. Xiaoyun Yu acknowledges financial support from the Arthur M. Weimer Fellowship.

1. Introduction

An initial public offering (IPO) is the most important milestone in a firm's life. By tapping a broad investor base and raising a large amount of capital, a firm can expand production capacity, pursue growth opportunities, gain a competitive edge against rivals, and survive its business environment (Draho 2004). Consequently, existing literature documents that the success of a firm's IPO hampers the performance of its industry competitors. In particular, incumbents experience negative stock market reactions, loss of market shares, and deterioration in operating performance around IPOs in their industries (Slovin, Sushka, and Ferraro 1995; Hsu, Reed, and Rocholl 2010; Chemmanur and He 2011; Chod and Lyandres 2011). While most of the literature focuses on the benefits accrued to IPO firms and the competitive effects they generate, there is little evidence on how and to what extent industry incumbents can mitigate the foreseeable threats imposed by their rivals' IPOs.

In this paper, we examine how firms strategically report their earnings in response to their peers' attempt for an IPO. We postulate that industry incumbents strategically manage their accruals downwards in order to deter peers' capital-raising efforts.

Ex ante, the effectiveness of such earnings management is less clear. On the one hand, Prior studies suggest that investors do not fully see through accrual-based earnings management (Sloan 1996; Xie 2001). In comparison to altering real production or operation, it is not only less costly, but also more timely and flexible to implement. More importantly, the pricing of a private firm's public offering relies less on firm-specific information, but more on industry prospective (Benveniste et al. 2003). All these give rise to the incentive of industrial rivals to sabotage their

peer's IPO attempt via strategic reporting. On the other hand, reporting unfavorable earnings news may make the IPO firm look more attractive than their industry incumbents to investors, offering more promising prospects and ensuring a more successful IPO outcome.

Using a sample of quarterly earnings announcements by US firms from 1991 to 2014, we find that firms manage their earnings downwards during the period when their peers, defined as those operating in the same industry, attempt an IPO. Our results are robust to a variety of alternative specifications, including the addition of various controls for firm-specific characteristics, and the use of alternative measures for earnings management and industry classifications.

Importantly, the downward discretionary accruals reverse in the following quarter. We also show that the extent of downward earnings management during a peer's IPO is more pronounced when the peer is more innovative and thus poses a bigger threat to the incumbents. The incentive to manipulate earnings is also stronger if an industry has larger information asymmetry, which makes the pricing of the IPO more uncertain, or if an industry has fierce product market competition, in which, as Darrough and Stoughton (1990) and Wagenhofer (1990) theorize, a successful IPO would have given the peer a more competitive edge over its industry rivals. Taken together, these findings corroborate with our interpretation that product market competition motivates a firm to obstruct its industry peer's IPO effort through strategic reporting.

The decision to go public can be endogenous. While our analysis focuses on incumbents' reporting strategy *after* their peer files for IPO and thus by design, takes the peer's decision to go public as given, it is still possible that unobserved factors correlated with both downward earnings management and peer's IPO filing may bias our findings. For instance, since IPOs tend to come in waves and these waves are industry specific, one may observe many peers going

public during the peak of an IPO wave, which is subsequently correlated with a decline in incumbents' earnings performance due to diminishing growth opportunities in the industry post peak. Thus, incumbents may release bad earnings news following peers' IPO filing in anticipation of a heightened product market competition. Another possible explanation is that, to discourage a peer's going-public decision, incumbents may have managed earnings upwards before it files for IPO; as a result, the observed negative accruals after the filing simply reflect a mechanical downward reversal rather than strategic reporting.

To mitigate these concerns, we perform a battery of robustness tests. First, all the tests include calendar quarter and industry fixed effects. Our results are also robust to the inclusion of interactions of quarter and industry fixed effects and when we falsely assign peer IPO activities two quarters ahead of current earnings announcement. Together with the findings of accrual reversals, a negative effect of peer IPO activities on incumbents' quarterly discretionary accruals cannot be interpreted to spuriously depend on industry shocks.

Second, we consider settings that affect the decision to go public and the likelihood of IPO completion, but are unlikely to be driving public firms' incentive to manage accruals downwards. We exploit the passage of the Jumpstart Our Business Startups (JOBS) Act, which relaxes the requirement for firms in selected industries such as biotech and pharmaceutical industries to speed up their IPO process (Dambra, Field, and Gustafson, 2015). Alternatively, market conditions may facilitate or deter IPO activities. We thus explore market-wide fluctuations that are known to affect the success of an IPO (Benveniste et al. 2003; Bernstein 2015). Importantly, neither the enactment of the JOBS act, nor the stock market performance, occurred in response to public firms' downward earnings management.

In a difference-in-difference setting, we find that, by spurring more IPO activities in the biotech and pharmaceutical industries, downward earnings management is more aggressive in these two industries relative to other industries only after the passage of the JOBS act. Similarly, the effort to manage earnings downwards during a peer firm's IPO is stronger when there is a greater stock market volatility, which is known to make IPO outcome more uncertain. When the market condition favors the completion of an IPO, the extent of downward earnings management diminishes. These tests provide causal inference for our findings.

Lastly, we assess the economic consequences of incumbents' strategic reporting during a peer's IPO. When incumbents engage in more aggressive downwards earnings management, the peer firm is more likely to withdraw its offerings. Contingent on the completion of an IPO, the final offer price and the amount of proceeds raised are significantly lower. Arguably, this hampers the peer firm's ability to grow after going public, limiting the extent of damage its IPO imposes on industry rivals. Accordingly, we find peer firms spend less on capital investment after IPO when incumbent public firms have more negative pre-IPO discretionary accruals. Peers appear to also experience low cash flows and be less profitable; they thus hoard more cash to mitigate refinancing risk and the underinvestment problem (Harford, Klasa, and Maxwell 2014). Furthermore, incumbents experience an improvement in performance when their strategic reporting helps mitigate the threat from industry peers' IPO activities.

Our paper contributes to the literature examining the spillover effect from IPO activities. Most of the literature focuses on how going-public can negatively affect industry competitors' performance and stock returns. For instance, incumbent public firms experience negative stock reactions to IPOs in their industry, and positive reactions to their withdrawals (Slovin, Sushka, and Bendeck 1991; Slovin, Sushka, and Ferraro 1995; Hsu, Reed, and Rocholl 2010). A firm's

IPO results in a smaller market share and worsening operating performance (Chod and Lyandres 2011; Chemmanur and He 2011). We extend this line of research and show that incumbents can use strategic reporting to mitigate these adverse effects brought about by their peers' IPO.

Our paper is also related to the literature studying strategic disclosure to deter product market competition. This line of the research is motivated by studies on information transfer (e.g., Foster 1981; Bowen, Castanias, and Daley 1983; Baginski 1987), which find a firm's earnings announcement has a significant impact on the stock prices of other non-announcing industry peers. Such information transfer exists because industry peers' future expected cash flows are on average positively correlated. Thus, a firm's earnings information could change investors' perception of the industry's prospect. Consequently, Darrough and Stoughton (1990) and Wagenhofer (1990) theorize that firms restrain the product market threat through strategic reporting. In their models of an entry game, an incumbent's private information is valuable to both the financial market and potential competitors. Reporting favorable news can increase the incumbent's market valuation; by making the product market more attractive, however, it can also induce the entry by the opponent and compromise the incumbent's competitive position. In equilibrium, partial disclosure can arise in which the incumbent prefers reporting bad news and withholding good news so as to deter entry and prevent the loss in profits due to the increased competition. The incentive to disclose unfavorable information is particularly strong when the entry costs are low and the threat imposed by potential entrants is high.

Our paper provides direct empirical evidence consistent with their theoretical predictions that product market competition motivates strategic disclosure of unfavorable news. In this respect, our findings is closely related to Jones (1991), who shows that firms intentionally manage earnings downward during the period of import relief investigations to mislead the US

International Trade Commission in order to thwart competition from foreign competitors, and to Godsell, Welker, and Zhang (2017), who find EU firms engage in income-decreasing earnings management around the initiation of an antidumping investigation. Instead of influencing governmental policies, we find that firms also use strategic reporting to mitigate the threat of rivals through discouraging their capital raising efforts.

The rest of the paper is organized as follows. Section 2 introduces the methodology and describes the data. Sections 3 and 4 present the empirical results. Section 5 concludes. Variable definitions are in the Appendix.

2. Methodology and Data

2.1 Regression Framework

We explore incumbent public firms' reporting practice in response to their peers' IPO in the context of quarterly earnings release. Examining a firm's strategic reporting at quarterly frequency offers two advantages. First, managers can exercise relatively greater discretion over expense recognition in interim quarters, which better captures the extent of strategic motives in earnings management. By contrast, annual reports are subject to more rigid rules and audit than interim reports, providing managers with relatively less discretion and fewer opportunities to manage earnings (Palepu 1988; Brown and Pinello 2007). Second, the duration of a pre-IPO filing period is typically short; in our sample, the median book-building period lasts 69 days. Focusing on quarterly instead of annual reporting helps better distinguish earnings management in response to the recent peer IPO activities from those based on other purposes.

We construct two accrual-based proxies for earnings management and estimate the following regression model:

$$EM_{i,t} = \beta_0 + \beta_1 PeerIPO_{i,t} + B_2 X_{i,t} + \epsilon_{i,t}$$

where $EM_{i,t}$ is firm i 's earnings management in quarter t and $PeerIPO_{i,t}$ measures IPO activities by firm i 's industry peers at the time of its earnings announcement in quarter t .

Our primary dependent variable, “EM”, is the performance-adjusted discretionary accruals following Kothari, Leone, and Wasley (2005). We focus on this measure of earnings management to better isolate the extent of downward earnings management coming from strategic motives rather than being driven by poor operating performance. To further capture the downward nature of earnings management, we also employ a variation of the quarterly discretionary accruals: “Downward EM” is set to “EM” if it is negative and zero otherwise.

We capture the intensive and extensive margins of the impact from peer IPOs using two proxies: “# of IPOs”, calculated as the natural logarithm of one plus the number of peer firms that have filed for, but not completed, IPO process at the time when a firm announces its quarterly earnings. “IPO Volume”, calculated as the natural logarithm of one plus the total amount of proceeds filed by these firms attempting for IPOs. These variables are set to zero if there is no peer firm filing for IPO at the time of an incumbent public firm’s earnings announcement.

