

The Disclosure Dilemma: A Supply Chain Perspective on the Consequences of SEC Investigation Secrecy

Fangfei Jiang

University of Bristol

fangfei.jiang@bristol.ac.uk

Neslihan Ozkan

University of Bristol

n.ozkan@bristol.ac.uk

Fangming Xu

University of Bristol

fangming.Xu@bristol.ac.uk

The Disclosure Dilemma: A Supply Chain Perspective on the Consequences of SEC Investigation Secrecy

Abstract

This study investigates the spillover effects of SEC investigations on supply chain relationships, focusing on how investigations of suppliers, especially undisclosed ones, influence their major customers. Analyzing U.S. supply chain relationships from 2000 to 2017, we find that SEC investigations significantly increase the likelihood of relationship termination, even for non-disclosed cases, evidencing the existence of major customers' privileged information access. This is further supported by major customers selectively react more drastically to severe and more influential investigations. Weaker supplier bargaining power and private connections amplify termination likelihood, whereas greater supplier market attention mitigates it. Customers terminating relationships achieve cost reductions and profit growth, while persisting customers lower trade volume to manage risks. These findings highlight that SEC investigations impose unintended economic costs on suppliers, implying the intended confidentiality of such investigations fails to shield suppliers from these adverse effects.

Keywords: SEC Investigations, Disclosure, Supply Chain, Information Asymmetry, Spillover Effects

1. Introduction

The U.S. Securities and Exchange Commission (SEC) strives to promote a market environment that is worthy of the public's trust and characterized by transparency and integrity (SEC, 2014a). A critical tool in fulfilling this mission is the SEC's investigative power, which involves detailed examinations of possible securities law violations (SEC, 2017).

A defining feature of SEC investigations is their confidential nature. According to the SEC, investigations are conducted privately to protect their integrity from premature disclosure and to protect the reputation of individuals or entities under scrutiny (SEC, 2014b, 2024). Consequently, the existence of an investigation often remains undisclosed unless the company voluntarily reveals it or it leads to a formal enforcement action. This confidentiality means that investors and stakeholders may remain unaware of a company's SEC scrutiny for extended periods. Around 50% of investigations remain undisclosed by the conclusion, and for the disclosed investigations, the mean time lags between the opening of an investigation and its disclosure is 141 days (Blackburne et al., 2021; Blackburne & Quinn, 2023).

Despite their prudence and secrecy, SEC investigations can have a significant impact on the targeted firms under scrutiny. SEC took in \$8.2 billion in financial remedies across 583 enforcement actions in fiscal year 2024 (Ayer, 2024). Even without formal enforcement actions, investigation are associated with economically material declines in firm performance, reductions in R&D and capital expenditures, increased likelihood of CEO turnovers, and heightened probabilities of comment letters, earnings restatements, and class-action lawsuits (Blackburne et al., 2020). Moreover, managers often adjust their behavior during investigations. Given there is a higher likelihood that earnings manipulation is detected while under investigation by the SEC, managers shift from accruals management to real earnings management. For example, managers tend to increasing production to reduces per-unit COGS

and reduce discretionary expenses like advertising, and SG&A expenses (Blackburne et al., 2020). These disruptions may be exacerbated by the unfamiliarity of CEOs with fraud investigations, as they typically face such scrutiny for the first time without any prior experience (Solomon & Soltis, 2021). This worrying lack of experience and guidance may lead to suboptimal managerial decisions, potentially compounding negative firm outcomes.

The combination of the significant consequences of SEC investigations and their confidential nature inevitably creates information asymmetry. Firms may face significant challenges while investors and other stakeholders remain unaware of the underlying reasons. This asymmetry in information can be particularly problematic for investors, as it hinders their ability to accurately assess the risks and prospects of their investments. Blackburne et al. (2021) find that insider selling increases during undisclosed SEC investigations with severe negative outcomes, suggesting that insiders exploit the information asymmetry at the expense of uninformed investors.

However, insiders are not the only ones with potential access to undisclosed information of investigations. Firms' major customers in supply chain relationships often have unique insights into their suppliers' operations and financial status through frequent business interactions (Cen et al., 2016). Supply chain relationships are interdependent and risks faced by one party—such as litigation, financial distress, or cyberattacks—can spread across the chain, negatively impacting other participants (e.g., Cen et al., 2018; Crosignani et al., 2023; Johnson et al., 2014). For instance, Apple placed a key assembler of iPhones on probation after it was found to have concealed violations of labor laws by employing students (Mozur, 2020). Therefore, while SEC investigations are confidential in general, supply chain partners with privileged access to information may detect signs of an undisclosed SEC investigation and react accordingly, such as terminating supply-chain relationship.

This study examines the spillover effects of SEC investigations on supply chain relationships, focusing on how investigations of suppliers influence their major customers. We hypothesize that an SEC investigation introduces significant risk and uncertainty regarding a supplier's future performance and business prospects, prompting customers to reassess their relationships. Despite the SEC's intention to conduct investigations confidentially, major customers with privileged information access may become aware of ongoing investigations, even when not publicly disclosed, leading them to terminate relationships to mitigate potential spillover risks.

To investigate the reactions of major customers to the SEC investigation of a supplier firm, we analyze disclosures of investigations by reviewing EDGAR filings, press releases, and media articles for each investigation through a Factiva search algorithm, using data from Blackburne et al. (2021) and methodologies from Solomon and Soltes (2021). The search spans from one year prior to the investigation's start until its conclusion, capturing the earliest disclosure source, including the firm itself, the SEC, or the media. The sample comprises U.S. supply chain relationships from 2000 to 2017, encompassing 24,566 firm-year observations and 702 supplier investigations. We find that an SEC investigation increases the likelihood of major customers terminating their relationship with the supplier by over 20%. Notably, this effect persists for non-disclosed investigations, supporting the notion that major customers possess privileged information access to assess supplier conditions.

To address potential endogeneity concerns, we employ both propensity score matched and entropy-balanced samples. Additionally, we conduct an instrumental variables analysis using SEC office busyness and SEC personnel career incentives as instruments, which are correlated with the likelihood of an SEC investigation but unlikely to directly influence supply chain dynamics (Bonsall, Holzman, et al., 2024; Holzman, Marshall, et al., 2024). We further validate our findings using a Cox proportional hazard model to analyse the time to relationship termination, consistently confirming the robustness of our results.

Building on evidence that major customers can detect and respond to undisclosed investigations, we explore how investigation characteristics shape customer reactions, shedding light on the depth of information customers can access. Severe investigations resulting in SEC enforcement actions elicit a stronger customer response, increasing termination likelihood more drastically. However, there remains a significant effect of investigations on relationship termination even when we exclude investigations that do not result in enforcement actions from the sample, indicating that customers react to supplier investigations pre-emptively. Even alleged violations not warranting enforcement actions impose economic costs on suppliers, suggesting that the intended confidentiality of such investigations fails to shield suppliers from these adverse effects. In addition, customers' reaction is less pronounced to investigation initiated on the grounds of insider trading, whose risks, compared to other investigations subject matters like financial fraud/issuer disclosure, are less likely to be transmitted along the supply chain. Excluding insider trading investigations does not diminish the overall significance of the termination effect, indicating that customers can discern the underlying reasons for investigations—regardless of disclosure status—further underscoring their influential power and privileged information access.

We then examine three mechanisms through which SEC investigations influence customer exits: relative bargaining power, private connections, and market attention. First, the effect of supplier investigations on termination likelihood is more pronounced when suppliers have weaker bargaining power, as proxied by higher trade credit offered, a larger share of sales to the customer, and the customer's lower sourcing reliance on the supplier. Such imbalances empower customers to gain sensitive information and act decisively. Second, we explore if private connections in CEOs, the boards, and institutional investors can influence information transmission and relationship stability. We find that, the existence of shared directors and common institutional investors can amplify the impact of SEC investigations on relationship

termination, possibly through enhanced communications. Such effect is less pronounced for undisclosed investigations, implying that the willingness to share at the board and institutional investor level may be moderated by the nature of the investigation and the supplier's disclosure intent. Additionally, CEO turnover in either firm during the investigation year heightens termination likelihood, as the loss of executive ties weakens relationship stability. Finally, we find that the effect is weakened for suppliers under greater market attention measured analyst coverage, advertising, and active stock market activities. Suppliers with greater market attention are incentivized to retain the customer, since their loss of a major customer is more likely to attract notice and incur market penalties. This effect is less pronounced for undisclosed investigation when using advertising and stock market activities measure, likely due to differences in information discovery and monitoring intensity between general market participants and professional analysts.

We perform several additional analyses to strengthen our inferences on the effects of SEC investigations on supply chain relationships. First of all, we examine relationships that remains after the initiation of the investigation. We test if due to switching costs and contractual obligations, major customers cannot break the link and thus respond by sourcing less from the supplier. We find that major customers decrease both the trade volume from the investigated supplier and its sourcing reliance on the supplier. We also explore the change of pair trade credit and find that although trade credit decreases in general after the investigation initiation, suppliers extend more trade credit to retain the customers when the investigation is more likely to be influential.

To better understand the exit of major customers, we study the real impact on operations for those major customers who terminate the relationship after the initiation of SEC investigation on suppliers. We find that, unlike typical switching of suppliers that can increase costs and reduce profits, customers leaving investigated suppliers experience reduced cost of goods sold

and increased profitability. This suggests that investigations and related disruptions render the supplier suboptimal, enabling customers to partner with more reliable or efficient suppliers, thereby mitigating risks and enhancing operational outcomes.

This paper contributes to the literature that examines the consequences of secrecy in the SEC investigation process. Numerous studies have documented that firms and stakeholders suffer from the undisclosed nature of investigations. Blackburne et al. (2021) demonstrate that SEC investigations are often undisclosed and predict economically material declines in future firm performance, while insiders engage in trading in conjunction with these events. Holzman, Kim, et al. (2024) find that CEOs of privately investigated firms may choose to voluntarily exit the firm before news of the investigation becomes public to avoid potential reputational penalties, indicating that CEOs can exploit the confidentiality of the investigation to escape penalties and be rehired by another potentially unsuspecting firm. Blann and Lamoreaux (2023) show that investigations of M&A targets increase the likelihood of deal termination and renegotiation and lengthen deal completion times, highlighting an economic cost of regulatory oversight for M&A targets and their shareholders. On the other hand, Solomon and Soltes (2021) point out that companies are punished for their choice of disclosure regardless of whether they are ultimately found not guilty by the end of the investigation. Blackburne and Quinn (2023) analyze the influential factors of disclosure speed for firms that choose to voluntarily disclose the investigation and argue that firms face trade-offs in their choice of when to disclose. Fast disclosurers suffer immediate stock price declines and potential reputational costs, while slow disclosurers experience increases in bid-ask spreads and increases in auditor resignation. Our research contributes to this debate by suggesting that the confidentiality of investigations does not entirely shield firms from the negative spillover effects of regulatory scrutiny, as informed parties like major customers can still react against the interest of the investigated firm by terminating the relationship or reducing trade volume.

Our study extends the growing literature on information sharing along the supply chain when the relationship is at risk. Theoretical models developed by Baiman and Rajan (2002) highlight the crucial role of reliable information exchange in supply chain relationships. Empirical studies like Cen et al. (2018) argue that information asymmetry in supply chain relationships can hinder major customers' ability to identify, penalize, and prevent suppliers' strategic disclosure of bad news. In contrast, Hui et al. (2012) argue that despite the information asymmetry between suppliers and their customers, major customers with superior bargaining power can demand timely loss recognition from their suppliers to accurately assess the supplier's long-term financial viability and the risk of making relationship-specific investments. Cen et al. (2016) further posit that major customers have advantages in accessing information such as product quality, quantity, inventory build-up speed, and the offer of trade credit through frequent business interactions, which enables them to better understand their suppliers' operational and financial conditions. The existence of such information access allows customers to react to implicit uncertainties and risks in addition to events that are public and observable, such as bankruptcies, negative earnings shocks, litigations, cyberattacks, and financial distress risks faced by supply chain partners (e.g., Costello, 2020; Crosignani et al., 2023; Hendricks & Singhal, 2003; Hertz et al., 2008; Johnson et al., 2014; Kolay et al., 2016; Pandit et al., 2011). Our findings that customers not only react to undisclosed SEC investigations but also respond more dramatically to severe undisclosed investigations underscore the privileged information access that major customers have to their suppliers.

The remainder of the paper is organized as follows: Section 2 discuss the background of SEC investigations and develop the hypothesis. Section 3 presents a description of the data and the sample selection. Section 4 discusses our main findings for the relationship termination and the mechanisms underpinning. Section 5 delves into further analysis, exploring additional implications and the broader context of our results.

2. Background and hypothesis development

2.1 Background on SEC investigations

SEC is responsible for enforcing federal securities laws and protecting investors from potential violations. When a lead suggesting a possible securities law violation arises, the SEC initiates an investigation process to determine the credibility and severity of the issue. Leads can originate from various sources, including whistleblower tips, press reports, surveillance activities, or other SEC divisions, and collected in the SEC's tips, complaints, and referrals system (TCR) (SEC, 2010).

