Implications of Limited Investor Attention to Economic Links

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Abstract

This study focuses on the market reaction to information transfers from economically linked customers. In particular, I examine whether investors have limited attention with respect to the information contained in customer earnings announcements for suppliers. Using 1,083 unique customer-supplier relationships for the period 1983–2011, I find that the cumulative abnormal returns of a supplier surrounding and following its linked customer's earnings announcement date is positively related to its linked customers' unexpected earnings news, indicating that customer earnings announcements convey information for suppliers. Because customer-supplier links between firms are typically associated with information transfers, the results suggest that limited investor attention to the arrival of new information on economically linked firms leads to market underreactions.

Keywords: limited investor attention; information transfers; economic links

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1. Introduction

This study aims to identify predictable returns by using ex ante economic links between customers and suppliers. Recent studies on the limited investor attention hypothesis,[2] which state that investors' limited attention to the arrival of new information causes return anomalies, document that investor inattention is more likely when a large number of same-day earnings announcements are made by other firms (Hirshleifer, Lim, and Teoh, 2009) or where there are a large number of Friday earnings announcements (Dellavigna and Pollet, 2009). Investor inattention is also more likely when publicly available information about economically linked firms is neglected (Cohen and Frazzini, 2008). More importantly, evidence on the limited attention to economically linked firms suggests that information diffuses from customers to suppliers, generating predictable returns across linked assets.

In this paper, I examine whether investors have limited attention with respect to the information contained in customer earnings announcements for suppliers. More specifically, I investigate the immediate responsiveness of a firm's abnormal returns around the announcement dates of its linked customers and the delayed responsiveness of stock returns following the linked customers' earnings announcements. The disclosure of customer-supplier links between firms was required according to Statement of Financial Accounting Standards (SFAS) No. 14 before 1997 and based on SFAS No. 131 after 1997, and this information is available for public use. When news about a linked firm is released into the market, the stock price of the supplier firm should respond immediately to that news if investors consider these ex ante links. On the other hand, if investors pay limited attention to such links, the stock prices of the supplier will react slowly to the linked firm's earnings news, and delayed abnormal returns are expected. As a result, limited investor attention to a

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[2] The limited attention hypothesis by Cohen and Frazzini (2008) states that stock prices underreact to firm-specific information that induces changes in the valuation of related firms, generating return predictability across assets. In particular, stock prices underreact to negative (positive) news involving related firms and, in turn, generate negative (positive) price drift.

linked firm's announcements (i.e., a customer's unexpected earnings news[3]) leads to market underreactions.

Consistent with the limited attention hypothesis (e.g., Cohen and Frazzini, 2008), there are substantial abnormal returns after earnings announcements by linked firms. Using 1,083 unique customer-supplier relationships between 1983 and 2011, I find that the cumulative abnormal returns of a supplier surrounding and following the linked customer's earnings announcement date is positively related to its linked customers' unexpected earnings news. Because customer-supplier links between firms are typically associated with information transfer, the main results suggest that limited investor attention to the arrival of new information about economically linked firms generates abnormal stock returns. My results are also robust to controlling for the timing and order of earnings announcement, same-industry effect, and the ratios of firm size, sales, and returns[4] of linked customers to suppliers and with respect to the delayed returns over different horizons. Moreover, in line with the notion of the intra-industry information hypothesis (Kovacs, 2011), I find that the supplier's post-earnings announcement drift is more pronounced in the presence of subsequent arrival of information contained in customer earnings announcements, where customers are same-industry peers of suppliers. These results provide further evidence that limited investor attention to customer-supplier information transfers leads to market underreactions.

The paper contributes to the literature in several ways. First, this paper adds to the growing stream of studies on the implications of limited attention for stock returns. Cohen and Frazzini (2008) examine how investors' limited attention to economically related firms leads to predictable future stock returns by testing "customer momentum," which is defined as a monthly strategy of buying firms whose customers had the most positive returns in the

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[3] Unexpected earnings news, unexpected earnings, earnings surprises, earnings news, and earnings-related information are exchangeable terms used in the paper.
[4] Cohen and Frazzini (2008) provide evidence of return predictability across economically linked firms.

previous month and selling firms whose customers had the most negative returns in the previous month. If investors pay limited attention to the stock returns of economically linked firms, one would expect investors to be inattentive to earnings-related information from such firms. Consequently, I hypothesize that market underreactions for suppliers are related to limited investor attention to earnings announcements by economically linked customers. I test this hypothesis by examining immediate (delayed) market reactions surrounding (following) earnings announcements by economically linked customers. Whereas most studies investigate market reactions around the time of a firm's own earnings announcements,[5] I focus on market reactions around the time of earnings announcements by related firms because investors tend to ignore this publicly available link between suppliers and economically related customers. That is, investors are inattentive to customer-supplier links, and thus, stock returns are predictable.

Second, this study provides a new insight into information diffusion. The customer-supplier links between firms are longstanding public relationships. Thus, the earnings information released by customers is closely related to the earnings information for suppliers. Prior studies have shown that one firm's earnings news may be useful in updating earnings expectation for other firms in the industry.[6] For instance, Ramnath (2002) examines intra-industry information diffusion by investigating the market reaction experienced by a firm that announces its earnings subsequent to the first announcing firm in the same industry when the earnings of the first announcing firm is unexpected. A recent study by Kovacs (2011) further documents that the firm's post-earnings announcement drift is driven by information diffusion from subsequent-announcing firms in the same industry. If earnings information is

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[5] Koch and Sun (2004) test announcement reactions around the firm's subsequent dividend changes, conditioning on the sign of the firm's unexpected earnings. Kovacs (2011) examines the effect of same-industry peers' earnings announcements on the post-earnings announcement drift. Cohen and Frazzini (2008) investigate market reactions to news about related firms but do not relate the phenomenon to the price response of suppliers around (after) the customer's earnings announcement.

[6] Earnings-related information transfers in the industry examined in prior studies include, among others, Freeman and Tse (1992), Ramnath (2002), and Kovacs (2011).

transferred from other firms in the industry, one would also expect that investors perceive the earnings-related information from the economically related announcing-customers to be useful in updating their expectations for suppliers, and thus earnings information to be transferred from economically related firms. I find that the immediate and delayed returns of a supplier[7] surrounding and following customers' earnings announcement dates are positively related to customers' unexpected earnings, confirming that customer earnings announcements convey information for suppliers.

Finally, this evidence introduces a new dimension to the large body of literature that explains the post-earnings announcement drift. Specifically, I show that the supplier's post-earnings announcement drift is more pronounced when earnings news by economically linked customers arrives within the supplier's 60-trading-day drift window and both the supplier and its linked customers are in the same industry. The results exhibit contagion-type customer-supplier information transfers, suggesting underreaction to ex ante customer-supplier economic links between firms contributes to the post-earnings announcement drift.

The remainder of the paper is organized as follows. Section 2 reviews the related studies and develops hypotheses. Section 3 provides the research design and summary statistics. Section 4 presents the empirical results. Section 5 provides additional sensitivity analysis. Section 6 concludes the paper.

