The spillover effects of management narratives for seasoned equity issuance decisions

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Abstract

This paper examines the influence of peers' Management Discussion and Analysis (MD&A) narratives on firms' seasoned equity issuance activities. Firms are more likely to issue seasoned equity when the MD&A tone of their peers becomes more positive. This spillover effect is more pronounced for firms that face greater product market competition and that operate in worse information environments. Firms are more sensitive to leader peers and current and new peers. This spillover effect is driven by the numerical sentences. Equity issuers are more likely to use proceeds for R&D investment, and they have a lower post-issuance return when peers increase their positive tone before the issuance.

Key words: seasoned equity offerings, peer effect, Management Discussion and Analysis
JEL code: G32, M41

1. Introduction

Understanding the factors influencing firm equity financing decisions is crucial in corporate finance. Market timing is considered a key determinant of the seasoned equity financing decision, with managers seeking to issue highly-priced shares (Baker and Wurgler, 2002; Graham and Harvey, 2001). Another stream of the literature suggests that meeting a near-term cash need can be a crucial reason that firms make seasoned equity offerings (David McLean, 2011; DeAngelo et al., 2010; Huang and Ritter, 2021). Research on equity financing decisions typically assumes that firms make capital structure choices independently, without regard to the actions or characteristics of their peers. As such, the role of peers in affecting capital financing decisions remains largely understudied. However, peer firms play an important role in shaping a number of corporate policies, such as investment decisions (Bustamante and Frésard, 2021), payout decisions (Adhikari and Agrawal, 2018), and so on. In addition, existing evidence suggests that peer firms may matter in capital financing decisions.

Leary and Roberts (2014) contend that firms do not independently make financing decisions. Firms may derive insights about optimal capital structure or financing models by observing peer financing. Alternatively, the learning could be related to industry growth opportunities. Graham and Harvey (2001) provide the survey evidence and indicate that a significant number of CFOs acknowledge the importance of peer firm financing decisions for their own financing decisions. Aghamolla and Thakor (2022) further illustrate this dynamic within the drug development industry and find that in the drug development industry, a private firm's decision to go public can trigger IPO decisions among its peers. The most closely related paper to my work is Billet et al. (2023). They show that firms increase their SEOs when their peers conduct a seasoned equity offering (SEO) within the prior six months. So far, the literature on equity finance decisions documents a "true" peer effect where firms simply observe and mimic other corporate finance decisions. My paper argues that firms can also become better informed about industry investment or financing opportunities using publicly available information about their peers and then adjust their equity financing decisions.

Managers may lack complete information regarding industry growth opportunities and challenges, which can hinder their ability to make optimal financing decisions, especially in complex economic and policy environments. To bridge this information gap, managers seek information that adds to their knowledge. A peer firm can be a source of information, which may possess unique insights due to variations in prior investments, information-gathering practices, and in-house expertise. Financial reports represent a prominent information source.

As a mandated section in a firm's annual report filed with the Securities and Exchange Commission (SEC), the Management Discussion and Analysis (MD&A) section delivers managerial commentary about trends and events expected to affect liquidity, capital resources, and future operations materially. Firms will change their MD&A after changes in operations, capital resources, and other major activities, which are informative about future earnings, cash flows, investments, and firm value. MD&As do not merely rehash information found elsewhere but provide incremental information to other information resources. It contains a wealth of non-financial and forward-looking information and serves as a valuable complement to financial information as "soft" information, enabling outsiders to capture and grasp decision-useful information and look at a firm through the eyes of management (Li, 2010). In addition, an annual report is publicly available so a firm's MD&A can be easily accessed by outsiders. With standardized format and content requirements, MD&A ensures reliability and comparability, making it a robust source for external analysis. Therefore, outsiders can utilize the firm's MD&A section and make their own decisions. In particular, previous studies show that investors utilize a firm's MD&A narratives to form their risk perceptions about the firm (Kravet and Muslu, 2013), predict the firm's future earnings (Barron et al., 1999), and make investment decisions (Loughran and Mcdonald, 2011; Muslu et al., 2015). Recent studies also document the firm use of peers' MD&A narratives and show that firms increase their investment and boost investment efficiency when average peer MD&A narratives become more optimistic (Cho and Muslu, 2021; Durnev and Mangen, 2020). These findings suggest that peers' MD&A narratives can help a firm make decisions based on improved information about industry-wide investment opportunities and challenges.

Firms can strategically utilize MD&A narratives from other firms in their financing decisions to enhance their understanding of financial information and better navigate industry-wide opportunities and challenges. This is especially valuable when using MD&A, which is disclosed by firms that operate within the same product market sector. To finance investment opportunities identified in peers' MD&A sections, firms may favor equity capital over debt capital. This preference is driven by the greater flexibility that equity capital provides to issuers, along with the limited restrictions it imposes on fund usage (Fama and French 2002; Jung, Kim, and Stulz 1996; Myers 2003). Furthermore, given the considerable uncertainty typically associated with the investment opportunities outlined in peers' MD&A narratives, I hypothesize that firms will be more likely to raise equity, particularly as the tone of peers' disclosures becomes increasingly positive, in order to capitalize on these potential investment opportunities. Yet, the literature to date does not examine the usefulness of a firm's peers'

publicly available narratives in corporate finance decisions. This paper fills this gap by investigating the extent to which firms are influenced by their peers' perspectives on the future trends of their product market in the MD&A when making financing decisions, using a comprehensive sample of U.S. firms between 1997 and 2020.[1]

To answer this question, I analyze whether the changing tone of peer firms' MD&A narratives affects a firm's equity financing decisions. We assess the content of MD&As by analyzing their tone, which enables us to transcend the diverse terminology and definitions that firms employ to express comparable concepts. This approach focuses on the underlying meanings rather than the specific language (Cole and Jones, 2005). I assess the tone of the MD&A sections using the Loughran and McDonald's (2011) financial positive and negative dictionaries. The MD&A tone is calculated as an average across firms within the same industry, with the focal firm excluded from this calculation. I identify a firm's peers using product market peer groups developed by Hoberg and Phillips (2016), which are constructed based on firm pairwise similarity scores from text analysis of firm 10-K product descriptions.

The baseline tests show that, on average, the likelihood of equity issuance is positively associated with the changing positive tone of its peers' MD&A narrative, with the changing MD&A tone of its peers being the average changing MD&A tone of all other firms in the same product markets. However, this peer influence does not exist in the bond financing decisions.

Several additional empirical tests are performed. First, this association is stronger when a firm operates in a more competitive product market, as measured by total similarity and the number of its peers. This finding is consistent with rivalry-based theory, which indicates that firms make decisions based on peers' actions to maintain their competitive parity. Second, I examine whether the spillover effect can be explained by information-based theory. I find that firms operating in uncertain environments closely monitor their peers and are more likely to adjust their financing decisions based on peer disclosures. I also examine the leader-follower model, where learning is much more likely among followers than leaders. According to the information-based theory (Foucault and Fresard, 2014), firms intend to learn from leaders, which enables them to garner additional information about better growth opportunities and challenges. Leaders are likely better informed about product and capital markets. On the other hand, followers often struggle to access valuable information, making the MD&A narrative of market leaders more valuable to them. Findings reveal that a firm's equity financing decisions

[1] Sample starts with the year 1998 because I require the previous two years' filings to be on EDGAR and the year 1996 is the first fiscal year for which almost all companies filed the 10-K electronically. The sample ends in 2020 since I examine the post issuance activities.

are only significantly associated with the leader peers (i.e., larger, have more market share, and more tangible), consistent with the leader-follower model. This finding is consistent with a learning motivation for the identified peer effect. Third, I expect the financing decision to be associated with the changing tone of new and current peers. This relationship should be weaker for past peers because their product descriptions have significantly diverged from those of the focal firm and thus should not provide as relevant information as new and current peers. Results indicate that firms' seasoned equity financing decisions are less sensitive to the changing tone of firms that are no longer their peers and more sensitive to the changing positive tone of current and new peers matters for a firm's equity financing decisions. Fourth, I investigate the role of content. Different MD&A content should impact the identified spillover effect differently. Firms may find that the tone of specific content is more informative. Specifically, I focus on the changing tone of three types of content sentences: investment-related sentences, numerical sentences, and forward-looking sentences. I find that changing the tone in numerical sentences drives the baseline findings, confirming the role of MD&A as supplementary qualitative information alongside quantitative information. Finally, I examine the use of proceeds and post-issuance returns to corroborate my main finding. Issuers are more likely to use proceeds to finance research and development (R&D) when their peers become more positive in their MD&A disclosure, consistent with the conjecture that firms raise capital to finance the potential investment opportunities revealed by increased positive peers' tone. Real option theory predicts that firms with great investment opportunities will have a lower post-issuance return (Carlson et al., 2006; Lyandres et al., 2008). In line with the investment story, I find that post-issue abnormal stock returns show more negative trends for issuers whose peers become more optimistic. To ensure the robustness of my findings, I also employ an alternative tone measurement (using FinBERT), an alternative industry classification (using 3-digit SIC industry code), and various empirical settings, yielding consistent results supporting the positive association between firms' seasoned equity financing decisions and peers' changing positive tone.

This study contributes to the literature in several ways. Firstly, this paper sheds new light on the corporate peer effect by showing the impact of peers' changing tone in textual disclosures on seasoned equity issuance decisions. Indeed, previous studies typically focus on peer effects from explicitly imitating peers' activities or information obtained through private and public quantitative information. For example, Billett et al. (2023) show that firms are more likely to issue SEO when their peers issue SEO in the past six months. Bradley and Yuan (2013) indicate that firms are more likely to issue seasoned equity if the market reacts favorably to

their peer's SEO announcement. This paper shows that firms use peers' publicly available narratives when making financing decisions. Specifically, in addition to the peer's security issuance activities and peer change in Tobin Q, the peers' MD&A tone is likely incremental information to the firm's security issuance decision.

Secondly, this paper contributes to the growing literature within economics and finance that examines the determinants of seasoned equity financing decisions. Previous studies explain the firms' equity financing decision based on trade-off theory, pecking order theory, market timing theory, and the precautionary demand for cash theory (Baker and Wurgler, 2002; DeAngelo et al., 2010; Kraus and Litzenberger, 1973; Myers and Majluf, 1984). The role of peers in affecting capital financing decisions has often been ignored in previous studies. One related study is Leary and Roberts (2014), which examines whether firms make corporate financing decisions by imitating peers' capital structures. I advance this literature by providing a novel determinant of corporate financing decisions: publicly available textual disclosures of peer firms and exploring how firms use peers' textual disclosures to make better-informed corporate financing decisions.