The Office of Market Intelligence initially reviews the leads received through the TCR system, categorizing according to internal risk criteria. This process helps assess which leads merit further review and assigns them to the appropriate staff attorneys. When staff attorneys receive a lead, they assess whether there is sufficiently credible information to warrant further review. If they believe that a lead has the potential to address misconduct consistent with the SEC's enforcement priorities, they request approval from an Associate Director to open a Matter Under Inquiry (MUI) (SEC, 2009, 2013).

An MUI can be initiated based on limited information and is evaluated more thoroughly than a lead. The assessment of an MUI is typically completed within 60 days by SEC staff. If the information gathered during the MUI stage suggests a possible violation of federal securities laws and warrants further investment of SEC resources, the Enforcement directors may decide to elevate the MUI to a formal investigation (SEC, 2017).

During an investigation, the SEC has the authority to issue subpoenas, obtain documents from the firm under investigation, and conduct interviews with firm personnel. Investigations are more comprehensive than MUIs and can take an average of three years to complete (Blackburne et al., 2021). At the conclusion of the investigation, the Enforcement personnel

present their findings to the SEC's Commissioners, who then vote in a closed meeting on whether to pursue an enforcement action against the firm. Firms are only required to disclose the investigation if and when the SEC proceeds with an enforcement action. In this sense, the existence of an investigation often remains undisclosed unless the company voluntarily reveals it or it leads to a formal enforcement action.

Recent studies on the determinants of SEC investigations have found that the likelihood of an investigation is influenced by concerns about the public interest, such as protecting investors, and the cost of negligence, including funding and staff career concerns (Holzman, Marshall, et al., 2024). Factors such as case backlog in SEC offices, career incentive of the SEC staff attorneys (Bonsall, Holzman, et al., 2024), the financial experience of office directors (Blann, 2023), and the SEC's fiscal year have also been shown to impact investigation likelihood and quality (Donelson et al., 2023).

2.2 Hypothesis development

The opening of an SEC investigation on a firm indicates that the Enforcement directors have assessed the information gathered during the MUI stage and concluded that there is a possible violation of federal securities laws that justifies the allocation of SEC resources (SEC 2017). These investigations can have significant negative consequences for the investigated firms. Investigations that result in enforcement actions may impose substantial financial burdens on the company. In fiscal year 2024, the SEC collected \$8.2 billion in financial remedies across 583 enforcement actions (Ayer, 2024). Even in cases where investigations do not lead to enforcement actions, the consequences can be significant. Blackburne et al. (2020) find that firms under SEC investigation tend to experience a decrease in R&D and capital expenditures, an increase in comment letter receipt, earnings restatements, and class-action lawsuits. Furthermore, among firms that disclose an investigation, Blackburne and Quinn (2023)

document a significant negative short-window market reaction to the news. During the investigation, the firm's management is often disrupted, leading to suboptimal managerial decisions as CEOs typically face such scrutiny for the first time without prior experience or feedback (Solomon & Soltes, 2021). In some cases, CEOs even leave the company to avoid career penalties (Holzman, Kim, et al., 2024). The financial consequences of enforcement actions, coupled with the disruptions to management and operations during the investigation process, can have far-reaching effects on the firm's performance, reputation, and long-term prospects.

When a firm in the supply chain faces substantial challenges, risks diffuse along the supply chain, adversely affecting the operating and stock performance of their supply chain partners. Previous research has examined the impact of events such as bankruptcies, negative earnings shocks, litigations, and the financial distress risks (e.g., Costello, 2020; Hendricks & Singhal, 2003; Hertz et al., 2008; Johnson et al., 2014; Kolay et al., 2016; Pandit et al., 2011). Recent studies have further expanded the scope. Pankratz and Schiller (2024) document customers are more likely to terminate supplier relationships when they observe supplier's abnormal physical climate exposure. Crosignani et al. (2023) discover that affected customers terminate trading relations with firms that hit by cyberattacks, since cyberattacks can disrupt the integrity of IT systems, affect the productive capacity, and thus spread through supply chain relations. Given the significant impact of investigations, we anticipate that major customers will react accordingly to mitigate the spillover risks from the supply chain, provided they can uncover information about the supplier's investigation. The potential for reputational damage, operational disruptions, and financial instability associated with an investigation may prompt customers to reassess their relationships with the affected supplier. Customers may choose to reduce their exposure to the investigated supplier by reducing the trade volume, renegotiating contracts, or even terminating the relationship altogether.

However, the ability of customers to react to a supplier's investigation depends on their access to privileged information. There are reasons to believe that major customers may have access to privileged information about their suppliers, even when such information is not publicly disclosed. For example, suppliers of Stellantis, the global automaker, are subject to its Supplier Information Security Requirements. The suppliers need to provide annual self-attestation and on-request evidence. Suppliers are required to reveal internal security policies, vulnerability-management practices, encryption standards, etc (Stellantis, 2024). Moreover, SEC allows firms to redact information from material contracts by submitting confidential treatment requests if redacted information is not material and would cause competitive harm upon public disclosure (Bao et al., 2022). Major customers can pressure suppliers to redact mandated disclosures when those disclosures may reveal customers' proprietary information. Studies have shown that firms withhold about 40 percent of the identities of major customers and redact around 30 percent of material contracts with their major customers, presumably out of concern for proprietary costs (Chen et al., 2022; Ellis et al., 2012). This selective disclosure and redaction of information underscore the sensitive nature of the data exchanged within these relationships. The economic and informational links in supplier-customer relationships are so prominent that the information disclosed by one party can even help detect accounting fraud committed by the other party (Li et al., 2023). Moreover, studies show that major customers can exert significant influence over their through dictating prices, squeezing the profits and even demanding specific accounting treatments (e.g., Hui et al., 2012; Lustgarten, 1975; Ravenscraft, 1983). Such influence can be used to request information.

In addition to the power that major customers can rely on to request information from suppliers, major customers often have unique insights into their suppliers' operations and financial status through frequent business interactions. By observing a supplier's speed of inventory build-ups, willingness to accept delayed payments, or propensity to offer trade credit, major customers

can assess the financial distress risk of their suppliers with greater accuracy than other stakeholders. Moreover, major customers' direct knowledge of their suppliers' product quality and quantity provides them with a clearer understanding of the suppliers' operational conditions. This information is typically not available to other stakeholders (Cen et al., 2016). Naidu and Ranjeeni (2024) also shows that companies are more likely to contract with supply chain partners who are more willing to provide them with better information.

In contrast to uninformed investors who may be exploited by insider trading on undisclosed investigations, we anticipate that supply chain partners with privileged access to information will become aware of an undisclosed SEC investigation. This informational advantage allows major customers to make more informed decisions regarding their relationships with suppliers under investigation, potentially mitigating the negative consequences of such events. Based on this discussion, we make the following hypothesis:

H1: The SEC's initiation of an investigation on a supplier firm increase the likelihood of relationship termination by its major customers.

The reaction of major customers to an SEC investigation on their supplier firm can be influenced by the relative bargaining power within the relationship. As discussed earlier, major customers, who account for at least 10 percent of the supplier's total revenues, already exert significant influence over their suppliers in various aspects, such as contracting terms and information disclosure. When a supplier is under investigation, its ability to persuade major customers to maintain the relationship may depend on its bargaining power relative to these customers. We posit that a supplier has weaker bargaining power when the customer is not dependent on its sales, meaning that the supplier provides only an insignificant fraction of the customer's input goods, or if the supplier is heavily dependent on the customer's purchases, i.e., the customer's purchases account for a large fraction of the supplier's sales (Chang et al., 2022;

Hui et al., 2012; Porter & Strategy, 1980). Furthermore, a supplier's bargaining power is weaker if it has a larger share of goods sold on credit, i.e. offers more trade credit (Dass et al., 2015; Fabbri & Klapper, 2016; Wilner, 2000). When a supplier has weaker bargaining power relative to their customers, the customer has less to lose by terminating the relationship and can more easily find alternative suppliers to meet their needs. In contrast, a supplier with stronger bargaining power may be able to convince major customers to continue the relationship, as the customers may face significant costs and disruptions if they were to switch suppliers. Based on this discussion, we propose the following hypothesis:

H2: The positive association between the initiation of an SEC investigation on a supplier firm and the likelihood of relationship termination by its major customers is more pronounced when the supplier has weaker bargaining power relative to its major customers.

The existence of private connections can also impact a customer's reaction to an SEC investigation of their supplier. In addition to economic links and normal business communications, private connections can help customers gain clearer and more timely information about the initiation of the investigation. Shared directors may grant the major customer with superior information and enhanced influence (Bouwman, 2011; Cai et al., 2014; Geng et al., 2021). Overlapping institutional investors can also play as a communication channel. They help firms discover the decisions and actions of other firms over time (Freeman, 2023; Goranova et al., 2010; Jung, 2013). Such connections can facilitate the exchange of sensitive information and provide major customers with an even greater level of insight into their suppliers' activities. As a result, major customers are more likely to find out about the investigation sooner or in more detail when they have common directors and overlapping institutional investors with the supplier, enabling them to react more quickly and decisively to the investigation.

Moreover, Chen et al. (2021) find that personal connections between supplier and customer executives can play a crucial role in fostering and strengthening supply chain relationships. These connections often form the basis for the initial establishment of the relationship and can help maintain it over time. Contrary to the connections at the board and investor level, supplier CEOs have no incentive to share negative information, such as an SEC investigation, with their major customers, as it can put the company's operational performance and, consequently, their own compensation and bonuses at risk. However, the replacement of a firm's CEO can significantly affect relationships with supply chain partners, as the partners that had a good rapport with the outgoing CEO are not guaranteed to be compatible with the new one. The loss of personal ties due to CEO turnover can weaken the relationship, as the new CEO may not have the same level of trust or commitment to the relationship as the outgoing CEO. Once in office, a successor CEO may reassess the firm's trade relationships and renegotiate contracts and sales terms (Chen et al., 2023; Dasgupta et al., 2021; Intintoli et al., 2017). The relationship is particularly at risk when one side is faced with a crisis, and there is a CEO turnover on either side. In such situations, the loss of personal ties at the executive level can further weaken the supply chain relationship and make it more susceptible to termination. Based on this discussion, we propose the following hypothesis:

H3: The positive associations between the initiation of a SEC investigation on a supplier firm and the likelihood of relationship termination by its major customers are more pronounced when private connections either facilitate information access or are disrupted by executive turnover

Market attention and visibility can influence how customers respond to SEC investigations of supplier firms. Extensive research highlights the disciplinary role of market attention on firm management, governance, and operations (An et al., 2020; Iliev et al., 2021; Tang & Tang, 2016). Investors and analysts, constrained by limited attention, prioritize more visible firms,

directing their efforts toward uncovering private information based on a firm's prominence (Driskill et al., 2020; Frederickson & Zolotoy, 2016). Consequently, firms with greater market scrutiny—often driven by analyst coverage, advertising, or stock market activities such as seasoned equity offerings—face heightened oversight from investors, customers, and the media (Driskill et al., 2020; Fich et al., 2025; Focke et al., 2020; Gao & Ritter, 2010; Kovacs, 2014). Abdulmanova et al. (2021) further demonstrate that investor attention accelerates the diffusion of fraud-related information and hastens lawsuit filings, amplifying reputational damage and financial losses in litigation, particularly for high-visibility firms.

The market often interprets the loss of a major customer as a signal of underlying issues with the supplier's products, services, or management, potentially triggering further customer defections and financial decline. This effect is magnified for suppliers under greater market scrutiny, as their loss of a major customer is more likely to attract notice and incur market penalties. Moreover, market probing into the reasons for a customer's departure may uncover a previously confidential SEC investigation, damaging the supplier's reputation, straining relationships with other customers, and eroding market confidence in the firm's future prospects. Consequently, supplier firms with high market attention face stronger incentives to preserve relationships with major customers during an SEC investigation. These firms are likely to intensify efforts to reassure customers, offer enhanced benefits, and persuade them to remain, thereby mitigating potential adverse market reactions. Building on this foundation, we propose the following hypothesis:

H4: The positive associations between the initiation of a SEC investigation on a supplier firm and the likelihood of relationship termination by its major customers are less pronounced if the supplier firm attracts more market attention.

3. Sample and data

3.1 Sample selection and data

We begin our sample construction with supply chain relationships data obtained from the Compustat segment customer files. Compustat segment files identify a supplier's major customers. Data on major customers are based on the SEC Regulation S-K and SFAS No. 131 (FASB, 1997) requirements that U.S. public companies disclose the existence of and sales to those individual external customers representing more than 10 percent of the firm's total revenues on a firm's 10-K filings. The customer identifiers are linked by historical CRSP and Compustat company fields through a fuzzy name-matching algorithm and verified manually by WRDS Analytics Tool following Cen et al. (2017) and Cohen and Frazzini (2008). We require both the supplier and the customer to be publicly traded, as the SEC primarily oversees public securities. We source accounting data from the Compustat database and stock market data from the Center for Research in Security Prices (CRSP) database. To account for the unique regulatory conditions faced by certain industries, we exclude utilities (SIC codes 4900–4999) and financial firms (SIC codes 6000–6999) from our sample, as they are subject to stricter regulatory rules and oversight.

