

Order Backlog Disclosure before Seasoned Equity Offerings

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December 2017

Abstract

Prior studies suggest that firms issue more disclosures prior to the SEO to reduce the cost of capital. In contrast to the findings in prior studies, we find that firms on average stop disclosing order backlog, a leading indicator of market demand change, prior to primary seasoned equity offerings (SEOs) and then resume the disclosure after the SEO. As primary SEOs may signal an increase in the issuer's growth prospect, we posit that the increasing proprietary cost accompanying the growth prospect is associated with this change in order backlog disclosures. We find that firms that face more intensive competition are more inclined to reduce order backlog disclosures prior to the offering. Moreover, although firms that disclose order backlog prior to the offering experience smaller underpricing than those who do not disclose order backlog, they also experience increasing competition as their disclosures are followed by greater investments in rival firms. Our findings show that the tradeoff between capital market benefits and proprietary costs lead to different adjustments of corporate disclosures.

Key words: corporate disclosures; seasoned equity offerings; product market competition; cost of capital

1. Introduction

Extant literature suggests that external financing needs motivate firms to increase disclosures to reduce cost of capital (e.g., Frankel, McNichols and Wilson, 1995; Marquardt and Wiedman 1998; Lang and Lundholm 2000; Shroff et al., 2013). However, external financing needs often arise as new investment opportunities arrive (e.g., Jung et al. 1996). New investment opportunities are usually associated with more intensive product market competition, which suggests greater proprietary cost concerns (Bradley and Yuan 2013; Ali et al. 2014; Huang et al. 2017). Thus, capital market benefits of disclosures are correlated with proprietary costs of disclosures from product market competition (Beyer et al. 2010). Furthermore, the capital market and product market effects likely vary across different types of information (Lang and Sul 2014). Theory and anecdotes both suggest that firms trade off the costs and benefits of disclosures from both markets when they make disclosure decisions.¹ Therefore, instead of increasing disclosure of all types of information when external financing needs arise, firms are likely to adjust their portfolio of disclosures, depending on the relative cost and benefit of different types of information disclosed. Nevertheless, the extant literature provides limited evidence on firms' disclosure adjustment.

We attempt to shed light by studying order backlog disclosure behavior before primary SEOs, where firms must trade off capital market benefits and product market costs of disclosures. Prior studies conclude that SEOs increase voluntary disclosures because the capital market benefits of disclosures increase around SEOs (Marquardt and Wiedman 1998; Lang and Lundholm 2000; Shroff et al., 2013). Nonetheless, primary SEOs also signal

¹ For example, in the earnings call for the fourth quarter financial results in 2015, the Chief Executive Officer of Visa Inc. stated that “we're trying to create that balance of being as transparent as we can while not giving away anything competitively.”

favorable industry prospect and intensify product market competition (Jung et al. 1996; Bradley and Yuan 2013). In other words, primary SEO issuers face a dilemma of increasing disclosure to reduce the cost of equity and reducing disclosure to avoid giving away competitive information to rivals.

We focus on the disclosure of unfilled order, i.e., order backlog, as it is a leading indicator of market demand information. Disclosure theory suggests that information about industry-level aggregate demand matters most for rivals to make optimal production decisions (Verrecchia, 1990; Clinch and Verrecchia, 1997). Christensen and Feltham (2003) show that market demand information is more useful than earnings/cost information for competitors in determining the optimal levels of production and investments. Firms with a long lead time of production would have a material amount of order backlog, and the longer production lead time implies that the firm has to make production decisions with greater demand uncertainty (Desai et al. 2007). Anecdotes suggest that order backlog is often used as a direct measure of market demand by firms and analyst, and that firms monitor their competitors' order backlog closely when determining their own production.² These studies and anecdotes imply that the proprietary costs of order backlog disclosures are likely very high for firms with material order backlog.

On the other hand, in the setting of primary SEOs, there could also be a great amount of benefit for firms disclosing order backlog. Before 2005 firms are not allowed to freely

² AOL's online advertising backlog was considered a de facto bellwether of the industry, which serves as a good example that order backlog is used as a measure of market demand (Keefe 2001). Managers often equate order backlog and market demand in their public address. For example, the President and Chief Executive Officer of Wabash National Corporation commented on the 2016 4th quarter results as follows: "[w]e enter 2016 with great momentum from a record 2015, a strong trailer demand environment generating a strong backlog." For another example, managers in Fluor Corp responded to the question about the production slowdown by assuring investors that "we'll match our backlog with any of our competitors." (Wall Street Journal 1982).

communicate forward-looking information prior to the SEOs, but there is no similar restriction on factual information (Shroff et al., 2013). Since order backlog represents the amount of orders to be filled and delivered in the future, it is a type of factual information that has a strong predicting power of future sales. Moreover, it is not directly verifiable – the definition of order backlog varies across firms, making it less costly to manipulate than earnings or sales forecasts. Firms hoping to convey their forecasts of future performance prior to SEOs can thus choose to disclose order backlog instead of other forward looking information.

We focus on firms most likely to have material order backlog by examining a sample of primary SEO issuers who make order backlog disclosures at least once in the three years before and three years after the offering. In contrast with prior studies that find an increase in earnings guidance or press releases prior to SEOs (Marquardt and Wiedman 1998; Jo and Kim 2007; Shroff et al. 2013), we find that the likelihood of disclosing order backlog information decreases by 10 percentage points in the year before the offering dates of SEOs compared with the likelihood of order backlog disclosure in the prior two years. The results are statistically significant after controlling for other economic determinants of voluntary disclosures (Shroff et al. 2013; Kim 2016).

If the reduction in order backlog disclosure is driven by the increasing proprietary cost concerns before SEOs, then the change should be greater for firms that face more intensive competition from the capital market. We find that the reduction in order backlog disclosure is greater for more concentrated. This finding is consistent with Ali et al. (2014)'s argument that the proprietary costs of disclosures are increasing in industry concentration as each company's disclosure in concentrated industries provides more information to its competitors than in less concentrated industries. We also use the competition measure developed by Li et al. (2013),

and continue to find more pronounced decrease in order backlog disclosure before SEO when firms face more intense competition. Overall, our results suggest that firms change order backlog disclosure prior to SEOs for competitive reasons.

We conduct several additional tests to corroborate our hypotheses and mitigate concerns of alternative explanations. First, the different change in order backlog disclosure and other types of disclosures, such as management earnings guidance, might be driven by the difference in capital market benefit between rather than the proprietary costs between the two types of information. To address this concern, we examine how order backlog disclosure and management earnings guidance relate to SEO underpricing and rival firms' investment behavior after the SEOs. We find that both types of disclosures are negatively associated with SEO underpricing. The evidence suggests that both types of disclosures provide capital market benefit. On the other hand, our analysis of proprietary costs shows that order backlog disclosures before SEOs are followed by greater investments in rival firms whereas earnings guidance is not. These results suggest that in our setting order backlog is more useful in reducing uncertainty faced by competitors and enables them to take more aggressive actions.

