

Supplier Disclosures and Customer Performance*

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Abstract

This study investigates information flow within supply chain relationships, focusing on the decision-usefulness and timeliness of information provided by suppliers about their major customers during quarterly conference calls. Using data from annual 10-K disclosures to identify linked supplier-customer pairs, we find that customers mentioned by suppliers during conference calls experience significantly negative Cumulative Abnormal Returns (CAR), driven primarily by supplier disclosures of bad news. These results challenge the conventional attribution bias hypothesis, suggesting that investors react meaningfully to supplier disclosures rather than dismissing them as self-serving. Additionally, we document that negative sentiment in supplier disclosures is associated with reduced earnings, future negative news articles, lower sales growth, narrower operating margins, and longer inventory turnover periods for customers in the current and future quarters. Our study contributes to a better understanding of information externalities within supply chains, shedding light on the significance of supplier disclosures for supply chain information and investor decision-making.

I. INTRODUCTION

Understanding information flow within supply chain relationships is crucial in today’s complex business landscape. These relationships create significant economic bonds between suppliers and customers, due to mechanisms like long-term contracts and strategic alliances (Cho, Kim, and Zang, 2020). Regulatory frameworks – namely, ASC 280, SFAS No. 131, and SEC Regulation S-K – mandate the disclosure of major customers, providing valuable insight for investors evaluating supplier performance. Strong customer earnings drive suppliers’ revenues, while customers’ financial struggles can hurt suppliers through reduced purchases, delayed payments, or contract breaches (Ellis, Fee, and Thomas, 2012). Within this context, prior research explores the consequences of information sharing along the supply chain. Prior studies examine information externalities where major customer disclosures significantly impact supplier valuation and decisions (Cohen and Frazzini, 2008; Pandit, Wasley, and Zach, 2011). However, empirical evidence remains scarce regarding whether suppliers’ voluntary disclosures provide timely insights into their major customers’ future performance and whether customers’ shareholders revise their beliefs upon this information. Our study examines whether investors perceive the information disclosed by suppliers, specifically when they mention their major customers during quarterly conference calls, as decision-useful. Additionally, we assess whether this information provides timely insight into the subsequent performance of these major customers.

Previous research extensively documents the role of major customer relationships in facilitating information exchange within supply chains, thereby allowing supplier firms to optimize production and enhance working capital management. Notably, the seminal work of Patatoukas (2012) documents the positive impact of customer concentration on supplier firm fundamentals and market reactions. Subsequent studies find effects of major customer concentration on various firm outcomes, encompassing increased supplier cost of equity (Dhali-

wal, Judd, Serfling, and Shaikh, 2016), reduced amount of public disclosure (Crawford, Huang, Li, and Yang, 2020), a greater inclination to withhold unfavorable news (Chen, Hu, Yao, and Zhao, 2022b), reduced income smoothing (Jung, Kim, Park, and Yoon, 2023), and a negative association with a supplier profitability but a positive association with major customer profitability (Hui, Liang, and Yeung, 2019). The concept of information externalities across economically linked firms (Pandit et al., 2011) has received more attention recently. Cho et al. (2020) find that suppliers are more likely to issue earnings guidance after their customers earnings announcements when the earnings announcements news deviates from the market’s expectation. Chen, Tian, and Yu (2022a) document that suppliers are more likely to redact mandated disclosures when major customers have proprietary information to protect. Meanwhile, two studies specifically examine suppliers that engage in customer referencing and find that those suppliers achieve better product market performance (Chung, Jia, Jing, Ng, and Zhang, 2022) and enjoy a lower cost of equity (Jing, Myers, Ng, and Su, 2023).¹ We supplement this literature by focusing on suppliers’ voluntary discussion of their customer on their earnings conference call, examining whether and how the information content of the suppliers’ disclosure is associated with subsequent customer performance.

Drawing from the above literature on supply chain relationships, we posit that these relationships facilitate the transfer of relevant information about major customers to those customers’ shareholders. Since active analyst involvement in conference calls enhances the information content of such calls, impacting investor decisions and stock prices (Matsumoto, Pronk, and Roelofsen, 2011; Cho et al., 2020), supplier disclosures during these calls potentially impact major customer stock returns. However, it is an open question whether these information exchanges are straightforward, as the market may anticipate that the supplier’s managers are inclined to attribute negative news to external causes, such as issues in the

¹Companies can strategically disclose their customer connections – either privately or publicly – in order demonstrate the credibility and attractiveness of their products (Chung et al., 2022).

supply chain (i.e., attribution bias) (Baginski, Hassell, and Kimbrough, 2004; Barton and Mercer, 2005; Kimbrough and Wang, 2014). This anticipation could lead the customer’s investors to approach suppliers’ disclosures on conference calls with caution and skepticism, potentially dampening their reactions to the information conveyed. As such, while supply chain relationships facilitate information flow, the presence of attribution bias may temper the market’s response to suppliers’ discussion of their customers on conference calls, raising questions about the balance between information sharing and investor expectations regarding attribution bias.

We identify economically significant customer-supplier links between firms and exploit the timing differences between the linked firms’ earnings announcements to examine whether suppliers’ disclosures during their conference calls are indicative of a customer’s future performance. Specifically, we use the WRDS Supply Chain linking query, which is constructed using the annual 10-K ASC 280 major customer disclosures (Cohen and Frazzini, 2008; Cen, Maydew, Zhang, and Zuo, 2017). With the linked supplier-customer pairs, we identify all Compustat quarterly earnings announcements during the identified supply chain relationship.² For each customer-quarter, we identify all linked suppliers’ earnings conference calls during the time between the customer’s prior period earnings announcement and current period earnings announcement. We obtain a final sample of 831 suppliers linked to 557 major customers, representing 9,224 customer-quarters and 27,572 supplier conference calls linked to a unique customer-quarter. Our sample period spans from 2002 to 2016. For each supplier conference call, we generate a regular expression of their major customer’s name. To do this, we randomly selected and read multiple supplier conference calls linked to each customer in order to identify any potential common references to the customer other than the full name of the customer; in other words, we develop regular expressions that capture both the full

²We define the window that the supply chain relationship exists as beginning four quarters prior to the first 10-K disclosure by the supplier of the major customer and up to four quarters after the last 10-K disclosure by the supplier. Refer to Section II and Appendix A for further details.

name of the customer (e.g., International Business Machines) and any potential short names (e.g., IBM). With these regular expressions for each customer, we employ textual analysis to capture each statement on the supplier’s call when a customer is mentioned, including the number of words used and the positive and negative tone of the statements.

Our main findings reveal a significant difference in the average short-window Cumulative Abnormal Returns (CAR) experienced by customers when mentioned by suppliers during conference calls compared to when they are not mentioned. On average, customers exhibit a CAR of -0.068% when mentioned by suppliers. To delve deeper into these results, we divide supplier-conference calls into two categories: those where suppliers announce good news and those where they announce bad news.³ When suppliers report good news (Figure 1, Panel A), we observe that customers had an average CAR of 0.145% when mentioned and 0.184% when not mentioned, showing no significant difference. However, in cases where suppliers disclose bad news (Figure 1, Panel B), customers experience a statistically significant average CAR of -0.183% when mentioned compared to -0.081% when not. These results challenge the attribution bias hypothesis (Baginski et al., 2004; Barton and Mercer, 2005; Kimbrough and Wang, 2014) and suggest an informational role of suppliers’ earnings conference calls. This occurs because the information shared in these disclosures has the potential to revise investors’ expectations regarding customers’ future performance (Pandit et al., 2011).

To delve deeper into the consequences of this information externality, specifically as it relates to customers’ performance, we analyze their subsequent earnings. Our multivariate analysis yields compelling evidence, indicating that not only the mere mention of the customer but also the volume of discussion devoted to the customer and, more importantly, the negative sentiment accompanying these disclosures are related to reduced earnings in the upcoming current and future quarterly earnings, persisting for up to two subsequent periods.

³We use the sign of the supplier’s three-day CAR centered on their earnings call date to capture whether the supplier announced good or bad news.

These findings align with prior literature on supply chain relationships (Patatoukas, 2012).

Building upon the evidence of suppliers' disclosures constituting an information externality, we further investigate whether suppliers' disclosures about customers serve as timely signals of impending negative news regarding the customer. To examine this, we rely on business press news articles and classify them as either conveying good or bad news based on their composite sentiment scores from RavenPack. On the one hand, if the supplier's disclosure is merely a one-time event regarding transitory news and does not constitute a meaningful signal of future adverse operating events for the customer, we expect that the negative sentiment expressed by the supplier about the customer in period t will show no association with the presence of negative business press articles in period $t + 1$. On the other hand, if suppliers' disclosures regarding customers serve as timely indicators of sustained and significant negative operating events at the customer, then we expect to observe a relation between the supplier's negative sentiment regarding the customer and future negative news articles. We document a significant association between the negative sentiment in the supplier's disclosure about their customer and subsequent negative news articles, reinforcing the notion that such disclosures carry valuable information regarding a downturn in the customer's operations. Conversely, we also find that positive sentiment in supplier disclosures relates to positive future news articles, underscoring the informative nature of these disclosures.