2. Related Studies and Hypotheses

2.1. Limited Investor Attention

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[7] On the basis of Regulation SFAS No. 131, it is the suppliers that need to report the identity of customers representing more than 10% of their total sales in interim financial reports issued to shareholders. As such, information is merely transferred from economically linked customers to suppliers. The tests of whether customers' returns surrounding and following the supplier's earnings announcement date are related to the supplier earnings news are statistically insignificant, which confirms my observation. The test results are not reported for brevity and are available upon request from the author.

This paper is related to the finance literature on how limited investor attention affects financial markets. Recent empirical studies have related limited investor attention to asymmetric selling behavior (Barber and Odean, 2008), demographic shifts (Dellavigna and Pollet, 2007), and relevant information at the time of previous extraneous news (Huberman and Regev, 2001). Using share turnover as a proxy for investor attention, Hou, Peng, and Xiong (2009) document that price underreaction to earnings news weakens when investors are inattentive, whereas price continuation caused by investors' overreaction strengthens with investor attention. In the same vein, Loh (2010) finds that investor inattention and the underreaction to stock recommendations lead to postrecommendation drift. In contrast, Da, Engelberg, and Gao (2011) use the Google search volume index (SVI) as a proxy for investor attention and show stronger price momentum among stocks with higher levels of SVI. Yuan (2012) finds that high market-wide attention generates significant trading and price changes by analyzing the ability of market-wide attention-grabbing events, which are measured as record-breaking events for the Dow index and front-page articles about the stock market. Bae and Wang (2012) investigate whether the China-name affects investor attention and firm value and find that the returns of China-name stocks are, on average, more than 100% higher than those of non-China-name stocks. Bae and Wang attribute this phenomenon to increased investor attention to China-name stocks after controlling for alternative measures of investor attention, such as *Wall Street Journal* news coverage, abnormal trading volume, extreme past one-day returns, and the Google SVI. In addition, Gilbert et al. (2012) use the U.S. Leading Economic Index as a proxy for the stale information and find that investor inattention to the stale nature of information causes return anomalies.

The literature also discusses theoretical approaches to modeling limited investor attention. For instance, Merton (1987) suggests that higher expected stock returns are obtained from lesser-known stocks with smaller investors. Hong and Stein (1999) suggest that investor

profit from trading on information is gradually transferred across the population if the information is helpful in predicting future outcomes. Hirshleifer and Teoh (2003) model how investors' inattention to accounting reports may lead to the misvaluation of stocks. Peng and Xiong (2006) demonstrate that investors are more likely to respond to market- and industry-wide information than they are to consider firm-specific information, which makes cross-sectional returns predictable. Finally, Peng (2005) develops a model in which the learning process for investors is optimally allocated when they have a limited capacity for information processing. Peng further predicts that mispricing is related to the speed with which investors process information about large or small firms.

2.2. Information Transfers

Several studies also focus on the role of information transfer in the prediction of future stock returns (e.g., Ramnath, 2002; Hong, Torous, and Valkanov, 2007; Cohen and Frazzini, 2008; Menzly and Ozbas, 2010; Prokopczuk, 2010; Cai, Song, and Walkling, 2011; Bae et al., 2012). Ramnath finds that the response to subsequent announcing firms around the first announcing date in the industry is positive when the earnings of the first announcing firm are unexpected. This underreaction, in turn, leads to predictable stock returns for subsequent announcers in the same industry. In the same vein, Hong, Torous, and Valkanov suggest that some industries predict future stock market returns. Both Cohen and Frazzini, and Menzly and Ozbas find that individual customer returns generate predictable future supplier returns. The former focuses more broadly on customer-supplier links, whereas the latter examines specific inter- and intra-industry relations. Moreover, Prokopczuk reports strong evidence that earnings news leads to a significant contagion effect in the banking industry but outside that industry, the magnitude of the contagion effect is positively related to the bank size and the size of the reporting news. A recent study by Cai, Song, and Walkling finds strong evidence that bidder abnormal returns is positively related to the degree of surprise associated

with a bid announcement and the prices of rival firms adjust at the time of an initial industry bid, suggesting the transfer of bid-related information through industry channels. Using the degree of accessibility of foreign investors to emerging stock markets as a proxy for investibility of foreign investments, Bae et al. find that greater investibility is associated with faster diffusion of global market information across stocks in emerging markets.

On the other hand, recent studies have documented that information transfers play an important role in the post-earnings announcement drift. Among other, Kovacs (2011) presents strong evidence that subsequent same-industry earnings announcements are related to a firm's post-earnings announcement drift. Hou (2007) argues that industry information transfer from large firms to small firms contributes to the post-earnings announcement drift.

2.3.   Hypothesis Development

My study is distinct from these other articles in that I analyze earnings-related information diffusion from customers to suppliers. That is, I test how a supplier's abnormal returns around the customer's earnings announcement date react to unexpected earnings by linked customers. In a closely related paper, Cohen and Frazzini (2008) examine how limited investor attention to economically related firms leads to predictable future stock returns, whereas Ramnath (2002) investigates investor and analyst reactions to earnings announcements by related firms in the industry. A recent study by Kovacs (2011) further documents that the firm's post-earnings announcement drift is driven by information diffusion from subsequent-announcing firms in the same industry. If the corresponding price drift of the firm can be predicted based on earnings-related information from subsequent-announcing firms in the same industry, one would expect the stock price reactions of the firm around the earnings report date of related firms to reflect this information. As such, investors may incorporate the information from linked customers' earnings announcements into their expectations for suppliers. In an efficient market, one would expect the immediate price

responses for a supplier around its linked customers' earnings announcement dates to reflect those announcements. Thus, the stock price responses of a supplier around its customers' announcements will be positively related to unexpected customer earnings. I therefore make the following hypothesis:

H_{1a}: *The cumulative abnormal return of a supplier, around the linked customers' announcement date, is positively related to linked customers' earnings news.*

However, prior studies (e.g., Bernard and Thomas, 1989; Abarbanell and Bernard, 1992; Ramnath, 2002) have documented that investors may not be able to completely adjust their earnings expectations for announcing firms and that this dynamic leads to predictable stock returns. More specifically, investor underreactions to first announcer's news yield predictable stock returns for subsequent announcers in the same industry (Ramnath, 2002). If investors are inattentive to earnings-related information from economically related customers, they may not react as strongly to the earnings-related information immediately. As such, the corresponding drift in prices, i.e., the abnormal returns of a supplier cumulated after the customer's earnings announcement date, would be predictable even after the customer's actual earnings are announced to the market. Thus, one would expect that the stock returns of a supplier cumulated after the customer's earnings announcement date will be positively related to unexpected customer earnings. It follows that:

H_{1b}: *The abnormal return of a supplier, cumulated after the linked customers' announcement date, is positively related to linked customers' earnings news.*

The discussion above suggests that limited investor attention to a linked firm's announcement (i.e., customers' unexpected earnings news) leads to market underreactions. This underreaction generates predictable stock returns for suppliers following the customers'

earnings announcements. That is, stock prices do not promptly incorporate information from linked firms and that this generates substantial abnormal returns.