Finally, this paper provides additional evidence on the proprietary costs of disclosure. Although theoretical frameworks suggest that disclosures may undermine a firm's competitive position in product markets (Darrough and Stoughton, 1990; Verrecchia, 1983), empirical evidence supporting this view is very limited. Previous studies have examined how firms strategically manage disclosures to mitigate proprietary costs (Ellis et al., 2012; Lang and Sul, 2014; Verrecchia, 1983). My paper shows that firms' disclosure can influence their peers' financing decisions. These financing choices may influence the competitive dynamics among peers.

The remainder of the paper is structured as follows. Section 2 provides a literature review and develops testable predictions. Section 3 describes the data and defines the main variables. Section 4 provides empirical results on the equity financing decision, uses of proceeds, and post-issuance stock return. Section 5 delivers a battery of robustness checks. Section 6 concludes.

2. Literature review and Hypothesis development

The literature on peer effects shows that a firm's decision-making can be influenced by its peers. Many previous studies have focused on a firm's explicit imitation of peer actions and outcomes, such as capital structure (MacKay and Phillips, 2005; Leary and Roberts, 2014), initial public offering (Aghamolla and Thakor, 2022), SEO (Billett et al., 2023), stock splits

(Kaustia and Rantala, 2015), dividend payment (Adhikari and Agrawal, 2018; Grennan, 2019), tax avoidance (Bird et al., 2018; Kubick et al., 2015), investments (Bustamante and Frésard, 2021), and management compensation (Bizjak et al., 2011). Another branch of research documents that firms use private information about peers to make decisions. For example, firms with private connections among executives and directors share a similar tax-avoidance strategy (Brown and Drake, 2014), disclosure policy (Cai et al., 2014), corporate governance practice (Foroughi et al., 2017), and capital investments (Fracassi, 2016) owing to private connections among executives and directors. In addition, existing studies also perceive peers' stock prices and restatement as a major source of peer information (Durnev and Mangen, 2009; Foucault and Fresard, 2014). These findings indicate that mimicking or learning from peers is prevalent and associated with financially prudent decision-making and reduced costs. Indeed, the above studies typically ascribe peer effects to either deliberate replication of peer activities or spillovers of private and public quantitative information. However, little attention has been paid to whether firms utilize peers' publicly available narratives when making corporate decisions.

Annual 10-K disclosure is a credible channel through which managers convey superior information about firm conditions to outsiders. Among all 10-K sections, MD&A is arguably the most closely read and important component that delivers managerial commentary about trends and events expected to affect liquidity, capital resources, and future operations materially (Securities and Exchange Commission, 1989, 2003; Tavcar, 1998). The SEC intends for the MD&A section to offer investors a perspective through the eyes of management, providing a transparent view and guidance regarding the content of MD&A disclosures. The length of the MD&A section has increased over time, making it potentially a rich depository of corporate narratives (Cho and Muslu, 2021). The existing literature suggests that 10-K disclosure, especially the MD&A section, has become a standard resource for outsiders seeking a comprehensive understanding of the firm's decisions and insight into future projections (Brown and Tucker, 2011; Drake et al., 2016; Loughran and Mcdonald, 2016). The content and sentiment of 10-K reports enable investors to form their risk perceptions about the firm (Campbell et al., 2014; Kravet and Muslu, 2013), predict a firm's future earnings (Barron et al., 1999; Cole and Jones, 2004; Li, 2010), and invest based on the improved information (Loughran and Mcdonald, 2011; Muslu et al., 2015).

At the industry level, peers' MD&A tone reflects the prospect of an industry. Additionally, peers' MD&A tone can serve as a reference guide for comprehending the macro-environment (Cho and Muslu, 2021). The MD&A disclosures contain a wealth of non-financial and prospective information, enabling firms to gain better insights into potential opportunities and

challenges. This is particularly valuable when considering peers' MD&A, which is disclosed by firms operating within the same market sector and subject to the same industrial regulations. Firms can utilize peers' MD&A tone to reduce information collection costs, correct cognitive biases, and prevent losses incurred by uninformed choices. If the average tone of peers' MD&A becomes positive, it suggests a favorable macroeconomic condition or industry prospect. Cho and Muslu (2021) and Durnev and Mangen (2020) find that firms are inclined to increase their investment and boost investment efficiency when peer MD&A tone becomes more positive. Their findings indicate that changes in tone in peer narratives reveal industry-wide sentiment regarding investment opportunities and challenges.

Myers (1977) suggests that firms with potential investment opportunities tend to opt for equity financing. Specifically, Myers (1977) describes a firm's potential investment opportunities as call options, whose value relies on the probability that management will choose to exercise them. He argues that when a firm with valuable growth opportunities issues debt, it may lead to suboptimal investment decisions, as the obligation to meet interest and principal payments could cause management to forgo valuable investment opportunities. Issuing debt can reduce the present market value of a firm that holds real options. One way to control this underinvestment problem and its associated value loss is to finance growth options with equity rather than debt. Therefore, Myers (1977) suggests that firms with potential investment opportunities tend to keep their debt levels low and issue equity to avoid financial distress and to maintain flexibility for future investments. Numerous studies have empirically validated this theory, such as Fama and French (2002), Wu and Wang (2005), and Wu and Au Yeung (2012). In addition, considerable uncertainty is typically associated with the investment opportunities outlined in peers' MD&A narratives. To sum up, given the informativeness and availability of peers' MD&A, I hypothesize that a firm will raise equity capital according to the changing tone of peer textual disclosure to seize investment opportunities:

Hypothesis 1: The likelihood of equity issuance is positively associated with the increased positive tone of peer management narratives.

The rivalry-based theory posits that firms imitate their peers to maintain competitive parity. Literature indicates that peer effects are stronger when firms compete fiercely to attract customers (Adhikari and Agrawal, 2018; Cao et al., 2019; Durnev and Mangen, 2020). In highly competitive markets with numerous peers and similar products, product differentiation becomes more challenging. In such environments, firms closely monitor their peers' actions and disclosures to maintain competitive parity. Competition influences a firm's financing decisions as it seeks to gain advantages in the product market. SEOs play a crucial role in

corporate financing strategies to counter competitive pressures. SEOs provide the necessary liquidity to support ongoing investment and innovation, impacting both the issuing firm and its competitors, thereby influencing the competitive landscape. Raising additional equity through an SEO increases cash infusion for issuers. Unlike debt financing, equity capital imposes fewer constraints and offers greater investment flexibility, allowing firms to develop existing projects and explore new opportunities. Thus, firms are motivated to pay attention to their peers and adjust financing decisions accordingly. In contrast, in less competitive environments, product differentiation is more straightforward, reducing the incentives to focus on peers' disclosures and adjust financing decisions accordingly. Therefore, the incentives to respond to the peers changing MD&A tone increase with the degree of competitive in the product market. I derive my second hypothesis:

Hypothesis 2: The spillover effects of management narratives for seasoned equity issuance decisions increase with the level of competition.

Information-based theories suggest that in uncertain and ambiguous environments, firms are more likely to take actions based on information inferred from the actions of other firms (Adhikari and Agrawal, 2018; Lieberman and Asaba, 2006). Accordingly, when information asymmetry is high, firms have more incentives to pay attention to their peers, who are perceived to have better information. In such cases, peer disclosure is a source of valuable information about industry investment and financing opportunities. Thus, firms that operate in an uncertain environment closely monitor their peers and are more likely to adjust their financing decisions in response to peer disclosure.

Hypothesis 3: The spillover effects of management narratives for seasoned equity issuance decisions increase when firms operate in a high asymmetric information environment.

In addition, followers are sensitive to leaders who are perceived to have superior information. Less successful firms often struggle to access valuable information. Leary and Roberts (2014) suggest that market followers are more likely to imitate the financing decisions of their peers. Consequently, these market followers may find greater value in their peers' MD&A narratives due to their accessibility. Larger, easier-to-value firms and those with more market share are likely to be better informed about product and capital markets.

Hypothesis 4: Firms are more sensitive to the changing tone of leader peers' management narratives.

3. Data

3.1. Sample

I obtained 10-K filings, financial statements, and stock prices between 1997 and 2020 from the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system, Compustat, and CRSP databases, respectively. Following Loughran and McDonald (2011), I discard 10-K filings for which I cannot confidently identify an MD&A or that have fewer than 250 MD&A words, which are too short to gain information from textual analysis.[2] I then merge the EDGAR data with Compustat and exclude observations that lack data to link with Compustat and CRSP to identify product market peers and construct empirical variables. I delete utilities (SIC codes 4900–4999) and financial firms (SIC codes 6000–6999) that may face regulatory restrictions on their capital structure. I further restrict the sample to firms listed on the New York Stock Exchange (NYSE), NYSE American, and NASDAQ with a CRSP share code of 10 or 11 (ordinary shares).

The SEO sample selection process begins with all SEOs issued by U.S. industrial firms in the SDC database. Following Lyandres, Sun, and Zhang (2008), I delete units and purely secondary share offerings in which firms do not raise capital, and I only include the main tranche of each issue when there are multiple tranches to avoid double counting. I then match firm-year observations with the SEO sample. Following Erel, Julio, Kim, and Weisbach (2012), I collapse firms' SEO at the year level. I only include the first offering in the case of multiple SEOs issued by one firm in one fiscal year (Fu and Huang, 2016). The final sample comprises 47,497 firm-year observations from 6,660 unique firms, where 3,234 firm-year with SEO issued by 1,719 firms.

I define firms' potential peers as the product market peers identified using Hoberg and Phillips' (2010, 2016) network industry classification (TNIC) data, constructed based on the similarity of product descriptions of 10-Ks (Item 1 or Item 1A). The rationale behind this approach is rooted in the notion that managers often consider other firms as peers based on the similarity of their products. Therefore, the level of product similarity plays a crucial role in identifying peers. The main advantage of the TNIC data, in contrast to traditional measures such as SIC codes, is that it is time-varying and nontransitive. Specifically, this classification captures an up-to-date and dynamic relationship between firm-pairs that operate in the same product market. In particular, when a firm modifies its product range or enters a new product

[2] After electronically gathering 10-Ks including 10-K, 10-K405, 10KSB, 10KSB40, 10-KT, and 10KT405, I exclude 10,057 filing for which have less than 250 words in MD&A or for which I cannot confidently identify an MD&A.

market, the set of peer firms changes accordingly. In addition, this classification does not require relations between firms to be transitive. Indeed, as industry members are defined relative to each firm, each firm has its own distinct set of peers. This provides a richer definition of peer. Under this classification system, each firm has its own set of distinct peers. This identification results in an average (median) of 49 (18) peers, similar to those reported by Cho and Maslu (2021). I also identify industries using the SIC 3-digit codes as an alternative to product market peers, as discussed in Section 5. The main variables used in this study are described in the Appendix.