In additional analyses, we delve deeper into the relationship between the sentiment of suppliers' disclosures and customers' key performance indicators that offer crucial insights into customer performance within the supply chain. Specifically, we focus on metrics such as sales growth, operating margin, and days sales in inventory, which we deem important in assessing customer economic performance over time. We document a negative association between negative sentiment and changes (from period t to period $t + 1$) in both sales growth and operating margin, indicating that negative sentiment is linked to reduced sales growth

and narrower operating margins. Furthermore, we show a positive association between negative sentiment and changes in days sales in inventory, implying that negative sentiment is associated with longer inventory turnover periods in the future. These outcomes underscore the significance of sentiment in informing investors of customer performance, reinforcing the impact of supplier disclosures on the broader supply chain dynamics.

This study contributes significantly to the broader literature on supply chain relationships, building upon foundational work such as Patatoukas (2012) and complementing prior studies that explore information externalities within supply chains (Pandit et al., 2011). By empirically demonstrating the informativeness of supplier conference calls on major customer performance and investor reaction, we further our understanding of how information flows within supply chains and document how suppliers' disclosures about a customer contain information regarding their customer. Additionally, our study extends the literature on attribution bias (Baginski et al., 2004; Barton and Mercer, 2005; Kimbrough and Wang, 2014) by suggesting that investors can discern between supplier disclosures that provide valuable information about the future performance of major customers and those that offer implausible attributions. Furthermore, this study contributes to the broader disclosure literature (Leuz and Wysocki, 2016) by documenting the impact of disclosures originating from external stakeholders – in this case, smaller (on average) supply chain partners – on a firm's information environment.

The remainder of the paper is organized as follows. Section II describes the data and the sample. Section III provides the details of the empirical tests and our expectations. Section IV details the results of the primary analyses, while Section V provides the results of the additional analyses. Section VI concludes.

II. DATA AND METHODOLOGY

Identifying Supplier-Customer Links & Sample Formation

We utilize the WRDS Supply Chain linking query to generate a sample of supplier-customers linked to valid GVKEYs. WRDS identifies these links using the disclosure of major customers – customers who comprise typically 10% or more of the supplier’s revenues in a fiscal year – required by ASC 280, which is a part of the annual 10-K filing (Cohen and Frazzini, 2008; Cen et al., 2017).

The linking query provides the date of each filing where the supplier firm listed the customer firm as a major customer. With these annual dates, we turn to identifying the time window where the supply chain relationship is most likely to be economically significant and garner discussion on a supplier’s conference call. Since the disclosure of major customers is an annual disclosure, we assume the supply chain relationship is economically meaningful for the four quarters before the first annual disclosure of the identified customer. We then extend the window of the supply chain relationship four quarters forward for each consecutive disclosure of that major customer. As an example, if a supplier firm discloses a customer firm for three consecutive annual reports, our window begins four quarters prior to the first disclosure, extends for all three consecutive disclosures, and then ends four quarters after the final disclosure.⁴ Appendix A provides illustrative timelines to more specifically represent these windows.

With the time window identified, we collect all customer-quarter end dates in Compustat

⁴Given the fact we use the four quarters prior to the first disclosure and four quarters after the last consecutive disclosure means that a supply chain relationship is still considered economically meaningful if the supplier skips a year of reporting that customer firm as a major customer. In other words, our window of economic significance of the relationship includes the instance where, in year s and $s + 2$, the supplier discloses the customer firm, but they do not list that major customer in year $s + 1$. However, if a supplier firm does not list the customer firm as a major customer for two consecutive years or more, then the window will end four quarters after the last disclosure and will begin again four quarters before the next identified disclosure (three or more years later).

within that window and match them to the most recent previous supplier-quarter end date. Due to the availability of conference call data, our sample is limited to customer-quarters ending between 2002 and 2016. After requiring that both customers and suppliers not be in the financial services and utility industries, we yield 85,022 supplier-customer quarters. Since one customer can be named by multiple suppliers, the 85,022 supplier-customer quarters represent 20,616 individual customer-quarters from 1,053 unique customers.

We then require suppliers to have a valid Thomson Reuters conference call transcript during the customer-quarter; specifically, the supplier conference call must occur more than one trading day after the prior customer-quarter earnings announcement (Compustat RDQ date) and more than one trading day prior to the current customer-quarter earnings announcement date. This requirement reduces our sample to 43,240 supplier-customer quarters, representing 13,620 individual customer-quarters from 669 customers. Next, we require the customer to have a valid link to RavenPack News Analytics which reduces our sample to 39,672 supplier-customer quarters, representing 12,480 individual customer-quarters from 666 customers.

Lastly, we require both customers and suppliers to have non-missing data in order to be matched with an annual Fama-French 5x5 size and book-to-market portfolios for benchmark returns. We remove supplier-customer quarters where either supplier or customer abnormal returns are missing during the -1 to +1 window around the linked supplier's conference call. We also impose that the customer cannot have an earnings conference call during the same -1 to +1 trading day window. These restrictions yield a sample of 29,652 supplier-customer quarters, representing 10,216 individual customer-quarters from 591 customers. As a final step, we remove customer-quarter observations that do not have sufficient data to calculate our main outcome variables and covariates used in the main analyses. This yields a final sample of 27,572 supplier-customer quarters, representing 9,224 individual customer-quarters from 557 customers. Refer to Appendix B for further details on each step of the

sample formation.

Identifying Mentions of Major Customers on Supplier Conference Calls

In order to capture whether or not the supplier mentions their major customer on the supplier’s conference call, we generate a regular expression for each major customer’s name. The regular expression is created in the following manner. First, two of the co-authors read a few examples of supplier conference calls linked to each major customer name in order to identify any potential common references to the customer other than the full name of the customer (i.e., our goal is to create regular expressions that will capture both the full name of the customer – for example, International Business Machines – and the short name – IBM). Additionally, we review the list of all customer names and flag names that have the potential to be used in the conference call to refer to other business concepts. For example, we flag the major customer name of Target since a supplier may be referring to their earnings “target” or their major customer “Target”. Since regular expressions cannot systematically differentiate whether the supplier was referring to the customer or to a more commonly used word or phrase, supplier-customer links where the customer name is flagged under this condition are removed as part of the sample formation step, specifically when data is linked to the Thomson Reuters conference call transcripts outlined in Appendix B.

We then employ a textual analysis script to systematically analyze each linked supplier conference call for the major customer’s name using the regular expression. In addition to collecting general textual properties of the whole call, we specifically extract the sentences that mention the major customer’s name. We use one approach for the introduction of the call and one approach for the question-and-answer (Q&A) portion of the call.

The introduction part of the call typically includes management reading a prepared statement regarding general operating performance (Bochkay, Chychyla, and Nanda, 2019). Due to the nature of the introduction being a longer prepared statement that covers a broad

range of topics related to the supplier, we extract only the sentences made by management during the introduction that explicitly mention the customer by name. Using the Loughran and McDonald (2011) dictionary of positive and negative financial words, we classify the whole sentence as either having a positive sentiment or a negative sentiment overall depending on whether the number of positive sentiment words is larger or smaller than the number of negative sentiment words. Sentences that mention the customer can also be considered neutral if there are no positive or negative words in the dictionary present or if the number of positive and negative words in the sentence are equal to each other.

The Q&A part of the call entails a back-and-forth between analysts and investors asking questions and management responding (Bochkay et al., 2019). In this section of the conference call, questions and answers can be more narrowly focused. Thus, if our regular expression captures the use of the major customer’s name in either the question asked by the analyst or the answer provided by management to the analyst, then we extract all sentences spoken during that individual back-and-forth between management and the specific analyst, and we consider all those sentences as being relevant to the major customer. For each sentence in the individual back-and-forth, we classify each sentence as either positive or negative depending on whether the number of positive words is larger or smaller than the number of negative words.

With all sentences related to the major customer extracted and classified as either positive, negative, or neutral, we create four measures at the supplier-customer conference call level. First, we construct an indicator if there was any mention of the major customer i on the supplier conference call j during quarter t , $CustMention_{i,j,t}$. Second, we count the number of sentences (regardless of tone) related to the major customer, $SentsAbtCust_{i,j,t}$. Third, we calculate the overall tone of these sentences as the number of sentences classified as positive minus the number of sentences classified as negative, scaled by the total number of sentences (regardless of tone) about the major customer, and we name this variable

$ToneOfSents_{i,j,t}$. Fourth, we separately count the number of positive sentences and the number of negative sentences, $PosSents_{i,j,t}$ and $NegSents_{i,j,t}$, respectively.

Thus far, all counts have been performed at the unique major customer-supplier conference call level (also referred to as the supplier-customer quarter level). However, one customer firm can be listed as a major customer for multiple suppliers. In our sample, 47.4% of customer-quarters have two or more suppliers with conference calls during the same quarter. Thus, for our analyses at the customer-quarter level, we aggregate all supplier calls together during the quarter, extract all sentences as identified above, and redo the counts and calculations as if there was only one call occurring during the quarter. These measures are designated with the subscript i, t .