We include several control variables that may affect the level of discretionary accruals (e.g., Kothari, Leone, and Wasley 2005, Zang 2012, and Fang, Huang and Karpoff 2016). First, we control for a number of firm-level fundamental characteristics. “Size” is a measure of firm size, calculated as the natural log of total assets at the end of the year. The book to market ratio (“Book to Market”) is used to control for investment opportunities. The financial leverage (“Leverage”) is calculated as the ratio of total liabilities to total assets. “Sales Growth” is the growth rate of sales revenue. “Cash Flow” is operating cash flows scaled by average total assets.

Further, “Industry Book to Market” refers to the average book to market ratio of all the peer firms in the 3-digit SIC. A low “Industry Book to Market” suggest that the industry may be overvalued. Thus, when “Industry Book to Market” is low, a private peer firm may be more likely to file for an IPO (Pagano, Panetta, and Zingales 1998). Finally, we include quarter and 3-digit-SIC industry fixed effects to control for cross-quarter and cross-industry differences in economic conditions.

2.2 Sample Selection and Descriptive Statistics

We begin with a sample of non-financial and non-utility publicly listed US firms from the COMPUSTAT. The initial sample contains 721,013 firm-quarter observations from 1991 to 2014. We remove 133,585 observations with missing earnings announcement dates and 28,745 observations with missing value in quarterly cash flows. To ensure the estimation of discretionary accruals meaningful, we require each industry-year to have at least 15 observations. We further exclude 266,630 firm-quarter observations with missing information to calculate discretionary accruals, 23,819 observations with missing information on other financial variables, 10,991 observations with negative book to market ratios. We next remove 87,250 observations of firms with stock price less than \$5 or market value smaller than \$50 million, since their valuation and share price have little impacts on the investors’ perception of an industry. The final sample consists of 169,993 firm-quarter observations.

We obtain a sample of IPO firms from the Thomson Financial Securities Data Corporation (SDC) new issues database during the same time. We exclude from our sample ADRs, unit offerings, reverse LBOs, foreign issues, and REITs. To ensure that the peer firm’s IPO is economically relevant and to reduce the influence of microcap stocks, we exclude

offerings in which the offer price is less than \$5 (Chemmanur and He 2011). The final sample contains 4,995 firms that went public in the U.S during the 1991-2014 period.

Table 1 Panel A summarizes the sample characteristics of incumbent firms. For the ease of interpretation, we report the number of peer IPOs and proceeds filed by peer IPO firms with and without log form. The mean value of earnings management indicates that quarterly discretionary accruals over total assets averages around -0.17%.² In an average industry-quarter, there are 2.03 firm filing for IPO with total proceeds of \$151.55 million. On average, a sample firm has assets of \$3,565.54 million, a leverage ratio of 46%, and quarterly sales growth rate of 6%.

Panel B of Table 1 describes the characteristics of IPO firms. An average IPO firm sets \$12.43 per share offer price, representing 1% revision up from the initial filing price. It raises \$87.37 million in proceeds, 3% more from the proceeds filed. About 55% of IPO firms are VC-backed and 22% of these that file for IPO end up withdrawing from the offering. The median length of pre-IPO filing period (from the filing date to the final offer date) is 69 days. These numbers are in line with the existing literature (e.g., Lowry and Schwert 2002; Benveniste et al. 2003; Wang, Winton, and Yu 2010).

3. Empirical Results

3.1 Earnings Management during Peer Firm's IPO

Table 2 explores how firms manage their quarterly earnings in response to industry peers' IPO events. We observe a negative and significant coefficient associated with the number of peer

² Our descriptive statistics of quarterly discretionary accruals is comparable to prior studies. For example, using a sample of quarterly observations from 1993 to 2005, Brown and Pinello (2007) report that the average discretionary accruals estimated based on modified Jones model is -0.004.

firms attempting for IPO, as well as the amount of proceeds they intend to raise. This suggests that firms manage their earnings downwards before their industry peers' IPO.

The negative effect of upcoming peer IPOs on a firm's discretionary accruals holds for both measures of earnings management. It is also robust when we control for firm characteristics and to the inclusion of calendar quarter and industry fixed effects, indicating that time-specific or industry-specific shocks cannot drive our results.

In term of economic magnitude, column 1 suggests that when "# of IPOs" increases by one standard-deviation, which is equivalent to roughly 2.32 peer firms engaging in the going-public process at the time of earnings announcement, earnings management reduces an average incumbent firm's return on assets by approximately 12% ($=0.84 \times -0.147\% \div 1\%$). If "IPO Volume" increases by one standard deviation (equivalent to \$13 millions), earnings management reduces an average incumbent firm's return on assets by approximately 5% ($=2.59 \times -0.018\% \div 1\%$). Given the sample mean of quarterly ROA being 1%, these numbers are economically significant.

To further validate that incumbents manage earnings downward in response to the upcoming capital raising activity of industry peers, rather than to unobserved industry- and time-specific trend or for mechanical reasons, we examine whether such a behavior reverses in the absence of peer IPO activities. We augment the regression framework in Table 2 with "Post IPO Dummy", a dummy variable set to one if at least one industry peer has attempted for an IPO in the previous quarter but no peers have filed for IPO in the current quarter in which the incumbent firms release their quarterly earnings.

Columns 1 and 2 of Table 3 provide more evidence on incumbents' strategic understatement of quarterly earnings. The coefficient for the post IPO dummy is positive and significant, suggesting that discretionary accruals are more positive when there are no peers

filing for IPO in comparison to the quarters that witness peer IPO activities. In columns 3 through 6, we consider the accrual reversals by taking into account the direct effect of peer IPOs and including “# of IPOs” and “IPO Volume”. In these regressions, “Post IPO Dummy” is thus redefined as one if at least one peer firm has filed for IPO in the previous quarter and zero otherwise. While the coefficients for “# of IPOs” and “IPO Volume” remain negative and significant, we always observe a positive effect, i.e., higher accruals, after peer IPO events. These results suggest that while the discretionary accruals become negative during the peer firms’ going-public process, they quickly reverse in the following period.

3.2 Cross-sectional Analysis

3.2.1 Threat of IPO Peers

Our analysis so far provides evidence that incumbent firms engage in strategic reporting to undermine their peers’ capital raising effort, as theorized in Darrough and Stoughton (1990) and Wagenhofer (1990). Darrough and Stoughton (1990) and Wagenhofer (1990) also highlight that the incentive to disclose unfavorable information is particularly strong when the threat imposed by potential entrants is high and when the entry costs are low. In this subsection, we validate how the magnitude of downwards earnings management varies with an IPO firm’s ability to challenge the incumbents. In subsection 3.2.2, we consider the nature of product market competition.

We measure an IPO firm’s capacity to poise potential threat with the extent of its spending on R&D and innovativeness of their products prior to its IPO. R&D investments and innovations allow IPO firms to upgrade product quality and differentiate their products from industry rivals; in turn, these firms might be better suited to fare competition and survive. We augment the regression framework in Table 2 by interacting our measures for peer IPO activities

(“# of IPOs” and “IPO Volume”) with “R&D” and “Patents”, respectively. “R&D” is the natural logarithm of one plus the average of peer firms’ R&D expenditures in the year prior to their IPOs. “Patents” is defined as the natural logarithm of one plus the average number of patents filed by peer firms over the three-year period before they file for IPO. The interaction term thus allows for a differential degree of earnings management with different levels of potential threat from IPO firms.

Table 4 shows that the coefficient for the interaction term is always negative and significant. The discretionary accruals are more negative if the upcoming IPO peer is more innovative or invests more in R&D. These results suggest that downward earnings management becomes more aggressive when IPO peers pose a bigger threat to incumbent firms in the same industry.

3.2.2 Industry Characteristics

The effort to understate earnings and the likelihood of success to do so can also hinge on industry characteristics. For instance, manipulation is easier in industries with higher degree of information asymmetry. The desire to sabotage peer firms’ capital-raising effort is also accentuated in more competitive industries.

We consider a firm operating in a less competitive industry (i.e., a “High HHI” industry) if the Herfindahl-Hirschman Index of its industry falls in the top tercile (Hoberg and Phillips 2010b). We calculate an industry’s Herfindahl-Hirschman Index using firms’ product market shares. A high-HHI industry has higher degree of product market concentration and thus less competition. We consider an industry with high information asymmetry (a “High Info Asymmetry” industry) if the average of analyst forecast errors of all the firms in the industry falls above the sample median.

We then interact “# of IPOs” and “IPO Volume” variables with, respectively, an indicator variable for a high HHI industry, and an indicator variable for an industry of high information asymmetry. Table 5 reveals that firms operating in industries with higher degree of information asymmetry and higher product market competition manage their earnings downwards to a larger extent during their peers’ IPO process.

3.2.3 Presence of Short-term Incentives

A long-standing view in corporate governance is that the presence of short-horizon investors, who typically hold a firm’s stock for short periods of time and focus on short-term returns (Bushee 2001), can lead corporations to pursue short-term objectives at the expense of the long-run (Graham, Harvey, and Rajgopal 2005). While releasing unfavorable earnings news to mitigate the competition threat from industry rivals’ capital-raising effort benefit the firm in long run, it often generates immediate negative stock market reaction. This implies that doing so can be especially costly to managers who maximize short-term stock valuations instead of focusing on long-term profit maximization. As a result, firms that are short-term oriented are more reluctant to engage in downward earnings management.

We classify a firm to have a high short-term institutional ownership if the fraction of its shares held by transient institutional investors as defined in Bushee (1998 and 2001) is greater than the top tercile. A greater presence of short-horizon investors indicates more pressure on managers to avoid short-term share price underperformance.

Next, we interact “# of IPOs” and “IPO Volume” variables with a dummy variable for high short-term institutional ownership (“High Short-term Ownership”). Table 6 reveals that firms to which transient investors have a larger stake manage their earnings downwards to a lesser extent during their peers’ IPO process.