Our sample spans from 2000 (the earliest year for which we have comprehensive data on all investigations) to 2017 (the latest year for which the SEC does not post FOIA denial logs). We obtain data on all SEC investigations closed between January 1, 2000, and August 2, 2017, through a FOIA request submitted to the SEC, which was generously shared by Blackburne et al. (2021). The sample period ends in 2017 to mitigate the impact of the SEC's decision to begin posting monthly FOIA denial logs in late 2017 or early 2018. As demonstrated by Coleman et al. (2021), FOIA request denials can predict a substantial number of ongoing SEC investigations. We additionally request data from SEC FOIA request to supplement the data from Blackburne et al. (2021) and classify the investigations based on the primary subject matter of the investigation.

Using data from Blackburne et al. (2021) and methodologies from Solomon and Soltes (2021), we analyze disclosures of investigations by reviewing EDGAR filings, press releases, and media articles through a Factiva search algorithm.¹ The search spans from one year prior to the investigation's start until its conclusion, capturing the earliest disclosure source, including the firm itself, the SEC, or the media. The search begins one year prior to the SEC investigation opening to account for the fact that some firms publicly announce the SEC's interest before the SEC actually opens a formal investigation. Our final sample consists of 24566 firm-year observations, which covers 702 investigations.

3.2 Descriptive statistics

Table 1 provides descriptive statistics about the sample. Panel A present statistics investigation sample. Following Blackburne and Quinn (2023), we calculate the disclosure speed (DISC_SPEED) as the number of years from the investigation open date to the date of first disclosure. It is important to note that disc_speed is only calculated for cases where the date of first disclosure occurs after the investigation open date, as some firms may disclose a MUI before the SEC formally opens an investigation. Blackburne et al. (2021) demonstrate that investigations disclosed over a longer window experience more severe downward drift returns in the long run compared to those disclosed in a shorter window. To address different effect of disclosure speed, we classify disclosed investigations into two categories: investigations disclosed early (INV_EARLY_DISC) and investigations disclosed late (INV_LATE_DISC). Given that the median DISC_SPEED in our sample is 0.8323 years, we set the threshold at one year. Investigations with a DISC_SPEED less than or equal to one year are classified as INV_EARLY_DISC, while those with a DISC_SPEED greater than one year are classified as INV_LATE_DISC.

¹ "[firm name] and ("Securities and Exchange Commission" or SEC) w/10 (investigat* or inquir* or wells notice or settlement or subpoena or probe or complaint or cooperat*)"

Panel B of Table 5 details the distribution of SEC target investigations by investigation classification. Consistent with Blackburne and Quinn (2023), the most prevalent investigation type is financial fraud/issuer disclosure, accounting for the largest share of cases, followed by insider trading and market manipulation. Together, these three primary categories comprise over 90% of the investigations in our sample. The remaining classifications are grouped to an "Other" category, which encompasses seven additional subject matters, including corporate governance, securities offerings, etc.

Panel C presents descriptive statistics for pooled sample variables used in analysis. SEC investigations suppliers occur for 3.8 percent of observations, and most of these investigations are not publicly disclosed by the supplier. These investigation characteristics are comparable to those reported in recent studies on SEC investigations, e.g., Blann and Lamoreaux (2023), Blackburne et al. (2021), and Bonsall, Donovan, et al. (2024). The distributions of our supply chain related variables are in line with those from prior literature (e.g., Boehm & Sonntag, 2023; Campello & Gao, 2017; Crosignani et al., 2023; Ersahin et al., 2024).

4. Empirical design and finding

4.1 Relationship termination

4.1.1 Baseline model

To examine whether the initiation of SEC investigations on suppliers impact the likelihood of relationship termination by its major customers, we estimate the following equation using the linear probability model²:

² We estimate our baseline model using the linear probability model (LPM), which offers convenience for interpretation and is particularly well-suited for panel data with multiple fixed effects.

$$\begin{aligned}
Y_{i,j,t} = & \beta_0 + \beta_1 INV_ALL_{i,t} + \beta_2 ROA_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 LIQUID_{i,t} + \beta_5 LEV_{i,t} \\
& + \beta_6 MTB_{i,t} + \beta_7 TANG_{i,t} + \beta_8 CASH_{i,t} + \beta_9 NUM_CUSTOMER_{i,t} \\
& + \beta_{10} CUS_PROIR_INV_{i,t} + \gamma_{j,t} + \theta_{ind_i, ind_j, t} + \varepsilon_{i,j,t}
\end{aligned} \tag{1}$$

where i and j index suppliers and their customers, respectively. $Y_{i,j,t}$ is the outcome variable $BREAK_LINK_{i,j,t}$, which equals one if the relationship between firm i and firm j is active in year t but inactive in year $t + 1$, and zero otherwise. $INV_ALL_{i,t}$ is an indicator variable equal to 1 if the SEC has an open investigation on the supplier firm in the year. Following Boehm and Sonntag (2023), Campello and Gao (2017), Cen et al. (2017), and She (2022), we control for several firm characteristics that may influence the likelihood of relationship termination. These include ROA ($ROA_{i,t}$) for profitability, firm size ($SIZE_{i,t}$) to capture economic scale, leverage ($LEV_{i,t}$), liquidity ($LIQUID_{i,t}$), and cash holding ($CASH_{i,t}$) to measure financial flexibility, tangibility ($TANG_{i,t}$) to capture investment activities, market-to-book ratio ($MTB_{i,t}$) to reflect growth opportunity, and number of customers ($NUM_CUSTOMER_{i,t}$) to measure customer base.

We also include $CUS_PROIR_INV_{i,t}$, which is an indicator variable equal to one if the SEC opens an investigation on the customer one year prior to source year (Blann & Lamoreaux, 2023). This variable controls for the possibility that the customer's own SEC investigation may influence its decision to terminate supplier relationships. To control for unobservable characteristics at different levels, we saturate our regressions with fixed effects. Specifically, we include: i) industry-pair-year fixed effects ($\theta_{ind_i, ind_j, t}$), which account for industry-pair-specific shocks that may lead to a higher probability of relationship termination (where industries are defined at the three-digit SIC level), and ii) customer-year fixed effects ($\gamma_{j,t}$), which control for time-varying characteristics of the customer that could make all its supplier relationships more likely to be terminated during a given year (such as the customer's exit from the market).

We estimate the following equation separately examine the undisclosed SEC investigations:

$$\begin{aligned}
Y_{i,j,t} = & \beta_0 + \beta_1 INV_NON_DISC_{i,t} + \beta_2 INV_EARLY_DISC_{i,t} + \beta_3 INV_LATE_DISC_{i,t} \quad (2) \\
& + \beta_4 ROA_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 LIQUID_{i,t} + \beta_7 LEV_{i,t} + \beta_8 MTB_{i,t} \\
& + \beta_9 TANG_{i,t} + \beta_{10} CASH_{i,t} + \beta_{11} NUM_CUSTOMER_{i,t} \\
& + \beta_{12} CUS_PROIR_INV_{i,t} + \gamma_{j,t} + \theta_{ind_i, ind_j, t} + \varepsilon_{i,t}
\end{aligned}$$

$INV_NON_DISC_{i,t}$ is an indicator variable equal to one if the SEC opens an investigation on a supplier in the year and it is not publicly disclosed. $INV_EARLY_DISC_{i,t}$ is an indicator variable equal to one if the SEC opens an investigation on a supplier and it is publicly disclosed within a year. $INV_LATE_DISC_{i,t}$ is an indicator variable equal to one if the SEC opens an investigation on a supplier and it is publicly disclosed after a year. The control variables and fixed effects, and convention for Equation 2 mirror those for Equation 1. We assume customers can learn about SEC investigations through business interactions, information requests and private connections regardless of disclosure, so we predict a positive coefficient on all three variables.

To address potential selection biases in the initiation of SEC investigations, we employ propensity score matching (PSM) and entropy balancing to enhance the robustness of our results against observable firm characteristics. PSM is utilized to mitigate selection concerns by constructing a matched sample of firms under investigation ($INV_ALL=1$) and control firms ($INV_ALL=0$) that exhibit similar attributes (Holzman, Kim, et al., 2024). Each firm subject to investigation is matched with a control firm using radius matching, employing a 0.01 caliper and allowing for replacement, based on the same firm characteristics that are controlled for in our model. Furthermore, we implement entropy balancing as an additional technique to address potential issues related to functional form misspecification and covariate imbalance, while retaining all observations in our analysis (Hainmueller, 2012). This approach, which is commonly adopted in related studies (e.g., Blackburne et al., 2020; Blann & Lamoreaux, 2023; Johnson et al., 2023). reweights the sample to ensure balance across the mean, variance, and

skewness of the control variables. While Panel A of Table 2 shows balance test after PSM, Panel B shows that covariate differences are eliminated through entropy balancing.

Table 3 Panel C presents the results of our analysis examining the impact of SEC investigations on the likelihood of customer-supplier relationship termination, as measured by BREAK_LINK. Columns (1) and (2) report the estimations using the PSM sample, while Columns (3) and (4) utilize the entropy-balanced sample, ensuring robustness across methodologies. In Columns (1) and (3), the coefficients on INV_ALL are positive and significant (0.0411; 0.0392; $p < 0.01$), indicating that an SEC investigation of a supplier firm significantly increases the likelihood of a customer terminating the relationship. This finding supports Hypothesis 1, which posits that the SEC's initiation of an investigation on a supplier firm increases the likelihood of relationship termination by its major customers. The economic magnitude is substantial: the coefficient of 0.0411 in Column (1) implies a roughly 22.9% higher likelihood of relationship termination relative to the sample mean of 0.1796.

Columns (2) and (4) disaggregate the investigation effect by disclosure choice. The coefficients on INV_NON_DISC are positive and significant (0.0410; 0.0395; $p < 0.05$), suggesting that non-disclosed investigations increase termination likelihood, consistent with the assumption that major customers possess privileged information access to the supplier's conditions. The coefficients on INV_EARLY_DISC (0.0162; 0.0137) are insignificant, reflecting a muted customer response, suggesting that early-disclosed investigations may be less severe. In contrast, the coefficients on INV_LATE_DISC (0.1109; 0.1063), while statistically insignificant, have larger point estimates, suggesting a potential amplified effect for late disclosures. This aligns with Cen et al. (2018), who find that suppliers, pressured by major customer reactions, are more likely to delay bad news. Blackburne et al. (2021)'s findings provides further support. They find that stock returns decrease more for investigations disclosed over a longer window compared to those disclosed in a shorter window, indicating

that late-disclosed investigations may reflect more severe issues or greater capital market pressures than early-disclosed ones.

4.1.2 Survival analysis

To further examine the impact of SEC investigations on the time to customer-supplier relationship termination, we employ the Cox Hazard model, which is well-suited for analyzing survival data such as the duration of supplier-customer relationships. The Cox Hazard Model is widely accepted in the literature for modelling time-to-event outcomes, including time to bankruptcy (Hillegeist et al., 2004) and time to relationship termination (Fee et al., 2006; Guan et al., 2015; Johnson et al., 2014; Pankratz & Schiller, 2024). For Cox Hazard model, a hazard ratio of 1 indicates no effect on relationship stability, a hazard ratio less than 1 suggests a protective effect that enhances survival, and a hazard ratio greater than 1 indicates an increased likelihood of termination. We allow the baseline hazard to vary across years, supplier industries, customer industries, and supplier-customer industry pairs, in lieu of fixed effects, to allow for different baseline hazards for each unique stratum. Columns (1) to (4) of Table 3 report the estimated results.

The results corroborate our primary OLS findings in Table 2. In Columns (1) and (3), the hazard ratios for INV_ALL are greater than 1 and significant (1.2018; 1.1576), indicating that SEC investigations increase the likelihood of relationship termination by 20.18% and 16.75%, respectively, relative to no investigation. These effects are economically substantial, closely mirroring the 22.9% increase in termination likelihood estimated in Table 2's linear probability model, thus reinforcing the robustness of our findings.

Columns (2) and (4) disaggregate the investigation effect by disclosure choice. The hazard ratios for INV_NON_DISC are significantly greater than 1 (1.3213; 1.3218), indicating an over 30% increase in termination probability. Further support the assumption that major customers

possess privileged information access to the supplier's conditions and can respond promptly to non-disclosed investigations, which remain concealed from the broader market.

4.1.3 Placebo test

To validate the impact of SEC investigations on customer-supplier relationship termination, we perform a placebo test by randomly assigning investigations to unaffected suppliers (distinct from the actual investigated supplier) that are in relationship with the affected customers (those linked to a genuinely investigated supplier) within the same investigation year. This method simulates a scenario devoid of authentic investigative influence, preserving the supply chain's temporal and structural integrity to isolate potential spurious correlations. Figure 1 displays the density estimates of the regression coefficients from this placebo test, overlaid with corresponding p-values, alongside a red vertical line denoting the real INV_ALL coefficient from the linear probability model. The coefficient distribution is tightly clustered around zero, suggesting that placebo effects are predominantly negligible. The p-value distribution, largely exceeding 0.1 (as indicated by the red horizontal line), further underscores the statistical insignificance of these simulated relationships, reinforcing that the termination effects observed in our primary analyses are unlikely to stem from random assignment and likely capture true investigative impacts.