III. EMPIRICAL METHODOLOGY AND EXPECTATIONS

Do suppliers' disclosures about a customer on their conference call provide decision-useful information regarding that customer's future performance?

We first examine whether the supplier's discussion of the customer on their conference call provides decision-useful information to shareholders of the customer. Since the supplier conference call occurs between the customer's previous earnings announcement and the customer's current period earnings announcement, the disclosures that the supplier makes on the conference call may constitute new information regarding the customer that leads to a revision of expectations about future performance, even if the supplier does not mention the customer on the call. In this general sense, we expect the customer's cumulative abnormal return (CAR) to be, on average, significantly different from zero and in the same direction (positive or negative) as the supplier's CAR. That is, if the supplier is generally announcing positive (negative) news about their own performance, then we expect the customer's CAR to also respond positively (negatively) but in smaller magnitudes than that of the supplier,

in line with Cohen and Frazzini (2008).

In the specific instance where the supplier mentions their major customer by name on the conference call compared to the instance where the supplier does not mention their customer, it remains an open question as to whether the customers that are mentioned should have a greater (in magnitude) CAR than customers that are not. On one hand, when a supplier specifically mentions their customer on the conference call, this may indicate that a greater volume (and severity) of decision-useful information is being divulged about that customer specifically, which is consistent with the notion of information externalities within the supply chain (Pandit et al., 2011). If this argument holds on average, then we expect the customer's CAR to be greater in magnitude when the customer is mentioned by the supplier compared to when the supplier does not mention them.

Conversely, if we apply the attribution bias hypothesis (Baginski et al., 2004) to this setting, then the supplier is more likely to attribute their own poor performance to an external reason, such as their major customer. In this case, rational market participants should see through the supplier's attempt to attribute poor performance to the customer, and we do not expect that customers who are mentioned by their supplier will have a statistically greater magnitude CAR compared to customers who are not mentioned by their supplier. Additionally, the decision-useful information in the supplier conference call may only apply to the supplier and the supplier's worsening performance, while the customer may be large with many suppliers (e.g., Walmart) such that the supplier's mentioning of the customer has very little decision-useful information in regards to the expectations of the customer's future performance. Overall, since there are compelling reasons in favor and against finding a differential market reaction to the customer being mentioned by the supplier, we do not state a directional prediction.

In order to examine this relation, we utilize short window abnormal returns around the date of the supplier conference call. Specifically, we calculate CARs for the supplier

and for the customer in the -1 to +1 trading day window around the supplier conference call date, and we use the matched Fama-French 5x5 Size and Book-to-Market portfolio as the benchmark return to calculate the abnormal return. We then perform t-tests to determine whether the customer CARs are significantly different from zero and also different across cross-sections, comparing the customers' CARs when they are mentioned by suppliers ($CustMention_{i,s,t} = 1$) to the customers' CARs when they are not ($CustMention_{i,s,t} = 0$). Additionally, due to the differing incentives suppliers face when disclosing positive versus negative news, we also split the sample between conference calls when the supplier announces positive news (i.e., the supplier's short-window CAR is positive) and calls when the supplier announces negative news (i.e., the supplier's short-window CAR is negative).

Are suppliers' disclosures about the customer associated with the customer's actual current and future performance?

We then turn to examining whether the supplier mentioning their major customer is associated with the customer's actual future performance. Since the supplier's conference call occurs prior to the customer's earnings announcement regarding quarter t , the supplier's decision to mention their major customer may be a signal of private information the supplier has regarding the customer's current performance such as the customer's declining sales or other operating performance issues. Additionally, the attribution literature suggests that suppliers will be more likely to mention customers in a negative light to place blame for the supplier's own poor performance on an external factor (Baginski et al., 2004). Thus, we expect the mentioning of the customer to be associated with lower levels of earnings in the same quarter t .

To examine this relation, we specify the following ordinary least squares regression at the customer-quarter level:

$$Earn_{i,t} = f(Conference\ Call\ Attributes_{i,t}, Controls, FEs) \tag{1}$$

where $Earn_{i,t}$ is defined as earnings before extraordinary items for quarter t scaled by total assets at the end of quarter $t-1$, and *Conference Call Attributes* is one or a combination of the four measures of textual characteristics of how the supplier mentions the customer on their conference call. In our first specification, we replace *Conference Call Attributes* with a simple indicator as to whether the customer was mentioned on a supplier conference call during the quarter, $CustMention_{i,t}$. In our second specification, we use $Ln(SentsAbtCust)_{i,t}$, which is the total number of sentences on the supplier conference call(s) that are related to the major customer, as a representation of the volume of disclosure by suppliers. In our third specification, we continue to use $Ln(SentsAbtCust)_{i,t}$, and we include our continuous tone measure $ToneOfSents_{i,t}$ to better capture the tone of how suppliers discuss the major customer. In our fourth specification, we continue to control for the volume of the disclosure $Ln(SentsAbtCust)_{i,t}$, and we decompose our continuous tone measure into $Ln(PosSents)_{i,t}$ and $Ln(NegSents)_{i,t}$ due to the potential asymmetric nature of how positive and negative news can map into future performance.⁵

In all specifications, we include a set of common covariates that are associated with both the level of current (and future) earnings and the likelihood that the supplier discusses their major customer. These include the prior quarters earnings $Earn_{i,t-1}$, the tone of the prior 10-K's forward-looking statements in the MD&A section ($MDATone_{i,t-1}$), the file size of the prior 10-K ($Ln(FileLength)_{i,t-1}$), the size of the customer ($Ln(Size)_{i,t-1}$), earnings volatility ($EarnVol_{i,t-1}$) and return volatility ($RetVol_{i,t-1}$), the age of the customer ($Ln(Age)_{i,t-1}$), the number of segments reported in the last 10-K ($Ln(Segs)_{i,t-1}$). We also include year, quarters, and industry fixed effects in all specifications. All continuous variables are winsorized at the 1st and 99th percentile. All variable definitions are summarized in Appendix C.

We next examine the association between the supplier mentioning the major customer and

⁵Since this analysis is at the customer-quarter level and there are instances where a customer-quarter has multiple different supplier conference calls occurring, we aggregate the measures across all calls that occur during quarter t , as detailed in Section II.

future earnings in order to assess whether the supplier’s disclosure regarding the customer is related to more transitory negative news or represents a more persistent lower customer performance. In order to do so, we replace the dependent variable in Equation 1 with $Earn_{i,t+1}$ and $Earn_{i,t+2}$ in separate specifications. We utilize our most granular measures of the volume and decomposed tone of the mentions of the customer by suppliers and the same controls as those noted above in Equation 1.

Lastly, we examine the occurrence of future business press articles written about the customer as a way to verify whether the supplier mentioning the customer during quarter t is indicative of substantial customer issues. We turn to the business press due to their unique incentives. A key incentive of the business press is to attract and retain a large readership. Thus, the news that the business press publishes must be timely and of a substantial scale such that it appeals to a broad audience of stakeholders. Thus, if the supplier is discussing the customer purely out of attribution bias or cheap talk, then there should not be a relation between how the supplier mentions the customer in quarter t and business press articles in $t + 1$ as there’s no substance or substantial issues at the customer to warrant publishing articles. Conversely, if the supplier discussing the customer on their conference call is indicative of more substantial and persistent problems at the customer firm, then we expect there to be an association with the supplier’s disclosure in quarter t and business press articles in $t + 1$ as there are likely more severe events happening at the customer that the business press would be inclined to write and publish.

To examine this relation, we specify the following Poisson pseudo-maximum likelihood regression at the customer-quarter level:

$$Business\ Press\ Articles_{i,t+1} = f(Ln(NegSents)_{i,t}, Ln(PosSents)_{i,t}, Controls, FEs) \quad (2)$$

where *Business Press Articles* is one of three different counts of business press articles. The first count is $News_{i,t+1}$, which is a simple count of any business press article captured in RavenPack during quarter $t + 1$ that is associated with the customer with a relevancy score

of 90 or above.⁶ The second count, $BadNews_{i,t+1}$, is a count of business press articles in RavenPack associated with the customer that has a composite sentiment score of 45 or less, which we consider a count of negative news articles about the customer. The third count, $GoodNews_{i,t+1}$, is a count of business press articles in RavenPack associated with the customer that has a composite sentiment score of 55 or above, which captures a count of positive news articles about the customer.

IV. RESULTS

Customer Returns around Supplier Disclosure

We begin our empirical analysis by examining how suppliers' and customers' cumulative abnormal returns (CAR) behave in short windows around the supplier conference call date. Our window of interest spans trading days -1 to +1, and we use the matched Fama-French 5x5 Size and Book-to-Market portfolio as the benchmark return for each firm.