Overall, the above cross-sectional tests further lend credence to our inferences of the negative effect of upcoming peer firm IPOs on incumbents' discretionary accruals. While it is possible that some omitted variables drive the documented results, it is difficult to conceive of an omitted variable that biases our results equally in IPO firms that spend more or less in R&D, IPO firms that are more or less innovative, in incumbent firms that operate in more or less competitive product markets and in industries with high or low information asymmetry, and in incumbent firms that have high or low transient institutional ownership. The differential effects of peer IPO activities on incumbent firms' discretionary accruals along these dimensions, together with the results on accruals reversals in Table 3, alleviate the identification concern to some extent, as our results are unlikely to be entirely driven by peer firms endogenously timing their IPO process in anticipation to incumbents' understated quarterly earnings.

3.3 Robustness

3.3.1 Alternative Definitions of Industry Peers and Earnings Management

In the main analysis, we define an industry peer based on the firm's 3-digit SIC code. We now check the robustness of our baseline results using several alternative industry classifications. In columns 1-4 of Table 6, a peer firm is defined according to Hoberg and Phillips' (2010b) industry classifications, which are based on firm pairwise similarity scores from text analysis of firm 10K product descriptions. In columns 5-8, we consider Fama-French 48 industries. In columns 9-12, we classify a peer firm using its 4-digit SIC code. From Table 6, we find no evidence that our findings depend on the way we classify an industry peer.

Our primary measure for earnings management is based on the Kothari-Leone-Wasley (2005) performance-adjusted discretionary accruals. We do so to explicitly take into account the extent of earnings management arising from firm's performance, which is especially crucial

since we focus on downward earnings management. In Table 7, we re-estimate the baseline regressions using alternative proxies for earnings management. In columns 1-2, we calculate the Dechow-Sloan-Sweeney (1996) version of discretionary accrual-based earnings management in a modified Jones (1991) model. To better reflect the nature of earnings understatement, we also estimate the likelihood that a firm reports income-decreasing discretionary accruals (columns 3-4) and the likelihood that a firm reports earnings loss (columns 5-6). Lastly, we measure earnings management with the degree of announced earnings exceeding analyst consensus forecast following DeGeorge, Patel, and Zeckhauser (1999).

Table 7 indicates that our findings are robust to different proxies for earnings management. Incumbent firms manage discretionary accruals downwards after their peers file for IPO. They are more likely to report losses, less likely to meet or just beat analyst earnings forecast, and more likely to disclose negative earnings news.

3.3.2 Endogeneity of Going-Public Activity

One concern is that both a peer firm's decision to go public and the extent of earnings management by incumbent firms can be endogenous. For example, market and industry conditions not only encourage or deter IPO activities, but also simultaneously affect the way incumbent firms manage their earnings. This concern is less relevant in our setting because we consider incumbents' earnings management *after* a peer files for IPO. By design, our analysis takes a peer's decision to go public as given. However, to mitigate any remaining doubt for endogeneity, we perform two sets of tests.

Our first test exploits the passage of the Jumpstart Our Business Startups Act (JOBS Act) on April 12, 2012, a law intended to encourage funding of small businesses in the United States by easing many of the country's securities regulations. Dambra, Field, and Gustafson (2015)

show that the enactment of the JOBS Act increases disproportionately firms in biotech and pharmaceutical industries to go public relative to those operating in other industries and in comparison to IPO activities in these two industries prior to the JOBS Act. In the context of our analysis, the JOBS Act spurs IPO activities particularly in biotech and pharmaceutical industries relative to other industries. However, it is not designed to cater to earnings management by public companies.

In a difference-in-difference setting, we estimate whether incumbents manage earnings downward more aggressively post JOBS Act in the biotech and pharmaceutical industries compared to other industries and to IPO activities prior to the JOBS Act. The dummy variable for post JOBS Act is set to one if a quarterly earnings announcement occurs after April 12, 2012. Biotech and pharmaceutical industries are defined as in Dambra, Field, and Gustafson (2015).³

Panel A of Table 8 shows that the coefficient for the interaction between the dummy variable for biotech and pharmaceutical industries and the post JOBS Act dummy is negative and significant. Responding to an exogenous increase in IPO activities in the biotech and pharmaceutical industries brought about by the JOBS Act, quarterly discretionary accruals become more negative after the enactment in these two industries in comparison to before the JOBS Act and to other industries.

In the second set of tests, we explore market and industry conditions that affect the IPO process but are less likely related to downward earnings management. Benveniste et al. (2003) provide a rationale for the hot and cold IPO markets and show that the decision to go public and the likelihood of completion depend on the market conditions and industry prospects. When

³ Specifically, the dummy for biotech/pharmaceutical industries is set to one if a firm's Global Industry Classification Standard (GICS) code is 352010, or belongs to #13 of the Fama-French 49 Industries (Pharmaceutical Products). The #13 Fama-French 49 Industry consists of the following 4-digit SIC industries: 2830-2830 Drugs; 2831-2831 Biological products; 2833-2833 Medicinal chemicals; 2834-2834 Pharmaceutical preparations; 2835-2835 In vitro, in vivo diagnostics; and 2836-2836 Biological products (except diagnostics).

market is volatile, it becomes more difficult for investors to evaluate the likelihood of a successful offering. In the context of our analysis, this gives rise to a greater incentive for incumbents to manipulate earnings downward.

Bernstein (2015) shows that Nasdaq return fluctuation does not affect IPO filing, but influence its completion. Specifically, when Nasdaq return is very high, a peer is likely to complete the offering regardless, making it difficult to deter its IPO. Managing earnings downward during a hot market period also becomes more costly for the incumbent firms. Therefore we expect that the extent of downward earnings management is less likely when there is a run-up in Nasdaq return.

In the same vein, we conduct a difference-in-difference test, first interacting the market volatility, measured by the VIX in the month of earnings announcement, with the two proxies for peer IPO activities. We then interact the two-month cumulative Nasdaq return up to the date of earnings announcement with the number of IPOs and with IPO volume, respectively.

Columns 1-4 of Table 8 Panel B show that incumbents manage earnings downwards to a greater extent during the peer firms' going-public process when the market volatility is high, captured by high VIX index. Columns 5-8 indicate that when Nasdaq return is high, thus favors the success of IPO completion, the incentive for downward earnings management is mitigated, as doing so becomes too costly to the incumbents while the deterrence effect is minimal during a hot market.

3.3.3 Timing of Accrual-Based Earnings Management

One concern is that peer IPO activities may occur during the peak of an IPO wave, which means that incumbents' performance goes down subsequently, explaining the release of unfavorable earnings news. While our findings in accrual reversal dispel this cause, to further

mitigate the concern that industry shocks simultaneously affect IPO activities and incumbents' earnings performance, we re-estimate our main results in Table 2 after including the interactions of industry and quarter fixed effects.

Columns 1-4 of Table 9 Panel A show that our findings are invariant when we control for interaction of industry and quarter effect. Therefore, a negative effect of peers' going-public activities in the same industry as the incumbent firm at the time of its earnings announcement could not be interpreted as driven by industry shocks.

We calculate our earnings management proxies using operating profit instead of net income and re-estimate our baseline regressions in columns 5-8 of Panel A. In comparison to earnings management computed based on net income, which already reflect both operating items and non-operating items (e.g., extraordinary items, and irreversible assets write-downs), operating profit is less affected by such non-operating items.⁴ Our results remain robust using this alternative measure.

Lastly, we perform a falsification test, leading both of our peer IPO variables by two quarters. Specifically, “# of IPOs (t+2)” is the number of peers filing for IPO two quarters ahead of an incumbent firm's current quarterly earnings announcement, and “IPO Volume (t+2)” is the total proceeds filed by peer firms attempting for IPOs two quarters ahead. Since it is difficult to predict future IPO activities by peers in the future, it is plausible that an incumbent's earnings management in the current quarter should respond only to the contemporaneous IPO activities instead of future ones. If, on the other hand, the industry conditions such as IPO waves or market fluctuations simultaneously affect the peer firms' going-public process and incumbent firms' downward earnings management, then current quarterly earnings management should be linked to future IPO activities as well.

⁴ Examples of asset write-downs include goodwill impairment, long-term assets impairment and inventory write-off.

Table 9 Panel B suggests otherwise. Most of future IPO volume and numbers are insignificantly related to current quarter earnings management. If anything, sometimes the coefficient is positive, rather than negative. Regardless, the current quarter's peer IPO activities continue to be negatively associated with incumbents' earnings management.

Overall, while it is never possible to provide a statistical demonstration that the dynamics of industry-wide conditions do not drive the estimates, the tests we perform, along with the results on accruals reversals, corroborate with our interpretation of strategic reporting to deter product market competition.

4. The Welfare Effect of Strategic Reporting

4.1 The Real Effect on Peer IPOs

In this section, we examine whether the incumbents' effort to deter a peer's IPO event has real impact. We start with various measures for the success of an IPO event. If incumbents' strategic reporting indeed influences how investors and underwriters perceive the offer, then we should observe a lower final offer price amid the more aggressive downwards earnings management by incumbents during an IPO firm's filing period. Since we focus on the quarterly earnings announced after the peer files for an IPO and thus already decides on the initial range of intended price, a lower final offer price indicates a lower upward offer price revision, calculated as the percentage change of the final offer price from the mid-point of the initial filing range. Alternatively, in order to raise the desired amount of capital, an IPO firm may compensate for the lower offer price by issuing more shares. We thus also compute "Proceeds Revision", calculated as the percentage change of the final proceeds offers from the initial proceeds filed.

The incumbents' reporting tactics may create more noise in the process of pricing the underlying IPO firms. As a result, uncertainty surrounding the likelihood of a successful IPO can lead to more frequent amendments by the peer firm to the initial filings. We capture this uncertainty about the issuing firm's prospective with "Frequency of Amendments", calculated as the natural logarithm of one plus the number of amendment filings during the pre-offer period. Lastly, a peer can withdraw from the offering if the likelihood of a successful IPO is dim.

In Table 10, we estimate how the extent of incumbents' earnings management during a peer's IPO period affects the outcome of its public offering. The unit of analysis is IPO firm. "Pre-IPO Industry EM" is the average quarterly earnings management by incumbent firms in the same industry during the filing period of a peer's IPO. We control for factors known in the IPO literature that affect IPO pricing. It is evident that when incumbents manage earnings downwards more aggressively during the peer's pre-IPO filing period, the peer suffers a smaller offer price revision, raises smaller amount of proceeds, amends its filings more frequently, and has a higher probability of withdrawal.