Second, we analyze the disclosure pattern for firms issuing secondary SEOs. As Bradley and Yuan (2013) show that secondary SEOs signal overvaluation rather than favorable investment opportunities, we expect that firms would not reduce order backlog disclosures for competitive reasons around secondary SEOs. Our results support this prediction. Third, to mitigate the concern that the decrease in order backlog disclosure is driven by industry-wide trend or other confounding events, we examine the change in order backlog disclosure behavior of a sample of non-SEO firms. Specifically, we match each SEO firm to a non-SEO firm based on industry, year and firm size, and assign the issuance date of the SEO firm as the pseudo

issuance date of the non-SEO firm. Contrary to the SEO firms, we find insignificant increase in order backlog disclosure before the pseudo issuance date for the non-SEO firms.

Our paper makes several contributions to existing literature. Prior studies of SEOs show that firms increase voluntary disclosures prior to the offering (e.g., Marquardt and Wiedman 1998; Lang and Lundholm 2000), and the increase could be correlated with a decrease in information asymmetry (Li and Zhuang 2012) or an increase in earnings management (Cohen and Zarowin 2010; Kothari et al. 2016). We add to the SEO literature by showing that companies adjust disclosures to create the balance of being transparent while staying competitive. Our study highlights the importance of jointly considering the impacts of capital market and product market on corporate disclosure behaviors.

We also contribute to the literature of the relation between product market competition and corporate disclosures. Prior studies primarily rely on managerial earnings guidance to document the impact of product market competition on corporate disclosures (e.g., Li 2010; Ali et al. 2014; Huang et al. 2017). Lang and Sul (2014) note that the source of proprietary costs remains unclear, and encourage future research to exploit the difference in disclosure incentives across different types of information. We add to the literature by showing that industry concentration affects disclosures of market demand information but not earnings guidance prior to primary SEOs. Our findings provide new evidence of how industry competition may affect corporate disclosures along different dimensions.

Last, we add to the literature of the information spillover of corporate disclosures. Prior studies show that financial misstatements have a negative effect on peer firm investment decisions (Durnev and Mangen 2009; Beatty et al. 2013), and that public companies' disclosures affect their private counterparts' investments (Badertscher et al. 2013). We

complement this literature by showing that a firm's disclosure of market demand information has a positive spillover effect on its rival firms' investing decisions.

The rest of the paper is organized as follows. In Section 2, we review the related literature and develop our hypotheses. In Section 3, we describe our sample and research design. In Section 4, we present the empirical results of the main tests, the supplemental analyses, and the robustness tests. We conclude the paper in Section 5.

2. Related literature and hypothesis development

2.1. Seasoned equity offerings and corporate disclosures

Extant studies in general conclude that firms increase voluntary disclosures before SEOs but disagree on the interpretation of the results. One stream of literature suggests that firms increase disclosures before SEOs in order to reduce cost of capital through reducing information asymmetry. Marquardt and Wiedman (1998) find that managerial participation of secondary SEOs is positively associated with the frequency of earnings guidance and negatively associated with information asymmetry before secondary SEOs. Li and Zhuang (2012) show that management earnings guidance reduces SEO underpricing, and the effect is stronger for smaller firms and more accurate or precise guidance. Another stream of literature suggests that increasing disclosures before SEOs lead to mispricing. Lang and Lundholm (2000) suggest that increasing disclosures before SEOs are used to hype the stock. Following the same line of arguments, Jo and Kim (2007) find that non-persistent disclosures are associated with more earnings management around SEOs. Regardless of the channels through which disclosures affect cost of capital, one main implication in these studies is that there are significant capital market benefits of disclosures. Nonetheless, no firm chooses the maximum

amount of disclosures. As Beyer et al. (2010) point out, the lack of empirical evidence of full disclosures suggests that it is also likely that there are significant proprietary costs from the product market.

One major source of proprietary costs is the increasing investment opportunities around SEOs. Walker and Yost (2008) find that firms increase investments after SEOs regardless of their stated intent of issuing SEOs. DeAngelo et al. (2010) argue that, while some firms issue SEOs when stock prices are overvalued, most firms raise capital because they are short of cash for investments and working capital. Bradley and Yuan (2013) further show that primary SEOs on average signal favorable industry prospects and that those receiving positive market reaction lead to competitive reactions from rival firms. In contrast, secondary SEOs signal overvaluation of the industry and prompt negative stock returns of the rival firms. These studies suggest the firms issue primary SEOs because they have good news of market demand.

As the exact changes in market demand are privately observed by the seasoned equity issuers, the issuers have to tradeoff between lowering the cost of capital and protecting proprietary information from rivals. Firms that disclose an increase in order backlog, for example, may on the one hand convince investors that they have favorable growth opportunities but on the other hand give competitors valuable information of the exact change of the growth opportunities. Although prior studies show that firms increase voluntary disclosures prior to the SEOs (Marquardt and Wiedman 1998; Lang and Lundholm 2000), these studies cannot rule out the possibility that the issuers may at the same time withhold some other information that has become too costly to disclose at the arrival of new growth opportunities.

We use order backlog as a proxy for market demand information for the following reasons. First, order backlog is factual information and therefore less likely to be subject to the “gun-jumping” restrictions than forward-looking information prior to the SEOs. Second, order backlog has been widely used by firms and financial analysts as an indicator of industry-wide market demand³ and firms often use their rival firms’ order backlog amount as a benchmark of their own competitive status. For example, in the earnings call on April 23, 2008, Praxair Inc. stated that “[w]e’ve got a much bigger backlog proportionately than our competitors do and that’s a sign that we’re winning more business.” Such benchmarking behavior suggests that a company’s disclosure of increasing order backlog may increase competition as other firms try to match their rivals’ backlog amount. Last, firms have some discretion on whether or not to disclose order backlog. Regulation S-K requires firms to disclose in 10-K the amount of backlog orders “believed to be firm” to the extent “material to an understanding of a registrant’s business taken as a whole.” The lack of official definition of “firm orders” and materiality, however, leaves it to the discretion of managers to determine whether or not to report order backlog⁴. This leads to our first hypothesis.

H1: Companies reduce order backlog disclosures before primary SEOs.

³ For example, Trinity Industries Inc. states in their earnings call on October 29, 2014 that “[n]orth American rail car industry experienced a record level of orders during the third quarter, reflecting broad industry demand. The industry backlog now stands at over 124,000 rail cars.” Second, order backlog disclosure is reasonably reliable even though it is not audited.

⁴ Some firms withhold the information for various reasons including competition concerns. For example, the President and Chief Executive Officer of Ditech Communications commented in the earnings call for fiscal Q2 2005 that “we don’t really talk about backlog and bookings. Mostly for competitive reasons.”