4.2 Instrument variables estimation

SEC investigations are often initiated in response to specific triggers. While our models control for some of these factors (e.g., ROA, SIZE, LEV), the positive and significant coefficient on INV_ALL may be confounded by customers' responses to unmodeled events that trigger SEC investigations. To address this endogeneity concern, we perform a two-stage instrumental variable analysis, instrumenting INV_ALL with four variables: HO_BUSY (SEC home office busyness), RO_BUSY (SEC regional office busyness), PROMOTIONR (promotion rate within an SEC regional office), and TURNOVERR (turnover rate within an SEC regional office).

These instruments are grounded in the SEC's operational and personnel dynamics. The SEC's enforcement manual specifies that case assignments are primarily determined by the geographic location of the firm, with investigations typically handled by one of 11 regional offices (e.g., Boston, Philadelphia, Miami) overseeing the firm's headquarters. When regional resources are strained, cases may be referred to the home office in Washington, DC (SEC, 2017). Bonsall, Holzman, et al. (2024) demonstrate that high workloads in SEC offices (HO_BUSY, RO_BUSY) constrain staff capacity to initiate new investigations, even for cases of potential misconduct that would otherwise warrant scrutiny. Additionally, Holzman, Marshall, et al. (2024) find that SEC personnel career incentives influence investigation initiations, as higher investigation opening rates reduce turnover (TURNOVERR) and increase promotions (PROMOTIONR). To avoid appearing negligent, enforcement staff may initiate investigations with a lower likelihood of resulting in public charges, particularly when career incentives are strong.

For the instruments to be valid, they must satisfy the relevance condition and the exclusion restriction (Larcker & Rusticus, 2010). The relevance condition is supported by the first-stage estimations in Columns (1) and (3) of Table 4. HO_BUSY exhibits a significant negative association with INV_ALL (-0.0020), consistent with Bonsall, Holzman, et al. (2024), indicating that busier offices are less likely to initiate investigations. PROMOTIONR positively relates to INV_ALL (0.1835; 0.1779), as higher promotion incentives encourage investigation openings (Holzman, Marshall, et al., 2024). RO_BUSY and TURNOVERR exhibit directions of impact consistent with predictions: RO_BUSY negatively relates to INV_ALL as higher regional office workloads reduce investigation likelihood, and TURNOVERR also shows a negative association with INV_ALL (-0.3690; -0.130), as higher investigation opening activity reduces turnover. Their inclusion strengthens the first-stage

model, as evidenced by the Cragg-Donald Wald F-statistics (67.9504; 69.5482) and Stock-Wright LM S statistic (15.5704; 14.1110), confirming strong instruments.

The exclusion restriction requires that the instruments influence BREAK_LINK solely through INV_ALL. Although untestable directly, it is plausible that SEC office busyness (HO_BUSY, RO_BUSY) and personnel career metrics (PROMOTIONR, TURNOVERR) do not directly affect customer-supplier relationship terminations, as they are administrative factors tied to SEC operations rather than supply chain dynamics.

Second-stage results, reported in Columns (2) and (4) of Table 4, show that the instrumented INV_ALL coefficients are positive and significant (0.3690; 0.0.3745, $p < 0.01$), corroborating Table 2's findings. These coefficients, substantially larger than the original 0.0409, suggest that endogeneity biases the main estimates downward. Economically, the PSM sample coefficient of 0.3690 underscores the significant impact of SEC investigations, as posited by Hypothesis 1.

4.3 Investigation characteristics

4.3.1 Investigation severity

Building on the established impact of SEC investigations on supply chain relationship termination, we now examine how the nature of the investigation—specifically its severity—shapes customer responses. This helps reveal the sophisticated information discovery capabilities of customers in supply chain dynamics. We define severe investigations as those resulting in SEC enforcement actions (i.e., SEVERE = 1), following Blackburne et al. (2021) and Blackburne and Quinn (2023). This distinction allows us to evaluate whether customers, beyond merely detecting an investigation, can discern its specific nature and respond more drastically to severe cases, which carry a heightened risk of transmitting negative impacts across the supply chain.

Table 5 Panel A presents the results from our linear probability model. The coefficient for $INV_ALL * SEVERE$ is significantly larger compared to $INV_ALL * NON_SEVERE$, indicating that severe investigations increase the probability of relationship termination by 11.17 and 11.21 percentage points, respectively, versus 3.06 and 2.83 percentage points for non-severe cases. This suggests that customers react more intensely to severe investigations, likely due to the heightened risks they pose. For non-disclosed investigations, $INV_NON_DISC * SEVERE$ almost doubles the termination probability, compared to non-severe cases. These indicate that customers take great advantage of their relative power and information access to accurately identify and respond to investigations warranting stronger reactions.

To explore the economic costs of SEC investigations further, we examine whether our findings persist for investigations that do not result in enforcement actions, as such non-severe cases may still trigger customer exits, reflecting unintended economic consequences for suppliers. Panel B of Table 5 presents the results after excluding severe investigations, showing that both INV_ALL and INV_NON_DISC continue to exert a significant positive effect on termination likelihood. Combined with Panel A's findings, these results suggest that while customers can distinguish severe investigations and respond more intensely, they still react significantly to non-severe ones. This indicates that even alleged violations not warranting enforcement actions impose economic costs on suppliers, and the intended confidentiality of such investigations fails to shield suppliers from these adverse effects.

4.3.2 Investigation type

As shown in Table 1, Panel B, investigations initiated on the grounds of insider trading account for approximately 40% of total investigations in our sample. We hypothesize that, compared to other investigation types such as financial fraud/issuer disclosure, market manipulation, and corporate governance—which often signal underlying issues in financing, liquidity, operations,

or management within the supplier firm—insider trading investigations are less likely to transmit adverse effects along the supply chain. To test this, we examine whether customers exhibit a less pronounced reaction to insider trading investigations compared to other types, reflecting their ability to discern the reason of the investigation and its potential impact on supply chain stability.

The results in Table 5 Panel A confirms that customer responses vary by investigation type. For overall investigations, $INV_ALL * OTHER_TYPE$ yields coefficients of 0.0606 and 0.0587 ($p < 0.01$), while $INV_ALL * INSIDER_TRADING$ shows much smaller and insignificant coefficients of 0.0173 and 0.0153. For non-disclosed investigations, $INV_NON_DISC * OTHER_TYPE$ exhibits coefficients of 0.0850 and 0.0852 ($p < 0.01$), whereas $INV_NON_DISC * INSIDER_TRADING$ has negative and insignificant coefficients of -0.0107 and -0.0136. Similarly, $INV_LATE_DISC * OTHER_TYPE$ significantly increases termination likelihood by 14.96 and 14.86 percentage points, compared to the weaker and insignificant effects of $INV_LATE_DISC * INSIDER_TRADING$. These results indicate that customers react more strongly to other types of investigations like financial fraud, market manipulation, or governance issues, which are more likely to disrupt supply chain operations, while their response to insider trading investigations is muted, reflecting the lower perceived risk of transmission along the supply chain.

To further assess the implications of investigation types, we examine whether customer reactions are driven primarily by investigations other than insider trading, which are hypothesized to have a greater impact on supply chain relationships. Panel B of Table 6 presents the results after excluding insider trading investigations. Both INV_ALL and INV_NON_DISC continue to exert a significant positive effect on termination likelihood. Combined with Panel A's findings, these results confirm that customers exhibit a stronger reaction to investigation types other than insider trading, which are more likely to transmit

adverse effects along the supply chain, indication, regardless of disclosure. In addition, the significant termination response even in the absence of insider trading investigations underscores that these other investigation types—particularly those involving operational or financial distress—play a critical role in driving customer exits, highlighting the heightened sensitivity of supply chain relationships to such SEC investigations. These findings suggest that customers can effectively discern the reason of investigations even if the investigation is not disclosed, and tailor their reactions accordingly, demonstrating their privileged information access to supplier conditions.

4.4 Mechanism analysis

Building on the significant influence of SEC investigations on supply chain relationship termination, we explore how characteristics such as bargaining power, private connections, and market attention shape the response of major customers to SEC investigations.³

4.4.1 Bargaining power

We investigate the role of relative bargaining power in moderating the impact of SEC investigations on customer-supplier relationship termination. As posited in Hypothesis 2 (Section 2.2), the positive association between SEC investigations and termination likelihood should be more pronounced when suppliers have weaker bargaining power relative to their major customers. Given that suppliers often depend on multiple major customers, we use three proxies to capture bargaining power dynamics. First, `TRADE_CREDIT` measures the share of goods sold on credit, where a larger share signals weaker supplier bargaining power (Dass et al., 2015; Fabbri & Klapper, 2016; Wilner, 2000). We define `HIGH_TRADE_CREDIT` as a

³ In this mechanism analysis, we focus on `INV_ALL` and `INV_NON_DISC` as our primary variables of interest, excluding early and late disclosure and their interactions (`INV_EARLY_DISC`, `INV_LATE_DISC`). This approach aligns with our research motivation to investigate whether customers possess privileged information access, enabling them to uncover non-disclosed investigations unknown to the broader market (`INV_NON_DISC`), while also enhancing presentation clarity by concentrating on the most relevant variables.

dummy equal to one if `TRADE_CREDIT` exceeds the sample median by year and industry, and zero otherwise. Second, `CUS_DEPEND` reflects the proportion of supplier-customer pair-level sales relative to the customer's cost of goods sold, where a lower proportion indicates weaker supplier bargaining power by enabling customers to switch suppliers more easily. `LOW_CUS_DEPEND` is assigned to firms below the industry-year median. Third, `SUP_DEPEND` captures the proportion of supplier-customer pair-level sales to the supplier's total sales, where a higher proportion indicates weaker supplier bargaining power due to increased vulnerability (Chang et al., 2022; Hui et al., 2012; Porter & Strategy, 1980). `HIGH_SUP_DEPEND` denotes firms above the industry-year median.

We test these effects using the linear probability model, with results reported in Columns (1) to (12) of Table 7. The effect of SEC investigations on termination likelihood is significantly amplified when suppliers exhibit weaker bargaining power. Specifically, `INV_ALL * HIGH_TRADE_CREDIT` yields significant coefficients of 0.7826 and 0.7652. Similarly, `INV_NON_DISC * HIGH_TRADE_CREDIT` raises termination probability by 75.78 and 74.21 percentage points. `INV_NON_DISC * HIGH_SUP_DEPEND` also demonstrates a notable effect, with coefficients of 0.1223 and 0.1186. Interactions such as `INV_ALL * LOW_CUS_DEPEND` and `INV_NON_DISC * LOW_CUS_DEPEND` exhibit similar effects across the specifications. Overall, these findings confirm that the impact of SEC investigations on relationship termination is more pronounced when suppliers have weaker bargaining power, providing strong support for Hypothesis 2.

4.4.2 Private connections

We then investigate the influence of private connections on the relationship between SEC investigations and customer-supplier relationship termination. As posited in Hypothesis H3 (Section 2.2), the positive association between SEC investigations and termination likelihood should be more pronounced when private connections either facilitate information access or

are disrupted by executive turnover. We use three proxies to capture private connections. First, `SHARED_DIRECTOR` indicates the presence of shared directors between the supplier and customer, enhancing the customer's information access and influence (Bouwman, 2011; Cai et al., 2014; Geng et al., 2021). Second, `COM_INS_OWNER` reflects overlapping institutional investors, serving as an information channel for information exchange (Freeman, 2023; Goranova et al., 2010; Jung, 2013). Third, `NEW_CEO` denotes CEO turnover in either the supplier or customer firm, capturing the loss of personal executive ties that can weaken the supply chain relationship (Chen et al., 2021; Dasgupta et al., 2021; Intintoli et al., 2017).

Results are represented in Table 8. The effect of SEC investigations on termination likelihood is significantly amplified in the presence of private connections. Specifically, `INV_ALL * SHARED_DIRECTOR` yields significant positive coefficients of 0.5999 and 0.5506. `INV_DISC * COM_INS_OWNER` also significantly raises termination probability by 4.07 and 4.15 percentage points. `INV_ALL * NEW_CEO` also exhibits a significant effect, with coefficients of 0.0345 and 0.0351. For undisclosed investigations, the `NEW_CEO` interaction consistently amplifies termination likelihood, with significant positive coefficients, underscoring the role of disrupted executive ties in driving customer exit. However, `INV_NON_DISC` interactions with `COM_INS_OWNER` and `SHARED_DIRECTOR` do not exhibit significant effects, suggesting that the extent of information sharing through directors and institutional investors may be moderated by the nature of the investigation and the supplier's disclosure intent. Overall, these findings confirm that private connections, whether through shared directors, overlapping investors, or disrupted executive ties, amplify the impact of SEC investigations on relationship termination, providing strong support for Hypothesis 3.