Bhattacharya et al. (2015) show that the first three years after IPO are crucial to a firm's long-term survival. This implies that the inability for a peer to raise the desired amount of capital puts a limit on how fast it can grow and expand during this critical time, dampening the chance of its survival and thus the extent of threat its IPO poses to the incumbents. We therefore also study how peer firms exposed to different degrees of incumbents' earnings managements during their pre-IPO periods perform differently post IPO.

Table 11 provides evidence consistent with that the inability to raise sufficient capital limit peers' post IPO expansion. Peer firms experiencing more aggressive downward earnings management by industry incumbents during their pre-offer periods spend less in capital

investments during the three-year period after going public, in comparison to these whose industry incumbents manage earnings less. They also suffer from lower cash flows and profitability. As a result, they hoard more cash, arguably to mitigate refinancing risk and the underinvestment problem (Harford, Klasa, and Maxwell 2014).⁵

4.2 Extensions

In Darrough and Stoughton (1990) and Wagenhofer (1990), reporting bad news (partial disclosure) arises in equilibrium when the incumbent trades off the benefit from deterring the product market entry with the cost of a declining market valuation. The findings in subsection 4.1 suggest that the incumbents can potentially recoup the costs of lower stock price reaction by destroying opponents' capital raising efforts, thus preventing the potential operating loss due to an otherwise heightened product market competition.

In this subsection, we examine whether an incumbent's performance can directly benefit from mitigating the threat of opponents' IPO via strategic reporting. In columns 1-2 of Table 12, we estimate how an incumbent's profitability, measured by its ROA, improves after sabotaging its peers' IPO activities. Specifically, for incumbent firm i in year t , we include “# of completed IPOs (t-1)”, calculated as the natural logarithm of one plus the number of i 's peers that have completed IPO in year $t - 1$, as well as its interaction with variable “Pre-IPO Industry EM of completed IPOs (t-1)”, calculated as the average of “Pre-IPO Industry EM” of all of i 's peers that have completed an IPO in year $t - 1$. Since an IPO firm eventually will become an industry incumbent, in light of the findings in subsection 4.1 and Bhattacharya et al. (2015), for this set of analysis, we exclude firm-year observations up to three years after a firm's IPO from our sample of COMPUSTAT firms.

⁵ Due to less successful IPOs, these firms are likely more concerned about refinancing risk.

Columns 1-2 of Table 12 report the OLS results. To mitigate the concern that industry and firm specific shocks or omitted variables drive our findings, we control for industry and year fixed effects in column 1. In column 2, we replace industry fixed effects with firm fixed effects. Table 12 shows that “# of completed IPOs (t-1)” is always negatively and significantly related to an incumbent’s profitability, consistent with the existing literature documenting that IPO events hamper industry rivals. Importantly, the interaction, “# of completed IPOs (t-1)” \times “Pre-IPO Industry EM of completed IPOs (t-1)”, is negative and significant, suggesting that this adverse externality is mitigated when incumbents engage in more aggressive downward earnings management at the time of their peers’ IPO filing.

One concern is that the accrual reversal explains higher profitability following peer IPOs, instead of that incumbents benefit from strategic reporting to sabotage rivals’ capital raising efforts. To rule out the possibility that the findings are mechanical, we re-estimate the tests in columns 1-2, replacing ROA with cash flow as the dependent variable. The results in columns 3-4 of Table 12 corroborate with our interpretation that incumbents’ strategic reporting mitigates the negative externalities of IPOs. While peer firms’ IPO activities lead to lower cash flows for the industry incumbents, this effect is reduced when the incumbents exert more aggressive downward earnings management efforts during their rivals’ IPO filing stage.

In Table 13, we also explore to what extent the cost to an incumbent’s market valuation due to its downward earnings management can be substantial. If firms engage in strategic reporting only during the time of peer IPO activities, which are unlikely to occur continuously throughout the year, the valuation damage to both shareholders and managers may not be persistent.

We estimate the stock market reaction over a two-day [0,1] event window surrounding a quarterly earnings announcement, depending on whether or not there are peer IPO activities. Table 12 shows that while an incumbent firm experiences adverse market reaction when reporting unfavorable information during its peers' going-public process, the price reaction becomes positive post peers' IPOs. Since the downward earnings management reverse when there is no peer filing for IPO (Table 3), this test suggests that the cost of releasing bad earnings news to deter product market threat can be limited.

5. Conclusion

In this paper, we show that firms manage earnings downwards when their industry peer files for IPO. The downward discretionary accruals reverse later. This effect is stronger when peers pose bigger threat to the incumbents, and when an industry is more competitive or informationally opaque. As a result, IPO peers suffer from lower final offer price, raise smaller amount of proceeds, make more frequent amendments in order to gauge the offer price, and are more likely to withdraw from the offering. Post IPO, they invest less, hold more cash, and experience lower performance when their industry incumbents have engaged in more aggressive downward earnings management during their going-public process. Our findings highlight that strategic disclosure serve as a valid tool to deter entry of competitors.

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Appendix: Variable Definitions

Variable	Definition and Data Source
# of IPOs	Natural logarithm of one plus the number of industry peers that have filed but not completed an IPO when the firm announces its quarterly earnings. This variable is set to zero if there is no peer firm filing for IPO at the time of quarterly earnings announcement. Winsorized at the 1% and 99% levels. An industry peer firm is defined based on the 3-digit SIC code. Sources: SDC and COMPUSTAT.
Big 4 Auditor	A dummy variable equal to one if an IPO firm hires a Big 4 auditor, and zero otherwise. Source: COMPUSTAT.
Bio/Pharmaceutical	A dummy variable equal to one if a firm belongs to the biotech or pharmaceutical industry as in Dambra, Field, and Gustafson (2015), and zero otherwise. Source: Dambra, Field, and Gustafson (2015).
CAPEX	An IPO firm's annual capital expenditure scaled by average total assets. Winsorized at the 1% and 99% levels. Sources: COMPUSTAT and SDC.
Cash Flow	Operating cash flows scaled by average total assets, multiplied by 100. Source: COMPUSTAT.
Cash Holding	Cash and cash equivalent scaled by average total assets. Source: COMPUSTAT.
Dividend	A dummy variable equal to one if an IPO firm pays dividend after going public, and zero otherwise. Source: COMPUSTAT.
Downward EM	A variable set to EM if EM is negative, and zero if EM is zero or positive. Source: IBES.
EM	Kothari, Leone, and Wasley's (2005) performance-adjusted modified Jones model measure of discretionary accruals, constructed as the residual of the regression model $\frac{TACC_{it}}{TA_{it}} = \varphi_0 + \varphi_1 \frac{1}{TA_{it}} + \varphi_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it}} + \varphi_3 \frac{PPE_{it}}{TA_{it}} + \varphi_4 \frac{IB_{it}}{TA_{it}} + e_{it}$ estimated for each industry and quarter, multiplied by 100. For firm i in quarter t , $TACC_{it}$ is the total accruals defined as the difference between net income and cash flows from operations; ΔREV_{it} is the change in revenue; ΔREC_{it} is the change in receivables from quarter $t - 1$ to quarter t ; PPE_{it} is the gross property, plant and equipment; IB_{it} is income before extra-ordinary items; TA_{it} is the average total assets. We require each industry-quarter to have at least 15 firm-quarter observations, and exclude firms with quarter-average total assets less than \$10 million. Industry classification is based on 2-digit SIC codes. Source: COMPUSTAT.
Filing Period Duration	Natural logarithm of one plus the number of days between initial filing date and final offer date. Winsorized at the 1% and 99% levels. Source: SDC.
Frequency of Amendments	Natural logarithm of one plus the number of amendment filings during the pre-offer filing period. Winsorized at the 1% and 99%

	levels. Source: SDC.
High HHI	A dummy variable equal to one if an industry-year's Herfindahl-Hirschman Index (HHI) falls in the top tercile, and zero otherwise. We follow Hoberg and Philips (2010a) and compute a revenue-weighted HHI for each industry-year. Source: Compustat.
High Info Asymmetry	A dummy variable equal to one if the average of analyst forecast errors of an industry-year falls above the sample median, and zero otherwise. Source: IBES.
High Short-term Ownership	A dummy variable equal to one if the fraction of a firm's shares held by transient institutional investors is greater than sample top tercile, and zero otherwise. Transient investors are identified following Bushee's (1998 and 2001) classification of 13F investors. Source: 13F and Bushee's Website.
High Underwriter Reputation	A dummy variable equal to one if an IPO firm's underwriter ranking exceeds 8. Source: Jay Ritter's website.
Industry Book to Market	The average of book to market ratios of public firms in an industry. Source: COMPUSTAT.
IPO Volume	Natural logarithm of one plus the sum of proceeds filed by industry peers when the firm announces its quarterly earnings. This variable is set to zero if there is no peer firm filing for IPO at the time of quarterly earnings announcement. Winsorized at the 1% and 99% levels. An industry peer firm is defined based on the 3-digit SIC code. Sources: SDC and COMPUSTAT.
Leverage	Total liabilities divided by total assets. Winsorized at the 1% and 99% levels. Source: COMPUSTAT.
Meet or Just Beat Analyst Forecast	A dummy variable equal to one if the difference between the firm's actual quarterly earnings and the average of analyst forecasted earnings is within the range of zero and one cent, and zero otherwise. Source: COMPUSTAT.
MJEM	Dechow, Sloan, and Sweeney's (1996) modified Jones model measure of discretionary accruals, constructed as the residual of the regression model $\frac{TACC_{it}}{TA_{it}} = \varphi_0 + \varphi_1 \frac{1}{TA_{it}} + \varphi_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it}} + \varphi_3 \frac{PPE_{it}}{TA_{it}} + e_{it}$ estimated for each industry and quarter, multiplied by 100. For firm i in quarter t , $TACC_{it}$ is the total accruals defined as the difference between net income and cash flows from operations; ΔREV_{it} is the change in revenue; ΔREC_{it} is the change in receivables from quarter $t-1$ to quarter t ; PPE_{it} is the gross property, plant and equipment; TA_{it} is the average total assets. We require each industry-quarter to have at least 15 firm-quarter observations, and exclude firms with quarter-average total assets less than \$10 million. Industry classification is based on 2-digit SIC code. Source: COMPUSTAT.
Nasdaq Return	The cumulative Nasdaq return over two months prior to the firm's quarterly earnings announcement. Winsorized at the 1% and 99% levels. Source: CRSP.