2.2. *The impact of product market competition on corporate disclosures before SEOs*

Extant studies suggest that competition from potential entrants and that from existing competitors affect corporate disclosures differently. As primary SEOs signal favorable industry prospects, firms may have to take into account both types of competition to form their disclosure strategy. Theories in general predict that competition from potential entrants encourage full disclosures or more bad news disclosures in some special settings. For example, Darrough and Stoughton (1990) predict that firms would be inclined to disclose bad news disclosures to deter potential entrants when entry costs are high, and disclose all information when entry costs are low. Since firms with order backlog have a long production lead time, which implies that the entry costs are high in such industries, these firms in our setting are likely to withhold good news according to prior analytical models. To the extent that the order backlog information conveys good news prior to the primary SEOs, we expect that firms in more competitive industries would reduce order backlog disclosures.

As to competition from existing rivals, theories predict that competition would discourage disclosures. For example, Clinch and Verrecchia (1997) argue that firms would withhold very high or very low future demand from existing rivals. Since firms without material order backlog are not required to disclose it in the annual reports, the non-disclosure of order backlog could mean either that the company has a significant reduction in order backlog or that the company has a significant increase in order backlog. As removing order backlog information increases market demand uncertainties for rival firms, firms in more competitive industries may be more likely to reduce order backlog disclosures.

Competition could also affect disclosures through industry concentration of public companies. Badertscher et al. (2013) show that public companies' disclosures

affect their private rivals' investment decisions. Ali et al. (2014) argue that corporate disclosures in more concentrated industries are likely more informative because in industries with fewer public firms, each of the public firms provides a greater fraction of the total public information of market demand than their counterparts in industries with more public firms. Hence, we expect that the proprietary cost of disclosures is increasing in industry competition based on public firms. This leads to our second hypothesis.

H2: The decrease in order backlog disclosure before primary SEOs is more pronounced for firms that face more intense product market competition.

3. Research design

3.1. Sample Selection

We start with an initial sample of SEOs between 1996 and 2015 by issuers that are domiciled in the United States and the shares are publicly listed on NYSE, Amex, or NASDAQ. We obtain SEO data from Security Data Company (SDC) Platinum database. Our sample period starts from 1996 because, as explained in detail later, we rely on 10-K filings and SEO prospectus on EDGAR to identify whether firms disclose order backlog information. Following prior literature on SEOs, we delete the issuers in financial and utility industries (SIC code 4900-4999 or 6000-6999). We also delete the SEOs that were issued within two years after IPO.

As the unit of observations of our tests is firm-year, we eliminate duplicate observations by keeping only the first SEO if a company issues SEOs in consecutive years. We then merge the SEO data with COMPUSTAT and require each SEO firm to have accounting data for at least two years before SEO. To remove the confounding effect of merger and acquisitions, we

eliminate years in which the financial accounting data reflect the impact of merger and acquisitions (COMPUSTAT SALE_FN = 'AA'). We obtain additional data from CRSP for stock return data, from I/B/E/S for financial analyst data, , from First Call for management earnings guidance, and from Thomson Reuters for the institutional ownership data. Since our tests do not always require the availability of all data from the above sources, we use the largest possible sample for each test. As First Call only covers management guidance between mid-1990s and 2010, we limit the sample to observations before 2010 for tests involving management earnings guidance. As firms are only required to disclose order backlog if the information is material, we further remove firms that never disclose order backlog in the three years before and three years after the SEOs. The maximum sample includes 339 primary SEOs.

3.2. Model Specification

We estimate the following probit model to test the change in order backlog disclosures before SEOs.

$$\Pr(OB\ Disclosure) = \beta_1 SEO + \beta_2 \ln Market\ Value + \beta_3 Sales\ Growth + \beta_4 CumRet + \beta_5 StdRet + \beta_6 EarnVol + \beta_7 ROA + \beta_8 nAnalyst + \beta_9 InstOwn + industry\ fixed\ effects + \varepsilon \quad (1)$$

The unit of observation is firm-year and the sample includes the three-year period ended on the SEO issuance date. *SEO* is a dummy variable equals one for the period right before the SEO issuance date (i.e., year $t-1$), and zero otherwise. Thus, essentially we conduct a within-firm comparison and use the disclosures in the previous two years (i.e., years $t-3$ and $t-2$) as the benchmark. The dependent variable, *OB Disclosure*, is an indicator variable that equals one for year $t-i$ ($i = 1, 2, 3$) if a company discloses order backlog amount information in the year, and zero otherwise. For the observations in year $t-1$, we check form 10-K and the

prospectus (form 424B) filed within the year to identify whether the firm discloses order backlog information.⁵ For the observations in year $t-3$ and $t-2$, we only check form 10-K filed within the corresponding period to identify whether a firm discloses the order backlog information.⁶

As we conjecture that order backlog disclosures are subject to managerial discretion (i.e., how much backlog is material and what orders are believed to be firm), we follow the prior literature on voluntary disclosure (e.g., Shroff et al., 2013) and control for common cost and benefit factors that affect voluntary disclosures. Specifically, $\ln(\text{Market Value})$ is the natural logarithm of market value of equity, measured at beginning of each year. *Sales Growth* is the ratio of current year sales to previous year sales minus one. *CumRet* is the cumulative stock returns over the year. *StdRet* is the standard deviation of the stock returns over fiscal year. *EarnVol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is return on asset, defined as income before ordinary items scaled by lagged total assets. *nAnalyst* is the number of analysts following the firm. *InstOwn* is the percentage of outstanding common shares owned by institutional investors. Finally, we control for industry fixed effects so as to control for the unobserved industry-wide factors that affect order backlog disclosures. We cluster the standard errors at firm level to adjust arbitrary within firm correlation of the error terms. Our H1 predicts that β_1 is negative, which suggests that the likelihood of disclosing order backlog prior to the SEO is lower than the likelihood of disclosing order backlog disclosures in the benchmark years.

⁵ In cases where a company did not file a form 424B but instead filed an amended registration, S-3/A, we use the disclosures in S-3/A.

⁶ We also checked the press release of annual and quarterly earnings announcement for observations between 2006 and 2015. We find that for firms that do not disclose order backlog information in form 10-K, less than 1% of the observations disclose order backlog information in the press releases.