4.4.3 Market attention

We explore the role of market attention in moderating the impact of SEC investigations on customer-supplier relationship termination. As posited in Hypothesis H4 (Section 2.2), the

positive association between SEC investigations and termination likelihood should be less pronounced for suppliers with greater market attention, as they face stronger incentives to preserve customer relationships. We use three proxies to capture market attention. First, SEO indicates whether the supplier has conducted a seasoned equity offering, reflecting stock market visibility (Gao & Ritter, 2010; Kovacs, 2014). Second, AD measures advertising intensity, where higher advertising signals greater market prominence (Fich et al., 2025; Focke et al., 2020). Third, NUMEST captures the number of analyst estimates, indicating analyst coverage and investor scrutiny (Kirk, 2011; Mehran & Peristiani, 2010).

Results are presented in Table 9. The effect of SEC investigations on termination likelihood is consistently mitigated by greater market attention across all proxies. Specifically, $INV_ALL * SEO$ yields significant coefficients of -0.1738 and -0.1813. $INV_ALL * HIGH_AD$ significantly decreases termination probability by 11.59 and 11.59 percentage points. $INV_ALL * HIGH_NUMEST$ lowers termination probability by 44.25 and 34.51 percentage points. Similarly, $INV_NON_DISC * HIGH_NUMEST$ exhibits significant coefficients of -0.5507, underscoring analysts' significant monitoring effect. $INV_NON_DISC * SEO$ and $INV_NON_DISC * HIGH_AD$ also show negative coefficients, decreasing termination probability, though their effects are less pronounced, possibly due to differences in information discovery sophistication and monitoring intensity between general market participants and professional analysts. Collectively, these findings confirm that greater market attention consistently reduces the impact of SEC investigations on relationship termination, providing strong support for Hypothesis 4.

5. Additional analysis

5.1 Trade volume

Major customers may terminate their relationship with a supplier upon learning of an SEC investigation, but switching costs and contractual obligations can prevent them from exiting,

even if they prefer to do so. In such cases, customers may respond by sourcing less from the supplier to reduce their reliance. Heese and Pérez-Cavazos (2019) find that government customers, following fraud allegation investigations that resulted in settlements, reduced contract dollar volume by approximately 15% through contract-design changes to mitigate uncertainty in suppliers' reputation. We investigate this behavior using two measures of trade volume: $\Delta\text{PSALES}[0, 2]$, the change in supplier-customer pair-level sales from the investigation year to two years post-investigation, and $\Delta\text{PSALES2COGS_C}[0, 2]$, the change in the proportion of pair-level sales to the customer's cost of goods sold over the same period.

As reported in Table 10 & 11, SEC investigations lead to a consistent and significant reduction in trade volume across both measures for all investigation types. These results confirm that customers significantly reduce trade volume with suppliers under SEC investigation, reflecting a strategic response to mitigate risk by decreasing reliance on the supplier.

5.2 Trade credit

Trade credit is a critical financial tool that supports supply-chain stability and facilitates trade (Breza & Liberman, 2017; Ersahin et al., 2024; Freeman, 2025). We explore in this section whether firms strategically employ trade credit as a means to manage their supply chain relationships. On the one hand, one possible explanation for customer exit during an SEC investigation is that constrained suppliers reduce trade credit, prompting customers to switch to alternative suppliers offering more favorable terms without awareness of the underlying investigation. On the other hand, suppliers may offer more trade credit to customers as a way to preserve the relationship (Ersahin et al., 2024).

We test this by regressing SEC investigations on $\Delta\text{TRADE_CREDIT}[0,2]$, the change in trade credit from the year of to two year after the investigation. Results are reported in Table 12. Although we do not observe significant changes in trade credit extension at all investigation

level, firms may have different priorities among investigations. As shown in column (2) and (4), INV_LATE_DISC is positively associated with the trade credit change (0.0462, $p < 0.10$), while INV_NON_DISC (-0.0122; -0.0201) and INV_EARLY_DISC (-0.0675; -0.0856, $p < 0.10$) impose negative effects. This indicates that suppliers make more efforts to preserve the customers when the investigation is more likely to be influential. This also helps to explain why INV_LATE_DISC in Table 2 while have larger impact on termination likelihood, lacks significance. In addition, despite minimal trade credit cuts for INV_NON_DISC, we still find significant customer exit and trade volume reductions in our prior analysis. This suggests that trade credit reduction is not the primary driver of customer reactions, supporting the notion that trade credit serves as a channel through which customers gain information about supplier investigations, prompting their strategic responses.

5.3 Real impact on customers left

We investigate the real impact on major customers who terminate their relationship with a supplier under SEC investigation, focusing on changes in their operational performance. We follow the methodology in Ersahin et al. (2024) and perform the analysis using the regression model below:

$$\begin{aligned}
 Y_{j,(t-1,t+1)} = & \beta_0 + \beta_1 INV_ALL_{i,t} * \beta_1 BREAK_LINK_{i,j,t} + \beta_2 INV_ALL_{i,t} \\
 & + \beta_3 BREAK_LINK_{i,j,t} + \beta_4 ROA_{C_{j,t}} + \beta_5 SIZE_{C_{j,t}} + \beta_6 LIQUID_{C_{j,t}} \\
 & + \beta_7 LEV_{C_{j,t}} + \beta_8 MTB_{C_{j,t}} + \beta_9 TANG_{C_{j,t}} + \beta_{10} CASH_{C_{j,t}} \\
 & + \beta_{11} CUS_PROIR_INV_{C_{j,t}} + \theta_{ind_i, ind_j} + \delta_j + \gamma_t + \varepsilon_{j,t}
 \end{aligned} \tag{3}$$

,where j and i index customers and their suppliers, respectively. Customer firm characteristics are controlled. The inclusion of the interaction us to test whether the exit of customer due to supplier SEC investigation differ from other exits. We analyse two outcomes: $\Delta COGS_C[0, 2]$, the change in customer cost of goods sold from the year of to two year after the investigation,

and $\Delta \text{EBITDA_C}[0, 2]$, the change in customer EBITDA over the same period. These measures capture the cost and profitability implications for customers who exit the supplier relationship.

Table 13 presents the results for the change in customer cost of goods sold. Link termination generally increases the cost of goods sold, as indicated by the positive and significant coefficients of BREAK_LINK suggesting that switching suppliers often entails additional sourcing expenses. However, when termination occurs due to SEC investigations, customers experience a reduction in COGS, as evidenced by negative and significant coefficients for $\text{INV_ALL} * \text{BREAK_LINK}$ and $\text{INV_NON_DISC} * \text{BREAK_LINK}$. This suggests that exiting the relationship with suppliers under investigation, potentially due to management issues or operational disruptions, enables customers to switch from suboptimal to more optimal suppliers, mitigating cost increases.

The results for the change in EBITDA provide consistent evidence in Table 14. The negative coefficients of BREAK_LINK reflects the financial burden of supplier switching in general. In contrast, investigation-driven terminations enhance profitability, with coefficients for $\text{INV_ALL} * \text{BREAK_LINK}$ and $\text{INV_NON_DISC} * \text{BREAK_LINK}$ being significantly positive and significant. These results demonstrate that customers terminating relationships with suppliers under SEC investigation strategically reconfigure their supply chains, exiting suboptimal relationships to partner with more reliable or efficient suppliers, thereby reducing COGS and enhancing profitability while avoiding risks tied to the investigated supplier's challenges.

6. Conclusions

This study investigates the spillover effects of SEC investigations on supply chain relationships, focusing on major customers' reactions to supplier investigations, especially undisclosed ones. Using U.S. supply chain relationships from 2000 to 2017, we find that SEC investigations

significantly increase relationship termination likelihood, even for non-disclosed cases, evidencing major customers' privileged information access. Results are robust with alternative model and placebo test. Endogeneity is addressed through propensity score matching, entropy balancing, and instrumental variables.

Customers react more drastically to severe investigations, but reactions remain significant for alleged violations not warranting enforcement actions. The effect is also more pronounced for investigations that are potentially more influential on the supply chain, such as those involving financial fraud or governance issues, compared to insider trading cases, which pose lower supply chain risks.

Furthermore, our findings show that the spillover effects of SEC investigations on supply chain relationships operates through three channels. Weaker supplier bargaining power and private connections, including shared directors, common institutional ownership or CEO turnover, amplify termination likelihood, while greater supplier market attention mitigates it. In addition, customers terminating relationships achieve cost reductions and profit growth, implying a switch to efficient suppliers, while persisting customers lower trade volume and reliance on the supplier to manage risks. We also find that persisting relationships face reduced trade credit, though suppliers may extend more to retain customers during impactful investigations.

These findings while supporting the assumption of major customers' privileged information access, reveal that SEC investigations impose unintended economic costs on suppliers, and the designed confidentiality of such investigations fails to shield suppliers from these adverse effects. Moreover, informed customers' pre-emptive actions can exacerbate suppliers' performance declines, compounding the direct negative impacts of investigations. In undisclosed cases, investors—unaware of potential misconduct and ongoing investigations—are further disadvantaged by informed parties' strategic decisions, such as relationship

terminations. This underscores the need for improved regulatory design to mitigate these unintended consequences, ensuring better transparency and protection for all stakeholders.

References

- Abdulmanova, A., Ferris, S. P., Jayaraman, N., & Kothari, P. (2021). The effect of investor attention on fraud discovery and value loss in securities class action litigation. *Journal of Financial Research*, 44(3), 513-552.
- An, Z., Chen, C., Naiker, V., & Wang, J. (2020). Does media coverage deter firms from withholding bad news? Evidence from stock price crash risk. *Journal of Corporate Finance*, 64, 101664.
- Ayer, E. (2024). SEC penalties hit an all-time high of \$8.2B in FY 2024. *Front Page News*.
- Baiman, S., & Rajan, M. V. (2002). The role of information and opportunism in the choice of buyer-supplier relationships. *Journal of Accounting Research*, 40(2), 247-278.
- Bao, D., Kim, Y., & Su, L. (2022). Do firms redact information from material contracts to conceal bad news? *The Accounting Review*, 97(5), 29-57.
- Blackburne, T., Bozanic, Z., Johnson, B. A., & Roulstone, D. T. (2020). The regulatory observer effect: Evidence from SEC investigations. *Available at SSRN 3514915*.
- Blackburne, T., Kepler, J. D., Quinn, P. J., & Taylor, D. (2021). Undisclosed SEC investigations. *Management Science*, 67(6), 3403-3418.
- Blackburne, T. P., & Quinn, P. J. (2023). Disclosure speed: Evidence from nonpublic SEC investigations. *The Accounting Review*, 98(1), 55-82.
- Blann, J. J. (2023). Does the Financial Experience of SEC Regional Directors Impact SEC Investigations? *Available at SSRN 4470329*.
- Blann, J. J., & Lamoreaux, P. T. (2023). Economic Implications of SEC Investigations: Evidence From M&A Transactions. *Available at SSRN 4465319*.
- Boehm, J., & Sonntag, J. (2023). Vertical integration and foreclosure: Evidence from production network data. *Management Science*, 69(1), 141-161.
- Bonsall, S. B., Donovan, J. B., Holzman, E. R., Wang, X., & Yang, D. G. (2024). Do Credit Ratings Reflect Private Information about SEC Investigations? *The Accounting Review*, 1-24.
- Bonsall, S. B., Holzman, E. R., & Miller, B. P. (2024). Wearing out the watchdog: The impact of SEC case backlog on the formal investigation process. *The Accounting Review*, 99(1), 81-104.
- Bouwman, C. H. (2011). Corporate governance propagation through overlapping directors. *The Review of Financial Studies*, 24(7), 2358-2394.
- Breza, E., & Liberman, A. (2017). Financial contracting and organizational form: Evidence from the regulation of trade credit. *The Journal of Finance*, 72(1), 291-324.
- Cai, Y., Dhaliwal, D. S., Kim, Y., & Pan, C. (2014). Board interlocks and the diffusion of disclosure policy. *Review of Accounting Studies*, 19, 1086-1119.