While our primary focus lies in understanding the differential reactions of equity investors of major customer firms when they are mentioned during supplier conference calls, we first examine the overall information content within supplier calls. To do so, we investigate whether both suppliers' and customers' CARs are significantly different from zero, which serves as an initial indicator of whether supplier calls, on average, contain meaningful information regarding the supply chain link. In untabulated analyses, the average supplier CAR around their conference call is 0.337%, which is significantly different from zero ($t=6.14$, $p<0.01$). Meanwhile, the average customer CAR around the supplier's conference call is 0.035%, which is significantly different from zero ($t=2.24$, $p<0.05$). This difference in the magnitude of CARs

⁶RavenPack assigns each business press article with a relevancy score for each firm mentioned in the news story. This relevancy score represents how much of the article focuses on the specific firm, and it ranges from 0 (very little) to 100 (extremely relevant). The cutoff for the relevancy score is used to ensure that the underlying event being discussed in the article is largely about the mentioned firm, and the 90 or above cutoff is consistent with prior literature (Drake, Guest, and Twedt, 2014).

between suppliers and customers conforms to our expectations, as supplier conference calls are inherently anticipated to unveil more pertinent information pertaining to the supplier rather than the customer.

Next, we turn to examining customers' CARs and whether there is a different reaction by the customer's shareholders when they are mentioned on the supplier's call. In Table 1, we find that across all supplier calls, customers' average CAR is -0.013% when they are mentioned compared to 0.055% when they are not. This difference of -0.068% is significantly different ($t=-2.03$, $p<0.05$). This evidence is in line with the general idea that it is seen more likely as bad news for major customers when suppliers mention their customers on a conference call.

We further explore this by separating supplier conference calls between positive and negative news in Table 1. We classify a supplier conference as disclosing positive news if the supplier's CAR is above zero and as disclosing negative news if the supplier's CAR is below zero. With these two subsamples, we find no evidence of a different reaction in customer CARs when the supplier discloses positive news. The customer experiences positive average CARs of 0.145% and 0.184% when they are mentioned and not mentioned, respectively. This difference of -0.039% is not statistically significant at the 10% level. Thus, our findings indicate that – during conference calls with generally favorable news – shareholders do not seem to interpret the mention of a customer any differently from instances where the customer is not.

When the supplier discloses negative news, customers experience a negative CAR of -0.183% on average when they are mentioned and -0.081% when they are not. This difference of -0.102% is significantly different ($t=-2.12$, $p<0.05$). Thus, these results suggest that the customer's equity shareholders update their beliefs to a greater negative degree about customers' future performance when the supplier specifically mentions the customer compared to when the customer is not.

Figure 1 visualizes the average customer CAR in different windows around the supplier conference call. Panel A displays the average customer CAR when the supplier discloses good news, and Panel B displays the average customer CAR when the supplier discloses bad news. From both panels, it is evident that the supplier call occurring during the $[-1,1]$ window represents a significant information event for the shareholders of the customer.

Overall, our results suggest that supplier conference calls, on average, serve as a conduit of information about customers' future performance. Consistent with the notion of information externalities (Pandit et al., 2011), shareholders of customer firms exhibit a more pronounced adjustment in their beliefs, particularly when supplier conference calls predominantly convey negative news and explicitly reference the major customer.

Customer Performance after Supplier Disclosure

Having confirmed that the supplier conference call serves as an information event that prompts shareholders of the customer firm to revise their expectations regarding customers' future performance – especially in response to calls with negative news – we now investigate whether these revised beliefs indeed materialize as negative customer performance in the current and subsequent quarters.

As mentioned in Section II, we aggregate our supplier-customer-quarter measures to the customer-quarter level in order to perform these analyses. Table 2, Panel A provides the descriptive statistics for this sample, including our key conference call measures aggregated at the customer-quarter level. On average, customers are mentioned by a supplier during their conference call in 46% of customer-quarters. The customers in our sample are also relatively large, with an average (median) market value of equity of \$34.9 billion (\$10.5 billion). Table 2, Panel B displays the textual characteristics of the supplier sentences used to describe the customer when the customer is mentioned. At the mean (median), suppliers spend 52.96 (22) sentences discussing the customer, with 6.10 (2) sentences with a negative

tone and 10.71 (4) with a positive tone. Table 3 displays the correlation matrix between the outcome variables, the textual characteristics of how the suppliers talk about the customer, and the other covariates.

Concurrent and Future Earnings

We then turn to examine whether a supplier mentioning their customer on the conference call is associated with the forthcoming current period earnings of the customer. Table 4, Column (1) displays the results when using a simple indicator variable to capture whether the customer was mentioned by a supplier during the quarter. Being mentioned by a supplier on their conference call during quarter t is associated with a 9.4% lower level of earnings, relative to the median, at the end of the current quarter t .

Column (2) displays the results of including the volume of the suppliers' disclosures about the customer. We document a negative and significant coefficient of -0.051 ($t=-3.10$, $p<0.01$) for $Ln(SentsAbtCust)_{i,t}$. Thus, the supplier devoting more of the call to discussing the customer is associated with that customer having a lower level of earnings in quarter t .

In Column (3), we include both the volume of the suppliers' disclosures and a continuous tone measure of the suppliers' disclosures. We find that the coefficient for the volume measure, $Ln(SentsAbtCust)_{i,t}$, remains negative and significant at the 1% level. However, the coefficient for the continuous tone measure, $ToneOfSents_{i,t}$, is not statistically significant. In order to investigate whether this is due to a potential non-linearity driven by the different incentives to discuss a customer in a positive light versus a negative light, we present results using a disaggregated tone measure, $Ln(NegSents)_{i,t}$ and $Ln(PosSents)_{i,t}$, in Column (4). We find evidence that the amount of negative sentences used by the supplier to discuss the customer is associated with the customer having a lower level of earnings in quarter t . We do not find evidence that the count of positive sentences is associated with earnings in the same quarter.

Lastly, in Column (5), we restrict the sample to just customer-quarter observations where a supplier mentions the customer ($CustMention_{i,t} = 1$). We do this to address two concerns: (1) there is an inflated level of zeros in our count variables when we included all customer-quarters in the specification; and (2) the customer-quarters where the supplier mentions a customer are fundamentally different from the quarters when they are not mentioned such that either a fully-interactive model or separate models are required to recover more accurate coefficients. We find that the results from Column (4) hold in Column (5) with this restricted sample.

Having established that there is an association between a customer being mentioned by their supplier during the quarter and the customer's current quarter earnings, we turn to future quarters, $t + 1$ and $t + 2$, to assess whether the decline in performance is transitory or persistent. Table 5 displays the results of this analysis. We find that the number of negative sentences is associated with a lower level of earnings in quarter $t + 2$.

Overall, our results suggest that suppliers mentioning their customers on a conference call is associated with a lower level of current and future customer performance. Further, we document, on a more granular level, that the negative tone used by suppliers when discussing a major customer is associated with a lower level of earnings consistently across various specifications.

Future Business Press Articles

Expanding on our examination of the informativeness of supplier conference calls and their influence on customer earnings, we proceed to analyze whether suppliers' disclosures concerning customers act as early indicators of forthcoming negative developments related to the customer. To investigate this, we turn to business press news articles and categorize them as either conveying favorable or unfavorable news based on sentiment scores from RavenPack as described in Section III. Table 6 displays the results from examining how suppliers men-

tioning their customers is associated with future business press articles.⁷ In Column (1), we find that the amount of negative sentiment used by suppliers in discussing the customer in t is associated with a general increase in the number of news articles about the customer in quarter $t + 1$. In Column (2), we find evidence that higher levels of this negative sentiment are associated with the presence of negative news articles in the following quarter specifically. In Column (3), we find that the positive tone used by suppliers when discussing the customer is associated with positive news articles in the following quarter. Overall, this evidence supports the notion that suppliers are disclosing substantial and severe news about the customer, as opposed to the supplier simply attempting to attribute the supplier’s poor performance to their customer as a way to attribute blame to an external party.

V. ADDITIONAL ANALYSES

Relation to Key Financial Ratios

Having documented that customers’ future performance is lower, we additionally explore whether this is related to financial ratios that would reflect a worsening inventory cycle, specifically as indicators of lower levels of customer demand for inventory from the supplier. First, we examine the association with the customer’s current and future sales growth. If the demand for the customer’s products or services has fallen and the customer has begun to realize that lowering of demand, then we expect that the customer would start to reduce their orders from the supplier, which may spur the supplier to discuss the customer on their current quarter conference call. Thus, we would expect to see lower sales growth in the quarter of the conference call. We also examine the association with future sales growth to examine whether any decline in sales growth is transitory or persistent. In Table 7, Panel A,

⁷Results are presented using a Poisson pseudo-maximum likelihood regression since the dependent variables are count variables of the number of news articles. The results are robust to electing the following different methods: ordinary least squares, Poisson, zero-inflated Poisson, and zero-inflated Negative Binomial.

we find that the amount of negative sentiment used by the supplier to discuss the customer on their conference call is associated with lower levels of sales growth in quarters t , $t + 1$, and $t + 2$. Thus, this evidence supports the notion that suppliers may have private information about declining demand for the customer's revenue-generating operations before it is realized in customers' revenues.