Offer Price Revision	The final offer price divided by the mid-point of the price range at the initial filing date, minus one. Winsorized at the 1% and 99% levels. Source: SDC.
Patents	The natural logarithm of one plus the average number of patents filed by peer firms over the three-year period before they file for IPO. Winsorized at the 1% and 99% levels. Sources: SDC and Kogan, Papanikolaou, and Soffman (2017).
Pre-IPO Industry EM	The average of EM of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Pre-IPO Market Return	The cumulative CRSP value-weighted return during the IPO firm's filing period. Winsorized at the 1% and 99% levels. Sources: CRSP and SDC.
Pre-IPO Industry Book to Market	The average of book to market ratio of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Pre-IPO Industry Size	The average of total assets of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Pre-IPO Industry Sales Growth	The average of sales growth of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Pre-IPO Industry Cash Flow	The average of operating cash flows (scaled by average total assets) of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Pre-IPO Industry Leverage	The average of operating cash flows (scaled by average total assets) of firms operating in the same 3-digit SIC industry as the IPO firm during its filing period. Winsorized at the 1% and 99% levels. Source: COMPUSTAT and SDC.
Proceeds	Natural logarithm of total proceeds filed by the IPO firm. Winsorized at the 1% and 99% levels. Source: SDC.
Proceeds Revision	The final proceeds offered divided by the proceeds filed, minus one. Winsorized at the 1% and 99% levels. Source: SDC.
Post JOBS Act	A dummy variable equal to one if the firm's quarterly earnings announcement occurs after April 5 th , 2012, the enactment of the Jumpstart Our Business Startups Act (JOBS Act), and zero otherwise. Source: COMPUSTAT
Post IPO Dummy	A dummy variable equal to one if at least one industry peer firm has attempted for an IPO in the previous quarter, and zero otherwise. In columns 1 and 2 of Table 3, it is also required that but no peer firms file for IPO in the contemporaneous quarter when the firm announces its quarterly earnings. Sources: SDC and IBES.
R&D	The natural logarithm of one plus the average of peer firms' R&D expenditures in the year prior to their IPOs. Winsorized at the 1%

	and 99% levels. Source: SDC and COMPUSTAT.
Report Earnings Loss	A dummy variable equal to one if the firm's quarterly income before extra-ordinary items is negative, and zero otherwise. Source: COMPUSTAT.
Report Income- Decreasing Discretionary Accruals	A dummy variable equal to one if there exists income-decreasing discretionary accruals, and zero otherwise. Source: COMPUSTAT.
ROA	Income before extra-ordinary items scaled by average total assets. Source: COMPUSTAT.
Sales Growth	Percentage change in sales revenue. Winsorized at the 1% and 99% levels. Source: COMPUSTAT
Size	Natural logarithm of total assets. Winsorized at the 1% and 99% levels. Source: COMPUSTAT.
VC Back	A dummy variable equal to one if the IPO firm receives VC backing. Source: SDC.

Table 1: Descriptive Statistics**Panel A: Incumbent Firm Characteristics**

The sample period is 1991-2014. The unit of analysis is firm-quarter observations. Variable description and data sources are in the Appendix.

Variable	# of obs.	Mean	Median	Std. Dev.
EM	169,993	-0.17	-0.16	3.70
Downward EM	169,993	-1.47	-0.16	2.96
# of IPOs (in log form)	169,993	0.52	0.00	0.84
# of IPOs	169,993	2.03	0.00	5.94
IPO Volume (in log form)	169,993	1.80	0.00	2.59
IPO Volume (\$MM)	169,993	151.55	0.00	486.09
Size	169,993	6.33	6.17	1.74
Total Assets (\$MM)	169,993	3,565.54	18,831.39	476.66
Book to Market	169,993	0.50	0.42	0.35
Leverage	169,993	0.46	0.47	0.21
Sales Growth	169,993	0.06	0.03	0.25
Cash Flow	169,993	2.30	2.50	4.67
Industry Book to Market	169,993	0.50	0.48	0.18

Panel B: IPO Characteristics

The sample period is 1991-2014. The unit of analysis is IPO firm observations. Variable description and data sources are in the Appendix.

Variable	# of obs.	Mean	Median	Std. Dev.
Offer Price	3,776	12.43	12.00	5.31
Proceeds (\$MM)	3,776	87.37	40.00	459.56
Offer Price Revision	3,776	0.01	0.00	0.18
Proceeds Revision	3,776	0.03	0.00	0.37
# of Amendments	3,776	3.01	3.00	2.20
IPO Withdraw	4,877	0.22	0.00	0.42
Filing Period Duration (# of days)	3,776	95.63	69.00	122.09
Underwriter Rank	3,776	5.44	7.00	3.57
VC Back	3,776	0.55	1.00	0.50
Pre-Offer Market Return	3,776	0.04	0.03	0.06

Table 2: Earnings Management during Peer Firms' IPO

The dependent variable is “EM” in columns 1 and 2, and “Downward EM” in columns 3 and 4. The unit of analysis is firm-quarter observations. “# of IPOs” (“IPO Volume”) is the natural logarithm of one plus the number of companies (one plus the sum of proceeds filed by companies) operating in the same industry that have filed for, but not completed, IPO during a firm’s quarterly earnings announcement date. This variable is set to zero if during the quarter of earnings announcement there is no peer firm filing for IPO. All models include a constant, forecast calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	EM		Downward EM	
	(1)	(2)	(3)	(4)
# of IPOs	-0.147*** (0.016)		-0.159*** (0.017)	
IPO Volume		-0.018*** (0.004)		-0.021*** (0.004)
Size	0.203*** (0.009)	0.204*** (0.009)	0.342*** (0.010)	0.342*** (0.010)
Book to Market	-0.007 (0.030)	-0.006 (0.030)	0.274*** (0.033)	0.275*** (0.033)
Leverage	-0.240*** (0.057)	-0.235*** (0.057)	-0.594*** (0.068)	-0.588*** (0.068)
Sales Growth	1.971*** (0.070)	1.968*** (0.070)	0.697*** (0.058)	0.693*** (0.058)
Cash Flow	-0.658*** (0.004)	-0.657*** (0.004)	-0.363*** (0.004)	-0.362*** (0.004)
Industry Book to Market	-0.543*** (0.068)	-0.487*** (0.068)	-0.402*** (0.076)	-0.344*** (0.076)
Quarter Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
# of obs.	169,993	169,993	169,993	169,993
R-squared	0.638	0.638	0.333	0.333

Table 3: Accrual Reversal

The dependent variable is “EM” in columns 1, 3 and 4, and “Downward EM” in columns 2, 5 and 6. The unit of analysis is firm-quarter observations. For columns 1-2, “Post IPO Dummy” is a dummy variable equal to one if at least one peer firm has attempted for IPO in the previous quarter but no peer firms have filed for IPO in the current quarter, and zero otherwise. For the rest of columns, this variable is set to one if at least one peer firm has filed for IPO in the previous quarter and zero otherwise. “# of IPOs” (“IPO Volume”) is the natural logarithm of one plus the number of companies (one plus the sum of proceeds filed by companies) operating in the same industry that have filed for, but not completed, IPO during a firm’s quarterly earnings announcement date. This variable is set to zero if during the quarter of earnings announcement there is no peer firm filing for IPO. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	EM		Downward EM		EM		Downward EM	
	(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)
Post IPO Dummy	0.048** (0.023)	0.081*** (0.021)	0.240*** (0.019)	0.072*** (0.018)	0.235*** (0.019)	0.106*** (0.019)		
# of IPOs			-0.190*** (0.016)		-0.201*** (0.017)			
IPO Volume				-0.009** (0.004)			-0.013*** (0.004)	
Size	0.204*** (0.009)	0.342*** (0.010)	0.199*** (0.008)	0.036* (0.020)	0.338*** (0.010)	0.322*** (0.021)		
Book to Market	-0.006 (0.030)	0.275*** (0.033)	-0.008 (0.030)	-0.344*** (0.034)	0.273*** (0.033)	-0.035 (0.036)		
Leverage	-0.234*** (0.057)	-0.587*** (0.068)	-0.233*** (0.057)	-1.114*** (0.081)	-0.587*** (0.067)	-1.168*** (0.092)		
Sales Growth	1.967*** (0.070)	0.692*** (0.058)	1.979*** (0.070)	2.366*** (0.074)	0.704*** (0.058)	1.093*** (0.053)		
Cash Flow	-0.657*** (0.004)	-0.362*** (0.004)	-0.659*** (0.004)	-0.728*** (0.004)	-0.364*** (0.004)	-0.424*** (0.005)		
Industry Book to Market	-0.451*** (0.068)	-0.302*** (0.075)	-0.505*** (0.068)	-0.270*** (0.071)	-0.365*** (0.076)	-0.125 (0.078)		
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes		
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes		
# of obs.	169,993	169,993	169,993	169,993	169,993	169,993		
R-squared	0.638	0.333	0.639	0.710	0.334	0.470		