3.2. Variable construction

I capture the content of MD&As using their tone, which allows me to abstract from the many different terms and definitions employed by different firms to convey similar information (Cole and Jones, 2005). In light of earlier studies on managerial tone, I measure the tone of a firm's MD&A narrative using the 2020 version of Loughran and McDonald's (2011) financial positive and negative dictionaries.[3] For each firm year, I obtain the number of positive and negative words per 100 words in the MD&A section of 10-K reports and calculate the changes in tone, labeled as Δ*Firm Positive* and Δ*Firm Negative*. I focus on changes rather than levels since the level of tone in corporate disclosure may be an inherent firm characteristic. Following Cho and Maslu (2021), positive tone and negative tone are included separately because they differ in credibility (Hutton et al., 2003), timeliness (Kothari et al., 2009), and information content (Darrough and Stoughton, 1990). These changing tones may reveal industry-wide opportunities and challenges. Our main variables of interest are changes in peer positive and negative tone (Δ*Peer Positive* and Δ*Peer Negative*), calculated as the average change in positive and negative tone across all peers' MD&A narrative for each firm-year observation.

Besides the change in MD&A tone, I include several control variables that prior studies identify as associated with the firm's equity issuance decision (see, e.g., Frank and Goyal, 2009; Graham and Harvey, 2001; Leary and Roberts, 2014). First, I control for the following firm characteristics: change in firm size (Δ*Firm Size*) and change in Tobin Q (Δ*Firm Tobin*), which reflect future and current growth expectations, change in leverage (Δ*Firm Leverage*), change in tangibility (Δ*Firm Fixed Assets*), change in cash (Δ*Firm Cash*), change in profitability (Δ*Firm Profitability*), which reflect financial constraints and resources, change in R&D

[3] The Loughran McDonald word list has been developed for the context of 10-K, unlike other word lists such as Diction (Loughran and McDonald, 2015); it contains 347 positive words and 2345 negative words.

expenditure (Δ*Firm R&D*) and stock returns (*Firm Stock Return*) which capture the market timing opportunities. Second, I control for the following peer firm characteristics: average change in firm size (Δ*Peer Firm Size*), average change in Tobin (Δ*Peer Tobin*), average change in leverage (Δ*Peer Leverage*), average change in tangibility (Δ*Peer Fixed Assets*), average change in cash (Δ*Peer Cash*), average change in profitability (Δ*Peer Profitability*), average change in R&D expenditure (Δ*Peer R&D*), stock returns (*Peer Stock Return*), and peer SEO issuance activities (*Peer SEO*) which captures firm's explicit imitation of peers' equity issuance activities.

3.3. Descriptive statistics

Table 1 reports descriptive statistics for MD&A tone and firm characteristics, discussed in 3.2. To minimize the effect of outliers, I winsorize all continuous variables at the 1st and 99th percentiles.

<<Please insert Table 1 here>>

Table 1 shows that, within the MD&A section, positive words account for 0.9% while negative words account for 2.1%, calculated as the average across all peers for each firm year. These proportions closely align with the average tone observed for the focal firm. The key variables of interest, Δ*Peer Positive* and Δ*Peer Negative*, have averages of −0.008 and 0.034, respectively. It implies that peer firms, on average, decrease positive and increase negative words over time. In a similar trend, changes in positive and negative tone in a firm's MD&A narrative (i.e., Δ*Firm Positive* and Δ*Firm Negative*) have averages of −0.008 and 0.039, respectively. Regarding firm characteristics, peer characteristics are similar to their firm counterpart, although aggregation reduces their standard deviation.

Table 2 reports the differences in empirical variables between SEO and non-SEO firms.

<<Please insert Table 2 here>>

In line with my hypothesis, ΔPeer Positive is higher for those who issue SEO in the following year. In addition, ΔFirm Positive and ΔFirm Negative are higher for those SEO issuers than firms that do not issue SEO in the next year, suggesting tone management.

4. Empirical results

4.1. Seasoned equity financing decision

To test whether changing peer tone prompts a firm's SEO decision, I utilize a change regression on the decision to issue an SEO, following Xu (2012) and Cho and Muslu (2021).

$$\text{SEO}_{t+1}=\beta_0+\beta_1\Delta\text{Peer Positive}_t+\beta_2\Delta\text{Peer Negative}_t+\beta_3\Delta\text{Controls}+\varepsilon \quad (1)$$

where SEO_{t+1} is a dummy equal to 1 if the firm issues an SEO in a given year, t+1, and zero for the rest of the Compustat firms in that year. $\Delta Peer\ Positive_t$ and $\Delta Peer\ Negative_t$ are average changes in the positive tone and negative tone of peers' MD&A narratives from year t−1 to t, respectively. The one-year lag between the dependent and independent variables of Equation (1) allows a firm to acquire and respond to information obtained from the changing tone of peer narratives. Lagged annual changes of firm positive tone, firm negative tone, peer characteristics, firm characteristics, and peer SEO issuance activities variables, as discussed in Section 3.2, are included as control variables. Following prior literature, I include year fixed effects in all regressions and report heteroscedasticity-consistent standard errors clustered by industry. Table 3 presents the results of estimating Equation (1).

<<Please insert Table 3 here>>

Column (1) only includes the change in MD&A tone and year fixed effect. The coefficient for $\Delta Peer\ Positive_t$, 0.049, is significant on the 1% level, while the coefficient for $\Delta Peer\ Negative_t$, -0.001, is not significant. This result suggests that peers' increasing positive tone increases the likelihood of firms' SEO issuance, which is consistent with the hypothesis. However, this significant effect of $\Delta Peer\ Positive_t$, could be caused by shifts in peer or firm characteristics. We, therefore, add control variables outlined in Section 3.2. to the model in Column (2). The respective coefficient for $\Delta Peer\ Positive_t$, 0.031, is also significant. Peers' changing negative tone still does not significantly impact SEO issuance decisions. In addition, I include peer SEO issuance activities to control for the firm's explicit imitation of peer SEO issuance activities. $PeerSEO_t$ has a significant coefficient of 0.513, indicating that firms are motivated by peers' SEO issuance to issue SEOs. This finding provides evidence of a firm's explicit imitation of peer financing decisions. All results are robust using the number of SEOs issued as dependent variables (as shown in Column (3)), using logit and probit models (as shown in Columns (4) and (5)), and using level (instead of change) as control variables. Taken together, these findings indicate that a changing positive tone of peer narratives impacts a firm seasoned equity issuance activities.

This peer effect is also economically significant. When $\Delta\text{Peer Positive}_t$ increases by one standard deviation (0.099), the likelihood of issuing SEO increases by 0.031×0.099=0.3%, corresponding to 4.5% of the mean value of SEO (0.068).

Finally, I estimate a multinomial probit model to analyze firms' choice between seasoned equity, bonds, or no external financing. The findings confirm my results that firms are more likely to issue seasoned equity in response to an increase in peers' positive MD&A tone.

However, this peer influence does not exist in the bond financing decisions, as shown in Column (6). These results, taken together, support the idea that firms prefer to finance investment opportunities with equity, not bonds, as Myers (1977) suggested.

4.2. The reason behind the spillover effect in MD&A disclosure

In this section, I explore the reasons behind such spillover effects in the MD&A disclosure. According to a comprehensive review of the literature on peer effect, Lieberman and Asaba (2006) identify two primary reasons for the peer effect: 1) rivalry-based theory and 2) information-based theory. The rivalry-based theory suggests that firms imitate their peers to maintain their competitiveness or to limit rivalry. The information-based theory indicates that firms are more inclined to act based on the information inferred from the actions of other firms when in a high information asymmetry environment (Adhikari and Agrawal, 2018). Specifically, less successful firms may follow more successful peers if they believe the latter are better informed about capital and product markets.

4.2.1. The role of competition

The rivalry-based theory argues that firms imitate their peers to maintain competitive parity and limit rivals. For example, Aghion et al. (2001) indicate that firms can preserve their competitiveness and enhance growth prospects by imitating their competitors. Previous literature shows that peer effects are stronger when a firm and its peer compete fiercely and try to win customers (Adhikari and Agrawal, 2018; Cao et al., 2019; Durnev and Mangen, 2020). In highly competitive product markets with many peers and similar products, product differentiation becomes more challenging. The ability to exert market power in such competitive product markets decreases uncertainty about a firm's future performance (Gaspar and Massa, 2006). When firms operate in a more competitive environment, they may pay attention to peers' actions and disclosure in order to maintain their competitive parity with peers. Competition may shape a firm's financing decisions in an effort to obtain a number of competitive advantages in the product market. SEOs serve distinct roles in corporate financing strategies to overcome competitive pressures. In particular, SEOs offer necessary liquidity that supports ongoing investment and innovation. The decision to raise additional equity through an SEO affects not only the issuing firm but also its competitors, influencing the broader competitive landscape of the product market. Raising seasoned equity will result in an increase in cash infusion for issuers. Unlike debt financing, equity capital has fewer constraints and

grants management greater investment flexibility. As a result, firms can further develop their existing project portfolio (such as allocating more resources to existing drug development) and broaden their project portfolio (such as developing new drugs). However, in a less competitive environment, product differentiation is more straightforward, and thus, there is less need to pay attention to peers disclosure and adjust corporate financing decisions accordingly. Therefore, consistent with the rivalry-based theory, I expect that firms are more likely to be active in responding to the changing tone of their peers when the firm faces more intense competition.

I analyze whether this association between a firm's equity issuance activities and peers' changing MD&As tone varies with competition in the product market. I include the *Number of Peers* and *Total Similarity* to account for the effect of competition. The number of peers is the number of product market peers based on Hoberg and Phillips' (2010, 2016) network industry classification data. Total similarity measures firms' exposure to product market competition based on how similar a firm's products are to those of its peers.

Table 4 shows the results of the analysis of how competition affects the relationship between firm equity financing decisions and peer-changing MD&A tone.

<<Please insert Table 4 here>>

The coefficient on $\Delta Peer\ Positive \times Competition$ and $\Delta Peer\ Negative \times Competition$ shows how the association between the probability of SEO issuance and the tone of its peers' MD&As is affected by competition. Both interaction terms $\Delta Peer\ Positive \times Number\ of\ Peers$ and $\Delta Peer\ Positive \times Total\ Similarity$ are significantly positive, suggesting that the association between a firm SEO issuance and the tone of its peers' MD&As is stronger when a firm faces higher competition. Hypothesis 2 is supported by the data.