Second, we turn to the customer expense side of the income statement and examine the seasonal change in the operating margin for the current quarter and the future two quarters. While sales growth relied on a demand-side argument, we examine operating margin as a stand-in for higher supply-side costs. If the customer is simply reducing the amount of inventory purchased from the supplier due to lower demand for the customer's product, then we would not expect to find any association with the operating margin, as that should remain unchanged. However, if the product costs are rising from the supplier and the supply chain relationship is becoming strained as a result, then we should expect to see operating margins decrease. In Panel B, we find that the amount of negative sentiment used by the supplier to discuss the customer on their conference call is associated with lower operating margins for the customer in quarters t , $t + 1$, and $t + 2$. Thus, this evidence, in combination with Panel A, supports the notion that revenues are falling while product costs are increasing, and the customer is overall experiencing worse operating performance as a result, which the supplier is divulging through their conference call disclosures.

Third, we then examine a financial ratio specifically tailored to how the customer is managing their inventory: the days sales in inventory. For this ratio, if the customer is experiencing declining (increasing) demand for their product, then the time it takes for the customer to convert its inventory to sales will be increasing (decreasing). This again would imply that the customer would begin to reduce purchases from their suppliers. In Panel C, we find that the amount of negative sentiment used by the supplier to discuss the customer on their conference call is associated with increases in the days sales in inventory for the

customer in quarters t , $t + 1$, and $t + 2$.

Overall, this additional analysis sheds further light on how the overall performance of the customer is deteriorating in the current quarter, and that deterioration persists for at least two future quarters, which reinforces the impact of supplier disclosures on the broader supply chain dynamics.

Determinants of Customers Being Mentioned by their Suppliers

As an exploratory analysis, we document the potential determinants of what leads a supplier to mention their customer using information available at the time of the conference call. In Table 8, we display the results of the analysis at the supplier conference call-customer level. We include characteristics of the supplier (e.g., whether they are reporting a loss that quarter, the level of their unexpected earnings), the same characteristics for the customer based on their most recent earnings announcement prior to the call, and also characteristics about the call and the length of the supply chain relationship. Overall, we find that suppliers are more likely to mention their customer when: (1) the conference call is longer; (2) the supply chain has existed for a longer amount of time; (3) the supplier is smaller and the customer is larger; (4) the customer has recently reported a loss.

VI. CONCLUSION

Our study examines information flow within supply chain relationships. Our work is motivated by extant research documenting that information externalities exist within supply chain relationships, where major customer disclosures significantly impact supplier valuation and decisions. We examine whether investors perceive the information disclosed by suppliers, specifically when they mention their major customers during quarterly conference calls, as decision-useful. Moreover, we assess whether this information provides timely insights into the future earnings of these major customers.

Using data from the annual 10-K ASC 280 major customer disclosures to identify linked supplier-customer pairs, we document a significant difference in the average CAR experienced by customers when mentioned by suppliers during conference calls compared to when they are not. These results are driven by cases where suppliers disclose bad news. Our findings challenge the attribution bias hypothesis by revealing that investors do not simply dismiss supplier disclosures as self-serving but react to them in a meaningful way. Rather than being viewed solely as a strategic attempt to deflect blame, supplier disclosures appear to convey relevant information about major customers and forthcoming lower levels of earnings.

When we delve deeper into the consequences of these information externalities for customers, we document that negative sentiment accompanying these disclosures is related to reduced earnings in the upcoming current and future quarterly earnings. We also find a significant association between the negative sentiment in the suppliers disclosure about their customer and subsequent negative news articles. Last, we document that negative sentiment is associated with reduced sales growth, smaller operating margins, and longer inventory turnover periods. Our study contributes to a better understanding of information externalities within supply chains, shedding light on the significance of supplier disclosures for supply chain information and investor decision-making.

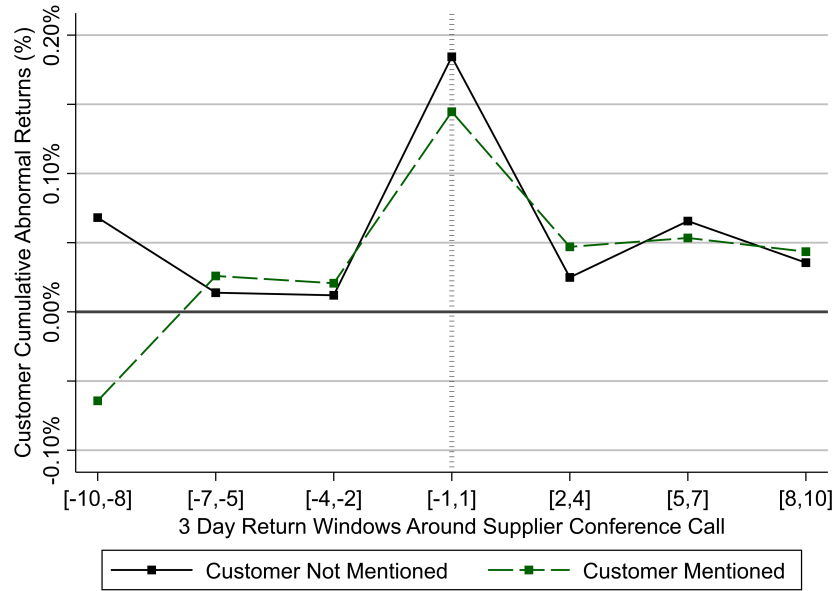
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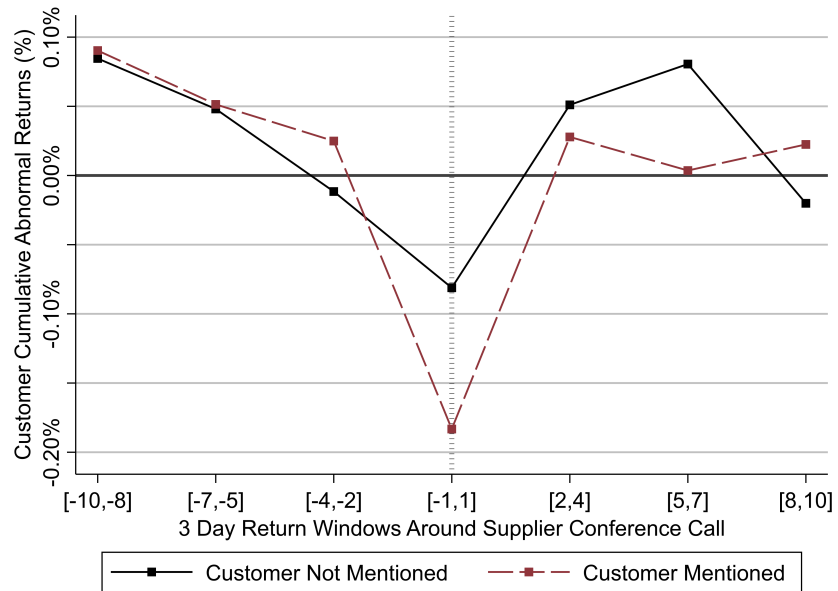
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Figure 1: Customer Abnormal Returns Around Supplier Conference Calls

Panel A: Customer Returns when Supplier Discloses Good News



Panel B: Customer Returns when Supplier Discloses Bad News



This figure presents the average of customers' short-window Cumulative Abnormal Returns (CAR) in the trading days surrounding the supplier's earnings conference call. Panel A is the sample of supplier conference calls where the supplier announces good news (classified by whether the supplier's [-1,1] CAR was positive). Panel B is the sample of supplier conference calls where the supplier announces bad news. In both panels, the dashed line represents conference calls where the major customer is mentioned, and the solid line is where the major customer is not mentioned.