Table 4: Threat of IPO Rivals

The dependent variable is “EM” in columns 1-4 and “Downward EM” in columns 5-8. The unit of analysis is firm-quarter observations. “R&D” is the natural logarithm of one plus the average of peer firms’ R&D expenditures in the year prior to their IPOs. “Patents” is the natural logarithm of one plus the average number of patents filed by peer firms over the three-year period before they file for IPO. Variable description and data sources are in the Appendix. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	EM				Downward EM			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs × R&D	-0.053*** (0.008)				-0.049*** (0.008)			
# of IPOs × Patents		-0.070*** (0.008)				-0.053*** (0.009)		
IPO Volume × R&D			-0.012*** (0.002)				-0.011*** (0.002)	
IPO Volume × Patents				-0.020*** (0.002)				-0.016*** (0.002)
# of IPOs	-0.050** (0.020)	-0.032* (0.019)			-0.069*** (0.021)	-0.071*** (0.021)		
IPO Volume			-0.002 (0.004)	-0.004 (0.005)			-0.006 (0.004)	-0.009** (0.005)
Size	0.203*** (0.009)	0.216*** (0.009)	0.204*** (0.009)	0.216*** (0.009)	0.342*** (0.010)	0.354*** (0.010)	0.342*** (0.010)	0.354*** (0.010)
Book to Market	-0.007 (0.030)	-0.011 (0.033)	-0.007 (0.030)	-0.011 (0.033)	0.274*** (0.033)	0.304*** (0.035)	0.275*** (0.033)	0.305*** (0.035)
Leverage	-0.238*** (0.057)	-0.270*** (0.063)	-0.232*** (0.057)	-0.269*** (0.063)	-0.592*** (0.067)	-0.655*** (0.072)	-0.586*** (0.067)	-0.653*** (0.072)
Sales Growth	1.971*** (0.070)	2.016*** (0.073)	1.968*** (0.070)	2.014*** (0.073)	0.697*** (0.058)	0.742*** (0.060)	0.693*** (0.058)	0.739*** (0.060)
Cash Flow	-0.658***	-0.657***	-0.658***	-0.656***	-0.363***	-0.357***	-0.362***	-0.357***

	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Industry Book to Market	-0.535***	-0.508***	-0.484***	-0.470***	-0.395***	-0.342***	-0.342***	-0.296***
	(0.068)	(0.076)	(0.068)	(0.076)	(0.076)	(0.086)	(0.076)	(0.086)
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	169,993	139,171	169,993	139,171	169,993	139,171	169,993	139,171
R-squared	0.639	0.637	0.638	0.636	0.334	0.322	0.333	0.322

Table 5: Industry Characteristics

The dependent variable is “EM” in columns 1-4 and “Downward EM” in columns 5-8. The unit of analysis is firm-quarter observations. An industry is classified as a “High HHI” industry if its Herfindahl-Hirschman Index falls above the sample median and in an industry of high information asymmetry (“High Info Asymmetry”) industry if the average of analyst forecast errors of all the firms in the industry falls above the sample median. Variable description and data sources are in the Appendix. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	EM				Downward EM			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs × High Info Asymmetry	-0.131*** (0.017)				-0.130*** (0.018)			
# of IPOs × High HHI		0.225*** (0.031)				0.164*** (0.035)		
IPO Volume × High Info Asymmetry			-0.169*** (0.016)				-0.170*** (0.018)	
IPO Volume × High HHI				0.053*** (0.009)				0.050*** (0.009)
# of IPOs	-0.064*** (0.017)	-0.163*** (0.016)			-0.085*** (0.018)	-0.170*** (0.017)		
IPO Volume			0.004 (0.004)	-0.025*** (0.004)			-0.003 (0.004)	-0.028*** (0.004)
High Info Asymmetry	-0.060*** (0.017)		-0.042** (0.017)		-0.063*** (0.017)		-0.045*** (0.017)	
High HHI		0.122*** (0.034)		0.136*** (0.033)		0.037 (0.035)		0.033 (0.034)
Size	0.207*** (0.009)	0.204*** (0.009)	0.207*** (0.009)	0.204*** (0.009)	0.345*** (0.010)	0.342*** (0.010)	0.346*** (0.010)	0.343*** (0.010)
Book to Market	0.012 (0.031)	-0.008 (0.030)	0.012 (0.031)	-0.007 (0.030)	0.280*** (0.034)	0.274*** (0.033)	0.280*** (0.034)	0.275*** (0.033)

Leverage	-0.217*** (0.058)	-0.249*** (0.057)	-0.215*** (0.058)	-0.243*** (0.057)	-0.585*** (0.069)	-0.600*** (0.068)	-0.584*** (0.069)	-0.594*** (0.068)
Sales Growth	1.943*** (0.071)	1.972*** (0.070)	1.942*** (0.071)	1.968*** (0.070)	0.671*** (0.059)	0.698*** (0.058)	0.670*** (0.059)	0.694*** (0.058)
Cash Flow	-0.658*** (0.004)	-0.658*** (0.004)	-0.658*** (0.004)	-0.658*** (0.004)	-0.364*** (0.005)	-0.363*** (0.004)	-0.364*** (0.005)	-0.363*** (0.004)
Industry Book to Market	-0.555*** (0.071)	-0.550*** (0.068)	-0.525*** (0.071)	-0.498*** (0.068)	-0.374*** (0.070)	-0.406*** (0.076)	-0.346*** (0.070)	-0.353*** (0.076)
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	158,524	169,993	158,524	169,993	158,524	169,993	158,524	169,993
R-squared	0.643	0.639	0.643	0.639	0.352	0.334	0.352	0.333

Table 6: Presence of Short-term Incentive

The dependent variable is “EM” in columns 1-2 and “Downward EM” in columns 3-4. The unit of analysis is firm-quarter observations. “High Short-term Ownership” is a dummy variable set to one if the fraction of a firm’s shares held by transient investors falls to top sample tercile, and zero otherwise. Variable description and data sources are in the Appendix. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	EM		Downward EM	
	(1)	(2)	(3)	(4)
# of IPOs	-0.189*** (0.018)		-0.192*** (0.019)	
# of IPOs × High Short-term Ownership	0.117*** (0.021)		0.090*** (0.022)	
IPO Volume		-0.030*** (0.005)		-0.029*** (0.005)
IPO Volume × High Short-term Ownership		0.036*** (0.006)		0.024*** (0.007)
High Short-term Ownership	0.037* (0.019)	0.033* (0.019)	0.049** (0.021)	0.052** (0.021)
Size	0.193*** (0.009)	0.193*** (0.009)	0.332*** (0.010)	0.332*** (0.010)
Book to Market	0.008 (0.030)	0.009 (0.030)	0.290*** (0.033)	0.290*** (0.033)
Leverage	-0.217*** (0.057)	-0.211*** (0.057)	-0.572*** (0.068)	-0.566*** (0.068)
Sales Growth	1.973*** (0.070)	1.969*** (0.070)	0.699*** (0.058)	0.695*** (0.058)
Cash Flow	-0.659*** (0.004)	-0.658*** (0.004)	-0.363*** (0.004)	-0.363*** (0.004)
Industry Book to Market	-0.544*** (0.068)	-0.486*** (0.068)	-0.403*** (0.076)	-0.343*** (0.076)
Quarter Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
# of obs.	169,993	169,993	169,993	169,993
R-squared	0.639	0.639	0.334	0.333

Table 6: Alternative Definitions of Industry Peers

Industry classification is based on Hoberg and Phillips (2010b) industry classification based on textual analysis on 10K filing in columns 1 to 4, based on Fama-French 48 industries in columns 5-8 and on 4-digit SIC codes in columns 9-12. The dependent variable is earnings management for columns 1-2, 5-6 and 9-10, and is downward earnings management for columns 3-4, 7-8, and 11-12. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	10K Filing				Fama-French 48				4-digit SIC code			
	EM		Downward EM		EM		Downward EM		EM		Downward EM	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
# of IPOs	-0.092*** (0.017)		-0.084*** (0.015)		-0.135*** (0.013)		-0.129*** (0.013)		-0.100*** (0.015)		-0.074*** (0.016)	
IPO Volume		-0.011*** (0.004)		-0.009*** (0.003)		-0.019*** (0.003)		-0.014*** (0.003)		-0.117*** (0.020)		-0.110*** (0.021)
Size	0.197*** (0.010)	0.198*** (0.010)	0.284*** (0.008)	0.285*** (0.008)	0.189*** (0.009)	0.190*** (0.009)	0.333*** (0.010)	0.334*** (0.010)	0.327*** (0.016)	0.209*** (0.008)	0.439*** (0.019)	0.348*** (0.010)
Book to Market	-0.119*** (0.037)	-0.112*** (0.037)	0.188*** (0.033)	0.195*** (0.033)	0.003 (0.032)	0.004 (0.032)	0.282*** (0.035)	0.283*** (0.035)	0.179*** (0.066)	-0.038 (0.030)	0.617*** (0.071)	0.252*** (0.032)
Leverage	-0.388*** (0.068)	-0.375*** (0.068)	-0.466*** (0.058)	-0.454*** (0.058)	-0.159*** (0.059)	-0.154*** (0.059)	-0.528*** (0.072)	-0.524*** (0.072)	-0.332*** (0.110)	-0.287*** (0.057)	-1.044*** (0.127)	-0.621*** (0.069)
Sales Growth	1.915*** (0.078)	1.914*** (0.078)	0.646*** (0.045)	0.645*** (0.045)	1.952*** (0.070)	1.948*** (0.070)	0.656*** (0.058)	0.652*** (0.058)	1.439*** (0.104)	1.984*** (0.070)	0.341*** (0.100)	0.713*** (0.058)
Cash Flow	-0.651*** (0.004)	-0.651*** (0.004)	-0.322*** (0.003)	-0.322*** (0.003)	-0.651*** (0.004)	-0.651*** (0.004)	-0.358*** (0.005)	-0.358*** (0.005)	-0.662*** (0.005)	-0.661*** (0.004)	-0.369*** (0.007)	-0.365*** (0.004)
Industry Book to Market	-0.088 (0.086)	-0.075 (0.086)	0.049 (0.072)	0.063 (0.072)	-0.310*** (0.078)	-0.268*** (0.078)	-0.251*** (0.082)	-0.205** (0.082)	-1.423*** (0.227)	-0.457*** (0.067)	-0.714*** (0.216)	-0.318*** (0.075)
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	118,554	118,554	118,554	118,554	169,993	169,993	169,993	169,993	35,361	169,993	35,361	169,993
R-squared	0.630	0.630	0.435	0.435	0.630	0.630	0.320	0.320	0.681	0.641	0.379	0.338