3. Data and Research Design

3.1. Sample Selection

To empirically investigate the relationship between the supplier's cumulative abnormal returns surrounding (following) linked customers' earnings announcement date and an earnings surprise for the customer, I obtained data from three sources: Compustat segment, which provides linked data for suppliers and their principal customers; the Center for Research in Securities Prices (CRSP), which provides information on stock returns; and I/B/E/S, which provides data on quarterly earnings and the timing of announcements.

According to Regulation SFAS No. 131, firms must periodically release their financial information for any industry segment that comprises more than 10% of consolidated annual sales and for any linked customer that represents more than 10% of total reported sales. Based on the Compustat segment file for each firm, I inspect whether the customer is another company listed in the CRSP, Compustat, and I/B/E/S files by matching the customer name, and I assign it the corresponding CRSP permno number to ensure that customers are matched to the appropriate stock returns and financial information.[8]

I then extract stock returns from CRSP based on the announcement dates of both suppliers and their linked customers at the same fixed quarter end. To construct unexpected earnings, I require the actual earnings and analyst forecasts. The I/B/E/S unadjusted individual analyst forecasts for quarterly earnings per share (EPS) are based on the number of shares outstanding on the estimate date. By contrast, the actual reported EPS are based on the number of shares outstanding on the earnings report date. To ensure that both estimated and

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[8] Customers for which I could not identify a unique match are excluded from the sample.

actual EPS are based on the same number of shares outstanding, I use the CRSP cumulative

adjustment split factor extracted from the CRSP daily stock files, merging these data with the

unadjusted detailed history and the data from the actual files in the I/B/E/S database. In this

way, I generate the final sample of 10,207 firm-quarter observations for the period 1983–

2011, which cover a total of 1,083 unique customer-supplier relationships.

3.2. Research Design

I examine market reactions to earnings news involving linked customers by estimating

several specifications of the following model:

$$CAR[-1,1] = \alpha + \beta_1 CUE + \beta_2 Z + Industry\ Effect + Year\ Effect + \varepsilon, \qquad (1)$$

$$CAR[2,61] = \alpha + \beta_1 CUE + \beta_2 Z + Industry\ Effect + Year\ Effect + \varepsilon, \qquad (2)$$

where the dependent variable CAR [−1, 1] is defined as a supplier's 3-trading-day cumulative

abnormal returns around the customer's earnings announcement and CAR [2, 61] as the

supplier's subsequent 60-trading-day cumulative abnormal returns after the customer's

earnings announcement. The independent variable CUE is the customer's unexpected

earnings, defined as the actual earnings per share subtracted by the median of the individual

analyst forecasts,[9] normalized by the stock price on the date of the fixed quarter end.

Z is a vector of control variables that are routinely used in return anomaly regressions

(e.g., Ramnath, 2002; Cohen and Frazzini, 2008; Hirshleifer et al., 2009).[10] ADISTANCE

denotes the absolute value of the reporting lag between the supplier and its linked customers;

FEARLY is an indicator variable that equals 1 if the supplier announces earnings earlier than

its linked customers for the same quarter and that equals 0 otherwise; CEARLY is an

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[9] Some studies (e.g., Zhang, 2008) have used the latest individual analyst forecast to compute firm's unexpected
earnings. I use the latest analyst consensus forecast in my study. However, the inferences are unchanged if I use
the latest individual analyst forecast as a proxy for market expectations.
[10] See also Givoly and Palmon (1982), Chambers and Penman (1984), Atiase, Bamber, and Tse (1989), Chae
(2005), which focus on good (bad) news that is released early (late).

indicator variable that equals 1 if linked customers announce earnings earlier than the supplier for the same quarter and that equals 0 otherwise; CBNEWS is an indicator variable that equals 1 if the customer's unexpected earnings are negative and 0 otherwise; CANALYSTS represents the number of analysts following the customer; PERCRET represents the ratio of stock returns around the earnings announcement date of linked customers to that of suppliers; PERCSALE represents the logarithm of the ratio of sales of economically linked customers to that of suppliers; PERSIZE is the logarithm of the ratio of market capitalization of linked customers to that of suppliers, where market capitalization is defined as price times the number of shares outstanding at the end of the fiscal quarter; MKTRET represents the market return on the S&P 500 Index around the customer's earnings announcement date; SAMEDAY is an indicator variable that equals 1 if both the supplier and its linked customers release their earnings on the same day and that equals 0 otherwise; and SAMEINDUSTRY is an indicator variable that equals 1 if both the supplier and its linked customers are in the same industry and that equals 0 otherwise. I also control for industry (according to the Fama and French's (1997) industry classification) and year effects. ε denotes the error term. Details regarding the construction of the variables are also given in the Appendix.

Table 1 presents the summary statistics for the variables used in the paper. There are 1,083 unique customer-supplier relationships for the period 1983–2011 in the final sample. On average, the supplier's 3- and 60-trading-day cumulative abnormal returns around and following the linked customer's earnings announcement are 0.2% and 1.8%, respectively, whereas the supplier's 60-trading-day drift returns following its own earnings announcement are 2.2%. The average unexpected earnings for customers in the sample is –0.1% whereas supplier unexpected earnings is –9.8%, suggesting bad earnings news is observed mostly in suppliers in the sample. This observation is confirmed by the indicator variables of customer

bad earnings news (0.359) and supplier bad earnings news (0.783). On average, there are 20 analysts following the customer and 13 following the supplier, respectively; the ratio of the supplier's abnormal returns surrounding the earnings announcement date to its linked customers is 0.154; the size of customers is about 2 million whereas supplier size is around 0.06 million (i.e., firm size of customers is 33 times of that of suppliers); customer sales represent 12% of supplier sales; and the reporting lag between suppliers and their linked customers is about 12 days. In terms of early, late, and same-day announcements, 66.2% of sample firms are linked customers who release their quarterly earnings earlier than suppliers, 27.3% are suppliers who release their quarterly earnings earlier than the linked firms, and 6.5% are suppliers who release their quarterly earnings on the same day as their linked firms. Finally, 27% of sample firms are linked customers who subsequently announce earnings within the supplier's 60-trading-day drift window whereas linked customers being intra-industry peers of suppliers account for only 9.8% of the entire sample.

[Insert Table I about here]

Overall, the evidence shows that the average stock returns of suppliers, cumulated after the customers' earnings announcement dates, are similar to the average stock returns of suppliers, cumulated after their own earnings announcement dates. The evidence suggests that there are observable returns generated after the earnings announcement date by a supplier's linked customers.