To test H2, we augment model (1) by including two additional variables, *COMPETE* and its interaction with *SEO*.

$$\begin{aligned} \text{Pr}(OB \text{ Disclosure}) = & \beta_1 SEO + \beta_2 SEO + \beta_3 SEO * COMPETE + \beta_4 COMPETE + \\ & \beta_5 \ln Market Value + \beta_6 Sales Growth + \beta_7 CumRet + \beta_8 StdRet + \\ & \beta_9 EarnVol + \beta_{10} ROA + \beta_{11} nAnalyst + \beta_{12} InstOwn + \\ & industry \text{ fixed effects} + \varepsilon \end{aligned} \quad (2)$$

where *COMPETE* is the quartile rank of the measure of product market competition. We consider two proxies for product competition. The first is the Herfindahl–Hirschman Index (“HHI”) of sales of all firms in the industry defined based on three-digit SIC. Raith (2003) argues that a higher value of industry concentration indicates more intense product market competition if the competition is driven by product substitutability or other dimensions of the toughness of competition, since fewer firms can survive in an industry with higher competition intensity. Ali et al. (2014) shows that HHI is negatively correlated with firms’ tendency to provide management earnings forecast, which is consistent with the notion that a high HHI indicate more intense product market competition. In addition, their finding is also consistent with the notion that disclosure provides more reliable information about future industry demand because each firm accounts for a larger fraction of aggregate industry output.

However, other studies show that HHI can be positively related to firms’ tendency to provide earnings guidance (Li 2010). Since there is no consensus in prior studies on whether a high HHI indicates more or less intense product market competition, we consider a second proxy of product competition developed by Li et al. (2013). This proxy measures the management’s perceptions of the intensity of product market competition the firm faces using textual analysis of the firm’s 10-K filings. Li et al. (2013) show that this measure of

competition is positively associated with firms' rates of diminishing marginal returns on new and existing investment.

4. Empirical Results

4.1. Summary Statistics

Table 1 shows the summary statistics of the key variables. The mean value of OB Disclosure is 0.858, suggesting that 85.8% of the firm-year observations in our sample disclose order backlog amount information. This is not surprising as we only include firms that disclose order backlog information in the three years before and three years after the SEO issuance date. The firm size, performance, operating risk, analyst following, and institutional ownership of our sample firms are very similar as the other SEO issuers that do not disclose order backlog over our sample period.

[Insert Table 1 here]

4.2. Disclosure of Order Backlog before SEOs

Figure 1, Graph A shows the proportion of firms disclosing order backlog around primary and secondary SEOs in the three years before and three years after SEO. The univariate results show that firms on average stop order backlog disclosures prior to the primary SEO and then gradually resume the disclosure afterwards. This decrease in order backlog disclosure around primary SEOs is consistent with our conjecture that the proprietary costs of order backlog may be higher as the issuers observe an increase in growth opportunities. In contrast, firms increase order backlog disclosure prior to secondary SEOs, and the trend continues until two years after

the offering. This time-series change in order backlog disclosure around secondary SEOs is consistent with the notion that firms may increase disclosures prior to SEOs to hype the stock (e.g., Lang and Lundholm, 2000; Jo and Kim, 2007). To facilitate a comparison with prior studies, we also plot the time series change in earnings guidance in Figure 1, Graph B. The proportion of firms issuing earnings guidance increases prior to SEOs regardless of the nature of the offerings. Untabulated results suggest similar patterns in the frequency of 8-K filings. These univariate comparisons of different types of disclosures suggest that firms have different disclosure strategies for order backlog and for other disclosures prior to primary SEOs.

Table 2 shows the results of the multivariate probit regression of model (1). The conclusion is consistent with that drawn from the univariate analysis. The coefficient of *SEO* is negative and significant at 1% level (-0.393, $t = -2.784$). Thus, the results suggest that the primary SEO firms reduce the likelihood of disclosing order backlog information in the year right before SEO issuance date. The marginal effect of SEO is about 10%, which is also economically significant. Regarding the control variables, the coefficient of Sales Growth is negative and significant, suggesting that firms are less likely to disclose order backlog when sales growth is higher. To the extent that the proprietary cost of market demand information is higher for firms with higher sales growth, the results suggest that firms with more growth potential are less likely to disclose order backlog⁷. The coefficient of *InstOwn* is positive and significant, suggesting that firms are more likely to disclose order backlog information when institutional investors hold more shares. The coefficient of *nAnalyst* is also positive albeit statistically

⁷ The results are also consistent with the notion that firms manipulation revenues before SEOs may reduce order backlog disclosures in order to conceal the manipulation. Using revenue manipulation measures developed by Stubben (2010), we do not find that a statistically significant association between the reduction in order backlog and revenue manipulation (results are not tabulated).

insignificant. This evidence is consistent the prior literature that institutional investors demand information disclosure. The coefficients of other control variables are not significant.

[Insert Table 2 here]

4.3. *The Conditional Effects of Product Market Competition*

As discussed before, we hypothesize that competition consideration is one main reason why firms reduce order backlog disclosures before SEOs. The results are reported in Table 3. The first column shows the results using HHI to measure product market competition. The coefficient of SEO*COMPETE is negative and significant (-0.312, $t = -1.963$). This is consistent with Ali et al. (2014)'s argument that industry concentration has a negative impact on corporate disclosures. The second column shows the results of using LLM index to measure product market competition. The sample size is reduced to 507 firm-year observations because the LLM index is available till 2009 and it is not available for some of our sample firms. Nevertheless, the inference is qualitatively similar. The coefficient of SEO*COMPTE is also negative and significant (-0.384, $t = -1.783$). Overall, the results support our H2 that the decrease in order backlog disclosure is more pronounced when firms face more intense product market competition. Thus the results support our conjecture that, in the context of primary SEOs, the proprietary costs exceed capital market benefits for order backlog disclosures. To corroborate our main findings, we next examine the capital market benefits and product market costs of these two types of disclosures.

[Insert Table 3 here]

4.4. The Capital Market Benefit of Order Backlog Disclosure

Prior studies suggest that one of the main benefits of disclosures is the lower cost of capital (e.g., Schrand and Verrecchia 2005; Leone et al. 2007). Using SEO underpricing as a proxy for cost of capital, Li and Zhuang (2012) show that earnings guidance reduces cost of capital and the results are stronger for higher quality earnings guidance. To examine whether the observed changes in disclosures before SEOs are correlated with firms' capital market consideration, we estimate the following regression model of SEO underpricing following prior studies (e.g., Bowen et al. 2008; Li and Zhuang, 2012):

$$\begin{aligned} \text{Underpricing} = & \beta_1 \text{OB Disclosure} + \beta_2 \text{Earnings Guidance} + \beta_3 \ln(\text{Market Value}) \\ & + \beta_4 \text{StdRet} + \beta_5 \text{Relative Offer} + \beta_6 \text{Pos. CAR} + \beta_7 \text{Neg. CAR} \\ & + \beta_8 \text{Tick} < \frac{1}{4} + \beta_9 \text{IPO Underpricing} + \text{year fixed effects} + \varepsilon \end{aligned} \quad (3)$$

Underpricing is negative one times the return from the closing price on the day prior to the issuance date to the offer price (the close-to-offer returns). *OB Disclosure* is an indicator variable that equals one if the firm discloses order backlog in the year prior to the issuance date and zero otherwise. *Earnings Guidance* is an indicator variable that equals one if the firm issues earnings guidance in the year prior to the issuance date and zero otherwise. *Ln(Market Value)* is the natural log of the market value of equity prior to the issuance date. *StdRet* is the standard deviation of the daily stock returns over the year ended ten days before the issuance date. *Relative Offer* is the number of shares offered in the SEOs divided by the number of shares outstanding prior to the offer. *Pos.CAR* (*Neg.CAR*) is the cumulative abnormal returns (*CAR*) over the five days prior to the issuance date if *CAR* is positive (negative). We measure abnormal return as market adjusted return and the market return is defined as the return on the CRSP value-weighted index. *Tick < 1/4* is an indicator variable that equals one if the offer price

is an increment of \$0.25 and zero otherwise. *IPO underpricing* is the average underpricing of all initial public offerings (IPOs) in the same month as the SEOs⁸. This regression is estimated using the sample of primary SEOs as described above.