Table 7: Alternative Measures for Earnings Management

The unit of analysis is firm-quarter observations. Columns 1-2 and 3-8 report OLS and logit regression coefficient estimates, respectively. The dependent variable is “MJEM” in columns 1-2, calculated as discretionary accrual based earnings management following modified Jones (1991) model; is a dummy variable set to one if the firm reports income-decreasing discretionary accruals in columns 3-4; is a dummy variable set to one if the firm reports earnings loss in columns 5-6; and is a dummy variable set to one if the reported earnings meet or just beat analyst forecast in columns 7-8. All models include a constant, calendar quarter fixed effects and industry fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	MJEM		Report Income-Decreasing Discretionary Accruals		Report Earnings Loss		Meet or Just Beat Analyst Forecast	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs	-0.245*** (0.029)		0.109*** (0.017)		0.147*** (0.020)		-0.105*** (0.024)	
IPO Volume		-0.031*** (0.007)		0.011*** (0.004)		0.017*** (0.005)		-0.013** (0.007)
Size	0.175*** (0.014)	0.176*** (0.014)	-0.124*** (0.008)	-0.124*** (0.008)	-0.247*** (0.012)	-0.247*** (0.012)	0.052*** (0.013)	0.052*** (0.013)
Book to Market	-0.907*** (0.048)	-0.905*** (0.048)	-0.035 (0.030)	-0.036 (0.030)	0.999*** (0.044)	0.998*** (0.044)	-0.649*** (0.063)	-0.647*** (0.063)
Leverage	-2.018*** (0.093)	-2.009*** (0.093)	0.051 (0.056)	0.047 (0.056)	1.551*** (0.086)	1.542*** (0.086)	-0.514*** (0.091)	-0.510*** (0.091)
Sales Growth	-0.489*** (0.007)	-0.489*** (0.007)	0.591*** (0.008)	0.590*** (0.008)	-0.209*** (0.004)	-0.209*** (0.004)	0.013*** (0.003)	0.013*** (0.003)
Cash Flow	0.326*** (0.103)	0.416*** (0.104)	0.365*** (0.072)	0.324*** (0.072)	0.195* (0.101)	0.135 (0.101)	0.671*** (0.117)	0.721*** (0.117)
Industry Book to Market	2.046*** (0.092)	2.040*** (0.092)	-1.901*** (0.062)	-1.898*** (0.062)	-0.709*** (0.050)	-0.704*** (0.050)	-0.527*** (0.050)	-0.532*** (0.050)
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	169,993	169,993	169,989	169,989	169,861	169,861	87,215	87,215
R-squared/Pseudo R-squared	0.293	0.293	0.350	0.350	0.224	0.224	0.057	0.057

Table 8: Endogeneity of Going-Public Activity

This table presents the endogeneity tests. The dependent variable is earnings management in column 1 and downward earnings management in column 2. The unit of analysis is firm-quarter observations. In Panel A, “Bio/Pharmaceutical” industry classification is based on Dambra, Field, and Gustafson (2015). “Post JOBS Act” is a dummy variable set for one if earnings announcement is made after April, 2012, the enactment of the JOBS Act, and zero otherwise. In Panel B, the dependent variable “# of IPOs” (“IPO Volume”) is the natural logarithm of one plus the number of companies (one plus the sum of proceeds filed by companies) operating in the same industry that have filed for, but not completed, IPO during a firm’s quarterly earnings announcement date. This variable is set to zero if during the quarter of earnings announcement there is no peer firm filing for IPO. “High VIX” is a dummy variable set to one if the monthly VIX at the time of quarterly earnings announcement is above sample median and zero otherwise. “Nasdaq Return” is the cumulative return of Nasdaq over two months prior to the earnings announcement date. All the models include a constant, industry fixed effects and calendar quarter fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Go-Public Activity and JOBS Act

Dependent Variable	EM	Downward EM
	(1)	(2)
Bio/Pharmaceutical	-1.313** (0.598)	-1.081** (0.424)
Bio/Pharmaceutical × Post JOBS Act	-0.900*** (0.135)	-0.963*** (0.170)
Size	0.202*** (0.008)	0.341*** (0.009)
Book to Market	-0.010 (0.030)	0.272*** (0.033)
Leverage	-0.236*** (0.056)	-0.589*** (0.067)
Sales Growth	1.972*** (0.070)	0.697*** (0.058)
Cash Flow	-0.658*** (0.004)	-0.363*** (0.004)
Industry Book to Market	-0.460*** (0.068)	-0.313*** (0.075)
Quarter Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
# of obs.	169,993	169,993
R-squared	0.639	0.334

Table 8 continued.

Panel B: Go-Public Activity and Market Conditions

Dependent Variable	EM		Downward EM		EM		Downward EM	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs × High VIX	-0.211*** (0.018)		-0.171*** (0.019)					
IPO Volume × High VIX		-0.051*** (0.005)		-0.047*** (0.006)				
# of IPOs × Nasdaq Return					0.506*** (0.090)		0.269*** (0.097)	
IPO Volume × Nasdaq Return						0.162*** (0.031)		0.065* (0.034)
# of IPOs	-0.022 (0.018)		-0.058*** (0.020)		-0.151*** (0.016)		-0.161*** (0.017)	
IPO Volume		0.008* (0.005)		0.003 (0.005)		-0.019*** (0.004)		-0.021*** (0.004)
High VIX	0.104*** (0.030)	0.097*** (0.030)	0.088*** (0.027)	0.092*** (0.027)				
Nasdaq Return					-0.177* (0.107)	-0.189* (0.110)	0.075 (0.132)	0.113 (0.138)
Size	0.203*** (0.008)	0.204*** (0.008)	0.342*** (0.010)	0.343*** (0.010)	0.203*** (0.009)	0.203*** (0.009)	0.342*** (0.010)	0.342*** (0.010)
Book to Market	-0.009 (0.030)	-0.008 (0.030)	0.272*** (0.033)	0.273*** (0.033)	-0.008 (0.030)	-0.007 (0.030)	0.274*** (0.033)	0.274*** (0.033)
Leverage	-0.252*** (0.057)	-0.242*** (0.057)	-0.604*** (0.068)	-0.595*** (0.068)	-0.242*** (0.057)	-0.236*** (0.057)	-0.595*** (0.068)	-0.589*** (0.068)
Sales Growth	1.977*** (0.070)	1.972*** (0.070)	0.702*** (0.058)	0.697*** (0.058)	1.972*** (0.070)	1.968*** (0.070)	0.697*** (0.058)	0.694*** (0.058)
Cash Flow	-0.658*** (0.004)	-0.658*** (0.004)	-0.363*** (0.004)	-0.363*** (0.004)	-0.658*** (0.004)	-0.658*** (0.004)	-0.363*** (0.004)	-0.362*** (0.004)
Industry Book to Market	-0.608*** (0.068)	-0.542*** (0.068)	-0.455*** (0.076)	-0.394*** (0.076)	-0.550*** (0.068)	-0.494*** (0.068)	-0.407*** (0.076)	-0.348*** (0.076)

Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	169,993	169,993	169,993	169,993	169,993	169,993	169,993	169,993
R-squared	0.639	0.639	0.334	0.333	0.639	0.638	0.333	0.333

Table 9: Timing of Accrual-Based Earnings Management

The unit of analysis is firm-quarter observations. Panel A examines the effect of industry shocks. The dependent variables are “EM” in columns 1-2 and “Downward EM” in columns 3-4. In columns 1-4, we replace industry fixed effects and quarter fixed effects with industry x quarter fixed effects. In columns 5-8, the dependent variables “EM” and “Downward EM” are estimated based on operating profit instead of net income. Panel B conducts a falsification test. “# of IPOs (t+2)” and “IPO Volume (t+2)” is the value of “# of IPOs” and “IPO Volume” two quarters ahead, respectively. We exclude observations with non-zero “# of IPOs” and “IPO Volume” in both current quarter t and quarter t+2. All the models include a constant, industry fixed effects and calendar quarter fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: The Effect of Industry Shocks

Dependent Variable	EM		Downward EM		EM		Downward EM	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs	-0.329*** (0.032)		-0.239*** (0.032)		-0.115*** (0.024)		-0.138*** (0.020)	
IPO Volume		-0.072*** (0.008)		-0.054*** (0.008)		-0.013** (0.005)		-0.016*** (0.004)
Size	0.223*** (0.008)	0.223*** (0.008)	0.348*** (0.010)	0.348*** (0.010)	0.162*** (0.013)	0.162*** (0.013)	0.319*** (0.011)	0.319*** (0.011)
Book to Market	-0.055* (0.030)	-0.053* (0.031)	0.250*** (0.034)	0.251*** (0.034)	-1.001*** (0.044)	-1.001*** (0.044)	-0.332*** (0.035)	-0.331*** (0.035)
Leverage	-0.321*** (0.058)	-0.303*** (0.059)	-0.635*** (0.071)	-0.622*** (0.071)	0.127 (0.087)	0.132 (0.087)	-0.465*** (0.073)	-0.460*** (0.073)
Sales Growth	1.898*** (0.068)	1.895*** (0.068)	0.632*** (0.061)	0.630*** (0.061)	2.080*** (0.079)	2.078*** (0.079)	0.812*** (0.063)	0.808*** (0.063)
Cash Flow	-0.692*** (0.004)	-0.691*** (0.004)	-0.380*** (0.004)	-0.380*** (0.004)	-0.498*** (0.006)	-0.498*** (0.006)	-0.279*** (0.005)	-0.279*** (0.005)
Industry Book to Market	0.173 (0.118)	0.343*** (0.123)	0.047 (0.158)	0.163 (0.160)	-0.042 (0.088)	0.003 (0.089)	-0.111 (0.071)	-0.057 (0.072)
Quarter Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Industry Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes
Industry x Quarter Fixed Effects	Yes	Yes	Yes	Yes	No	No	No	No
Observations	169,993	169,993	169,993	169,993	169,244	169,244	169,244	169,244
R-squared	0.698	0.698	0.459	0.459	0.421	0.421	0.252	0.251

Table 9 continued.