4. Empirical Results

To gain insight into the relationship between the stock returns of the supplier and the earnings news of its linked customers, I investigate the immediate price reaction of the supplier around the customers' announcement date to unexpected earnings of its customers and the delayed price responsiveness of the supplier following the customer's announcement

to unexpected earnings of its linked customers. If investors consider the ex ante customer-supplier links, the stock returns of the supplier will fully adjust when the information about its linked customers is released into the market. If investors do not fully react to information released by the supplier's linked customers, one expects to observe predictable stock returns in the period after the customer announcements.

4.1. Supplier Stock Price Reactions to Earnings News Involving Linked Customers

Table 2 reports the regression results. Columns 1 to 4 present the specifications with the supplier's 3-trading-day cumulative abnormal returns around the earnings announcement date for its linked customers, CAR [-1, 1], as the dependent variable. Each regression employs control variables that have the potential to influence supplier's immediate returns. Column 1 provides the baseline result for the immediate price reaction of a supplier around the customers' announcement date to unexpected earnings of its customers. I control for other potential determinants of the immediate stock return response (i.e., CBNEWS, CANALYSTS, PERCSALE, PERCSIZE, SAMEDAY, MKTRET, and their interaction terms with CUE) as well as industry and year effects. The coefficient of CUE is 0.103 and is statistically significant at the 1% level, confirming the presence of the immediate return predictability of a supplier around the customers' announcement date in my sample. To eliminate the concern that the impact of customer earnings surprises on the supplier's immediate stock returns is driven by the timing and order of announcements, I also control for other correlated factors, such as ADISTANCE, FEARLY, and CEARLY. The coefficient of CUE in column 2 is significantly positive at 0.092, which suggests that suppliers' stock returns are immediately responsive to the earnings announcements of their customers. In column 3, I add a control variable of SAMEINDUSTRY. The coefficient of CUE is significantly positive at 0.091. To reduce the concern that my results are not driven by stock returns of both suppliers and customers, I also control for the ratio of stock returns of linked

customers to suppliers on their own earnings announcement date respectively (i.e., PERCRET) and its interaction term with CUE. The coefficient of CUE in column 4 is significantly positive at 0.117, which confirms the immediate responsiveness of stock returns.

[Insert Table 2 about here]

Taken together, the evidence in Table 2 indicates that the cumulative abnormal returns of a supplier around the customer's announcement date are positively related to unexpected customers' earnings.

4.2.   Supplier Stock Price Reactions following Customers' Announcements

The immediate responsiveness of stock returns around the customer's announcement date, as indicated above, offers important evidence of the market reactions to earnings news involving the customers of suppliers. However, Cohen and Frazzini (2008) report that stock prices do not fully reflect news involving related firms, which generate predictable subsequent price moves. In this subsection, I further investigate cumulative stock return responses of a supplier to customers' unexpected earnings following its customers' announcements.

Table 3 reports the estimation results. Columns 1 to 4 present the specifications with the abnormal returns of a supplier cumulated 60-trading-day after the earnings announcement date for its linked customers, CAR [2, 61], as the dependent variable. The independent and control variables used in the delayed stock return analysis are the same as in the immediate stock return analysis. The coefficients of CUE in columns 1 to 4 are all positive and significant at the 1% level with magnitude of 0.619, 0.762, 0.755, and 0.748, respectively. The positive and statistically significant coefficient is in line with the hypothesis, and suggests that the stock reactions of a supplier after customers' earnings announcements to unexpected earnings of customers is substantial.

[Insert Table 3 about here]

Overall, the results in Tables 2 and 3 show that stock prices do not promptly incorporate information from linked firms, which in turn generates the abnormal returns for suppliers cumulated after earnings announcements by related customers. These results are consistent with the notion that systematic limited attention to a given piece of information predicts return forecastability with respect to the impact on firm value of the piece of information being ignored, and thus provide support to the hypothesis that limited investor attention to economic links causes market underreactions.

4.3. Supplier's Delayed Returns to Customers' Earnings News over Different Horizons

To address the possible effect of different horizons on return sensitivities, I compute supplier stock returns following the customers' announcements using different horizons.

Table 4 presents the estimation results for the delayed responses of a supplier following the customers' announcements over 30-, 45-, 60-, 75-, and 90-trading-day horizons. I find that the results are quite similar when I use different horizons. The coefficients of CUE in columns 1 to 5 are all positive and statistically significant at the 1% level, confirming that the cumulative abnormal returns of a supplier, following the customers' announcements, are positively related to customers' earnings news. I therefore conclude that the delayed returns over different horizons are not likely to affect the results.

[Insert Table IV about here]

Overall, these results provide evidence that customer earnings announcements convey information for suppliers, and thus provide further support for investor inattention to customer-supplier information transfers.

5. Additional Sensitivity Analysis: Post-earnings Announcement Drift

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The focus of H_{1a} and H_{1b} is on whether investors have limited attention with respect to the information contained in customer earnings announcements for suppliers when the ex ante customer-supplier links between firms are publicly available.

The extant literature argues that information transfer will have greater effects on the post-earnings announcement drift (e.g., Hou, 2007; Kovacs, 2011). Specifically, Kovacs (2011) suggest that subsequent same-industry peer earnings announcements strongly influence the firms' post-earnings announcement drift and that underreaction to intra-industry information transfers contributes to the drift. Therefore, it is of great interest to see what the role of customer-supplier information transfers plays in the post-earnings announcement drift. Since firm-specific information, such as earnings announcements by economically linked customers within the supplier's drift window, recurs systematically and induces changes in the valuation of related firms, it might have the potential to play a substantial role in the supplier's post-earnings announcement drift. If economically linked customers announce earnings subsequently after a supplier and release earnings within the supplier's drift window, one would expect that linked customers' earnings announcements would influence the supplier's post-earnings announcement drift and that underreaction to customer-supplier information transfers would contribute to the drift.

In attempt to identify whether customer earnings announcements convey information for suppliers that have already announced their earnings, I estimate Equation (3) relating the supplier's post-earnings announcement drift to unexpected earnings news in the presence of subsequent arrival of information contained in customer earnings announcements, where customers are same-industry peers[11] of suppliers.

$$FCAR[2,61] = \alpha + \beta_1 FUE + \theta_1 FINFO + \theta_2 (FUE \times FINFO) + \theta_3 (FUE \times FINFO \times SAMEINDUSTRY) +$$
$$\beta_2 W + Industry\ Effect + Year\ Effect + \varepsilon. \quad (3)$$

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[11] See Kovacs (2011) for the detailed model specification of intra-industry information transfer.

The dependent variable, FCAR [2, 61], is a supplier's cumulated abnormal returns in the 60-trading-day drift window following its own earnings announcements of the sample. FUE is the supplier's unexpected earnings defined as the actual earnings per share subtracted by the median of the individual analyst forecasts, normalized by the stock price on the date of the fixed quarter end. FINFO is an indicator variable that takes the value of one when economically linked customers announce earnings within the supplier's drift window in each quarter. The interaction term (FUE × FINFO × SAMEINDUSTRY) captures the sensitivity of supplier's return drift to unexpected earnings news when linked customers announce earnings within the supplier's drift window in each quarter and both linked customers and suppliers are in the same industry. A positive θ_3 estimate would indicate that the predictive power of earnings news on supplier's return drift is strongly influenced by subsequent arrival of information contained in customer earnings announcements, where customers are same-industry peers of suppliers.