The regression results are reported in Table 4. Column (1) does not control for the management earnings guidance. The sample only includes SEOs of the firms that have at least one disclosure of order backlog in the three years before and three years after the SEOs. The coefficient of *OB Disclosure* is negative and significant at 1% level (-0.020, $t = -2.395$). This result suggests that firms that disclose order backlog in the year prior to the issuance data have lower SEO underpricing and thus lower cost of equity. The coefficient of $\ln(\text{Market Value})$ is negative (-0.012, $t = -3.539$), suggesting that SEO underpricing is smaller for larger firms. The coefficient of *StdRet* significantly positive (0.631, $t = 3.621$), suggesting that SEO underpricing is higher when the issuers are riskier. The coefficients of other control variables are not statistically significant.

Column (2) further controls for the management earnings guidance. The sample size is reduced to 290 because the earnings guidance data is limited to observations between 1996 and 2010. Nevertheless, the results are qualitatively similar. The coefficient of *OB Disclosure* remains significantly negative (-0.022, $t = -2.871$). Consistent with Li and Zhuang (2012), the coefficient of *Earnings Guidance* is also significantly negative (-0.013, $t = -2.325$). Thus, the results suggest that order backlog information helps reduce information asymmetry beyond management earnings guidance. In addition, the coefficient of *OB Disclosure* appears to have greater magnitude albeit the difference is not statistically significant ($p = 0.342$). Thus, the

⁸ We obtain the data from Jay Ritter's Web page at <https://site.warrington.ufl.edu/ritter/ipo-data/>.

capital market benefit of order backlog disclosure is not lower than that of the earnings guidance. We next examine the association between rival firms' investment decisions and order backlog disclosure to understand the product market costs of order backlog disclosure in SEO setting.

[Insert Table 4 here]

4.5. *Rival Firms' Investment Decisions and Order Backlog Disclosures*

The proprietary costs of disclosures could also vary across different types of disclosures. While it is difficult to directly measure proprietary costs, one can infer these costs from rival firms' reactions. Prior studies show that seasoned equity issuers would increase capital expenditures (Walker and Yost 2008) and motivate rivals to issue SEOs (Bradley and Yuan 2013). Real option theory suggests that uncertainty decreases a firm's investment to the extent that the investment is irreversible (Dixit and Pindyck, 1994). If seasoned equity issuers' order backlog disclosures inform their rivals about the market demand change and reduce the rival firms' uncertainty, rival firms should make more aggressive investment. Following Bradley and Yuan (2013), we identify rival firms as firms with the same four-digit SIC as the seasoned equity issuers, and examine rival firms' investing behaviors in the two years following the focal firms' SEOs with the following regression model:

$$\begin{aligned}
 \text{Rival Investment} = & \beta_1 \text{OB Disclose} + \beta_2 \text{Earnings Guidance} + \beta_3 \text{OCF} + \\
 & \beta_4 \text{Leverage} + \beta_5 \ln(\text{Assets}) + \beta_6 \text{Tobin's } Q + \beta_7 \text{lagged Financing} + \\
 & \text{year fixed effects} + \text{industry fixed effects} + \varepsilon
 \end{aligned} \tag{4}$$

Rival Investment is defined as the amount of capital expenditure scaled by total assets at the beginning of the year. *OB Disclosure* and *Earnings Guidance* are defined in the same way

as in model 3. *OCF* is operating cash flows scaled by total assets at the beginning of the year. *Leverage* is the ratio of total long term liabilities to total assets at the beginning of the year. *ln(Market Value)* is the natural log of market value at the beginning of the year. *Tobin's Q* is the ratio of market value of assets, defined as the market value of equity plus book value of liabilities, to total assets at the beginning of the year. *lagged Financing* is the total external finance raised in the previous years, defined as sum of cash received from issuing equity and long-term debt scaled by total assets. We also control for year and industry fixed effects. To avoid double-counting the impact of SEOs, we exclude all rival firms issuing SEOs.

Table 5 reports the regression results of model 4. The first column does not control for management earnings guidance. The coefficient of *OB Disclosure* is positive and significant (0.005, $t = 2.533$). The second column further includes management earnings guidance. The sample size is reduced because our earnings guidance data is limited to year 2010. Nevertheless, the results are qualitatively similar. The coefficient of *OB Disclosure* continues to be positive and significant (0.006, $t = 2.447$). In contrast, the coefficient of *Earnings Guidance* is not significant (-0.000, $t = -0.056$). The evidence is consistent with the notion that order backlog information helps reduce the uncertainty of product market demand for the rival firms and enables them to make more aggressive investment. In contrast, earnings guidance does not appear to have significant impact on rival firms' investment, suggesting that earnings guidance is either not a sufficiently useful indicator of market demand or not interpreted by competitors in the same way as order backlog. Overall, Table 4 and Table 5 support our conjecture that the capital market benefits and proprietary costs differ across different types of disclosures.

[Insert Table 5 here]

4.6. *Robustness Tests*

Our main analyses show that firms reduce order backlog disclosures prior to SEOs and the reduction is more pronounced for firms that face more intense product market competition. Additional tests show that both order backlog disclosure and management earnings guidance reduce the SEO underpricing, and rival firms' investment are sensitive to SEO firms' order backlog disclosure but not management earnings guidance. These results suggest that firms adjust disclosures in different ways since different types of disclosures are associated with different capital market benefits and proprietary costs. However, the results may be subject to several alternative explanations. We explore each of them as follows.

4.6.1. Order Backlog Disclosure before secondary SEOs

Prior studies show that seasoned equity issuers engage in earnings management prior to the offering (e.g., Jo and Kim 2007; Cohen and Zarowin 2010; Kothari et al. 2016). Since firms can manage earnings through managing sales or expenses, earnings manipulation is likely easier than sales manipulation. Kim (2016) shows that firms with greater capacity to manage earnings are more likely to issue earnings guidance prior to SEOs. Hence, an alternative explanation for our findings is that firms switch from order backlog disclosures to earnings guidance because sales is harder to manage than earnings. If this alternative explanation holds, we would expect that firms would reduce order backlog disclosures more in secondary SEOs than in primary SEOs as the incentive to issue earnings guidance (and manage earnings) is stronger in secondary SEOs than in primary SEOs (Marquardt and Wiedman 1998).