Table 1: Customer Abnormal Returns around Supplier Conference Calls

Customer's [-1,1] CAR	$CustMention_{i,s,t} = 1$			$CustMention_{i,s,t} = 0$			Diff. in Means
	N	Mean	SD	N	Mean	SD	
All Supplier Calls	8,336	-0.013	2.572	19,236	0.055	2.569	-0.068** [-2.03]
Supplier discloses positive news	4,329	0.145	2.586	9,889	0.184	2.571	-0.039 [-0.84]
Supplier discloses negative news	4,007	-0.183	2.548	9,347	-0.081	2.559	-0.102** [-2.12]

This table presents the mean Cumulative Abnormal Returns (CAR) for customers in the -1 to +1 trading day window surrounding the supplier conference call for various subsamples of the customer-supplier conference call sample. The first row is the full sample of all supplier conference calls split by whether the customer was mentioned on the call or not. The second row is the sample of supplier conference calls where the supplier announces good news (classified by whether the supplier's [-1,1] CAR was positive). The third row is the sample of supplier conference calls where the supplier announces bad news (classified by whether the supplier's [-1,1] CAR was negative). The difference in means between customers mentioned and not mentioned is presented in the final column with t-statistics reported in brackets. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

Table 2: Sample Descriptive Statistics**Panel A:** Full sample

	Mean	SD	P25	Median	P75
$Earn_{i,t}$	1.32	2.54	0.66	1.49	2.50
$News_{i,t+1}$	114.35	135.06	33.00	66.00	140.00
$BadNews_{i,t+1}$	7.14	10.35	1.00	3.00	9.00
$GoodNews_{i,t+1}$	12.32	18.91	1.00	5.00	15.00
$CustMention_{i,t}$	0.46	0.50	0.00	0.00	1.00
$SentsAbtCust_{i,t}$	24.21	59.56	0.00	0.00	19.00
$ToneOfSents_{i,t}$	0.05	0.13	0.00	0.00	0.07
$NegSents_{i,t}$	2.79	7.15	0.00	0.00	2.00
$PosSents_{i,t}$	4.89	12.03	0.00	0.00	4.00
$Earn_{i,t-1}$	1.28	2.55	0.65	1.46	2.45
$MDATone_{i,t-1}$	0.02	0.19	0.00	0.00	0.00
$Size_{i,t-1}$ (in millions)	34,929.40	60,760.50	2,809.07	10,461.69	32,435.36
$MtB_{i,t-1}$	3.63	3.73	1.69	2.63	4.06
$EarnVol_{i,t-1}$	0.02	0.03	0.01	0.01	0.02
$RetVol_{i,t-1}$	0.09	0.05	0.06	0.08	0.11
$Age_{i,t-1}$	32.29	24.49	13.68	24.10	43.78
$FileLength_{i,t-1}$	57,964.60	33,755.10	37,085.50	50,181.00	70,383.00
$Segs_{i,t-1}$	6.40	4.06	3.00	6.00	9.00
Observations	9,224				

Panel B: Mentioned Sample (where $CustMention_{i,t} = 1$)

	Mean	SD	P25	Median	P75
$SentsAbtCust_{i,t}$	52.96	78.97	8.00	22.00	57.00
$ToneOfSents_{i,t}$	0.10	0.17	0.00	0.08	0.20
$NegSents_{i,t}$	6.10	9.58	1.00	2.00	7.00
$PosSents_{i,t}$	10.71	15.95	1.00	4.00	12.00
Observations	4,217				

This table presents the descriptive statistics at the customer-quarter level for key variables used in the main analyses. Panel A presents the mean, standard deviation, 25th percentile, median, and 75th percentile for the full sample. Panel B presents the same statistics of only the four constructed measures of how the supplier discusses the customer for a subsample of customer-quarters where the customer is mentioned by the supplier. Refer to Appendix C for variable definitions.

Table 3: Correlation Table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) $Earn_{i,t}$	1.00								
(2) $News_{i,t+1}$	0.17***	1.00							
(3) $BadNews_{i,t+1}$	0.05***	0.76***	1.00						
(4) $GoodNews_{i,t+1}$	0.19***	0.86***	0.61***	1.00					
(5) $CustMention_{i,t}$	0.05***	0.33***	0.24***	0.29***	1.00				
(6) $Ln(SentsAbtCust)_{i,t}$	0.06***	0.46***	0.34***	0.43***	0.89***	1.00			
(7) $ToneOfSents_{i,t}$	0.03***	0.10***	0.07***	0.10***	0.39***	0.32***	1.00		
(8) $Ln(NegSents)_{i,t}$	0.05***	0.48***	0.36***	0.45***	0.67***	0.90***	0.03***	1.00	
(9) $Ln(PosSents)_{i,t}$	0.06***	0.47***	0.35***	0.45***	0.75***	0.94***	0.46***	0.88***	1.00
(10) $Earn_{i,t-1}$	0.62***	0.16***	0.07***	0.18***	0.04***	0.06***	0.02*	0.05***	0.06***
(11) $MDATone_{i,t-1}$	0.01	-0.06***	-0.06***	-0.05***	-0.02*	-0.02*	0.00	-0.02**	-0.02*
(12) $Ln(Size)_{i,t-1}$	0.36***	0.62***	0.44***	0.53***	0.31***	0.40***	0.14***	0.39***	0.41***
(13) $MtB_{i,t-1}$	0.15***	0.12***	0.07***	0.16***	0.08***	0.09***	0.06***	0.07***	0.10***
(14) $EarnVol_{i,t-1}$	-0.29***	-0.14***	-0.08***	-0.13***	-0.06***	-0.09***	-0.01	-0.09***	-0.09***
(15) $RetVol_{i,t-1}$	-0.33***	-0.18***	-0.08***	-0.17***	-0.10***	-0.14***	-0.07***	-0.13***	-0.15***
(16) $Ln(Age)_{i,t-1}$	0.19***	0.29***	0.20***	0.22***	0.11***	0.12***	0.06***	0.10***	0.12***
(17) $Ln(FileLength)_{i,t-1}$	-0.04***	0.09***	0.05***	0.02**	0.08***	0.10***	0.03**	0.10***	0.10***
(18) $Ln(Segs)_{i,t-1}$	0.13***	0.15***	0.04***	0.09***	0.02**	0.03***	0.00	0.03***	0.03***

	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(10) $Earn_{i,t-1}$	1.00							
(11) $MDATone_{i,t-1}$	-0.00	1.00						
(12) $Ln(Size)_{i,t-1}$	0.37***	-0.07***	1.00					
(13) $MtB_{i,t-1}$	0.13***	-0.04***	0.23***	1.00				
(14) $EarnVol_{i,t-1}$	-0.33***	0.02	-0.33***	-0.01	1.00			
(15) $RetVol_{i,t-1}$	-0.35***	0.00	-0.53***	-0.11***	0.40***	1.00		
(16) $Ln(Age)_{i,t-1}$	0.19***	-0.05***	0.44***	-0.02**	-0.32***	-0.33***	1.00	
(17) $Ln(FileLength)_{i,t-1}$	-0.04***	-0.04***	0.15***	0.02*	0.03***	-0.00	0.01	1.00
(18) $Ln(Segs)_{i,t-1}$	0.13***	0.02**	0.23***	-0.06***	-0.06***	-0.13***	0.27***	0.08***

This table reports the Pearson correlation coefficients for selected variables of interest. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

Table 4: Supplier Disclosure and Customer's Current Earnings

	(1)	(2)	(3)	(4)	(5)
	$Earn_{i,t}$	$Earn_{i,t}$	$Earn_{i,t}$	$Earn_{i,t}$	$Earn_{i,t}$
$CustMention_{i,t}$	-0.140** [-2.53]				
$Ln(SentsAbtCust)_{i,t}$		-0.051*** [-3.10]	-0.057*** [-3.42]	0.002 [0.04]	0.107 [1.31]
$ToneOfSents_{i,t}$			0.258 [1.35]		
$Ln(NegSents)_{i,t}$				-0.132*** [-2.83]	-0.190*** [-3.37]
$Ln(PosSents)_{i,t}$				0.017 [0.31]	-0.028 [-0.43]
$Earn_{i,t-1}$	0.504*** [21.50]	0.503*** [21.50]	0.503*** [21.49]	0.502*** [21.46]	0.505*** [14.55]
$MDATone_{i,t-1}$	0.307** [2.50]	0.309** [2.52]	0.307** [2.51]	0.305** [2.50]	0.232 [1.37]
$Ln(Size)_{i,t-1}$	0.199*** [7.18]	0.210*** [7.37]	0.210*** [7.35]	0.214*** [7.39]	0.219*** [5.54]
$MtB_{i,t-1}$	0.045*** [4.34]	0.044*** [4.31]	0.044*** [4.30]	0.044*** [4.25]	0.033*** [2.94]
$EarnVol_{i,t-1}$	-4.035*** [-2.61]	-4.030*** [-2.61]	-4.063*** [-2.62]	-4.063*** [-2.61]	-7.062** [-2.55]
$RetVol_{i,t-1}$	-4.447*** [-5.58]	-4.376*** [-5.47]	-4.374*** [-5.47]	-4.363*** [-5.45]	-3.681*** [-3.23]
$Ln(Age)_{i,t-1}$	-0.043 [-1.08]	-0.044 [-1.10]	-0.044 [-1.11]	-0.047 [-1.18]	-0.079 [-1.44]
$Ln(FileLength)_{i,t-1}$	-0.083** [-2.31]	-0.082** [-2.27]	-0.081** [-2.26]	-0.081** [-2.25]	-0.042 [-0.88]
$Ln(Segs)_{i,t-1}$	0.086 [1.45]	0.085 [1.45]	0.084 [1.43]	0.083 [1.43]	0.079 [1.01]
Sample	Full	Full	Full	Full	Mentioned
Year, Quarter, and Industry FEs	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	42.9%	43.0%	43.0%	43.0%	45.4%
Observations	9,224	9,224	9,224	9,224	4,217

This table reports coefficient estimates of regressing customer's current period earnings ($Earn_{i,t}$) on key measures of whether and how the supplier mentioned the customer on a conference call during quarter t and other covariates. Columns (1) through (4) use the full sample of all customer-quarters, while Column (5) restricts the sample to customer-quarters where the customer has been mentioned by the supplier on a conference call during quarter t . Reported statistics in brackets are based on standard errors clustered at the customer level. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