Panel B: Falsification Test

Dependent Variable	EM				Downward EM			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of IPOs (t+2)	0.006 (0.029)		0.104*** (0.031)		-0.038 (0.028)		0.029 (0.030)	
IPO Volume (t+2)		-0.003 (0.005)		0.001 (0.005)		-0.006 (0.005)		-0.003 (0.005)
# of IPOs			-0.222*** (0.020)				-0.224*** (0.023)	
IPO Volume				-0.011** (0.005)				-0.010** (0.004)
Size	0.119*** (0.009)	-0.071*** (0.027)	0.168*** (0.008)	0.001 (0.022)	0.247*** (0.010)	0.223*** (0.028)	0.317*** (0.009)	0.296*** (0.023)
Book to Market	-0.220*** (0.037)	-0.394*** (0.043)	-0.047 (0.031)	-0.296*** (0.036)	0.085** (0.037)	-0.104** (0.042)	0.215*** (0.035)	-0.022 (0.039)
Leverage	-0.314*** (0.069)	-1.096*** (0.106)	-0.258*** (0.058)	-1.021*** (0.087)	-0.342*** (0.083)	-0.789*** (0.112)	-0.517*** (0.069)	-0.946*** (0.097)
Sales Growth	2.241*** (0.101)	2.668*** (0.108)	2.108*** (0.071)	2.454*** (0.078)	0.952*** (0.073)	1.379*** (0.077)	0.836*** (0.062)	1.187*** (0.059)
Cash Flow	-0.684*** (0.006)	-0.730*** (0.006)	-0.663*** (0.004)	-0.722*** (0.005)	-0.380*** (0.006)	-0.417*** (0.006)	-0.365*** (0.005)	-0.415*** (0.005)
Industry Book to Market	-0.392*** (0.078)	-0.221*** (0.083)	-0.491*** (0.070)	-0.301*** (0.074)	-0.229*** (0.086)	-0.058 (0.097)	-0.329*** (0.080)	-0.149* (0.083)
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	90,394	90,394	136,685	136,685	90,394	90,394	136,685	136,685
R-squared	0.634	0.693	0.632	0.707	0.332	0.426	0.325	0.471

Table 10: Offer Price Revision and IPO Withdrawal

The sample contains firms that went public during the 1991-2014 period. The unit of analysis is IPO firm observations. The dependent variable is “Offer Price Revision” in column 1, computed as the final offer price divided by the mid-point of the price range at the filing date, minus one; is “Proceeds Revision”, calculated as the final proceeds offered divided by proceeds filed minus one; is “Frequency of Amendments” in column 3, calculated as the natural logarithm of one plus the number of amendment filings during the pre-offer period; and is a dummy variable set to one if a firm withdraws from the IPO and zero otherwise in column 4. “Pre-IPO Industry EM” is the average “EM” of firms operating in the same industry as the IPO firm during its pre-IPO filing period. Columns 1-3 report the coefficient estimates from an OLS regression whereas column 4 reports the coefficient estimates from a logit regression. All the models include a constant but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm’s 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	Offer Price Revision	Proceeds Revision	Frequency of Amendments	Probability of Withdrawal
	(1)	(2)	(3)	(4)
Pre-Offer Industry EM	0.783** (0.324)	1.302** (0.612)	-0.030*** (0.009)	-0.155** (0.062)
Proceeds	-0.017 (0.426)		0.188*** (0.015)	0.875*** (0.077)
VC Back	3.313*** (0.870)	4.752*** (1.298)	-0.103*** (0.020)	-0.962*** (0.166)
High Underwriter Reputation	2.216*** (0.786)	2.098 (1.346)	0.083*** (0.019)	-4.587*** (0.362)
Pre-Offer Market Return	48.345*** (8.759)	96.128*** (19.613)	0.380 (0.358)	-4.906*** (0.788)
Filing Period Duration	-4.982*** (0.932)	-12.540*** (1.901)	0.371*** (0.030)	2.081*** (0.133)
Pre-Offer Industry Book to Market	-12.832*** (3.005)	-10.692* (5.463)	-0.492*** (0.080)	0.590 (0.439)
Pre-Offer Industry Size	-0.510 (0.514)	0.126 (0.997)	0.086*** (0.016)	-0.029 (0.088)
Pre-Offer Industry Sales Growth	-2.263 (4.363)	-6.838 (8.151)	0.222** (0.103)	1.060 (0.725)
Pre-Offer Industry Cash Flow	1.254*** (0.230)	2.188*** (0.401)	-0.032*** (0.006)	-0.173*** (0.038)
Pre-Offer Industry Leverage	2.467 (3.687)	7.050 (6.900)	-0.594*** (0.120)	-0.261 (0.549)
# of obs.	3,776	3,776	3,776	4,877
R-squared/Pseudo R-squared	0.071	0.062	0.433	0.527

Table 11: Post IPO Investment and Performance

The sample contains firms that went public during the 1991-2014 period. The unit of analysis is IPO firm-year observations. The dependent variable is an IPO firm's annual capital spending scaled by lagged total assets (column 1), cash flow (column 2), cash holdings (column 3), and ROA (column 4) during three years after IPO. "Pre-IPO Industry EM" is the average "EM" of firms operating in the same industry during an IPO firm's pre-IPO filing period. "Size" is the natural logarithm of total assets. "Big 4 Auditor" is a dummy variable set to one if a firm hires a Big 4 auditor. "Dividend" is a dummy variable set to one if a firm pays dividend. All the models include a constant, industry fixed effects and year fixed effects, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm's 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	CAPEX	Cash Flow	Cash Holding	ROA
	(1)	(2)	(3)	(4)
Pre-IPO Industry EM	0.004** (0.002)	0.013* (0.007)	-0.014*** (0.005)	0.013** (0.006)
Size	0.002* (0.001)	0.089*** (0.007)	-0.036*** (0.004)	0.086*** (0.005)
Leverage	-0.009 (0.006)	-0.207*** (0.033)	0.026*** (0.010)	-0.357*** (0.024)
Big 4 Auditor	-0.002 (0.003)	-0.006 (0.010)	-0.465*** (0.019)	-0.008 (0.012)
Book to Market	-0.015*** (0.003)	-0.015* (0.009)	-0.101*** (0.009)	-0.054*** (0.010)
Dividend	0.002 (0.005)	0.054*** (0.011)	-0.024** (0.010)	0.070*** (0.011)
Pre-IPO Industry Cash Flow	0.001 (0.001)	0.009* (0.005)	-0.012*** (0.003)	0.011*** (0.004)
Pre-IPO Industry Book to Market	-0.003 (0.015)	0.078* (0.043)	-0.105** (0.042)	0.123** (0.051)
Pre-IPO Industry Size	0.013 (0.018)	-0.058 (0.049)	0.042 (0.047)	-0.082 (0.055)
Pre-IPO Industry Sales Growth	0.002 (0.003)	-0.020* (0.011)	0.021** (0.008)	-0.025*** (0.010)
Pre-IPO Industry Leverage	0.013 (0.024)	0.087 (0.076)	-0.110* (0.061)	0.143* (0.077)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
# of obs.	5,274	5,273	5,259	5,274
R-squared	0.392	0.583	0.376	0.424

Table 12: Strategic Reporting and Incumbents' Performance

The sample period is 1991-2014. We exclude firm-year observations for IPO firms up to three years after their IPO. The dependent variable is a firm's ROA in columns 1-2 and cash flow in columns 3-4. "# of completed IPOs (t-1)" is the natural logarithm of one plus the number of peer IPOs completed in the previous year. "Pre-IPO Industry EM of completed IPOs (t-1)" is the average of "Pre-IPO Industry EM" of peer IPOs completed in the previous year. "Size" is the natural logarithm of total assets. "Big 4 Auditor" is a dummy variable set to one if a firm hires a Big 4 auditor. "Dividend" is a dummy variable set to one if a firm pays dividend. All the models include a constant and fixed effects as indicated in the table, but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Industry is a firm's 3-digit SIC code. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	ROA		Cash Flow	
	(1)	(2)	(3)	(4)
# of completed IPOs (t-1)	-0.022*** (0.004)	-0.011*** (0.004)	-0.018*** (0.003)	-0.011*** (0.003)
# of completed IPOs (t-1) × Pre-IPO Industry EM of completed IPOs (t-1)	-0.986*** (0.193)	-0.890*** (0.179)	-0.534*** (0.127)	-0.494*** (0.116)
Size	0.078*** (0.002)	0.082*** (0.005)	0.057*** (0.001)	0.066*** (0.004)
Leverage	-0.357*** (0.008)	-0.260*** (0.011)	-0.146*** (0.005)	-0.089*** (0.006)
Big 4 Auditor	-0.005 (0.006)	-0.016* (0.009)	-0.010** (0.004)	-0.009 (0.006)
Book to Market	-0.034*** (0.004)	-0.036*** (0.005)	-0.019*** (0.003)	-0.026*** (0.003)
Dividend	0.000 (0.006)	0.001 (0.007)	0.008* (0.004)	-0.002 (0.005)
Industry Fixed Effects	Yes	No	Yes	No
Firm Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	66,080	66,080	64,606	64,606
R-squared	0.514	0.769	0.414	0.737

Table 13: Market Reactions to Quarterly Earnings Announcements

The dependent variable is “CAR”, calculated as the market-adjusted cumulative stock return over the two-day [0,1] window surrounding a firm’s quarterly earnings announcement. The unit of analysis is firm-quarter observations. “Post IPO Dummy” is a dummy variable equal to one if at least one peer firm has attempted for IPO in the previous quarter and zero otherwise. “# of IPOs” (“IPO Volume”) is the natural logarithm of one plus the number of companies (one plus the sum of proceeds filed by companies) operating in the same industry that have filed for, but not completed, IPO during a firm’s quarterly earnings announcement date. This variable is set to zero if during the quarter of earnings announcement there is no peer firm filing for IPO. All models include a constant but the coefficients are not tabulated. Variable description and data sources are in the Appendix. Robust standard errors clustered at firm level are in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	CAR					
	(1)	(2)	(3)	(4)	(5)	(6)
Post IPO Dummy	0.138** (0.058)	0.160*** (0.059)	0.168** (0.068)	0.156** (0.071)	0.165** (0.068)	0.150** (0.072)
# of IPOs	-0.054*** (0.011)		-0.116** (0.046)		-0.143*** (0.048)	
IPO Volume		-0.192*** (0.037)		-0.032** (0.014)		-0.039** (0.015)
Size			0.106*** (0.016)	0.109*** (0.016)		
Book to Market			0.206* (0.102)	0.216** (0.103)	0.365*** (0.110)	0.384*** (0.111)
Observations	154,206	154,206	154,206	154,206	154,206	154,206
R-squared	0.000	0.000	0.001	0.001	0.001	0.001