4.2.2. The role of information

Information-based theory posits that peer effect is more prevalent in an environment with high information asymmetry (Lieberman and Asaba, 2006). My first proxy is the number of analyst forecasts (Adhikari and Agrawal, 2018; Jegadeesh et al., 2004), with lower followings implying a poor information environment. My second proxy of the information environment is the probability of informed trading measure introduced by Brown and Hillegeist (2007), with a larger PIN implying a poor information environment. I expect an increase in spillover effects when there is high information asymmetry. Thus, I partition the results based on the two proxies for the industry information environment, and Table 5 presents the regressions estimated on subsamples of firms with higher or lower information asymmetry.

<<Please insert Table 5 here>>

Using each measure, I find that the spillover effect is more pronounced among firms that operate in worse information environments, i.e., firms in industries that are followed by lower analysts and where stock trading conveys more private information. These findings suggest that the spillover effect is greater in more uncertain environments and supports the information-based theory.

I then investigate if this spillover effect is driven by a leader-follower model in which less successful firms are sensitive to more successful firms but not vice versa. Less successful firms often struggle to access valuable information. According to Leary and Roberts (2014), market followers are more likely to imitate their peer firms' financing decisions. Therefore, these market followers may find greater value in their peers' MD&A narrative because of its accessibility. Larger and easier-to-value firms and firms with more market share are likely better informed about product and capital markets. I partition the peer into two sub-groups by firm size, market share, and asset tangibility. Specifically, a peer is defined as a leader if its size exceeds the focal firm and is otherwise defined as a follower peer. In the same fashion, leaders and followers are defined by their market shares (sales revenue) and asset tangibility relative to the focal firm. Table 6 estimates the regression among each leader and follower sample.

<<Please insert Table 6 here>>

The coefficient on leader peers' ΔPeer Positive is significantly positive and much larger in magnitude than that on follower peers' ΔPeer Positive. The implication is that firms are more sensitive to the changing positive tone of larger peers, have more market share, and are more tangible than them, consistent with the leader-follower model. That is, a firm pays more attention to peers who are perceived to have superior information, indicating that firms react to peers' changing tone in the MD&A section based on learning motivations. Overall, these results provide strong support for information-based theory.

4.3. Do firms respond to the MD&A of peers that cease to be peers?

As discussed before, one of the significant advantages of using TNIC to identify peers is its ability to capture the dynamic nature of product markets. The set of peers for each firm is changing each year in TNIC industries. Capitalizing on such annual changes, I define three peer groups for each firm-year observation: peers for $year_{t-1}$ that cease to be peers for $year_t$ (past peers), peers for both $year_{t-1}$ and $year_t$ (current peers), and peers for $year_t$ that were not peers for $year_{t-1}$ (new peers), following Jayaraman et al. (2021). In this case, the SEO

issuance decision should be associated with the changing tone of new and current peers. This relationship should be weaker for past peers because product descriptions of past peers have significantly diverged from those of the firm and thus should not provide as relevant information as the product descriptions of new and current peers. I test this prediction by replacing $\Delta\text{Peer Positive}_t$ and $\Delta\text{Peer Negative}_t$ with the respective average for new, current, and past peer groups. Table 7 reports the results.

<<Please insert Table 7 here>>

Consistent with my expectation, in Column (1), changing the positive tone of past peers is insignificant, suggesting that the main findings of Table 3 are muted for past peers. In columns (2) and (3), I find that the coefficients on Δ*Peer Positive* for current and new peers remain significantly positive. This result suggests that managers dynamically adjust their peer groups, considering the evolving nature of product markets. Additionally, this test addresses the possibility that a firm may be responding to information from other public and private sources rather than to changes in tone in peer firms' MD&A disclosures. Overall, the evidence corroborates my main results and alleviates concerns that the observed impact of peers' MD&A narrative on firm SEO decisions is merely the result of the mechanical relationship between the focal firm and its product market peers.

4.4. Role of content

I then examine the relationship between firms' equity financing decisions and peer's changing tone of different sentences. Firms may pay more attention to the sentences that discuss specific content. In addition, firms may also find that the tone of specific content is more informative since specific information will reduce uncertainties. Bayesian belief revision per unit of noisy information is less than that in response to one unit of precise information (Holthausen and Verrecchia, 1988). Prior studies have employed different proxies for specific content within textual disclosures. Hope, Hu, and Lu (2016) utilize numbers (including percentages, monetary amounts, times, and dates) and show that investors are sensitive to specific risk disclosures. In addition, Muslu, Radhakrishnan, Subramanyam, and Lim (2015) demonstrate that forward-looking disclosure in the MD&A section helps investors forecast a firm future earnings performance. Therefore, numerical and forward-looking narratives from peers' MD&A sections can help firms have a better idea about industry-wide opportunities and challenges.

Following Cho and Muslu (2021), I focus on two types of content sentences: numerical sentences and forward-looking sentences. MD&A sections are divided into content sentences and other sentences utilizing the word list established by Cho and Muslu (2021). In our sample,

64 percent of MD&A sentences contain numerical words, and 29 percent of MD&A sentences contain forward-looking words, consistent with Cho and Muslu (2021). I re-estimate Equation (1) by replacing ΔPeer Positive, ΔPeer Negative, ΔFirm Positive, and ΔFirm Negative with the respective changing tone for content and other sentences (such as forward-looking and non-forward-looking MD&A sentences).

<<Please insert Table 8 here>>

Column (1) presents the results for the numerical content category. The coefficient for ΔPeer Positive of Content is significant, whereas ΔPeer Positive of Other is not significant. This finding suggests that changes in tone in numerical sentences primarily contribute to the baseline findings, supporting the significance of soft information.

Column (2) shows results with the forward-looking content category. The coefficient for ΔPeer Positive of Other is significant, while the coefficient for ΔPeer Positive of Content is not significant. However, the ΔPeer Positive of Content is not statistically different from ΔPeer Positive of Other. Overall, it remains unclear whether the changing tone in forward-looking sentences is the driver of the identified peer influence.

4.5. Use of proceeds

To investigate post-issuance investment, I follow Kim and Weisbach (2008) and Walker and Yost (2008) and examine post-SEO changes in capital expenditures, R&D, acquisitions, long-term debt reduction, changes in inventory, and changes in cash to measure the use of proceeds. Capital expenditures, R&D, acquisitions, and increases in inventory capture investment purposes for the offering proceeds. Increases in cash are consistent with the motive of market timing. Finally, long-term debt reduction is less clear-cut in terms of inferred motive. It is potentially attributable to long-term debt strengthening the monitoring of managers (Jensen, 1986) or market timing (Hertzel and Li, 2010; Walker et al., 2016).

For income statement and cash flow statement items (capital expenditures, R&D, acquisitions, and long-term debt reduction), I take the log of one plus the total value of each variable since the issue date normalized by total assets before the issue date: Use of proceeds=$\ln[(\sum_{i=1}^{t} V_i/\text{total assets}_{-1})+1]$, where V is the variable being measured, year −1 is the fiscal year-end before the issue date, and year t is the number of years after the issuance year. For balance sheet items (inventory, cash, and working capital), I take the log of one plus changes in each variable normalized by total assets before the issue date: Use of proceeds=$\ln[((V_t - V_0)/\text{total assets}_{-1})+1]$. I aggregate all proceeds raised by the

same firm within the same fiscal year. I estimate the following regression similar to those reported by Kim and Weisbach (2008) and Erel et al. (2012), using the following Specification:

$$\text{Use of proceeds}=\beta_0+\beta_1\text{LogProceeds}+\beta_2\Delta\text{Peer Positive}+\beta_3\Delta\text{Peer Negative}$$
$$+\beta_4\Delta\text{Peer Positive}\times\text{LogProceeds}+\beta_5\Delta\text{Peer Negative}\times\text{LogProceeds}+\text{Controls}+\varepsilon \quad (2)$$

where LogProceeds captures the total proceeds raised from seasoned equity issuance over the fiscal year. I take the log of one plus the ratio of total proceeds to total assets to minimize the effect of outliers. The key variables of interest are the ΔPeer Positive × LogProceeds and ΔPeer Negative× LogProceeds interaction terms, which capture the impact of the changes in peer tone on the use of proceeds. I also control for year and industry fixed effects in the regressions. Industry fixed effects are based on FIC 500 industry fixed effects as defined in Hoberg and Phillips (2016). Table 8 presents the regression results, omitting the coefficients on LogProceeds, ΔPeerPositive, ΔPeerNegative, LogAssets, year, and industry dummies for brevity. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses.

<<Please insert Table 9 here>>

I find significant positive coefficients on $\Delta Peer\ Positive \times LogProceeds$ for R&D expenditure, further cementing the conjecture that issuers raise seasoned equity to finance investment opportunities when peers become more positive in their MD&A disclosure. I also document significant negative coefficients on $\Delta Peer\ Positive \times LogProceeds$ for acquisition. The results suggest that proceeds raised from SEO whose peers become more positive are less likely to be used for acquisition.

4.6. Long-term stock performance

Our last set of tests focuses on the relationship between peers' changing tone in the MD&A section and post-issuance stock price performance. Real option theory predicts that firms with great investment opportunities will experience a lower post-issuance return as they invest after the issuance (Carlson et al., 2006; Lyandres et al., 2008). If a firm responds to peers' increased positive tone by issuing SEO and then using the proceeds for investment, these issuers should experience lower post-issuance stock returns. I measure issuers' long-term stock return using the buy-and-holding approach to validate my hypothesis.[4] Specifically, buy-and-hold

[4] The BHAR approach is largely free of rebalancing bias, has a strong power to detect abnormal return, and more robust then than the calendar time method (Asparouhova et al., 2013; Loughran and Ritter, 2000; Lyon et al., 1999). Moreover, I want to isolate the impact of peer changing tone on long-term stock return. I can only conduct multiple regression on BHAR not calendar time methods.

abnormal returns (*BHAR*) is calculated as the difference between buy-and-hold returns to SEO firms compared to its peers who do not issue SEO over a 72-month window (i.e., [−36, 36]) around the issuance month:

$$\mathrm{BHAR}_{\mathrm{i},\tau} = \prod_{t=1}^{\tau}[1 + R_{i,t}] - \prod_{t=1}^{\tau}[1 + MR_{i,t}] \quad (3)$$

where $\mathrm{BHAR}_{\mathrm{i},\tau}$ is BHARs for firm i for length τ months, $R_{i,t}$ is the return for firm i in month t, and $MR_{i,t}$ is peer return in month t, and month t is the number of months after the issuance month. I focus on 36-month BHARs, which are reported in two periods: one begins in the first month following the SEO issuance (i.e., [1, 36]), and the other begins in the seventh month following the SEO issuance (i.e., [7, 42]).[5] I also report 12-month and 24-month BHARs for robustness checks. To examine my hypothesis, I classify issuers into two groups based on whether ΔPeer Positive is above the median per year.