- Campello, M., & Gao, J. (2017). Customer concentration and loan contract terms. *Journal of Financial Economics*, 123(1), 108-136.
- Cen, L., Chen, F., Hou, Y., & Richardson, G. D. (2018). Strategic disclosures of litigation loss contingencies when customer-supplier relationships are at risk. *The Accounting Review*, 93(2), 137-159.
- Cen, L., Dasgupta, S., Elkamhi, R., & Pungaliya, R. S. (2016). Reputation and loan contract terms: The role of principal customers. *Review of Finance*, 20(2), 501-533.
- Cen, L., Maydew, E. L., Zhang, L., & Zuo, L. (2017). Customer-supplier relationships and corporate tax avoidance. *Journal of Financial Economics*, 123(2), 377-394.
- Chang, H., Liu, S., & Mashruwala, R. (2022). Customer bargaining power, strategic fit, and supplier performance. *Production and Operations Management*, 31(4), 1492-1509.
- Chen, G., Tian, X. S., & Yu, M. (2022). Redact to protect? Customers' incentive to protect information and suppliers' disclosure strategies. *Journal of Accounting and Economics*, 74(1), 101490.
- Chen, J., Su, X., Tian, X., Xu, B., & Zuo, L. (2023). The disciplinary role of major corporate customers. *Available at SSRN 3588351*.
- Chen, T., Levy, H., Martin, X., & Shalev, R. (2021). Buying products from whom you know: personal connections and information asymmetry in supply chain relationships. *Review of Accounting Studies*, 1-40.
- Cohen, L., & Frazzini, A. (2008). Economic links and predictable returns. *The Journal of Finance*, 63(4), 1977-2011.
- Coleman, B., Merkley, K., Miller, B., & Pacelli, J. (2021). Does the freedom of information act foil the securities and exchange commission's intent to keep investigations confidential? *Management Science*, 67(6), 3419-3428.
- Costello, A. M. (2020). Credit market disruptions and liquidity spillover effects in the supply chain. *Journal of Political Economy*, 128(9), 3434-3468.
- Croignani, M., Macchiavelli, M., & Silva, A. F. (2023). Pirates without borders: The propagation of cyberattacks through firms' supply chains. *Journal of Financial Economics*, 147(2), 432-448.
- Dasgupta, S., Zhang, K., & Zhu, C. (2021). Do social connections mitigate hold-up and facilitate cooperation? Evidence from supply chain relationships. *Journal of Financial and Quantitative Analysis*, 56(5), 1679-1712.
- Dass, N., Kale, J. R., & Nanda, V. (2015). Trade credit, relationship-specific investment, and product market power. *Review of Finance*, 19(5), 1867-1923.
- Donelson, D. C., Kubic, M., & Toynbee, S. (2023). The SEC's September spike: Regulatory inconsistency within the fiscal year. *Journal of Accounting and Economics*, 101636.

- Driskill, M., Kirk, M. P., & Tucker, J. W. (2020). Concurrent earnings announcements and analysts' information production. *The Accounting Review*, 95(1), 165-189.
- Ellis, J. A., Fee, C. E., & Thomas, S. E. (2012). Proprietary costs and the disclosure of information about customers. *Journal of Accounting Research*, 50(3), 685-727.
- Ersahin, N., Giannetti, M., & Huang, R. (2024). Trade credit and the stability of supply chains. *Journal of Financial Economics*, 155, 103830.
- Fabbri, D., & Klapper, L. F. (2016). Bargaining power and trade credit. *Journal of Corporate Finance*, 41, 66-80.
- FASB. (1997). Disclosures about Segments of an Enterprise and Related Information. Statement of Financial Accounting Standards No. 131. In. Norwalk, CT: FASB.
- Fee, C. E., Hadlock, C. J., & Thomas, S. (2006). Corporate equity ownership and the governance of product market relationships. *The Journal of Finance*, 61(3), 1217-1251.
- Fich, E. M., Starks, L. T., & Tran, A. L. (2025). Target firm advertising and firm value. *Management Science*, 71(2), 1438-1463.
- Focke, F., Ruenzi, S., & Ungeheuer, M. (2020). Advertising, attention, and financial markets. *The Review of Financial Studies*, 33(10), 4676-4720.
- Frederickson, J. R., & Zolotoy, L. (2016). Competing earnings announcements: Which announcement do investors process first? *The Accounting Review*, 91(2), 441-462.
- Freeman, K. (2025). The Lender's Lender: Trade Credit and the Monitoring Role of Banks. *Journal of Financial and Quantitative Analysis (Forthcoming)*.
- Freeman, K. M. (2023). Overlapping ownership along the supply chain. *Journal of Financial and Quantitative Analysis*, 1-30.
- Gao, X., & Ritter, J. R. (2010). The marketing of seasoned equity offerings. *Journal of Financial Economics*, 97(1), 33-52.
- Geng, H., Hau, H., Michaely, R., & Nguyen, B. (2021). Does board overlap promote coordination between firms? *Swiss Finance Institute Research Paper*(21-79).
- Goranova, M., Dharwadkar, R., & Brandes, P. (2010). Owners on both sides of the deal: Mergers and acquisitions and overlapping institutional ownership. *Strategic Management Journal*, 31(10), 1114-1135.
- Guan, Y., Wong, M. F., & Zhang, Y. (2015). Analyst following along the supply chain. *Review of Accounting Studies*, 20, 210-241.
- Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political analysis*, 20(1), 25-46.
- Heese, J., & Pérez-Cavazos, G. (2019). Fraud allegations and government contracting. *Journal of Accounting Research*, 57(3), 675-719.

- Hendricks, K. B., & Singhal, V. R. (2003). The effect of supply chain glitches on shareholder wealth. *Journal of Operations management*, 21(5), 501-522.
- Hertzel, M. G., Li, Z., Officer, M. S., & Rodgers, K. J. (2008). Inter-firm linkages and the wealth effects of financial distress along the supply chain. *Journal of Financial Economics*, 87(2), 374-387.
- Hillegeist, S. A., Keating, E. K., Cram, D. P., & Lundstedt, K. G. (2004). Assessing the probability of bankruptcy. *Review of Accounting Studies*, 9, 5-34.
- Holzman, E., Kim, J., Miller, B. P., & Schroeder, J. H. (2024). Jumping Ship: Undisclosed SEC Investigations and Voluntary CEO Turnover. *Available at SSRN 4735815*.
- Holzman, E., Marshall, N. T., & Schmidt, B. A. (2024). When are firms on the hot seat? An analysis of SEC investigation preferences. *Journal of Accounting and Economics*, 77(1), 101610.
- Hui, K. W., Klasa, S., & Yeung, P. E. (2012). Corporate suppliers and customers and accounting conservatism. *Journal of Accounting and Economics*, 53(1-2), 115-135.
- Iliev, P., Kalodimos, J., & Lowry, M. (2021). Investors' attention to corporate governance. *The Review of Financial Studies*, 34(12), 5581-5628.
- Intintoli, V. J., Serfling, M., & Shaikh, S. (2017). CEO turnovers and disruptions in customer-supplier relationships. *Journal of Financial and Quantitative Analysis*, 52(6), 2565-2610.
- Johnson, B. A., Lisic, L. L., Moon, J. S., & Wang, M. (2023). SEC comment letters on form S-4 and M&A accounting quality. *Review of Accounting Studies*, 28(2), 862-909.
- Johnson, W. C., Xie, W., & Yi, S. (2014). Corporate fraud and the value of reputations in the product market. *Journal of Corporate Finance*, 25, 16-39.
- Jung, M. J. (2013). Investor overlap and diffusion of disclosure practices. *Review of Accounting Studies*, 18, 167-206.
- Kirk, M. (2011). Research for sale: Determinants and consequences of paid-for analyst research. *Journal of Financial Economics*, 100(1), 182-200.
- Kolay, M., Lemmon, M., & Tashjian, E. (2016). Spreading the misery? Sources of bankruptcy spillover in the supply chain. *Journal of Financial and Quantitative Analysis*, 51(6), 1955-1990.
- Kovacs, T. (2014). Investor recognition and seasoned equity offers. *Journal of Corporate Finance*, 25, 216-233.
- Larcker, D. F., & Rusticus, T. O. (2010). On the use of instrumental variables in accounting research. *Journal of Accounting and Economics*, 49(3), 186-205.
- Li, C., Li, N., & Zhang, F. (2023). Using economic links between firms to detect accounting fraud. *The Accounting Review*, 98(1), 399-421.

- Lustgarten, S. H. (1975). The impact of buyer concentration in manufacturing industries. *The Review of Economics and Statistics*, 125-132.
- Mehran, H., & Peristiani, S. (2010). Financial visibility and the decision to go private. *The Review of Financial Studies*, 23(2), 519-547.
- Mozur, P. (2020). Apple Puts Key Contractor on Probation Over Labor Abuses in China. *The New York Times*.
- Naidu, D., & Ranjeeni, K. (2024). Is Customers' Financial Reporting Quality Associated with Suppliers' Decision to Contract? *The Accounting Review*, 1-26.
- Pandit, S., Wasley, C. E., & Zach, T. (2011). Information externalities along the supply chain: The economic determinants of suppliers' stock price reaction to their customers' earnings announcements. *Contemporary Accounting Research*, 28(4), 1304-1343.
- Pankratz, N. M., & Schiller, C. M. (2024). Climate change and adaptation in global supply-chain networks. *The Review of Financial Studies*, 37(6), 1729-1777.
- Porter, M. E., & Strategy, C. (1980). Techniques for analyzing industries and competitors. *Competitive Strategy*. New York: Free, I.
- Ravenscraft, D. J. (1983). Structure-profit relationship at the line of business and industry level. *The Review of Economics and Statistics*, 22-31.
- SEC. (2009). Program Improvements Needed Within the SEC's Division of Enforcement. *OIG Report*.
- SEC. (2010). Failure to Timely Investigate Allegations of Financial Fraud. *OIG Report*.
- SEC. (2013). Evaluation of the SEC's Whistleblower Program. *OIG Report*.
- SEC. (2014a). *Agency And Mission Information*.
- SEC. (2014b). Investor Bulletin: SEC Investigations.
- SEC. (2017). *Enforcement Manual*.
- SEC. (2024). *How Investigations Work*.
- She, G. (2022). The real effects of mandatory nonfinancial disclosure: Evidence from supply chain transparency. *The Accounting Review*, 97(5), 399-425.
- Solomon, D. H., & Soltes, E. (2021). Is "not guilty" the same as "innocent"? Evidence from SEC financial fraud investigations. *Journal of Empirical Legal Studies*, 18(2), 287-327.
- Stellantis. (2024). Stellantis Global Supplier Information Security Requirements.
- Tang, Z., & Tang, J. (2016). Can the media discipline Chinese firms' pollution behaviors? The mediating effects of the public and government. *Journal of management*, 42(6), 1700-1722.

Wilner, B. S. (2000). The exploitation of relationships in financial distress: The case of trade credit. *The Journal of Finance*, 55(1), 153-178.

Table 1. Descriptive Statistics

This table presents descriptive statistics. Panel A presents statistics for SEC investigations. INV_DURATION is the number of years the SEC investigation lasted. DISC_SPEED is the number of years from the investigation open date to the date of first disclosure. Panel B presents Supplier investigation distribution by investigation type. Panel C presents descriptive statistics for the variables used in our pooled regression analysis. BREAK_LINK is an indicator variable that equals 1 if the supplier-customer relationship is active in year t but inactive in year $t+1$, and 0 otherwise. INV_ALL is an indicator variable that equals 1 if the SEC has an open investigation on the supplier firm in the year, and 0 otherwise. INV_NON_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is not publicly disclosed, and 0 otherwise. INV_EARLY_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed within one year, and 0 otherwise. INV_LATE_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed after one year, and 0 otherwise. ROA is the ratio of earnings before interest, taxes, depreciation and amortization to the total book assets. SIZE is the natural logarithm of a firm's market value of equity. LIQUID is the sum of cash and short-term investments and account receivables over firm's total assets. LEV is the financial leverage of the firm, calculated as the sum of long-term debt and current liabilities divided by total assets. MTB is the market-to-book ratio, calculated as the product of the stock price and the number of common shares outstanding divided by total common equity. TANG represents the ratio of tangible assets, calculated as net property, plant, and equipment divided by total assets. NUM_CUSTOMER is the natural logarithm of one plus the number of customers a supplier has in a given year. CUS_PROIR_INV is an indicator variable that equals 1 if the SEC opens an investigation on the customer in the year prior to the current year, and 0 otherwise.