W is a vector of control variables that have the potential to influence the cross-section of returns. FBNEWS is an indicator variable that equals 1 if the supplier's unexpected earnings are negative and 0 otherwise; FANALYSTS represents the number of analysts following the supplier's earnings announcements; and FSIZE denotes firm size and is measured as the logarithm of market capitalization at the end of the fiscal quarter. SAMEDAY and MKTRET are defined the same as in Equations (1) and (2). I also control for industry (according to the Fama and French's (1997) industry classification) and year effects. ε denotes the error term. Details regarding the construction of the variables are also given in the Appendix.

Table 5 presents the estimation results. The coefficient of FUE is a positive of 0.266 with the statistical significance at the 5% level. The result is consistent with the extant literature in the post-earnings announcement drift (e.g., Bernard and Thomas, 1989; Zhang, 2008). My primary focus in Table 5 is, however, on the interaction variable (FUE × FINFO ×

SAMEINDUSTRY) that captures the effect of FUE on FCAR [2, 61] when linked customers announce earnings within the supplier's drift window in each quarter and both linked customers and suppliers are in the same industry. The coefficient of (FUE × FINFO × SAMEINDUSTRY) is 1.422 and is statistically significant at the 1% level. The positive and statistically significant coefficient indicates that the predictive power of earnings news on a firm's return drift is stronger when linked customers announce earnings within the supplier's drift window and both linked customers and suppliers are in the same industry, and thus supports the notion that customer earnings announcements convey information for suppliers that have already announced their earnings. The evidence is also consistent with the intra-industry information transfer hypothesis, whereby underreaction to intra-industry information transfers contributes to the drift.

[Insert Table 5 about here]

6. Conclusion

The limited investor attention hypothesis proposes that limited investor attention to firm-specific information of economically linked firms (Cohen and Frazzini, 2008), a large number of same-day earnings announcements made by other firms (Hirshleifer et al., 2009), Friday earnings announcements (Dellavigna and Pollet, 2009), and stock recommendations (Loh, 2010) cause market underreactions to new information, generating predictable returns across firms.

This study investigates whether limited investor attention to linked customers' announcements leads to market underreactions. I show that the cumulative abnormal stock returns of a supplier surrounding and following its linked customers' earnings announcement date are positively related to customers' earnings news, which suggests that investors are inattentive to customer-supplier information transfers. The evidence consistently supports the

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limited attention hypothesis. Investors pay limited attention to economic links and are slow to update their expectations regarding future earnings upon receiving new information from economically related firms. When customer news is released into the market, investors pay limited attention to this ex ante economic link. Consequently, the price of the supplier's stock does not promptly adjust; instead, the more substantial reaction is predictable following customers' surprising earnings.

Further, I find that the supplier's post-earnings announcement drift is more pronounced in the presence of subsequent arrival of information contained in customer earnings announcements, where customers are same-industry peers of suppliers. These results provide further evidence that limited investor attention to customer-supplier information transfers leads to market underreactions.

Appendix: Description of the Variables

Variables	Description and Source
Panel A: Cumulative abnormal returns	
CAR[-1,1]	Supplier's 3-trading-day cumulative abnormal returns around the customer's earnings announcement. *Source: author's calculations based on Compustat segment, CRSP, and I/B/E/S.*
CAR[2,61]	Supplier's subsequent 60-trading-day cumulative abnormal returns after the customer's earnings announcement. *Source: author's calculations based on Compustat segment, CRSP, and I/B/E/S.*
FCAR[2, 61]	Supplier's subsequent 60-trading-day cumulative abnormal returns after its own earnings announcement. *Source: author's calculations based on CRSP and I/B/E/S.*
Panel B: Unexpected earnings	
CUE	Customer's unexpected earnings are defined as the actual earnings per share subtracted by the median of individual analyst forecasts scaled by the end of the quarter share price. *Source: author's calculations based on I/BE/S and CRSP.*
FUE	Supplier's unexpected earnings are defined as the actual earnings per share subtracted by the median of individual analyst forecasts, scaled by the end of quarter share price. *Source: author's calculations based on I/B/E/S and CRSP.*
Panel C: Other control variables	
CBNEWS	Indicator variable that equals 1 if the customer's unexpected earnings are negative and 0 otherwise. *Source: author's calculations based on I/B/E/S.*
CANALYSTS	The number of analysts following the customer. *Source: author's calculations based on I/B/E/S.*
CEARLY	Indicator variable that equals 1 if linked customers announce earnings earlier than the supplier for the same quarter and 0 otherwise. *Source: author's calculations based on I/B/E/S.*
CSIZE	Customer's log of market capitalization which is price times the number of shares outstanding at the end of the fiscal quarter. *Source: author's calculations based on CRSP.*
FBNEWS	Indicator variable that equals 1 if the supplier's unexpected earnings are negative and 0 otherwise. *Source: author's calculations based on I/B/E/S.*
FANALYSTS	The number of analysts following the supplier. *Source: author's calculations based on I/B/E/S.*
FEARLY	Indicator variable that equals 1 if the supplier announces earnings earlier than its linked customers for the same quarter and 0 otherwise. *Source: author's calculations based on I/B/E/S.*
FSIZE	Supplier's log of market capitalization which is price times the number of shares outstanding at the end of the fiscal quarter. *Source: author's calculations based on CRSP.*
FINFO	Indicator variable that equals 1 if economically linked customers announce earnings within supplier's 60-trading-day drift window in each quarter. *Source: author's calculations based on Compustat segment, CRSP, and I/B/E/S.*
ADISTANCE	The absolute value of the reporting lag between the supplier and its linked customers in each quarter. *Source: author's calculations based on Compustat segment, CRSP, and I/B/E/S.*
MKTRET	Market returns on the S&P 500 Index. *Source: CRSP.*
PERCRET	Ratio of stock returns of linked customers to suppliers on their earnings announcement date respectively. *Source: author's calculations based on I/B/E/S and CRSP.*
PERCSALE	Log of the ratio of sales of economically linked customers to suppliers. *Source: author's calculations based on Compustat segment.*

PERCSIZE	Log of the ratio of market capitalization of linked customers to suppliers. *Source: author's calculations based on CRSP.*
SAMEDAY	Indicator variable that equals 1 if both the supplier and its customers release their earnings on the same day and that equals 0 otherwise. *Source: author's calculations based on I/B/E/S.*
SAMEINDUSTRY	Indicator variable that equals 1 if both the supplier and its linked customers are in the same industry and that equals 0 otherwise. *Source: author's calculations based on Compustat segment and Fama and French's (1997) industry classification.*

References

Abarbanell, J., V. Bernard. 1992. Tests of analysts' overreaction/underreaction to earnings information as an explanation for anomalous stock price behavior. *J. Finance* **47** 1191−1207.