Table 10 Panel A presents BHARs for the full sample and high and low peer positive tone samples, respectively.

<<Please insert Table 10 here>>

I find significantly negative mean BHARs for all issuers, ranging from −8.0% to – 33.4% for all horizons, except *BHAR*[1,36] for low-$\Delta\mathrm{Peer\ Positive}_t$ groups. These results provide additional evidence of SEO underperformance, which has been documented in previous studies. The last column shows the difference in mean BHAR between high-$\Delta\mathrm{Peer\ Positive}_t$ and low-$\Delta\mathrm{Peer\ Positive}_t$ groups. The results send a clear message: The long-run abnormal returns of stocks in the high-$\Delta\mathrm{Peer\ Positive}_t$ group are significantly lower than those in the low $\Delta\mathrm{Peer\ Positive}_t$ group, indicating a relative stock underperformance of SEO issuers whose peers increase their positive tone in their MD&A narrative, consistent with my expectations.

Following Fu and Huang (2016), I then implement the following regression model to investigate the effects of peer changing tone on long-run stock returns:

$$BHAR = \beta_1 \Delta\mathrm{Peer\ Positive}_t + \beta_2 \Delta\mathrm{Peer\ Negative}_t + \beta_3 \mathrm{Controls} + \varepsilon \quad (4)$$

where BHAR is the 12-month, 24-month, and 36-month buy-and-hold abnormal return relative to peers. The explanatory variables of interest are peers' changing positive and negative tones. Other control variables include the firm's changing tone, firm size, Tobin's Q, leverage, fixed assets, cash, profitability, stock return, stock volatility, proceeds, industry (classified as the FIC 500 industry), and year dummies. Table 9 Panel B shows that $\Delta Peer\ Positive_t$ has a negative

[5] To minimize the effect of underwriter price stabilization practices, I also examine the BHAR 7-42, following . Previous studies, such as Loughran and Ritter (1995), always find no SEO underperformance in the first six month after the issuance. Underwriters may buy share in the open market to create demand, which could potentially affect our results.

impact on long-term abnormal returns even after controlling for various firm and issue characteristics. Increased positive peer tone, which suggests the investment opportunities, contributes to post-issue underperformance even after controlling for the potential mispricing effect, supporting the real-investment explanations of low long-run post-issuance stock price underperformance put forward by Li et al. (2009) and Carlson et al. (2006).

5. Robustness tests

5.1. Alternative peer definition

In the baseline results, peers are identified using TNIC. Most studies define peer groups based on pre-defined industry classifications, such as Standard Industry Classification (SIC), North American Industry Classification System (NAICS), and Global Industry Classification Standard (GICS) (e.g., Beatty et al., 2013). Prior studies have demonstrated that these pre-defined industry classifications are noisy proxies for the peer group and often fail to accurately group firms operating within the same product market. Additionally, these industry classifications are rarely updated, failing to capture the evolving nature of product markets.[6] Therefore, I used TNIC to obtain the main results. However, consistent with previous literature, I define peer groups based on three-digit SIC industry groups in the robustness check. Next, I re-estimate the main analyses using a three-digit SIC industry definition; the results are presented in Table 11.

<<Please insert Table 11 here>>

Overall, my results hold. Specifically, the results in Columns (1) and (2) show that the estimated coefficient of $\Delta Peer\ Positive_t$ is significantly positive, suggesting that firms are more likely to issue SEO when peer firms become more optimistic in their MD&A. Moreover, I will examine whether this association is moderated by competition. In particular, I measure competition using three variables computed at the level of the 3-digit SIC code: (1) entry costs, (2) industry size, and (3) product substitutability, following Karuna (2007). Entry costs (*EntryCosts*) are defined as the natural logarithm of the weighted average of the gross value of property, plant, and equipment (PPE) for each firm within an industry, with the weights based on each firm's market share within that industry. PPE serves as a proxy for the minimal level of investments required to enter an industry to commence production. Larger initial investments generally have greater barriers to entry. Industry size (*IndustrySize*) is calculated

[6] I am not the first to argue that SIC classifications are an imperfect proxy for defining peer groups. Prior studies indicates that SIC codes often misclassify firms by failing to account for heterogeneity within groups (e.g., Clarke (1989); Bhojraj et al., (2003); Brickley and Zimmerman (2010))

as the natural logarithm of total industry sales, which reflects the density of consumers in an industry. Product substitutability (*ProductSubstitutability*) is calculated as the ratio of industry operating costs to total industry sales. A higher ratio indicates greater substitutability of products, as it represents the inverse of the price-cost margin. When products are more substitutable, firms face constraints in charging higher prices without risking the loss of customers. Column (3) includes these competition fundamentals and their interaction term with $\Delta Peer\ Positive_t$ and $\Delta Peer\ Negative_t$. The coefficient on interaction term shows how the relationship between the firm's seasoned equity issuance activities and the changing tone of its peer's MD&As is affected by *EntryCosts*, *IndustrySize*, and Product *ProductSubstitutability*. The coefficient on the interaction between *EntryCosts* and $\Delta Peer\ Positive_t$ is significantly negative at -0.042, suggesting that the relationship between peer-changing positive tone is stronger when firms operate in industries with lower entry costs.

5.2. Alternative tone measures

In the main analysis, I use straightforward methods, such as determining tone from financial dictionaries (Loughran and Mcdonald, 2011). I complement my analysis by incorporating an alternative tone measure: FinBERT, a specialized variant of the BERT language model. FinBERT is a large language model and pre-train using three types of financial texts: (i) corporate annual and quarterly filings, (ii) financial analyst reports, and (iii) earnings conference call transcripts. The FinBERT model outperforms the Loughran and McDonald dictionary and other machine learning methods in sentiment classification (Huang et al., 2023).

To calculate the MD&A tone, I first use the model to label each sentence as positive, negative, or neutral based on the highest predicted likelihood. I then calculate the percentage of positive sentences and the percentage of negative sentences in the MD&A section and the change in these two percentages from year t-1 to year t, labeled as $\Delta Firm\ Positive$ and $\Delta Firm\ Negative$. Finally, $\Delta Peer\ Positive$ and $\Delta Peer\ Negative$ are calculated as the average changing tone across all firms' product market peers. I document a significant positive impact of peer-changing positive tone on the likelihood of seasoned equity issuance, which is consistent with the baseline results.

<<Please insert Table 12 here>>

My results hold when I use the FinBERT to measure the MD&A tone in the regressions. Column (1) only includes the change in MD&A tone and year fixed effect. The coefficient for $\Delta Peer\ Positive_t$ significant, suggesting that peers' increasing positive tone increases the

likelihood of firms' SEO issuance, which is consistent with the baseline results. Peers' changing positive tone still has a significant impact on SEO issuance decisions after controlling for shifts in peer or firm characteristics, as shown in Column (2). Results stay robust using the number of seasoned equity issued as the dependent variable.

6. **Conclusion**

In this study, I investigate if peers' changing tone wields any influence on the firm's SEO issuance. I show that the increased positive tone of peers' MD&A narrative encourages firms to issue SEOs. Competition moderates this peer influence, consistent with rivalry-based theory. The cross-sectional tests show that the spillover effect is consistent with the information-based theory. The spillover effect is greater in more uncertain environments. Firms are sensitive to the changing tone of peers who are larger, have more market share, and are more tangible than them. In addition, the firm responds to the changing positive MD&A tones of both new and current peers but not to those of past peers. Further tests suggest that the changes in tone in numerical sentences drive the association between peer changing tone and equity financing decisions. Regarding the post-issuance activities, I document that issuers whose peers have increased their positive tone are more likely to use the SEO proceeds to finance R&D. I also document a lower post-issuance stock return for those whose peers have increased their positive tone.

My evidence suggests that a firm bases its financing decision on the changing tone of peers' MD&A narrative, which will then change the product market and competitive landscape, potentially disadvantaging the disclosing firm. This paper provides empirical support for the proprietary costs of disclosure and suggests that firms should consider such proprietary costs when making the annual report, especially the MD&A section.

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Table 1: Descriptive Statistics

This table reports the descriptive statistics for season equity offering (SEO), management discussion and analysis (MD&A) tone, peer characteristics, and firms' characteristics and their changes. I present means, 25th percentile, median, 75th percentile, standard deviations, and the number of observations for each variable. A variable pertaining to peers is calculated as the average, across all peers, of each peer's value for that variable. The Appendix provides variable definitions and sources. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Level						Change					
	Mean	25%	Median	75%	St.dev.	Obs.	Mean	25%	Median	75%	St.dev.	Obs.
Peer Positive	0.928	0.772	0.884	1.076	0.217	47,497	-0.008	-0.048	-0.001	0.035	0.099	47,497
Peer Negative	2.088	1.738	2.011	2.310	0.516	47,497	0.034	-0.095	0.016	0.161	0.284	47,497
Firm Positive	0.923	0.634	0.852	1.137	0.408	47,497	-0.008	-0.125	-0.006	0.114	0.233	47,497
Firm Negative	2.098	1.485	1.966	2.557	0.852	47,497	0.039	-0.219	0.013	0.277	0.511	47,497
Peer SEO	0.087	0.000	0.034	0.125	0.127	47,497						
Peer Firm Size	5.778	4.785	5.734	6.656	1.221	47,497	0.074	0.000	0.066	0.140	0.140	47,497
Peer Tobin	2.320	1.500	2.009	2.917	1.109	47,497	-0.132	-0.366	-0.065	0.193	0.855	47,497
Peer Leverage	0.160	0.077	0.130	0.233	0.110	47,497	0.009	-0.007	0.007	0.023	0.034	47,497
Peer Fixed Assets	0.234	0.099	0.153	0.304	0.192	47,497	0.002	-0.008	0.001	0.011	0.021	47,497
Peer Cash	0.260	0.094	0.208	0.387	0.193	47,497	-0.009	-0.028	-0.006	0.010	0.038	47,497
Peer Profitability	0.018	-0.026	0.079	0.130	0.171	47,497	-0.007	-0.028	-0.005	0.015	0.052	47,497
Peer R&D	0.087	0.001	0.038	0.139	0.106	47,497	0.002	-0.002	0.000	0.005	0.025	47,497
Peer Stock Return	0.184	-0.086	0.102	0.361	0.461	47,497						
Firm Size	5.608	4.144	5.545	6.998	1.962	47,497	0.066	-0.069	0.032	0.162	0.303	47,497
Firm Tobin	2.186	1.142	1.589	2.513	1.754	47,497	-0.102	-0.356	-0.018	0.266	1.324	47,497
Firm Leverage	0.159	0.000	0.100	0.274	0.177	47,497	0.008	-0.018	0.000	0.019	0.083	47,497
Firm Fixed Assets	0.234	0.065	0.151	0.329	0.226	47,497	0.002	-0.016	0.000	0.017	0.049	47,497
Firm Cash	0.242	0.043	0.149	0.371	0.250	47,497	-0.008	-0.040	-0.001	0.032	0.101	47,497
Firm Profitability	0.027	0.002	0.096	0.153	0.247	47,497	-0.007	-0.038	-0.001	0.029	0.131	47,497
Firm R&D	0.073	0.000	0.010	0.094	0.131	47,497	0.002	0.000	0.000	0.001	0.061	47,497
Firm Stock Return	0.157	-0.273	0.034	0.380	0.722	47,497						