We then estimate model 1 using the secondary SEO sample. The results are reported in Table 6. In contrast to the findings using the primary SEO sample, we do not find significant

change in order backlog disclosure in the year right before the secondary SEO issuance date. The coefficient of SEO is actually positive, although insignificant (0.658, $t = 1.283$). As secondary SEOs do not signal better growth opportunities (Bradley and Yuan 2013), these results provide further support for our main hypotheses that firms reduce order backlog disclosures for competitive reasons rather than for manipulation reasons.

[Insert Table 6 here]

4.6.2. Order Backlog Disclosures by matched non-SEO Firms

Another alternative explanation for our findings is that primary seasoned equity issuers are simply following an industry-wide change in disclosure behavior as firms often use their peers' disclosure policies as a benchmark. To mitigate this concern, we examine the change in order backlog disclosure of a sample of matched non-SEO firms. Specifically, for each SEO firm, we find a matched control firm based on the following criteria: (1) the control firm does not have SEO in the three years before and three years after the SEO issuance date of the SEO firm; (2) the control firm has disclosed order backlog information in the six-year period; (3) the control firm operates in the same industry as the SEO firm; and (4) the control firm has the closest firm size, as measured by market value of equity as the fiscal year end immediately before the SEO issuance date. The SEO issuance date is set as the pseudo-SEO date of the matched non-SEO firm. The sample period includes the three-year period ended on the pseudo-SEO issuance date. We rely on 10-K to identify the order backlog disclosure of the matched non-SEO firms.

We then estimate model 1 using the matched non-SEO sample. Correspondingly, SEO is replaced by *Pseudo SEO*, which is a dummy variable equals one for the year ended on the

pseudo-SEO issuance date. The results are reported in Table 7. The first column shows the results of using matched sample for the primary SEOs. We do not find significant decrease in order backlog disclosure for the matched non-SEO firms. The coefficient of SEO is 0.195 and not statistically significant ($t = 1.105$). Thus, the results reported in Table 2 are unlikely driven by the industry-wide trend of order backlog disclosure. The second column shows the results of using matched sample for the secondary SEOs. We find no significant change in order backlog in the year right before the pseudo-SEO issuance date either. The coefficient of SEO is 0.019 and insignificant ($t = 0.070$).

[Insert Table 7 here]

5. Conclusion

This paper documents that, instead of increasing all types of disclosures as suggested in prior studies (e.g., Lang and Lundholm 2000), firms adjust their portfolio of disclosures depending on the relative costs and benefits of each type of disclosures. We posit that, as market demand information becomes more valuable when there are favorable growth opportunities, firms withhold their privately observed market demand change prior to the primary SEOs. In contrast to prior studies that show an increase in voluntary disclosures before the offerings, we find that firms reduce order backlog disclosures. We further find that reduction in order backlog disclosures is more prominent in concentrated industries than in less concentrated industries, suggesting that one main source of proprietary costs of order backlog disclosures is the uncertainty of market demand. Further analyses show that firms maintaining order backlog disclosures prior to the offerings experience less underpricing but in the meanwhile elicit more investments in rival firms. Overall, our results are consistent with

the notion that firms tradeoff between different types of disclosures to strike a balance between being transparent to investors while not disclosing anything competitively.

Robustness test results suggest that our findings are not associated with firms' earnings manipulation incentives or industry-wide disclosure changes around SEOs. We add to existing literature by showing that, as firms adjust their disclosures in different directions, it is important to consider different dimensions of the corporate information environment when examining the impacts of capital market and product market on information asymmetry. Our findings are subject to the caveat, however, that while order backlog disclosures may be costly to each firm, it may not be costly to the whole market. To the contrary, our results imply that the mandating and enforcing the disclosures of order backlog may increase social welfare as such disclosures enhance product market competition.

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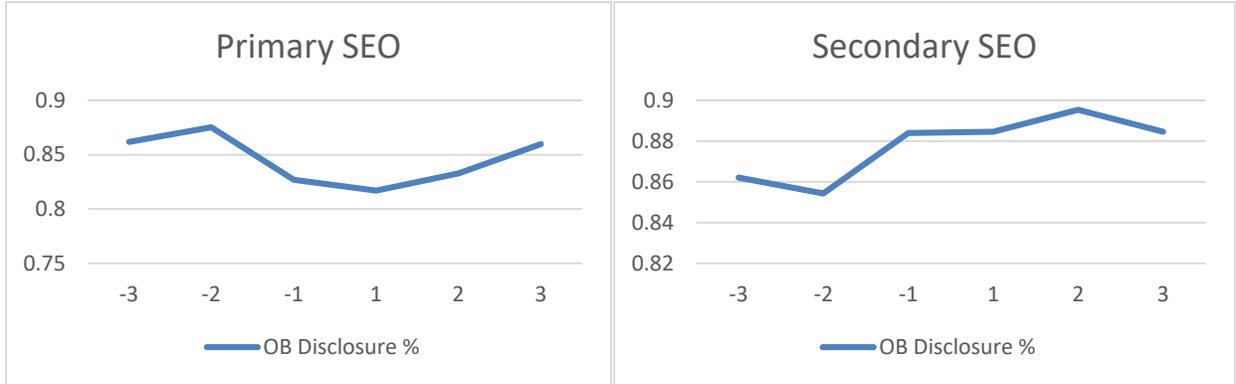
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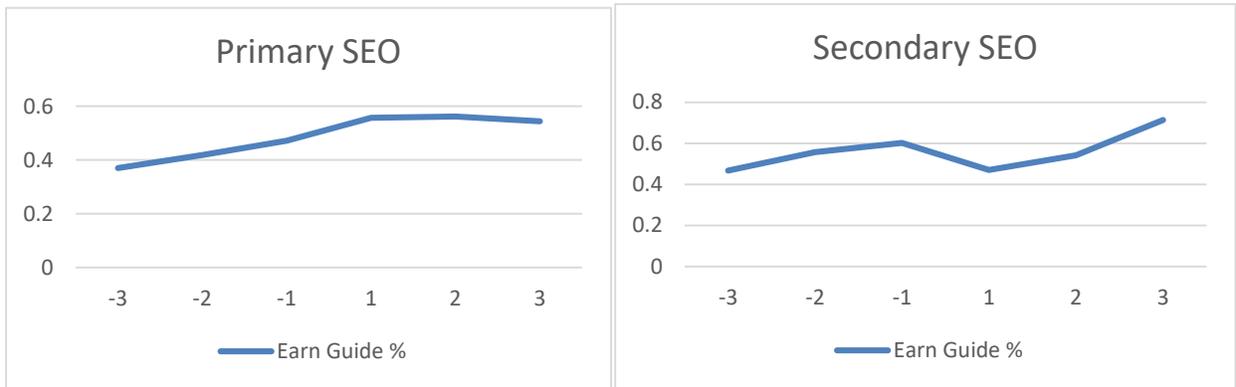
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Figure 1. Time Series Change of Order Backlog Disclosures and Earnings Guidance

Graph A. Order backlog disclosures around primary and secondary SEOs



Graph B. Earnings guidance around primary and secondary SEOs



Sample consists of 339 primary SEOs and 112 secondary SEOs issued between 1996 and 2015 with at least one order backlog disclosure in the three years before and three years after SEO issuance. Year t is the year relative to the year of SEO issuance. Graph A shows the percentage of firms disclosing order backlog (OB Disclosure), and Graph B shows the percentage of firms issuing earnings guidance (Earn Guide).