Atiase, R. K., L. S. Bamber, S. Tse. 1989. Timeliness of financial reporting, the firm Size effect, and stock price reactions to annual earnings announcements. *Contemporary Accounting Research* **5** 526−552.

Bae, K. H., A. Ozoguz, H. Tan, T. S. Wirjanto. 2012. Do foreigners facilitate information transmission in emerging markets? *J. Financial Econom.* **105** 209−227.

Bae, K. H., W. Wang. 2012. What is in a "China" name? A test of investor attention hypothesis. *Financial Management* **41** 429−455.

Barber, B. M., T. Odean. 2008. All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *Rev. Financial Stud.* **21** 785–818.

Bernard, L. V., K. J. Thomas. 1989. Post-earnings-announcement drift: Delayed price response or risk premium. *J. Accounting Research* **27** 1−36.

Cai, J., M. H. Song, R. A. Walkling. 2011. Anticipation, acquisitions, and bidder returns: Industry shocks and the transfer of information across rivals. *Rev. Financial Stud.* **24** 2242–2285.

Chae, J. 2005. Trading volume, information asymmetry, and timing information. *J. Finance* **60** 413−442.

Chambers, A. E., S. H. Penman. 1984. Timeliness of reporting and the stock price reaction to earnings announcements. *J. Accounting Research* **22** 21−47.

Cohen, L., A. Frazzini. 2008. Economic links and predicable returns. *J. Finance* **63** 1977−2011.

Da, Z., J. Engelberg, P. Gao. 2011. In search of attention. *J. Finance* **66** 1461−1500.

Dellavigna, S., J. M. Pollet. 2007. Demographics and industry returns. *Amer. Econom. Rev.* **97** 1167−1702.

Dellavigna, S., J. M. Pollet. 2009. Investor inattention and Friday earnings announcements. *J. Finance* **64** 709−749.

Fama, E. F., K. R. French. 1997. Industry costs of equity. *J. Financial Econom.* **43** 153−193.

Freeman, R. N., S. Y. Tse. 1992. An earnings prediction approach to examining intercompany information transfers. *J. Accounting and Econom.* **15** 509−523.

Gilbert, T., S. Kogan, L. Lochstoer, A. Ozyildirim. 2012. Investor inattention and the market impact of summary statistics. *Management Science* **58**(2) 336−350.

Givoly, D., D. Palmon. 1982. Timeliness of annual earnings announcements: Some empirical evidence. *Accounting Rev.* **57** 486−508.

Hirshleifer, D., S. Lim, S. H. Teoh. 2009. Driven to distraction: Extraneous events and underreaction to earnings news. *J. Finance* **64** 2289−2325.

Hirshleifer, D., S. H. Teoh. 2003. Limited attention, information disclosure, and financial reporting. *J. Accounting and Econom.* **36** 337–386.

Hong, H., J. C. Stein. 1999. A unified theory of underreaction, momentum trading, and overreaction in asset markets. *J. Finance* **54** 2143–2184.

Hong, H., W. Torous, R. Valkanov. 2007. Do industries lead the stock market? *J. Financial Econom.* **83** 367–396.

Hou, K. 2007. Industry information diffusion and the lead-lag effect in stock returns. *Rev. Financial Stud.* **20** 1113–1138.

Hou, K., L. Peng, W. Xiong. 2009. A tale of two anomalies: The implications of investor attention for price and earnings momentum. Working paper, Ohio State University.

Huberman, G., T. Regev. 2001. Contagious speculation and a cure for cancer: A nonevent that made stock prices soar. *J. Finance* **56** 387–396.

Kovacs, T. 2011. Intra-industry information transfers and the post-earnings announcement drift. Working paper, Northeastern University.

Koch, A. S., A. X. Sun. 2004. Dividend changes and persistence of past earnings changes. *J. Finance* **59** 2093–2116.

Loh, R. 2010. Investor inattention and the underreaction to stock recommendations. *Financial Management* **39** 1223–1251.

Menzly, L., O. Ozbas. 2010. Market segmentation and cross-predictability of returns. *J. Finance* **65** 1555–1580.

Merton, R. 1987. A simple model of capital market equilibrium with incomplete information. *J. Finance* **42** 483–510.

Peng, L. 2005. Learning with information capacity constraints. *J. Financial and Quantitative Analysis* **40** 307–329.

Peng, L., W. Xiong. 2006. Investor attention, overconfidence and category learning. *J. Financial Econom.* **80** 563–602.

Prokopczuk, M. 2010. Intra-industry contagion effects of earnings surprises in the banking sector. *Applied Financial Econom.* **20** 1601–1613.

Ramnath, S. 2002. Investor and analyst reactions to earnings announcements of related firms: An empirical analysis. *J. Accounting Research* **40** 1351–1376.

Yuan, Y. 2012. Market-wide attention, trading, and stock returns. Working paper, University of Pennsylvania, Pennsylvania.

Zhang, Y. 2008. Analyst responsiveness and the post-earnings-announcement drift. *J. Accounting and Econom.* **46** 201–215.

Table 1 Summary Statistics

VARIABLES	N	Mean	SD	P25	Median	P75
CAR[-1, 1]	10176	0.002	0.068	-0.027	-0.001	0.028
CAR[2, 61]	10167	0.018	0.281	-0.113	0.014	0.141
FCAR[2, 61]	10169	0.022	0.269	-0.101	0.017	0.137
CUE	10206	-0.001	0.062	0.000	0.000	0.002
FUE	10177	-0.098	0.833	-0.085	-0.027	-0.002
CBNEWS	10207	0.359	0.480	0.000	0.000	1.000
CANALYSTS	10207	20.319	15.415	9.000	17.000	28.000
CEARLY	10207	0.662	0.473	0.000	1.000	1.000
CSIZE	10206	16.844	1.723	15.791	17.101	18.117
FBNEWS	10207	0.783	0.412	1.000	1.000	1.000
FANALYSTS	10207	7.237	7.978	2.000	5.000	9.000
FEARLY	10207	0.273	0.445	0.000	0.000	1.000
FSIZE	10146	13.331	1.716	12.147	13.167	14.390
FINFO	10207	0.272	0.445	0.000	0.000	1.000
ADISTANCE	10207	11.526	11.029	4.000	8.000	15.000
MKTRET	10207	0.000	0.014	-0.006	0.001	0.007
PERCRET	9791	0.154	11.036	-0.600	0.033	0.977
PERCSALE	10174	-2.120	1.239	-2.809	-2.213	-1.537
PERCSIZE	10145	3.515	2.326	1.740	3.685	5.233
SAMEDAY	10207	0.065	0.246	0.000	0.000	0.000
SAMEINDUSTRY	10207	0.098	0.297	0.000	0.000	0.000

Notes. This table presents the number of observations, the mean, median, 25th and 75th percentile, and the standard deviation for all variables used in the main analysis. The sample period is 1983-2011. The appendix outlines the definitions and data sources for the variables.