Panel A: Investigation sample

	N	Mean	Std.	P25	P50	P75
INV_DURATION	702	2.8164	2.5456	1.0958	1.8700	3.8186
DISC_SPEED	154	1.1887	1.2271	0.3210	0.8323	1.7029
INV_NON_DISC	702	0.4188	0.4937	0	0	1
INV_EARLY_DISC	702	0.4886	0.5002	0	0	1
INV_LATE_DISC	702	0.0983	0.2979	0	0	0

Panel B: Supplier investigation distribution by investigation type

SEC Investigation Type	N	%
Financial Fraud/Issuer Disclosure	323	46.61
Insider Trading	270	38.96
Market Manipulation	41	5.92
Other	59	8.51

Panel C: Pooled sample

	N	Mean	Std.	P25	P50	P75
BREAK_LINK	24566	0.1796	0.3839	0	0	0
INV_ALL	24566	0.0392	0.1942	0	0	0
INV_NON_DISC	24566	0.0170	0.1293	0	0	0
INV_EARLY_DISC	24566	0.0190	0.1366	0	0	0
INV_LATE_DISC	24566	0.0033	0.0570	0	0	0
ROA	24566	0.0269	0.2522	-0.0032	0.0950	0.1534
SIZE	24566	5.9897	2.1664	4.6003	6.0763	7.4367
LIQUID	24566	0.4032	0.2362	0.2170	0.3645	0.5678
LEV	24566	0.2308	0.2654	0.0058	0.1645	0.3525
MTB	24566	2.7105	14.1287	0.8045	2.2100	4.7908
TANG	24566	0.2320	0.2419	0.0585	0.1388	0.3112

CASH	24566	0.1736	0.1756	0.0426	0.1190	0.2424
NUM_CUSTOMER	24566	1.3774	0.5623	1.0986	1.3863	1.6094
CUS_PROIR_INV	24566	0.0284	0.1662	0	0	0

Table 2. Relationship termination

This table reports estimates of the impact of supplier SEC investigations on the likelihood of relationship termination, estimated by the linear probability model. The table presents the results of Equation (1) in Columns (1) and (3) and Equation 2 in Columns (2) and (4), respectively. The equations are estimated using PSM in Columns (1) and (2), and entropy balancing in Columns (3) and (4). BREAK_LINK is an indicator variable that equals 1 if the supplier-customer relationship is active in year t but inactive in year $t+1$, and 0 otherwise. INV_ALL is an indicator variable that equals 1 if the SEC has an open investigation on the supplier firm in the year, and 0 otherwise. INV_NON_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is not publicly disclosed, and 0 otherwise. INV_EARLY_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed within one year, and 0 otherwise. INV_LATE_DISC is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed after one year, and 0 otherwise. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: PSM Balance Test

Variable	Mean		t-test		
	Treated	Control	%bias	t	p>t
ROA	0.014	0.013	0.1	0.02	0.982
SIZE	6.705	6.627	3.8	0.99	0.324
LIQUID	0.419	0.417	1.1	0.27	0.788
LEV	0.226	0.227	-0.4	-0.10	0.920
MTB	3.064	3.036	0.2	0.05	0.963
TANG	0.194	0.198	-1.6	-0.43	0.664
CASH	0.168	0.169	-0.2	-0.05	0.963

Panel B: Comparative descriptive statistics for entropy balancing

	Treated			Control-Pre			Control-Post		
	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness
ROA	0.014	0.065	-2.873	0.025	0.067	-2.894	0.014	0.065	-2.873
SIZE	6.705	4.047	-0.026	5.717	4.733	-0.183	6.705	4.047	-0.026
LIQUID	0.419	0.051	0.365	0.395	0.055	0.560	0.419	0.051	0.365
LEV	0.226	0.071	2.121	0.237	0.073	1.983	0.226	0.071	2.121
MTB	3.064	235.027	0.086	2.552	191.209	-0.181	3.064	235.027	0.086
TANG	0.194	0.044	1.712	0.234	0.057	1.407	0.194	0.044	1.712
CASH	0.168	0.027	1.585	0.168	0.031	1.594	0.168	0.027	1.585

Panel C: Regression Results

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	BREAK_LINK			
INV_ALL	0.0411*** (3.07)		0.0392** (2.41)	
INV_NON_DISC		0.0410** (2.15)		0.0395** (2.08)
INV_EARLY_DISC		0.0285 (1.57)		0.0273 (1.35)

INV_LATE_DISC		0.1268 (1.64)		0.1217 (1.48)
ROA	-0.1531*** (-9.81)	-0.1503*** (-9.18)	-0.1760*** (-7.79)	-0.1734*** (-7.14)
SIZE	0.0045 (1.10)	0.0037 (1.12)	0.0052 (1.47)	0.0045 (1.60)
LIQUID	0.0295 (0.38)	0.0237 (0.32)	0.0246 (0.33)	0.0191 (0.26)
LEV	0.0081 (0.34)	0.0062 (0.26)	0.0035 (0.15)	0.0021 (0.09)
MTB	0.0002 (0.79)	0.0003 (1.06)	0.0003 (1.67)	0.0004** (2.06)
TANG	-0.0531 (-0.67)	-0.0622 (-0.84)	-0.0463 (-0.62)	-0.0551 (-0.78)
CASH	-0.0174 (-0.24)	-0.0234 (-0.38)	-0.0213 (-0.28)	-0.0277 (-0.43)
NUM_CUSTOMER	0.0290* (1.75)	0.0299* (1.93)	0.0336** (2.07)	0.0345** (2.26)
CUS_PROIR_INV	-0.0005 (-0.03)	-0.0012 (-0.08)	0.0016 (0.06)	0.0006 (0.02)
CONSTANT	0.0995*** (3.40)	0.1080*** (5.22)	0.0924*** (3.37)	0.1004*** (5.10)
R-squared	0.6069	0.6078	0.6113	0.6121
N. of Obs.	24562	24562	24566	24566
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 3. Cox Hazard Model

This table reports estimates of the impact of supplier SEC investigations on the likelihood of relationship termination, estimated by the Cox Hazard model. *BREAK_LINK* is an indicator variable that equals 1 if the supplier-customer relationship is active in year *t* but inactive in year *t*+1, and 0 otherwise. *INV_ALL* is an indicator variable that equals 1 if the SEC has an open investigation on the supplier firm in the year, and 0 otherwise. *INV_NON_DISC* is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is not publicly disclosed, and 0 otherwise. *INV_EARLY_DISC* is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed within one year, and 0 otherwise. *INV_LATE_DISC* is an indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed after one year, and 0 otherwise. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	<i>BREAK_LINK</i>			
<i>INV_ALL</i>	1.2018** (2.03)		1.1576* (1.82)	
<i>INV_NON_DISC</i>		1.3213** (2.21)		1.3218** (2.33)
<i>INV_EARLY_DISC</i>		1.0164 (0.10)		0.9497 (-0.46)
<i>INV_LATE_DISC</i>		1.7759** (2.01)		1.5454 (1.44)
<i>ROA</i>	0.4336*** (-15.56)	0.4338*** (-15.73)	0.4633*** (-10.23)	0.4639*** (-10.28)
<i>SIZE</i>	0.9842 (-1.41)	0.9843 (-1.40)	0.9822** (-2.01)	0.9824** (-1.99)
<i>LIQUID</i>	1.1500 (0.35)	1.1551 (0.36)	1.2147 (0.55)	1.2196 (0.56)
<i>LEV</i>	0.8975 (-1.26)	0.8975 (-1.25)	0.8794* (-1.69)	0.8795* (-1.69)
<i>MTB</i>	1.0012 (0.87)	1.0012 (0.92)	1.0015 (1.39)	1.0016 (1.47)
<i>TANG</i>	0.6213*** (-3.56)	0.6180*** (-3.58)	0.7700** (-2.09)	0.7670** (-2.10)
<i>CASH</i>	1.0781 (0.17)	1.0726 (0.16)	1.0457 (0.12)	1.0438 (0.12)
<i>NUM_CUSTOMER</i>	1.2760*** (7.57)	1.2764*** (7.65)	1.2348*** (7.76)	1.2341*** (7.77)
<i>CUS_PROIR_INV</i>	1.0392 (0.33)	1.0396 (0.34)	0.9943 (-0.05)	0.9964 (-0.03)
N. of Obs.	25037	25037	27531	27531
Year Strata	Yes	Yes	Yes	Yes
S.ind Strata	Yes	Yes	No	No
C.ind Strata	Yes	Yes	No	No
Industry-pair Strata	No	No	Yes	Yes

Figure 1. Placebo test

The figure displays the density estimates of the regression coefficients from this placebo test, overlaid with corresponding p-values, alongside a red vertical line denoting the real INV_ALL coefficient from the linear probability model. The red horizontal line denotes p-value of 0.1.

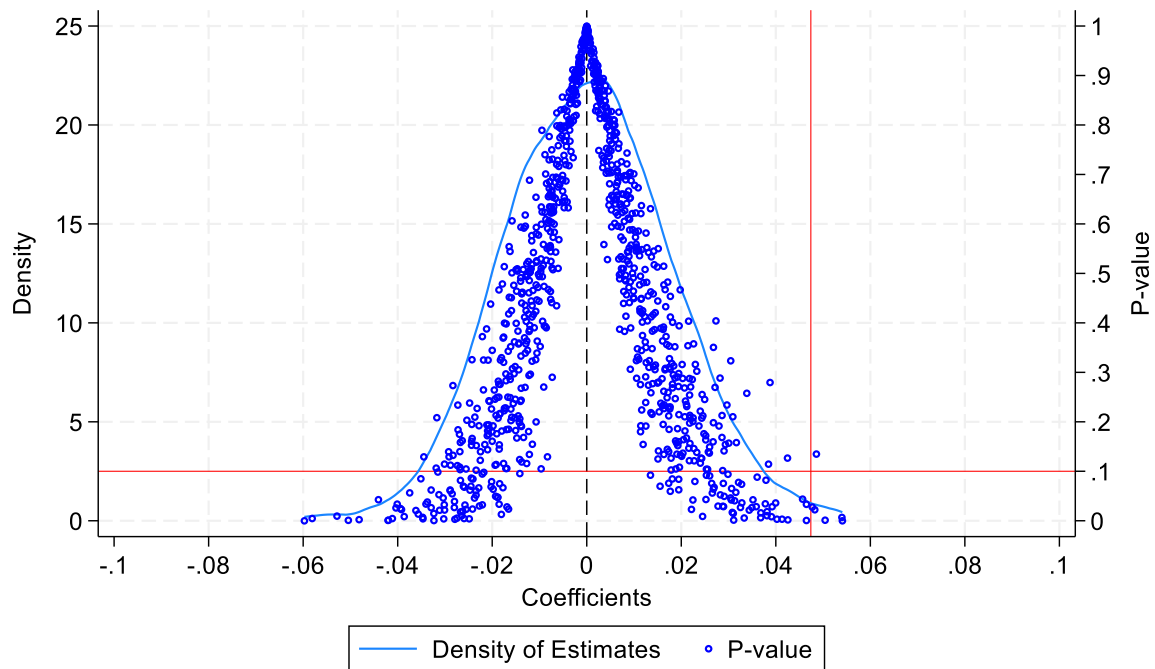


Table 4. Instrument variable

This table presents the results of two-stage instrumental variable analyses using HO_BUSY, RO_BUSY, PROMOTIONR and TURNOVERR as an instrument for INV_ALL. INV_ALL^ is the second-stage fitted value of INV_ALL. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	INV_ALL	BREAK_LINK	INV_ALL	BREAK_LINK
HO_BUSY	-0.0020** (-2.49)		-0.0020** (-2.57)	
RO_BUSY	-0.0001 (-0.96)		-0.0002 (-1.60)	
PROMOTIONR	0.1835*** (3.17)		0.1779*** (3.41)	
TURNOVERR	-0.1253 (-1.59)		-0.1484* (-1.72)	
INV_ALL^		0.3690*** (3.49)		0.3745*** (3.21)
ROA	0.0445 (1.40)	-0.1060*** (-3.43)	0.0480 (1.32)	-0.1290*** (-3.70)
SIZE	-0.0052 (-0.77)	-0.0014 (-0.35)	-0.0120 (-1.53)	0.0022 (0.45)
LIQUID	-0.0829** (-1.98)	0.0698 (0.70)	-0.0679 (-1.48)	0.0646 (0.64)
LEV	0.0785** (2.02)	-0.0257 (-1.15)	0.0449 (1.19)	-0.0246 (-1.60)
MTB	0.0001 (0.28)	-0.0000 (-0.12)	0.0003 (0.48)	-0.0001 (-0.27)
TANG	0.0124 (0.15)	-0.1201 (-1.46)	0.0301 (0.57)	-0.1219 (-1.66)
CASH	0.0533 (1.18)	-0.0012 (-0.01)	0.0508 (1.02)	-0.0080 (-0.09)
NUM_CUSTOMER	-0.0854*** (-2.62)	0.0649*** (3.10)	-0.0857*** (-2.68)	0.0664*** (2.93)
CUS_PROIR_INV	-0.0188 (-0.51)	-0.0129 (-0.45)	-0.0230 (-0.56)	-0.0102 (-0.37)
N. of Obs.	22344	22344	22347	22347
CD Wald F	67.9504		69.5482	
SW S stat	15.5704		14.1110	
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	No	No	No	No

Table 5. Investigation characteristics: severity

This table reports estimates of the impact of supplier SEC investigations on the likelihood of relationship termination, estimated by the linear probability model with interactions of SEVERE. SEVERE is an indicator variable that equals to one if the investigations results in SEC enforcement actions, zero otherwise. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Effects of Investigation severity on Relationship Termination

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	BREAK LINK			
INV_ALL * NON_SEVERE	0.0306*** (3.55)		0.0283*** (2.94)	
INV_ALL * SEVERE	0.1117 (1.40)		0.1121 (1.41)	
INV_NON_DISC* NON_SEVERE		0.0371** (2.03)		0.0352** (2.11)
INV_NON_DISC * SEVERE		0.0652 (0.91)		0.0658 (0.87)
INV_EARLY_DISC* NON_SEVERE		0.0226 (1.47)		0.0210 (1.25)
INV_EARLY_DISC * SEVERE		0.0855 (0.83)		0.0875 (0.89)
INV_LATE_DISC* NON_SEVERE		0.0865 (1.29)		0.0788 (1.12)
INV_LATE_DISC * SEVERE		0.1943** (2.10)		0.1930* (2.01)
ROA	-0.1537*** (-9.73)	-0.1514*** (-9.28)	-0.1768*** (-7.66)	-0.1749*** (-7.14)
SIZE	0.0046 (1.17)	0.0038 (1.06)	0.0053 (1.57)	0.0046 (1.52)
LIQUID	0.0263 (0.34)	0.0261 (0.34)	0.0213 (0.29)	0.0218 (0.29)
LEV	0.0046 (0.19)	0.0035 (0.15)	0.0001 (0.01)	-0.0007 (-0.03)
MTB	0.0002 (0.91)	0.0003 (1.17)	0.0003* (1.83)	0.0004** (2.30)
TANG	-0.0545 (-0.74)	-0.0573 (-0.78)	-0.0481 (-0.69)	-0.0503 (-0.72)
CASH	-0.0177 (-0.26)	-0.0267 (-0.41)	-0.0220 (-0.31)	-0.0316 (-0.47)
NUM_CUSTOMER	0.0303* (1.82)	0.0307* (1.99)	0.0349** (2.17)	0.0353** (2.35)
CUS_PROIR_INV	0.0008	-0.0004	0.0031	0.0017