Table 2: Univariate analysis

This table reports the mean and median values of empirical variables and the differences in these empirical variables between SEO-issued years and non-SEO-issued years. I also use an independent sample *t*-test (Mann-Whitney U test) to examine if the average (median) value differs significantly. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	SEO (1)		Non-SEO (2)		Diff in mean	Diff in median
	Mean	Median	Mean	Median	(1) − (2)	(1) − (2)
ΔPeer Positive	0.002	0.009	-0.009	-0.002	0.011***	0.011***
ΔPeer Negative	0.036	0.016	0.034	0.016	0.002	-0.001
ΔFirm Positive	0.001	0.005	-0.008	-0.007	0.009**	0.012***
ΔFirm Negative	0.018	0.004	0.040	0.013	-0.022**	-0.010
Peer SEO	0.204	0.164	0.079	0.029	0.125***	0.134***
ΔPeer Firm Size	0.090	0.083	0.073	0.065	0.016***	0.019***
ΔPeer Tobin	-0.043	-0.004	-0.138	-0.068	0.095***	0.064***
ΔPeer Leverage	0.014	0.013	0.008	0.006	0.006***	0.007***
ΔPeer Fixed Assets	0.005	0.002	0.002	0.001	0.003***	0.002***
ΔPeer Cash	-0.012	-0.010	-0.009	-0.006	-0.003***	-0.003***
ΔPeer Profitability	-0.011	-0.012	-0.007	-0.004	-0.005***	-0.007***
ΔPeer R&D	0.003	0.000	0.002	0.000	0.001	0.000***
Peer Stock Return	0.224	0.174	0.181	0.099	0.043***	0.076***
ΔFirm Size	0.097	0.058	0.064	0.031	0.033***	0.027***
ΔFirm Tobin	0.215	0.127	-0.125	-0.023	0.340***	0.150***
ΔFirm Leverage	0.008	0.002	0.001	0.000	0.007***	0.002***
ΔFirm Fixed Assets	0.020	0.000	0.007	0.000	0.013***	0.000***
ΔFirm Cash	-0.023	-0.008	-0.007	0.000	-0.017***	-0.007***
ΔFirm Profitability	-0.034	-0.010	-0.005	-0.001	-0.029***	-0.010***
ΔFirm R&D	0.018	0.000	0.001	0.000	0.017***	0.000***
Firm Stock Return	0.317	0.080	0.145	0.031	0.172***	0.049***

Table 3: SEO financing decision

This table presents the regression analysis of the relationship between peer changing tone and firm seasoned equity financing decisions. In Column (1), the dependent variable is a dummy variable that equals one if a firm issues SEO during year t+1. The explanatory variable of interest is ΔPeer Positive and ΔPeer Negative, the average change between t and t-1 of each peer's MD&A tone. Peer Positive (Peer Negative) is the number of positive (negative) words per 100 words in a firm's MD&A section, measured using the 2020 version of the word list from Loughran and McDonald (2011). Firms' potential peers are product market peers identified using Hoberg and Phillips' (2010, 2016) network industry classification data. Column (2) adds peer and firm characteristics. Column (3) uses the number of SEOs issued in year t+1 as the dependent variable. Columns (4) and (5) use the logit and probit models instead of the linear probability model and report the coefficient estimates, respectively. Columns (6) and (7) report coefficient estimates for a multinomial probit model. The dependent variable includes SEO and bonds. The base outcome is not issuing SEO and bonds in year t+1. All specifications include year fixed effect, controlling for unobservable economy-wide time-specific effects that may affect all firms. The Appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	Linear probability model			Logit model	Probit model	Multinomial probit model	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	SEO	SEO	Number of SEO	SEO	SEO	SEO	Bond
ΔPeer Positive	0.049***	0.031***	0.038***	0.632**	0.318***	0.446***	0.071
	(2.95)	(2.72)	(2.74)	(2.52)	(2.71)	(2.75)	(0.39)
ΔPeer Negative	-0.001	-0.001	-0.003	0.078	0.034	0.052	0.025
	(-0.09)	(-0.10)	(-0.43)	(0.63)	(0.55)	(0.62)	(0.37)
Peer SEO		0.513***	0.630***	5.577***	2.929***	3.885***	-0.366
		(3.76)	(3.78)	(7.99)	(6.94)	(7.32)	(-0.79)
ΔPeer Firm Size		-0.099***	-0.127***	-1.081***	-0.527***	-0.610**	0.688***
		(-2.69)	(-2.80)	(-3.32)	(-2.96)	(-2.49)	(3.34)
ΔPeer Tobin		0.009***	0.012***	0.151***	0.081***	0.128***	0.176***
		(4.50)	(5.14)	(3.48)	(3.88)	(4.42)	(4.50)
ΔPeer Leverage		0.245***	0.286***	3.895***	1.857***	2.556***	0.655
		(3.00)	(3.00)	(3.70)	(3.48)	(3.57)	(1.23)
ΔPeer FixedAssets		0.035	0.028	1.836	0.957	1.458	1.559
		(0.41)	(0.24)	(1.19)	(1.25)	(1.35)	(1.49)
ΔPeer Cash		-0.230***	-0.281***	-3.731***	-1.822***	-2.116***	2.874***
		(-2.77)	(-2.66)	(-3.54)	(-3.54)	(-2.93)	(4.78)
ΔPeer Profitability		-0.108*	-0.154**	-1.902***	-0.890***	-1.142**	0.359
		(-1.92)	(-1.97)	(-2.90)	(-2.67)	(-2.43)	(0.83)
ΔPeer R&D		0.094	0.094	1.730	0.986*	1.521**	1.066
		(1.13)	(0.71)	(1.48)	(1.82)	(2.04)	(1.38)
Peer Stock Return		0.001	0.001	0.060	0.021	-0.004	-0.258***
		(0.17)	(0.11)	(0.50)	(0.35)	(-0.05)	(-3.05)

Table 3 continued

	Linear probability model			Logit model	Probit model	Multinomial probit model	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	SEO	SEO	Number of SEO	SEO	SEO	SEO	Bond
ΔFirm Positive	0.006	0.005	0.005	0.069	0.037	0.042	-0.064
	(0.97)	(0.89)	(0.71)	(0.79)	(0.83)	(0.69)	(-1.22)
ΔFirm Negative	-0.007***	-0.003	-0.006*	-0.071	-0.034	-0.055*	-0.079***
	(-2.76)	(-1.23)	(-1.67)	(-1.63)	(-1.55)	(-1.83)	(-3.14)
ΔFirm Size		0.045***	0.047***	0.653***	0.334***	0.487***	0.234***
		(6.56)	(4.97)	(5.95)	(6.93)	(6.59)	(2.60)
ΔFirm Tobin		0.008**	0.009*	0.103***	0.050***	0.076***	0.051***
		(2.08)	(1.68)	(3.20)	(3.01)	(3.33)	(4.55)
ΔFirm Leverage		0.069***	0.073***	1.023***	0.512***	0.677***	-0.093
		(5.02)	(3.69)	(4.10)	(4.69)	(4.47)	(-0.61)
ΔFirm Fixed Assets		0.066**	0.091**	1.152***	0.525**	0.781***	0.532
		(2.04)	(2.15)	(2.75)	(2.52)	(2.64)	(1.59)
ΔFirm Cash		-0.071***	-0.100***	-1.094**	-0.576**	-0.778**	0.165
		(-3.50)	(-7.10)	(-2.20)	(-2.57)	(-2.50)	(1.49)
ΔFirm Profitability		-0.068***	-0.083***	-0.812***	-0.396***	-0.538***	-0.046
		(-2.93)	(-2.89)	(-7.94)	(-5.28)	(-4.95)	(-0.44)
ΔFirm R&D		0.280***	0.354***	2.715***	1.339***	1.890***	0.413**
		(12.49)	(13.52)	(3.20)	(4.10)	(4.14)	(2.43)
Firm Stock Return		0.018***	0.016***	0.233**	0.124***	0.172***	0.022
		(4.62)	(2.87)	(2.35)	(3.04)	(3.06)	(0.78)
Constant	0.069***	0.019***	0.020***	-4.356***	-2.323***	-3.148***	-2.250***
	(3.60)	(7.41)	(6.26)	(-29.50)	(-30.76)	(-30.63)	(-27.73)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	47,497	47,497	47,497	47,497	47,497	47,497	47,497
Adj. R-squared / Pseudo R-squared / Wald chi-squared	1.4%	9.0%	9.0%	14.3%	14.3%	12545.0	

Table 4: Role of competition

This table presents the regression analysis of the role of competition. The dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. The explanatory variable of interest is the interaction term between the competition measure and ΔPeer Positive and ΔPeer Negative, the average change between t and t-1 of each peer MD&A tone. Competition measures include number of peers and total similarity. The number of peers is the number of product market peers based on Hoberg and Phillips' (2010, 2016) network industry classification data in the sample in year t. Total similarity is the sum of the pairwise similarity scores between the firm and all peers in the sample in year t. All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The Appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1) Number of peers	(2) Total similarity
ΔPeer Positive	0.013	0.027**
	(1.27)	(2.42)
ΔPeer Negative	0.007	0.007
	(1.44)	(1.54)
ΔPeer Positive*Competition	0.003***	0.017***
	(6.16)	(2.73)
ΔPeer Negative*Competition	-0.001***	-0.010***
	(-2.83)	(-2.92)
Competition	0.001***	0.009***
	(5.81)	(18.42)
Peer control	Yes	Yes
Firm control	Yes	Yes
Year fixed effect	Yes	Yes
Observations	47,497	47,497
Adj. R-squared	11.0%	11.8%