Table 2 Test of Supplier's Stock Price Reaction around the Customer's Announcement Date (H_{1a})

VARIABLES	$CAR[-1,1] = \alpha + \beta_1 CUE + \beta_2 Z + Industry\ Effect + Year\ Effect + \varepsilon$			
	(1) CAR[-1, 1]	(2) CAR[-1, 1]	(3) CAR[-1, 1]	(4) CAR[-1, 1]
CUE	0.103***	0.092**	0.091**	0.117**
	(2.68)	(2.32)	(2.28)	(2.49)
PERCRET				0.000
				(0.28)
CUE × PERCRET				-0.004
				(-0.46)
SAMEINDUSTRY			0.001	0.002
			(0.55)	(0.68)
CUE × SAMEINDUSTRY			-0.055	-0.084
			(-0.64)	(-1.04)
ADISTANCE		-0.000	-0.000	-0.000
		(-0.57)	(-0.59)	(-0.41)
CUE × ADISTANCE × FEARLY		0.002	0.002	0.001
		(0.90)	(0.76)	(0.33)
CUE × ADISTANCE × CEARLY		0.003	0.003	0.003
		(0.99)	(0.99)	(1.08)
CBNEWS	0.001	0.001	0.001	0.001
	(0.71)	(0.75)	(0.73)	(0.74)
CANALYSTS	0.000	0.000	0.000	0.000
	(0.75)	(0.76)	(0.77)	(0.51)
PERCSALE	-0.000	-0.000	-0.000	-0.000
	(-0.78)	(-0.78)	(-0.82)	(-0.79)
PERCSIZE	0.000	0.000	0.000	0.000
	(0.83)	(0.92)	(1.00)	(0.99)
SAMEDAY	0.001	0.000	0.000	-0.001
	(0.24)	(0.10)	(0.07)	(-0.26)
MKTRET	0.140*	0.139*	0.139*	0.158**
	(1.89)	(1.87)	(1.88)	(2.09)
CUE × CBNEWS	-0.066	-0.076	-0.077	-0.100
	(-1.32)	(-1.48)	(-1.51)	(-1.50)
CUE × CANALYSTS	-0.000	0.000	0.000	-0.000
	(-0.01)	(0.02)	(0.02)	(-0.14)
CUE × PERCSALE	0.029***	0.034**	0.032**	0.034*
	(2.69)	(2.54)	(1.98)	(1.93)
CUE × PERCSIZE	-0.002	-0.001	-0.002	0.010
	(-0.25)	(-0.06)	(-0.17)	(0.76)
CUE × SAMEDAY	-0.165**	-0.157*	-0.148*	-0.146*
	(-2.05)	(-1.93)	(-1.68)	(-1.69)

CUE × MKTRET	0.845	0.495	0.499	-0.365
	(0.62)	(0.36)	(0.37)	(-0.25)
Intercept	-0.005	-0.005	-0.004	-0.002
	(-0.25)	(-0.24)	(-0.24)	(-0.18)
N	10,111	10,111	10,111	9,736
R^2	0.008	0.008	0.008	0.009

Notes. This table presents the estimation results obtained by regressing the supplier's cumulative abnormal returns around the customer's earnings announcement (CAR [-1, 1]) on the customer's unexpected earnings (CUE), on several controls, and on the interaction terms between CUE and controls. The appendix outlines the definitions and data sources for the regression variables. For the sake of brevity, industry and year controls are included, but the results are not reported; the industry controls are based on Fama and French's (1997) industry classification. *t*-statistics based on robust standard errors adjusted for clustering by firms are reported in parentheses.

* Significant at the 10% level; ** significant at the 5% level; *** significant at the 1% level.

Table 3 Test of Supplier's Stock Price Reaction following the Customers' Announcements (H_{1b})

	$CAR[2,61] = \alpha + \beta_1 CUE + \beta_2 Z + Industry\ Effect + Year\ Effect + \varepsilon$			
	(1)	(2)	(3)	(4)
VARIABLES	CAR[2, 61]	CAR[2, 61]	CAR[2, 61]	CAR[2, 61]
CUE	0.619***	0.762***	0.755***	0.748***
	(3.16)	(4.04)	(4.01)	(3.18)
PERCRET				0.000
				(1.15)
CUE × PERCRET				0.024
				(0.70)
SAMEINDUSTRY			0.003	-0.000
			(0.34)	(-0.01)
CUE × SAMEINDUSTRY			-0.295	-0.315
			(-0.71)	(-0.72)
ADISTANCE		-0.000	-0.000	-0.000
		(-0.65)	(-0.66)	(-0.12)
CUE × ADISTANCE × FEARLY		-0.026*	-0.027*	-0.023
		(-1.83)	(-1.87)	(-1.36)
CUE × ADISTANCE × CEARLY		-0.020	-0.020	-0.014
		(-1.45)	(-1.45)	(-1.11)
CBNEWS	0.007	0.007	0.007	0.010
	(1.06)	(1.11)	(1.08)	(1.50)
CANALYSTS	-0.000*	-0.000*	-0.000*	-0.000*
	(-1.78)	(-1.83)	(-1.81)	(-1.85)
PERCSALE	0.004	0.004	0.004	0.004
	(1.41)	(1.43)	(1.40)	(1.57)
PERCSIZE	0.007***	0.008***	0.008***	0.008***
	(4.98)	(4.96)	(4.92)	(4.68)
SAMEDAY	-0.019**	-0.021**	-0.021**	-0.022**
	(-1.99)	(-2.09)	(-2.11)	(-2.12)
MKTRET	0.351	0.356	0.356	0.290
	(1.25)	(1.27)	(1.27)	(1.02)
CUE × CBNEWS	-0.544**	-0.460**	-0.462**	-0.484*
	(-2.12)	(-2.13)	(-2.13)	(-1.66)
CUE × CANALYSTS	0.004	0.004	0.004	0.003
	(0.65)	(0.62)	(0.64)	(0.49)
CUE × PERCSALE	0.228***	0.154***	0.140**	0.125**
	(3.18)	(2.94)	(2.39)	(2.05)
CUE × PERCSIZE	0.049	0.016	0.010	0.021
	(1.17)	(0.36)	(0.23)	(0.45)
CUE × SAMEDAY	-0.788***	-0.848***	-0.800***	-0.747***
	(-2.83)	(-3.48)	(-3.09)	(-2.95)

CUE × MKTRET	1.071	5.203	5.224	4.969
	(0.21)	(1.01)	(1.02)	(0.91)
Intercept	-0.040	-0.049	-0.050	-0.065
	(-0.99)	(-1.09)	(-1.11)	(-1.23)
N	10,102	10,102	10,102	9,728
R^2	0.030	0.031	0.031	0.031

Notes. This table presents the estimation results obtained by regressing the supplier's cumulative abnormal returns after the customer's earnings announcement (CAR [2, 61]) on the supplier's standardized unexpected earnings (CUE), on several controls, and on the interaction terms between CUE and controls. Appendix outlines the definitions and data sources for the regression variables. For the sake of brevity, the industry and year controls are included but are not reported; the industry controls are based on Fama and French's (1997) industry classification. *t*-statistics based on robust standard errors adjusted for clustering by firms end are reported in parentheses.