Table 1. Summary Statistics

Variables	N	Mean	S.D	Q1	Median	Q3
OB disclosure	954	0.858	0.349	1.000	1.000	1.000
ln(Market Value)	954	5.516	1.588	1.507	4.426	5.460
Sales Growth	954	0.238	0.517	-0.727	-0.023	0.154
CumRet	954	0.436	0.985	-0.815	-0.198	0.178
StdRet	954	0.042	0.017	0.011	0.030	0.039
Earn Vol	954	0.560	0.939	0.016	0.115	0.226
ROA	954	-0.044	0.207	-0.863	-0.086	0.020
nAnalyst	954	3.577	4.399	0.000	1.000	2.000
InstOwn	954	0.323	0.316	0.000	0.000	0.246

This table shows the summary statistics of the key variables for the sample used in model 1. The unit of observation is firm-year and the sample includes the three-year period ended on the SEO issuance date. *SEO* is an indicator variable that equals one for year ended on the SEO issue date, and zero for the baseline years. *OB Disclosure*, is an indicator variable that equals one if a company discloses order backlog amount information in the year and zero otherwise. *ln(Market Value)* is the natural log of the market value of equity. *Sales Growth* is the ratio of current year sales to previous year sales less one. *CumRet* is the cumulative stock returns over the fiscal year. *StdRet* is the standard deviation of the stock returns over the fiscal year. *Earn Vol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is the ratio of net income to total assets at the beginning of the year. *nAnalyst* is the number of analysts following the company. *InstOwn* is the percentage of shares owned by institutional owners.

Table 2 Disclosure of Order Backlog before Primary SEOs

Independent variable	OB Disclosure		
	Coefficient	<i>t</i> -statistic	Marginal effect
SEO	-0.393***	(-2.784)	-0.099
ln(Market Value)	0.085	(0.908)	0.021
Sales Growth	-0.381***	(-2.583)	-0.096
CumRet	-0.076	(-0.959)	-0.019
StdRet	-5.317	(-0.952)	-1.344
Earn Vol	0.121	(0.987)	0.030
ROA	0.497	(1.079)	0.126
nAnalyst	-0.033	(-1.362)	-0.008
InstOwn	0.464*	(1.755)	0.117
Industry fixed effects	Yes		
N	954		
Pseudo R ²	0.436		

This table presents the probit regression results of the probability of disclosing order backlog. The unit of observation is firm-year and the sample includes the three-year period ended on the SEO issuance date. *SEO* is an indicator variable that equals one for year ended on the SEO issue date, and zero for the baseline years. The independent variable, *OB Disclosure*, is an indicator variable that equals one if a company discloses order backlog amount information in the year and zero otherwise. *ln(Market Value)* is the natural log of the market value of equity. *Sales Growth* is the ratio of current year sales to previous year sales less one. *CumRet* is the cumulative stock returns over the fiscal year. *StdRet* is the standard deviation of the stock returns over the fiscal year. *Earn Vol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is the ratio of net income to total assets at the beginning of the year. *nAnalyst* is the number of analysts following the company. *InstOwn* is the percentage of shares owned by institutional owners. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, in two-tailed *t* tests.

Table 3 Product market competition and Change of Order Backlog Disclosures before primary SEO

Independent variable	COMPETE based on HHI (1)			COMPETE based on LLM (2)		
	Coefficient	<i>t</i> -statistic	Marginal effect	Coefficient	<i>t</i> -statistic	Marginal effect
SEO	-0.261	(-1.615)	-0.033	0.390	(0.995)	0.031
SEO*COMPETE	-0.312**	(-1.963)	-0.040	-0.384*	(-1.783)	-0.031
COMPETE	-0.067	(-0.212)	-0.009	0.197	(0.826)	0.016
ln(Market Value)	0.107	(1.117)	0.014	-0.126	(-0.537)	-0.010
Sales Growth	-0.389***	(-2.692)	-0.050	-1.072***	(-2.761)	-0.086
CumRet	-0.094	(-1.192)	-0.012	0.268**	(1.971)	0.021
StdRet	-4.668	(-0.825)	-0.595	-25.317***	(-2.782)	-2.026
Earn Vol	0.130	(1.065)	0.017	-0.493***	(-2.869)	-0.039
ROA	0.485	(1.058)	0.062	-0.475	(-0.478)	-0.038
nAnalyst	-0.038	(-1.517)	-0.005	-0.009	(-0.122)	-0.001
InstOwn	0.441*	(1.657)	0.056	-0.017	(-0.025)	-0.001
Industry fixed effects	Yes			Yes		
N	954			507		
Pseudo R ²	0.442			0.613		

This table presents the probit regression results of the probability of disclosing order backlog. The unit of observation is firm-year and the sample includes the three-year period ended on the SEO issuance date. *SEO* is an indicator variable that equals one for year ended on the SEO issue date, and zero for the baseline years. The independent variable, *OB Disclosure*, is an indicator variable that equals one if a company discloses order backlog amount information in the year and zero otherwise. In column (1), *COMPETE* is the quartile rank of the Herfindahl–Hirschman Index. In column (2), *COMPETE* is the quartile rank of LLM, the competition measure based on textural analysis developed by Li, Lundholm and Minnis (2013). *ln(Market Value)* is the natural log of the market value of equity. Sales Growth is the ratio of current year sales to previous year sales less one. *CumRet* is the cumulative stock returns over the fiscal year. *StdRet* is the standard deviation of the stock returns over the fiscal year. *Earn Vol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is the ratio of net income to total assets at the beginning of the year. *nAnalyst* is the number of analysts following the company. *InstOwn* is the percentage of shares owned by institutional owners. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, in two-tailed t tests.