Table 5: Information environment and spillover effect

This table reports the regression analysis of the relationship between seasoned equity financing decisions and peer-changing MDA tone conditional on the information environment (number of analyst followings and probability of informed trading). The dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. The sample is partitioned into low and high sub-samples based on whether the firm is below or above the median of number of analyst followings (Columns (1)–(2)) and probability of informed trading (Columns (3)–(4)). The sample period is from 1997 to 2010 for sample partitions based on the probability of informed trading trading. All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	Number of analysts following		Probability of informed trading trading	
	(1)	(2)	(3)	(4)
	Low	High	Low	High
ΔPeer Positive	0.006***	-0.001	0.000	-0.003*
	(4.24)	(-0.38)	(0.30)	(-1.88)
ΔPeer Negative	0.001	0.001	-0.000	0.001
	(1.59)	(0.58)	(-0.31)	(0.47)
Peer control	Yes	Yes	Yes	Yes
Firm control	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	21,439	21,344	12,602	12,592
Adj. R−squared	2.4%	11.1%	3.0%	2.7%

Table 6: Leader-follower model

This table presents the regression analysis of the relation between seasoned equity financing decisions and peer changing MDA tone conditional on whether the peer is a follower or a leader. The dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. In Column (1), follower and leader are defined based on firm size: a peer is defined as a leader if its size is larger than the focal firm and is otherwise defined as a follower. Similarly, followers and leaders are defined by their market shares (sales revenue) relative to the focal firm in Column (2) and defined based on their asset tangibility relative to the focal firm in Column (3). All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The Appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1) Defined by size		(2) Defined by market share		(3) Defined by asset tangibility	
	Leader	Follower	Leader	Follower	Leader	Follower
ΔPeer Positive	0.031**	0.001	0.031***	-0.001	0.021**	0.016
	(2.30)	(0.08)	(2.80)	(-0.14)	(2.02)	(1.62)
ΔPeer Negative	0.009**	-0.004	0.011***	-0.002	-0.005	0.006
	(2.28)	(-0.69)	(2.90)	(-0.46)	(-1.12)	(1.03)
Peer control	Yes	Yes	Yes	Yes	Yes	Yes
Firm control	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	43,588	40,949	43,540	40,234	42,373	41,943
Adj. R−squared	9.2%	9.4%	9.3%	7.9%	8.6%	8.1%

Table 7: Dynamic Peer Groups and the impact of changing peer tone in firm SEO issuance decision

This table reports the regression analysis of the relationship between seasoned equity financing decisions and peer changing MDA tone conditional on the dynamic peer group. The dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. I define three peer groups for each firm-year observation: peers for year t−1 that cease to be peers for year t (past peers), peers for both year t−1 and year t (current peers), and peers for year t that were not peers for year t−1 (new peers). Firm-year observations with no past, current, and new peers are excluded, reducing the sample size to 39,389, 42,557, and 38,597. All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1)	(2)	(3)
	Past	Current	New
ΔPeer Positive	-0.005	0.041**	0.034**
	(-0.24)	(1.99)	(2.12)
ΔPeer Negative	0.014*	0.005	-0.010
	(1.71)	(0.54)	(-0.97)
Peer SEO	0.195***	0.506***	0.164***
	(2.84)	(3.77)	(3.59)
Peer control	Yes	Yes	Yes
Firm control	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	39,389	42,557	38,597
Adj. R−squared	4.7%	9.8%	4.8%

Table 8: Role of content

This table presents the regression analysis of the relation between a firm seasoned equity financing decision and peer changing tone conditional on sentence content. The dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. The key independent variable is the peers' changing positive and negative tone of the content sentences. Specifically, I examine three types of content sentences: investment-related, numerical, and forward-looking. The sentence is identified as investment-related, numerical, and forward-looking if it contains keywords. The word list is provided in Appendix 3. All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The Appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1) Numerical	(2) Forward-looking
ΔPeer Positive of Content	0.032***	0.012
	(3.20)	(1.19)
ΔPeer Negative of Content	0.006	0.005
	(1.39)	(1.42)
ΔPeer Positive of Other	0.009	0.027***
	(1.27)	(2.73)
ΔPeer Negative of Other	0.002	0.003
	(0.53)	(0.71)
ΔFirm Positive of Content	0.007*	-0.001
	(1.91)	(-0.41)
ΔFirm Negative of Content	-0.002	-0.002*
	(-0.66)	(-1.65)
ΔFirm Positive of Other	-0.001	0.007
	(-0.34)	(1.48)
ΔFirm Negative of Other	-0.001	0.001
	(-0.43)	(0.52)
Peer control	Yes	Yes
Firm control	Yes	Yes
Year fixed effect	Yes	Yes
Observations	47,497	47,497
Adj. R−squared	10.0%	10.0%
Test of coefficients (χ^2 statistic is in parentheses)		
ΔPeer Positive of Content - ΔPeer Positive of Other	0.023**	-0.015
	(4.79)	(0.97)
ΔPeer Negative of Content - ΔPeer Negative of Other	0.004	0.002
	(0.45)	(0.15)

Table 9: Use of proceeds

This table presents regression analyses of the impact of peer changing tone on the uses of proceeds of seasoned equity offerings. I use capital expense, R&D, acquisitions, long-term debt reduction, changes in inventory, and changes in cash capture uses of proceeds. Specifically, for each of these potential uses of proceeds, I estimate: Use of proceeds=β_0+β_1LogProceeds+β_2ΔPeer Positive+β_3ΔPeer Negative+β_4ΔPeer Positive × LogProceeds+β_5ΔPeer Negative × LogProceeds +β_6Firm size+ Fixed Effects+ε. The dependent variable for asset-based variables (inventory and cash) is: Use of proceeds=$ln[((V_t - V_{-1})/\text{total assets}_{-1}) + 1]$, and for cash flow-based variables (capital expense, acquisition, R&D, reduction in long-term debt) is Use of proceeds=ln[($\sum_{i=0}^{t} V_i/\text{total assets}_{-1}$)+1] where *V* is the variable being measured, and year −1 is the year-end before issuance. The independent variables include ΔPeer Positive, ΔPeer Negative, *LogProceeds*, their interaction term (i.e., ΔPeer Positive × $LogProceeds$ and ΔPeer Negative × *LogProceeds*), and *Firm Size*. I control for industry and year fixed effects. Industry fixed effects are based on FIC 500 industry fixed effects as defined in Hoberg and Phillips (2016). The Appendix provides variable definitions and sources. *t*-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. For brevity, I present results only for the variables of interest and indicate significant coefficients on ΔPeer Positive × $LogProceeds$ and ΔPeer Negative × *LogProceeds*) in bold. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables	Year	ΔPeer Positive × LogProceeds		ΔPeer Negative × LogProceeds		N	R^2
		β_4	t-stat	β_5	t-stat		
∑Capital Expense	1	-3.404	(-1.420)	-1.324	(-1.594)	1,963	6.0%
	2	-3.206	(-1.108)	-1.486	(-1.639)	1,640	4.6%
	3	-1.619	(-0.626)	-1.220	(-1.244)	1,402	4.2%
∑R&D	1	5.625	(1.405)	0.586	(0.278)	1,958	28.0%
	2	**13.995****	(2.153)	0.591	(0.220)	1,636	30.0%
	3	**20.080****	(2.189)	0.479	(0.158)	1,395	31.2%
∑Acquisition	1	**-3.155****	(-2.200)	-0.188	(-0.519)	1,912	4.2%
	2	-7.888	(-1.323)	0.679	(0.630)	1,581	3.0%
	3	**-14.267***	(-1.886)	-0.347	(-0.220)	1,346	4.1%
∑LTD Reduction	1	2.157	(1.600)	-0.255	(-0.609)	1,918	6.2%
	2	2.105	(0.905)	-0.630	(-0.991)	1,588	9.2%
	3	0.002	(0.001)	-1.349*	(-1.750)	1,346	10.8%
ΔInventory	1	0.271	(0.229)	-0.355	(-1.401)	1,963	3.8%
	2	-1.557	(-0.970)	-0.144	(-0.426)	1,640	3.1%
	3	-0.167	(-0.107)	0.108	(0.279)	1,401	2.2%
ΔCash	1	16.883	(1.358)	-3.264	(-1.215)	1,967	9.8%
	2	13.112	(1.110)	-4.446*	(-1.704)	1,647	9.7%
	3	2.713	(0.306)	3.379	(1.191)	1,411	8.9%

Table 10: Long-term stock performance

This table presents 1-year, 2-year, and 3-year buy-and-hold abnormal stock returns (BHARs) of issuing firms in relation to matched non-issuers during the three years after the offering. 3-year BHARs are reported for two periods: months 1-36 and months 7-42. Panel A presents the buy-and-hold returns of the issuer in excess of the buy-and-hold return for non-issuers matched peers. I first classify issuers into two groups based on whether ΔPeer Positive is above or below the median per year. I use a t-test to examine if the mean BHARs equal zero. I also report the difference in BHARs between the high peer changing positive tone SEOs and low peer changing positive tone SEOs and use an independent sample t-test to examine if BHAR differs significantly across the two subsamples. Panel B reports regression results of long-run abnormal returns. The dependent variable is months 1-12, months 1-24, months 1-36, and months 7-42 BHARs relative to non-issuer matched peers. All specifications are estimated using industry and year fixed effect, which are not tabulated. Industry fixed effects are based on FIC 500 industry fixed effects as defined in Hoberg and Phillips (2016). The Appendix provides variable definitions and sources. t-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: BHAR

	Full	Low	High	Diff
BHAR_1_12	-9.15%***	-7.99%***	-10.31%***	-2.33%
BHAR_1_24	-15.63%***	-8.98%**	-22.27%***	-13.30%***
BHAR_1_36	-20.99%***	-10.94%	-31.19%***	-20.25%***
BHAR_7_42	-24.49%***	-15.60%***	-33.40%***	-17.80%***

Panel B: Regression

	(1)	(2)	(3)	(4)
VARIABLES	BHAR_1_12	BHAR_1_24	BHAR_1_36	BHAR_7_42
ΔPeer Positive	-0.383*	-0.675*	-1.266***	-1.203***
	(-1.71)	(-1.73)	(-3.04)	(-3.02)
ΔPeer Negative	0.008	0.022	0.254	-0.004
	(0.10)	(0.15)	(1.47)	(-0.03)
ΔFirm Positive	-0.058	-0.095	0.094	0.018
	(-1.12)	(-0.85)	(0.34)	(0.08)
ΔFirm Negative	0.033	0.158*	-0.078	-0.085
	(1.35)	(1.88)	(-0.60)	(-0.84)
Firm size	0.001	0.015	0.059*	0.049*
	(0.08)	(0.63)	(1.93)	(1.72)
Tobin	0.001	0.000	-0.018	0.007
	(0.16)	(0.04)	(-0.77)	(0.31)
Leverage	-0.064	0.086	-0.162	-0.212
	(-1.17)	(0.83)	(-0.89)	(-0.64)
Fixed Assets	0.293**	0.404	0.129	0.203
	(2.42)	(1.41)	(0.38)	(0.53)
Cash	-0.034	0.029	0.149	0.120
	(-0.57)	(0.26)	(1.20)	(0.83)
Profitability	0.113**	0.458***	0.540***	0.545***
	(2.39)	(6.70)	(3.80)	(4.09)
R&D	-0.063	0.379*	0.848**	0.582*
	(-0.94)	(1.69)	(2.38)	(1.84)
Stock Return	0.000	-0.039*	-0.043**	-0.057***
	(0.04)	(-1.76)	(-2.17)	(-2.75)
Stock Volatility	-0.194*	0.313	0.598**	0.433
	(-1.87)	(1.37)	(2.04)	(1.54)
Proceeds	0.017	0.059	-0.008	-0.062**
	(1.47)	(1.11)	(-0.17)	(-2.07)
Constant	-0.068	-0.386**	-0.640***	-0.566***
	(-0.86)	(-2.05)	(-2.66)	(-2.81)
Year fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes
Observations	3,219	2,792	2,350	2,181
Adj. R-squared	1.5%	1.7%	2.5%	2.0%