Table 5: Supplier Disclosure and Customer's Future Earnings

	(1)	(2)
	$Earn_{i,t+1}$	$Earn_{i,t+2}$
$Ln(NegSents)_{i,t}$	-0.069 [-1.24]	-0.121** [-2.21]
$Ln(PosSents)_{i,t}$	-0.006 [-0.10]	0.015 [0.22]
$Ln(SentsAbtCust)_{i,t}$	-0.027 [-0.62]	-0.021 [-0.46]
$Earn_{i,t-1}$	0.457*** [16.37]	0.442*** [16.68]
$MDATone_{i,t-1}$	0.125 [0.88]	0.070 [0.45]
$Ln(Size)_{i,t-1}$	0.253*** [7.30]	0.257*** [6.97]
$MtB_{i,t-1}$	0.047*** [4.36]	0.053*** [4.48]
$EarnVol_{i,t-1}$	-5.202*** [-2.93]	-6.593*** [-3.28]
$RetVol_{i,t-1}$	-3.350*** [-3.94]	-3.185*** [-3.32]
$Ln(Age)_{i,t-1}$	-0.075* [-1.65]	-0.094* [-1.86]
$Ln(FileLength)_{i,t-1}$	-0.093** [-2.16]	-0.100** [-2.27]
$Ln(Segs)_{i,t-1}$	0.125* [1.82]	0.132* [1.73]
Sample	Full	Full
Year, Quarter, and Industry FEs	Yes	Yes
Adjusted R ²	38.0%	37.2%
Observations	9,214	9,182

This table reports coefficient estimates of regressing customer's future period earnings ($Earn_{i,t+1}$ and $Earn_{i,t+2}$) on key measures of how the supplier mentioned the customer on a conference call during quarter t and other covariates. Reported statistics in brackets are based on standard errors clustered at the customer level. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

Table 6: Supplier Disclosure and Future Customer News

	(1)	(2)	(3)
	$News_{i,t+1}$	$BadNews_{i,t+1}$	$GoodNews_{i,t+1}$
$Ln(NegSents)_{i,t}$	0.089** [2.46]	0.103** [2.48]	0.076 [1.63]
$Ln(PosSents)_{i,t}$	0.038 [1.09]	0.012 [0.28]	0.097** [1.96]
$Ln(SentsAbtCust)_{i,t}$	-0.004 [-0.15]	0.003 [0.08]	-0.026 [-0.55]
$Earn_{i,t-1}$	-0.025*** [-2.70]	-0.050*** [-4.50]	0.012 [0.77]
$MDATone_{i,t-1}$	-0.022 [-0.24]	-0.169 [-1.40]	-0.000 [-0.00]
$Ln(Size)_{i,t-1}$	0.491*** [22.00]	0.480*** [15.57]	0.583*** [19.41]
$MtB_{i,t-1}$	0.009 [1.43]	-0.001 [-0.14]	0.019** [2.50]
$EarnVol_{i,t-1}$	1.530** [2.14]	1.777 [1.61]	1.147 [0.75]
$RetVol_{i,t-1}$	3.505*** [6.72]	5.493*** [8.65]	4.768*** [5.08]
$Ln(Age)_{i,t-1}$	0.093** [2.30]	0.141*** [2.60]	0.045 [0.85]
$Ln(FileLength)_{i,t-1}$	0.003 [0.11]	-0.015 [-0.47]	-0.037 [-1.21]
$Ln(Segs)_{i,t-1}$	-0.030 [-0.61]	-0.173*** [-3.12]	-0.011 [-0.13]
Sample	Full	Full	Full
Year, Quarter, and Industry FEs	Yes	Yes	Yes
Pseudo R ²	65.6%	32.4%	51.7%
Observations	9,224	9,224	9,224

This table reports coefficient estimates from a Poisson pseudo-maximum likelihood regression of counts of future period news articles about the customer ($News_{i,t+1}$, $BadNews_{i,t+1}$, and $GoodNews_{i,t+1}$) on key measures of how the supplier mentioned the customer on a conference call during quarter t and other covariates. Reported statistics in brackets are based on standard errors clustered at the customer level. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

Table 7: Supplier Disclosure and Other Performance Measures**Panel A:** Sales Growth

	(1)	(2)	(3)
	<i>SalesGrowth_{i,t}</i>	<i>SalesGrowth_{i,t+1}</i>	<i>SalesGrowth_{i,t+2}</i>
<i>Ln(NegSents)_{i,t}</i>	-0.015** [-2.47]	-0.011* [-1.79]	-0.017*** [-2.77]
<i>Ln(PosSents)_{i,t}</i>	0.005 [0.71]	0.004 [0.54]	0.002 [0.20]
<i>Ln(SentsAbtCust)_{i,t}</i>	0.002 [0.34]	0.000 [0.00]	0.005 [0.85]
Sample	Full	Full	Full
Controls	Yes	Yes	Yes
Year, Quarter, and Industry FEs	Yes	Yes	Yes
Adjusted R ²	14.13%	10.24%	8.85%
Observations	9,195	9,184	9,151

Panel B: Seasonal Change in Operating Margin

	(1)	(2)	(3)
	<i>OpMargin_{i,t}</i>	<i>OpMargin_{i,t+1}</i>	<i>OpMargin_{i,t+2}</i>
<i>Ln(NegSents)_{i,t}</i>	-0.006* [-1.88]	-0.005* [-1.71]	-0.007*** [-2.65]
<i>Ln(PosSents)_{i,t}</i>	0.002 [0.77]	0.006* [1.86]	0.003 [1.05]
<i>Ln(SentsAbtCust)_{i,t}</i>	0.002 [0.88]	-0.002 [-0.74]	0.001 [0.48]
Sample	Full	Full	Full
Controls	Yes	Yes	Yes
Year, Quarter, and Industry FEs	Yes	Yes	Yes
Adjusted R ²	4.08%	2.10%	2.68%
Observations	9,149	9,134	9,108

Panel C: Seasonal Change in Days Sales in Inventory

	(1)	(2)	(3)
	<i>DaysSalesInv_{i,t}</i>	<i>DaysSalesInv_{i,t+1}</i>	<i>DaysSalesInv_{i,t+2}</i>
<i>Ln(NegSents)_{i,t}</i>	1.851*** [3.23]	1.130* [1.72]	0.872 [1.51]
<i>Ln(PosSents)_{i,t}</i>	-0.832 [-1.29]	-0.302 [-0.49]	-0.202 [-0.28]
<i>Ln(SentsAbtCust)_{i,t}</i>	-0.399 [-0.90]	-0.372 [-0.89]	-0.329 [-0.84]
Sample	Full	Full	Full
Controls	Yes	Yes	Yes
Year, Quarter, and Industry FEs	Yes	Yes	Yes
Adjusted R ²	1.68%	1.02%	2.01%
Observations	8,913	8,898	8,865

This table reports coefficient estimates of regressing customer's key performance ratios in the current and future periods on key measures of how the supplier mentioned the customer during a conference call during quarter t and other covariates. Panel A reports the coefficient estimates when using Seasonal Changes in Sales (Sales Growth) as the performance measure. Panel B reports the coefficient estimates when using Seasonal Changes in Operating Margin as the performance measure. Panel C reports the coefficient estimates when using Seasonal Changes in Days Sales in Inventory as the performance measure. Reported statistics in brackets are based on standard errors clustered at the customer level. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

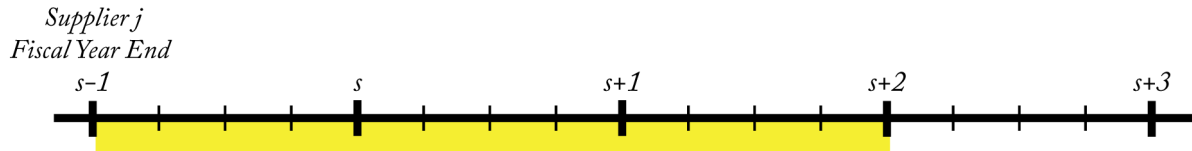
Table 8: Determinants of Mentioning Customer

	(1) <i>CustMention</i> _{<i>i,s,t</i>}
<i>Ln(CallLen)</i> _{<i>i,s,t</i>}	0.676*** [5.74]
<i>SuppUE</i> _{<i>i,s,t</i>}	0.109*** [3.44]
<i>SuppLoss</i> _{<i>i,s,t</i>}	0.097 [1.52]
<i>Ln(SuppSize)</i> _{<i>i,s,t</i>}	-0.198*** [-5.59]
<i>CustUE</i> _{<i>i,s,t-1</i>}	0.022 [0.87]
<i>CustLoss</i> _{<i>i,s,t-1</i>}	0.190* [1.92]
<i>Ln(CustSize)</i> _{<i>i,s,t-1</i>}	0.188*** [5.89]
<i>Ln(RelTime)</i> _{<i>i,s,t</i>}	0.293*** [6.06]
Constant	-4.971*** [-6.39]
Sample	Customer-Supplier-Call
Year, Quarter, and Industry FEs	Yes
Pseudo R ²	9.70%
Observations	27,480

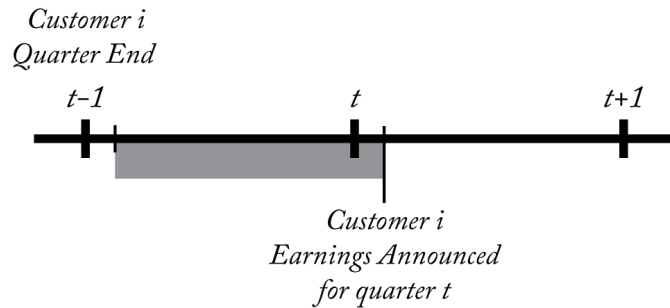
This table reports coefficient estimates from a logistic regression of the supplier mentioning the customer during their conference call ($CustMention_{i,s,t}$) on both supplier characteristics, customer characteristics, and supply chain relationship characteristics. Fixed effects include year, customer fiscal quarter, and both customer and supplier industries. Reported statistics in brackets are based on standard errors clustered at the customer level. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Refer to Appendix C for variable definitions.