Table 4. Capital Market Benefit of Order Backlog Disclosure and Management Earnings Guidance

Independent variable	Dependent variable = SEO underpricing	
	(1)	(2)
OB Disclosure	-0.020*** (-2.695)	-0.022*** (-2.871)
Earning Guidance		-0.013** (-2.325)
ln(Market Value)	-0.012*** (-3.539)	-0.011*** (-2.759)
StdRet	0.631*** (3.621)	0.485*** (2.616)
Relative Offer	-0.014 (-0.392)	-0.019 (-0.476)
Pos.CAR	0.051 (0.494)	0.055 (0.450)
Neg.CAR	0.077 (1.538)	0.090* (1.677)
Tick < ¼	0.004 (0.642)	0.000 (-0.041)
IPO Underpricing	0.000 (-0.337)	0.000 (-0.069)
Year fixed effects	Yes	Yes
N	344	290
Adjusted R ²	0.243	0.218

This table presents the ordinary least squares regression results of SEO underpricing for primary SEOs. Underpricing is negative one times the close-to-offer returns. *OB Disclosure* is an indicator variable that equals one if a company discloses order backlog amount information in the year prior to the issuance date and zero otherwise. *Earnings Guidance* is an indicator variable that equals one if a company issues earnings guidance in the year prior to the issuance date and zero otherwise. *ln(Market Value)* is the natural log of the market value of equity prior to the issuance date. *StdRet* is the standard deviation of the daily stock returns over the year prior to the issuance date. *Relative Offer* is the number of shares offered in the SEOs divided by the number of shares outstanding prior to the offer. *Pos.CAR* is the cumulative abnormal returns (*CAR*) over the five days prior to the offer if *CAR* is positive, and zero otherwise. *Neg.CAR* equals *CAR* over the five days prior to the offer if *CAR* is negative, and zero otherwise. *Tick < ¼* is an indicator variable that equals one if the offer price is an increment of \$0.25 and zero otherwise. *IPO underpricing* is the average underpricing of all initial public offerings (IPOs) in the same month as the SEOs. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5. The Relation between SEO issuers' Disclosures and Rival Firm Investment Decisions

Independent variable	(1)	(2)
OB Disclose	0.005** (2.533)	0.006** (2.447)
Earning Guidance		-0.000 (-0.056)
OCF	0.001 (0.170)	0.001 (0.268)
Leverage	-0.005 (-0.752)	-0.001 (-0.070)
ln(Market Value)	0.005*** (4.774)	0.006*** (4.732)
Tobin's Q	0.001*** (2.813)	0.001** (2.343)
lagged Financing	0.004*** (4.725)	0.004*** (3.918)
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
N	46,127	37,154
Adjusted R ²	0.281	0.270

This table presents the OLS regression results of the investments of rival firm after the primary SEOs of the issuing firms. For each SEO event, we identify rival firms as firms with the same four-digit SIC as the SEO firm. The sample includes the observations in the two-year period after the issuance date of the rival firms. The dependent variable is capital expenditure scaled by total assets at the beginning of the year. *OB Disclosure* is an indicator variable that equals one if the focal company discloses order backlog in the year prior to the issuance date and zero otherwise. *Earnings Guidance* is an indicator variable that equals one if the focal firm issues earnings guidance in the year prior to the issuance date and zero otherwise. *OCF* is operating cash flows scaled by total assets at the beginning of the year. *Leverage* is the ratio of total long term liabilities to total assets at the beginning of the year. *ln(Market Value)* is the natural log of market value of equity at the beginning of the year. *Tobin's Q* is the ratio of market value of assets, defined as the market value of equity plus book value of liabilities, to total assets at the beginning of the year. *lag Financing* is the sum of equity financing and debt financing in the prior year. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6 Order Backlog Disclosure around Secondary SEOs

Independent variable	OB Disclosure
SEO	0.658 (1.283)
ln(Market Value)	-1.073** (-2.174)
Sales Growth	1.107** (2.132)
CumRet	-0.102 (-0.226)
StdRet	-65.889*** (-3.228)
Earn Vol	-0.108 (-0.269)
ROA	3.526 (1.085)
nAnalyst	0.206** (2.318)
InstOwn	2.142*** (2.711)
Industry fixed effects	Yes
N	277
Pseudo R ²	0.759

This table presents the probit regression results of order backlog disclosure before secondary SEOs. The unit of observation is firm-year and the sample includes the three-year period ended on the SEO issuance date. *SEO* is an indicator variable that equals one for year ended on the SEO issue date, and zero for the baseline years. The independent variable, *OB Disclosure*, is an indicator variable that equals one if a company discloses order backlog amount information in the year and zero otherwise. *ln(Market Value)* is the natural log of the market value of equity. Sales Growth is the ratio of current year sales to previous year sales less one. *CumRet* is the cumulative stock returns over the fiscal year. *StdRet* is the standard deviation of the stock returns over the fiscal year. *Earn Vol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is the ratio of net income to total assets at the beginning of the year. *nAnalyst* is the number of analysts following the company. *InstOwn* is the percentage of shares owned by institutional owners. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, in two-tailed *t* tests.

Table 7 Disclosure of Order Backlog by matched non-SEO Firms

Independent variable	Rival OB disclosure	
	Primary SEOs (1)	Secondary SEOs (2)
Pseudo-SEO	0.195 (1.015)	0.019 (0.070)
ln(Market Value)	-0.433*** (-2.758)	-0.252 (-0.777)
Sales Growth	-0.347 (-1.102)	-1.620* (-1.851)
CumRet	0.278** (2.466)	0.169 (0.729)
StdRet	-11.199 (-1.212)	-20.834 (-1.219)
Earn Vol	0.604** (2.147)	1.918* (1.660)
ROA	2.553*** (2.716)	3.515*** (2.749)
nAnalyst	-0.047 (-0.951)	-0.107 (-1.573)
InstOwn	-0.196 (-0.297)	2.103* (1.889)
Industry fixed effects	Yes	Yes
N	869	163
Pseudo R ²	0.184	0.260

This table presents the probit regression results of the probability disclosing order backlog of a sample of matched non-SEO firms. For each SEO firm, we match a non-SEO firm by year, industry and firms size. The SEO issuance date of the SEO firm is assigned to the matched non-SEO firm as the pseudo SEO issuance date. The unit of observation is firm-year and the sample includes the three-year period ended on the pseudo SEO issuance date. *Pseudo-SEO* is an indicator variable that equals one for year ended on the Pseudo SEO issue date, and zero for the baseline years. The independent variable, *OB Disclosure*, is an indicator variable that equals one if a company discloses order backlog amount information in the year and zero otherwise. *ln(Market Value)* is the natural log of the market value of equity. *Sales Growth* is the ratio of current year sales to previous year sales less one. *CumRet* is the cumulative stock returns over the fiscal year. *StdRet* is the standard deviation of the stock returns over the fiscal year. *Earn Vol* is the volatility of earnings per share in the eight quarters before the current fiscal year end. *ROA* is the ratio of net income to total assets at the beginning of the year. *nAnalyst* is the number of analysts following the company. *InstOwn* is the percentage of shares owned by institutional owners. The *t*-statistics are in parentheses and are based on standard errors clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.