Table 11: Identifying peers using SIC

This table presents the regression analysis of the relationship between peer changing tone and firm seasoned equity financing decisions where peers are identified based on SIC industry classification. In Column (1), the dependent variable is a dummy variable that equals one if the firm issues SEO during year t+1. The explanatory variable of interest is ΔPeer Positive and ΔPeer Negative, the average change between t and t-1 of each peer's MD&A tone. Peer Positive (Peer Negative) is the number of positive (negative) words per 100 words in a firm's MD&A section, measured using the 2020 version of the word list from Loughran and McDonald (2011). Firms' potential peers are all firms in the same 3-digit SIC code as the firm, excluding the latter. Column (2) adds peer and firm characteristics. Column (3) adds competition measures: industry size, entry costs, and product substitutability. All specifications are estimated using the full set of control variables and year fixed effect, which are not tabulated. The Appendix provides variable definitions and sources. t-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on the 3-digit SIC code. ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1)	(2)	(3)
ΔPeer Positive	0.033**	0.030*	0.034
	(2.02)	(1.89)	(0.27)
ΔPeer Negative	-0.004	0.003	0.081
	(-0.41)	(0.54)	(1.08)
ΔPeer Positive*IndustrySize			0.031
			(1.40)
ΔPeer Negative*IndustrySize			-0.006
			(-0.74)
ΔPeer Positive*EntryCosts			-0.043***
			(-2.65)
ΔPeer Negative*EntryCosts			-0.003
			(-0.72)
ΔPeer Positive*ProductSubstitutability			0.000
			(0.97)
ΔPeer Negative*ProductSubstitutability			0.000
			(1.02)
Firm changing tone	Yes	Yes	Yes
Peer controls	No	Yes	Yes
Firm controls	No	Yes	Yes
Competition controls	No	No	Yes
Year fixed effect	Yes	Yes	Yes
Observations	52,179	52,179	52,179
Adj. R−squared	1.39%	3.45%	4.46%

Table 12: Identifying MD&A tone using FinBERT

This table presents the regression analysis of the relationship between peer changing tone and firm seasoned equity financing decisions using FinBert to measure MD&A tone. The explanatory variable of interest is ΔPeer Positive and ΔPeer Negative, the average change between t and t-1 of each peer's MD&A tone. Peer Positive (Peer Negative) is the percentage of positive (negative) sentences in a firm's MD&A section, measured using the FinBERT. Firms' potential peers are product market peers identified using Hoberg and Phillips' (2010, 2016) network industry classification data. The dependent variable in Columns (1) and (2) is a dummy variable that equals one if a firm issues SEO during year t+1. Column (1) includes ΔPeer Positive, ΔPeer Negative, and firm changing tone. Column (2) adds peer and firm characteristics. Column (3) uses the number of SEOs issued in year t+1 as the dependent variable. All specifications include year fixed effect, controlling for unobservable economy-wide time-specific effects that may affect all firms. The Appendix provides variable definitions and sources. t-statistics, calculated using robust standard errors clustered at the industry level, are reported in parentheses. Industry classifications are based on fixed effects of the FIC 500 industry, as defined by Hoberg and Phillips (2016). ***, **, and * denote significance at the 1%, 5%, and 10% level.

	(1)	(2)	(3)
	SEO	SEO	Number of SEO
ΔPeer Positive	0.008***	0.004**	0.004**
	(5.58)	(2.49)	(2.31)
ΔPeer Negative	0.004***	-0.000	-0.000
	(3.10)	(-0.06)	(-0.18)
Firm changing tone	Yes	Yes	Yes
Peer controls	No	Yes	Yes
Firm controls	No	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	47,497	47,497	47,497
Adj. R−squared	1.2%	9.9%	9.5%

Appendix 1 Variable Definitions

This Appendix defines the variables in my analysis and provides their sources. All balance sheet and income statement variables are measured at the fiscal year-end preceding the given year (in the security choice analysis) or at the fiscal year-end preceding the issue date (in the use of proceeds and post-issuance stock return analysis) unless noted otherwise.

Variable	Calculation	Source
Change in MD&A Tone		
ΔPeer Positive	Average ΔFirm Positive of peers	Own calculations
ΔPeer Negative	Average ΔFirm Negative of peers	Own calculations
ΔFirm Positive	Change in the number of positive words contained in the firm's MD&A divided by the total number of words.	Own calculations
ΔFirm Negative	Change in the number of negative words contained in the firm's MD&A divided by the total number of words.	Own calculations
Change in Firm Characteristics		
ΔPeer Cash	Average change in peers' cash and short-term investment (CHE) divided by total assets (AT)	Compustat
ΔPeer Frim Size	Average change in peers' natural logarithm of total assets (AT), deflated by the Consumer Price Index	Compustat and Federal Reserve Economic Data
ΔPeer Fixed Assets	Average change in peers' property, plant, and equipment (PPENT) divided by total assets (AT)	Compustat
ΔPeer Leverage	Average change in peers' long-term debt (DLTT) divided by total assets (AT)	Compustat
ΔPeer Profitability	Average change in peers' operating income before depreciation (OIBDP) divided by total assets (AT)	Compustat
ΔPeer R&D	Average change in peers' research and development expense (XRD) divided by total assets (AT)	Compustat
ΔPeer Tobin	Average change in peers' Tobin's Q, which is defined as total assets [AT] - book value of equity [CEQ] + market value of equity [CSHO×PRCC] divided by total assets [AT].	Compustat
Peer SEO	The proportion of peers that issue SEO in the year	SDC
Peer Stock Return	Average peers' stock return over the year	CRSP
Change in Firm Characteristics		
ΔFirm Cash	Change in the firm's cash and short-term investment (CHE) divided by total assets (AT)	Compustat
ΔFirm Firm Size	Change in the firm's natural logarithm of total assets (AT), deflated by the Consumer Price Index	Compustat and Federal Reserve Economic Data
ΔFirm Fixed Assets	Change in the firm's property, plant, and equipment (PPENT) divided by total assets (AT)	Compustat
ΔFirm Leverage	Change in the firm's long-term debt (DLTT) divided by total assets (AT)	Compustat
ΔFirm Profitability	Change in the firm's operating income before depreciation (OIBDP) divided by total assets (AT)	Compustat
ΔFirm R&D	Change in the firm's research and development expense (XRD) divided by total assets (AT)	Compustat
ΔFirm Tobin	Change in the firm's Tobin's Q, which is defined as total assets [AT] - book value of equity [CEQ]+market value of equity [CSHO×PRCC] divided by total assets [AT].	Compustat
Firm Stock Return	Stock return over the past year	CRSP

Appendix continued

Variable	Calculation	Source
Competitiveness		
EntryCosts	Natural logarithm of the weighted average of the gross value of the cost of property, plant, and equipment (PPENT) for firms in the industry, weighted by each firm's market share (SALES)	Compustat
IndustrySize	Natural logarithm of total industry sales (SALES)	Compustat
ProductSubstitutability	The ratio of industry operating costs (COGS+XSGA+DPACT) to total industry sales (SALES)	Compustat
Total similarity	The sum of the pairwise similarities between the firm and all peers in the sample in the given year	Hoberg's website
Use of proceeds		
ΔCash	Natural logarithm of one plus the change in cash (CHE) normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
ΔInventory	Natural logarithm of one plus the change in inventory (INVT) normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
∑Acquisition	Natural logarithm of one plus total acquisition (AQC) since issuance normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
∑CapitalExpense	Natural logarithm of one plus total capital expenditure (CAPX) since issuance normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
∑LTDReduction	Natural logarithm of one plus total long-term debt reduction (DLTR) since issuance normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
∑R&D	Natural logarithm of one plus total research and development expense (XRD) since issuance normalized by the total assets (AT) measured at the fiscal quarter end before issuance	Compustat
Firm size	Natural logarithm of total assets (AT), deflated by the Consumer Price Index	CCM and Federal Reserve Economic Data
LogProceeds	Natural logarithm of one plus the total proceeds raised in the fiscal quarter normalized by the total assets (AT)	SDC and Compustat

Appendix 2 Measuring Tone of MD&A Disclosures

Following Loughran and McDonald (2011), I took the following steps with each 10-K filing:

- Step 1: Download and clean 10-k filings
    - Remove ASCII-Encoded segments
    - Remove <DIV>, <TR>, <TD>, and <FONT> tags
    - Remove all XML and XBRL
    - Remove SEC Header/Footer
    - Replace \ and \ with a blank space.
    - Replace \&AMP and \&#38 with "&"
    - Remove all remaining extended character references
    - Tag Exhibits
    - Remove Markup Tags
    - Excess line feeds are removed
- Step 2: Remove the 10-K filing if the total number of words with two or more letters is fewer than 2,000.
- Step 3: Parse the MD&A section.
    - Extract Item 7 (or Item 6 for small firms)) and Item 7A if applicable.
- Step 4: Remove the 10-K filing if the total number of words in the MD&A section is fewer than 250.
- Step 5: Remove stop words
- Step 6: Calculate the MD&A tone

Appendix 3 Word list

Category	Words
Numerical	one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, hundred, thousand, million, billion, and any Arabic numeral expressions including monetary expressions, year, and percentages.
Forward-looking	Words: will, future, aim, anticipate, assume, commit, estimate, expect, forecast, foresee, hope, intend, plan, project, seek, target, and past and future tense of these words. Phrase: next fiscal, next month, next period, next quarter, next year, incoming fiscal, incoming month, incoming period, incoming quarter, incoming year, coming fiscal, coming month, coming period, coming quarter, coming year, upcoming fiscal, upcoming month, upcoming period, upcoming quarter, upcoming year, subsequent fiscal, subsequent month, subsequent period, subsequent quarter, subsequent year, following fiscal, following month, following period, following quarter, following year