A. SUPPLIER-CUSTOMER IDENTIFICATION AND TIMELINE

We use the WRDS Supply Chain Linking Query to identify a window in time where a supply chain relationship would be significant enough to garner discussion on a supplier’s conference call. Since the disclosure of major customers is an annual disclosure, we assume the supply chain relationship begins four quarters before the first annual disclosure listing the identified customer. We then extend the window of the supply chain relationship up to four quarters after the last successive annual disclosure that mentions that customer. Below is a timeline which illustrates the window of time for our analysis based off supplier j disclosing customer i as a major customer for fiscal years s and $s+1$. The shaded yellow area represents the window of time where we consider the supply chain relationship to be significant.



Next, we then identify customer-quarter ends that occur during the window of time shaded in yellow above. For each customer-quarter end identified within the window, we search for supplier customer calls that occur between the prior earnings announcement date and the current quarter’s earnings announcement date. Below is a timeline using customer i fiscal quarter ends. The grey shaded area indicates the time in which we search for supplier earnings conference calls for each fiscal quarter t in the window. We then finish our sample formation by following the sample selection procedures documents in Appendix B.



B. SAMPLE SELECTION

Data Step	Supplier-Customer Quarters	Customer Quarters	Unique Customers
The intersection of CRSP and Compustat Quarterly observations after requiring firms to be listed as a customer in an identifiable supply chain (supplier-customer link) with positive, non-missing total assets on Compustat with quarter end dates from 2002 to 2016.	117,348	29,677	1,483
Observations after removing customers and suppliers in the financial services and utility industries (SIC 6000-6999 and 4900-4999, respectively).	85,022	20,616	1,053
Observations after requiring the linked supplier-firms to have a conference call transcript on Thomson Reuters during the customer quarter.	43,240	13,620	699
Observations after requiring customer-firms to be covered in Raven-Pack News Analytics.	39,672	12,480	666
Observations after requiring customers and suppliers to have valid Fama-French 5x5 portfolio returns on days -1 to +1 surrounding the supplier conference call and no customer conference call during the same window.	29,652	10,215	591
Observations after removing firms with missing data to calculate variables in quarters t and $t-1$.	27,572	9,224	557
Final sample.	27,572	9,224	557

C. VARIABLE DEFINITIONS

This appendix provides the variable definitions for each variable used in the analyses of this study.

Variable	Definition	Source
<i>Dependent Variables</i>		
$Earn_{i,t}$	Quarterly income before extraordinary items for fiscal quarter t scaled by total assets at $t-1$ multiplied by 100	Compustat Quarterly
$News_{i,t+1}$	A count of articles with a relevancy score of 90 or above about customer i during fiscal quarter $t+1$	RavenPack
$BadNews_{i,t+1}$	A count of articles with a composite sentiment score of 45 or below and a relevancy score of 90 or above about customer i during fiscal quarter $t+1$	RavenPack
$GoodNews_{i,t+1}$	A count of articles with a composite sentiment score of 55 or above and a relevancy score of 90 or above about customer i during fiscal quarter $t+1$	RavenPack
<i>Independent Variables</i>		
$CustMention_{i,t}$	An indicator variable equal to 1 if the customer is mentioned by name during any of its suppliers' earnings conference calls during fiscal quarter t	Thomson Reuters
$SentsAbtCust_{i,t}$	A count variable of the total number of sentences classified as regarding the customer during all of the suppliers' earnings conference calls during fiscal quarter t	Thomson Reuters
$ToneOfSents_{i,t}$	The sum of the total number of sentences with a net positive tone regarding the customer minus the sum of the total number of sentences with a net negative tone regarding the customer during all of the suppliers' earnings conference calls during fiscal quarter t , scaled by $SentsAbtCust_{i,t}$; if the customer is not mentioned, this variable takes a value of zero	Thomson Reuters
$NegSents_{i,t}$	The sum of the total number of sentences with a net negative tone regarding the customer during all of the suppliers' earnings conference calls during fiscal quarter t ; if the customer is not mentioned, this variable takes a value of zero	Thomson Reuters

C. VARIABLE DEFINITIONS (CONTINUED)

Variable	Definition	Source
$PosSents_{i,t}$	The sum of the total number of sentences with a net positive tone regarding the customer during all of the suppliers' earnings conference calls during fiscal quarter t ; if the customer is not mentioned, this variable takes a value of zero	Thomson Reuters
$MDATone_{i,t-1}$	The difference between the total number of forward looking sentences with a positive tone and a negative tone in the customer's most recent MD&A, scaled by total forward looking sentences in the MD&A for the most recently filed 10-K prior to the earnings announcement for quarter t .	EDGAR
$Size_{i,t-1}$	The market value of equity at the end of fiscal quarter $t - 1$	Compustat Quarterly
$MtB_{i,t-1}$	Total market value of equity scaled by book value of equity at the end of fiscal quarter $t - 1$	Compustat Quarterly
$EarnVol_{i,t-1}$	The standard deviation of quarterly earnings before extraordinary items for the prior five years, requiring at least two fiscal years of data	Compustat Quarterly
$RetVol_{i,t-1}$	The standard deviation of returns over the prior 12 months, requiring at least 6 months of data	CRSP Monthly File
$Age_{i,t-1}$	Ending date of fiscal quarter $t - 1$ minus beginning coverage date in CRSP	CRSP
$FileLength_{i,t-1}$	Word count of the most recently filed 10-K	EDGAR
$Segs_{i,t-1}$	Number of geographic and business unit segments	Compustat Segments
<i>Variables Used in Additional Analyses</i>		
$SalesGrowth_{i,t}$	Seasonal change in sales defined as the sales in quarter t minus the sales in quarter $t - 4$, scaled by the sales in quarter $t - 4$	Compustat Quarterly
$OpMargin_{i,t}$	Seasonal change in operating margin, where operating margin is defined as operating income after depreciation (OIADPQ) scaled by sales for the quarter	Compustat Quarterly
$DaysSalesInv_{i,t}$	Seasonal change in days sales in inventory, where days sales in inventory is defined as the average inventory level for the quarter (the sum of beginning and ending inventory, scaled by 2) divided by cost of goods sold for the quarter, and multiplied by 90 days	Compustat Quarterly

C. VARIABLE DEFINITIONS (CONTINUED)

Variable	Definition	Source
$CallLen_{i,s,t}$	Total number of sentences spoken by all participants on the supplier conference call s	Thomson Reuters
$SuppUE_{i,s,t}$	Supplier's unexpected earnings announced during quarter t , defined as the earnings (IBQ) per share (CSHOQ) announced in quarter t subtracted by earnings per share in quarter $t - 4$	Compustat Quarterly
$SuppLoss_{i,s,t}$	An indicator variable that takes the value of 1 if the supplier's earnings (IBQ) is less than zero for quarter t , and 0 otherwise	Compustat Quarterly
$SuppSize_{i,s,t}$	Supplier's market value of equity at the end of quarter t	Compustat Quarterly
$CustUE_{i,s,t-1}$	Customer's most recent unexpected earnings announced prior to the supplier conference call during quarter $t-1$, defined as the earnings (IBQ) per share (CSHOQ) announced in quarter $t-1$ subtracted by earnings per share in quarter $t-5$	Compustat Quarterly
$CustLoss_{i,s,t-1}$	An indicator variable that takes the value of 1 if the customer's most recent earnings (IBQ) prior to the supplier conference call is less than zero for quarter $t-1$, and 0 otherwise	Compustat Quarterly
$CustSize_{i,s,t-1}$	Customer's market value of equity at the end of quarter $t-1$	Compustat Quarterly
$RelTime_{i,s,t}$	The number of quarters that have elapsed since the first time supplier s disclosed that customer i was a major customer	WRDS Supply Chain Linking Query
<i>Transformations</i>		
$\ln(x)$	Represents the variable has been logged transformed for the analysis	