  * Significant at the 10% level; ** significant at the 5% level; *** significant at the 1% level.

Table 4 Supplier's Delayed Returns to Linked Customers' Earnings News over Different Horizons

VARIABLES	(1) CAR[2, 31]	(2) CAR[2, 46]	(3) CAR[2, 61]	(4) CAR[2, 76]	(5) CAR[2, 91]
CUE	0.821***	0.909***	0.748***	1.299***	1.183***
	(4.64)	(4.14)	(3.18)	(4.77)	(3.34)
PERCRET	0.000**	0.000	0.000	0.000	-0.000
	(2.58)	(1.56)	(1.15)	(0.53)	(-0.40)
CUE × PERCRET	0.079**	0.060	0.024	-0.016	0.010
	(2.04)	(1.29)	(0.70)	(-0.39)	(0.21)
SAMEINDUSTRY	0.005	0.000	-0.000	-0.002	-0.002
	(0.84)	(0.01)	(-0.01)	(-0.18)	(-0.17)
CUE × SAMEINDUSTRY	0.262	-0.059	-0.315	0.006	-0.058
	(0.61)	(-0.15)	(-0.72)	(0.01)	(-0.11)
ADISTANCE	-0.000	-0.000	-0.000	0.000	0.000
	(-1.48)	(-0.35)	(-0.12)	(0.59)	(0.79)
CUE × ADISTANCE × FEARLY	-0.021	-0.017	-0.023	-0.029	-0.021
	(-1.57)	(-1.12)	(-1.36)	(-1.47)	(-1.03)
CUE × ADISTANCE × CEARLY	-0.004	-0.017	-0.014	-0.015	-0.009
	(-0.37)	(-1.45)	(-1.11)	(-0.89)	(-0.52)
CBNEWS	0.005	0.012**	0.010	0.017**	0.024***
	(1.09)	(2.19)	(1.50)	(2.42)	(2.99)
CANALYSTS	-0.000**	-0.001***	-0.000*	-0.000	-0.000
	(-2.21)	(-2.79)	(-1.85)	(-0.95)	(-0.71)
PERCSALE	0.002	0.003	0.004	0.003	0.005
	(1.62)	(1.37)	(1.57)	(1.15)	(1.35)
PERCSIZE	0.004***	0.006***	0.008***	0.009***	0.011***
	(3.80)	(4.18)	(4.68)	(4.74)	(4.71)
SAMEDAY	-0.018**	-0.013	-0.022**	-0.010	-0.006
	(-2.56)	(-1.57)	(-2.12)	(-0.83)	(-0.49)
MKTRET	0.226	0.190	0.290	0.096	0.163
	(1.24)	(0.69)	(1.02)	(0.32)	(0.50)
CUE × CBNEWS	-0.483**	-0.708**	-0.484*	-0.776**	-0.671
	(-1.99)	(-2.34)	(-1.66)	(-2.37)	(-1.63)
CUE × CANALYSTS	-0.004	0.004	0.003	-0.002	-0.011
	(-0.68)	(0.53)	(0.49)	(-0.24)	(-0.95)
CUE × PERCSALE	0.124**	0.163**	0.125**	0.130*	0.094
	(2.35)	(2.55)	(2.05)	(1.69)	(0.91)
CUE × PERCSIZE	0.026	0.027	0.021	0.047	0.009
	(0.61)	(0.57)	(0.45)	(0.86)	(0.12)
CUE × SAMEDAY	-0.848***	-0.883***	-0.747***	-0.982***	-0.828***
	(-4.10)	(-2.99)	(-2.95)	(-3.63)	(-2.62)
CUE × MKTRET	7.893	4.656	4.969	6.832	9.714

	(1.60)	(0.79)	(0.91)	(1.13)	(1.09)
Intercept	0.176***	-0.096**	-0.065	0.018	-0.161**
	(3.74)	(-2.19)	(-1.23)	(0.29)	(-2.56)
N	9,734	9,731	9,728	9,727	9,724
R^2	0.030	0.028	0.031	0.030	0.033

Notes. This table presents additional tests of the delayed responses of a supplier, after the customers' announcements, to customers' earnings news. More specifically, it reports supplier's stock price reactions following the customers' announcements over 30-, 45-, 60-, 75-, and 90-trading-day horizons. Independent and control variables are the same as used in Table III. Appendix outlines the definitions and data sources for the regression variables. For the sake of brevity, industry and year controls are included but are not reported, and the industry controls are based on Fama and French's (1997) industry classification. *t*-statistics based on robust standard errors adjusted for clustering by firms are reported in parentheses.

   * Significant at the 10% level; ** significant at the 5% level; *** significant at the 1% level.

Table 5 Additional Analysis: Post-earnings Announcement Drift

VARIABLES	$FCAR[2,61] = \alpha + \beta_1 FUE + \theta_1 FINFO + \theta_2 (FUE \times FINFO)$ $+ \theta_3 (FUE \times FINFO \times SAMEINDUSTRY) + \beta_2 W$ $+ Industry\ Effect + Year\ Effect + \varepsilon$
	FCAR[2, 61]
FUE	0.266**
	(2.04)
FINFO	-0.010
	(-1.60)
FUE × FINFO	-0.194**
	(-2.17)
FUE × FINFO × SAMEINDUSTRY	1.422***
	(3.43)
FBNEWS	-0.021***
	(-3.12)
FANALYSTS	0.001**
	(2.11)
FSIZE	-0.013***
	(-5.73)
SAMEDAY	-0.020**
	(-2.06)
MKTRET	0.343
	(1.36)
FUE × FBNEWS	-0.140
	(-1.56)
FUE × FANALYSTS	-0.009***
	(-4.91)
FUE × FSIZE	-0.014
	(-1.50)
FUE × SAMEDAY	0.055
	(0.47)
FUE × MKTRET	0.057
	(0.14)
Intercept	0.100**
	(2.53)
N	10,136
R^2	0.047

Notes. This table presents the estimation results for the responses of a supplier following the earnings announcement date to its own earnings news. More specifically, it estimates the supplier's cumulative abnormal returns following its own earnings announcement (FCAR [2, 61]) on its own unexpected earnings (FUE), the interaction terms between FUE and controls. FINFO is an indicator variable that takes value one when economically linked customers announce earnings within supplier's 60-trading-day drift window in each quarter. Appendix outlines the definitions and data sources for the regression variables. For the sake of brevity, industry and year controls are included but are not reported, and the industry controls are based on Fama and French's (1997) industry classification. *t*-statistics based on robust standard errors adjusted for clustering by firms are reported in parentheses.

* Significant at the 10% level; ** significant at the 5% level; *** significant at the 1% level.