	(0.05)	(-0.02)	(0.13)	(0.07)
CONSTANT	0.0988***	0.1052***	0.0918***	0.0975***
	(3.38)	(5.24)	(3.37)	(5.24)
R-squared	0.6075	0.6082	0.6120	0.6126
N. of Obs.	24562	24562	24566	24566
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Panel B: Exclude severe investigations

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	BREAK_LINK			
INV_ALL	0.0356*** (4.16)		0.0328*** (2.93)	
INV_NON_DISC		0.0523*** (2.99)		0.0501*** (2.88)
INV_EARLY_DISC		0.0194 (1.12)		0.0176 (0.98)
INV_LATE_DISC		0.0897 (1.29)		0.0815 (1.11)
ROA	-0.1343*** (-9.95)	-0.1353*** (-8.50)	-0.1554*** (-7.21)	-0.1564*** (-6.38)
SIZE	0.0025 (0.64)	0.0033 (0.98)	0.0032 (1.00)	0.0042 (1.50)
LIQUID	0.0421 (0.62)	0.0419 (0.60)	0.0369 (0.56)	0.0376 (0.55)
LEV	0.0093 (0.38)	0.0092 (0.39)	0.0042 (0.19)	0.0045 (0.21)
MTB	0.0002 (0.92)	0.0003 (1.14)	0.0004* (1.84)	0.0004** (2.16)
TANG	-0.0370 (-0.49)	-0.0458 (-0.61)	-0.0310 (-0.43)	-0.0387 (-0.53)
CASH	-0.0281 (-0.46)	-0.0264 (-0.43)	-0.0281 (-0.45)	-0.0263 (-0.41)
NUM_CUSTOMER	0.0304** (2.69)	0.0310*** (2.80)	0.0345*** (3.16)	0.0350*** (3.27)
CUS_PROIR_INV	-0.0047 (-0.25)	-0.0032 (-0.17)	-0.0019 (-0.07)	-0.0007 (-0.03)
CONSTANT	0.1052*** (5.08)	0.0982*** (6.62)	0.0985*** (5.20)	0.0901*** (6.49)
R-squared	0.5943	0.5948	0.5988	0.5992
N. of Obs.	24408	24408	24412	24412
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 6. Investigation characteristics: investigation type

This table reports estimates of the impact of supplier SEC investigations on the likelihood of relationship termination, estimated by the linear probability model with interactions of INSIDER_TRADING. INSIDER_TRADING is an indicator variable that equal to one if the investigation subject matter is insider trading, zero otherwise. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Effects of Investigation Type on Relationship Termination

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	BREAK LINK			
INV_ALL	0.0606***		0.0587***	
* OTHER_TYPE	(3.48)		(2.89)	
INV_ALL*	0.0173		0.0153	
INSIDER_TRADING	(1.12)		(0.99)	
INV_NON_DISC*		0.0850***		0.0852***
OTHER_TYPE		(3.88)		(4.27)
INV_NON_DISC*		-0.0107		-0.0136
INSIDER_TRADING		(-0.46)		(-0.59)
INV_EARLY_DISC*		0.0296		0.0270
OTHER_TYPE		(1.03)		(0.85)
INV_EARLY_DISC*		0.0277		0.0284
INSIDER_TRADING		(1.26)		(1.35)
INV_LATE_DISC*		0.1496**		0.1486*
OTHER_TYPE		(2.17)		(1.96)
INV_LATE_DISC*		0.1008		0.0907
INSIDER_TRADING		(1.21)		(1.10)
ROA	-0.1533***	-0.1502***	-0.1764***	-0.1733***
	(-9.96)	(-9.01)	(-7.74)	(-6.87)
SIZE	0.0044	0.0040	0.0051	0.0048*
	(1.11)	(1.29)	(1.48)	(1.87)
LIQUID	0.0387	0.0280	0.0343	0.0234
	(0.51)	(0.40)	(0.46)	(0.34)
LEV	0.0081	0.0067	0.0031	0.0026
	(0.34)	(0.28)	(0.14)	(0.11)
MTB	0.0002	0.0002	0.0003	0.0004**
	(0.66)	(1.01)	(1.48)	(2.08)
TANG	-0.0550	-0.0564	-0.0482	-0.0489
	(-0.73)	(-0.76)	(-0.67)	(-0.69)
CASH	-0.0221	-0.0177	-0.0262	-0.0216

	(-0.31)	(-0.32)	(-0.35)	(-0.38)
NUM_CUSTOMER	0.0298*	0.0309*	0.0344**	0.0355**
	(1.83)	(2.01)	(2.16)	(2.35)
CUS_PROIR_INV	-0.0010	0.0035	0.0012	0.0060
	(-0.06)	(0.19)	(0.04)	(0.20)
CONSTANT	0.0945***	0.0990***	0.0876***	0.0910***
	(3.36)	(5.44)	(3.33)	(5.32)
R-squared	0.6074	0.6087	0.6118	0.6132
N. of Obs.	24562	24562	24566	24566
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Panel B: Exclude insider trading investigations

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	BREAK_LINK			
INV_ALL	0.0452** (2.67)		0.0437** (2.24)	
INV_NON_DISC		0.0675** (2.63)		0.0682** (2.67)
INV_EARLY_DISC		0.0304 (1.17)		0.0283 (0.99)
INV_LATE_DISC		0.0604 (0.76)		0.0594 (0.71)
ROA	-0.1383*** (-12.42)	-0.1393*** (-11.57)	-0.1667*** (-8.48)	-0.1676*** (-7.31)
SIZE	0.0019 (0.56)	0.0028 (1.28)	0.0028 (0.96)	0.0039* (2.01)
LIQUID	-0.0112 (-0.36)	-0.0074 (-0.23)	-0.0168 (-0.62)	-0.0126 (-0.46)
LEV	-0.0057 (-0.27)	-0.0035 (-0.20)	-0.0117 (-0.63)	-0.0095 (-0.60)
MTB	0.0004*** (2.90)	0.0004*** (2.85)	0.0005*** (3.93)	0.0005*** (3.63)
TANG	-0.0795 (-1.54)	-0.0779 (-1.51)	-0.0716 (-1.47)	-0.0699 (-1.43)
CASH	0.0263 (0.66)	0.0275 (0.81)	0.0193 (0.44)	0.0208 (0.55)
NUM_CUSTOMER	0.0280*** (2.98)	0.0280*** (3.02)	0.0321*** (3.42)	0.0322*** (3.49)
CUS_PROIR_INV	-0.0065 (-0.31)	-0.0022 (-0.11)	-0.0073 (-0.24)	-0.0028 (-0.09)
CONSTANT	0.1401*** (5.59)	0.1294*** (7.64)	0.1332*** (5.38)	0.1212*** (7.24)
R-squared	0.5978	0.5981	0.6034	0.6038
N. of Obs.	24136	24136	24140	24140

Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 7. Mechanism: bargaining power

This table reports the results of cross-sectional analyses on suppliers' bargaining power. TRADE_CREDIT is the ratio of pair-level accounts receivable to pair-level sales for the supplier-customer relationship. CUS_DEPEND is the ratio of pair-level sales to the customer's cost of goods sold. SUP_DEPEND is the ratio of pair-level sales to the supplier's total sales. The high and low partition is based on industry-year median of different measures. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	PSM Sample						Entropy Sample					
	BREAK_LINK						BREAK_LINK					
INV_ALL *HIGH_TRADE_CREDIT	0.7826*** (5.87)						0.7652*** (6.60)					
INV_ALL *LOW_CUS_DEPEND		0.0616 (1.04)						0.0589 (1.02)				
INV_ALL *HIGH_SUP_DEPEND			0.0525* (1.95)						0.0514** (2.13)			
INV_NON_DISC *HIGH_TRADE_CREDIT				0.7578*** (5.65)						0.7421*** (6.36)		
INV_NON_DISC *LOW_CUS_DEPEND					0.1274** (2.28)						0.1257** (2.38)	
INV_NON_DISC *HIGH_SUP_DEPEND						0.1223*** (4.10)						0.1186*** (4.33)
INV_ALL	-0.7416*** (-5.33)	0.0171 (0.50)	0.0083 (0.55)				-0.7261*** (-5.92)	0.0166 (0.45)	0.0073 (0.43)			
INV_NON_DISC				-0.7313*** (-5.20)	-0.0347 (-0.96)	-0.0491** (-2.67)				-0.7163*** (-5.76)	-0.0344 (-0.92)	-0.0474** (-2.63)
DUMMY	0.0754 (1.11)	0.0097 (1.10)	-0.0620*** (-3.36)	0.0827 (1.24)	0.0114 (0.67)	-0.0604*** (-3.62)	0.0850 (1.16)	0.0085 (0.91)	-0.0612*** (-3.45)	0.0927 (1.31)	0.0093 (0.54)	-0.0594*** (-3.52)
ROA	-0.1531*** (-9.78)	-0.1490*** (-9.88)	-0.1534*** (-9.74)	-0.1561*** (-9.91)	-0.1554*** (-9.70)	-0.1544*** (-9.43)	-0.1760*** (-7.75)	-0.1703*** (-8.40)	-0.1754*** (-7.73)	-0.1784*** (-7.84)	-0.1765*** (-7.85)	-0.1760*** (-7.55)
SIZE	0.0045 (1.10)	0.0084*** (4.77)	0.0034 (0.88)	0.0056 (1.45)	0.0094*** (4.56)	0.0041 (1.06)	0.0052 (1.46)	0.0089*** (4.84)	0.0040 (1.23)	0.0061* (1.76)	0.0098*** (4.69)	0.0046 (1.31)
LIQUID	0.0295 (0.38)	0.0329 (0.39)	0.0339 (0.42)	0.0328 (0.39)	0.0388 (0.45)	0.0366 (0.41)	0.0247 (0.33)	0.0283 (0.35)	0.0300 (0.38)	0.0285 (0.35)	0.0356 (0.42)	0.0336 (0.39)

[illegible]

Table 8. Mechanism: private connection

This table reports the results of cross-sectional analyses on private connections between suppliers and customers. NEW_CEO is an indicator variable that equals 1 if the supplier firm appoints a new CEO in the year, and 0 otherwise. SHARED_DIRECTOR is an indicator variable that equals 1 if the supplier and customer share at least one common board director in the year, and 0 otherwise. COM_INS_OWNER is an indicator variable that equals 1 if the supplier and customer have at least one common institutional owner (based on 13F filings) in the year, and 0 otherwise. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	PSM Sample						Entropy Sample					
	BREAK_LINK						BREAK_LINK					
INV_ALL *NEW_CEO	0.0345** (2.30)						0.0351*** (2.80)					
INV_ALL *SHARED_DIRECTOR		0.5999*** (5.45)						0.5506*** (4.91)				
INV_ALL *COM_INS_OWNER			0.0407* (1.99)						0.0415** (2.13)			
INV_NON_DISC *NEW_CEO				0.1146* (1.91)						0.1139* (1.98)		
INV_NON_DISC *SHARED_DIRECTOR					0.3528 (0.84)						0.1596 (0.41)	
INV_NON_DISC *COM_INS_OWNER						0.0408 (1.42)						0.0444 (1.49)
INV_ALL	0.0168 (0.78)	0.0347*** (2.81)	0.0219 (1.39)				0.0148 (0.66)	0.0335** (2.21)	0.0196 (1.13)			
INV_NON_DISC				-0.0589 (-1.28)	0.0241 (1.15)	0.0106 (0.49)				-0.0589 (-1.26)	0.0248 (1.24)	0.0082 (0.40)
DUMMY	0.0177 (1.56)	-0.0754** (-2.61)	-0.0099 (-1.20)	0.0158 (1.05)	0.0227 (0.55)	0.0006 (0.06)	0.0168 (1.67)	-0.0731** (-2.27)	-0.0108 (-1.17)	0.0149 (1.04)	0.0236 (0.61)	-0.0008 (-0.07)
ROA	-0.1495*** (-9.50)	-0.1492*** (-8.83)	-0.1530*** (-10.16)	-0.1533*** (-9.44)	-0.1545*** (-9.99)	-0.1569*** (-10.31)	-0.1715*** (-7.41)	-0.1732*** (-7.36)	-0.1762*** (-8.14)	-0.1749*** (-7.40)	-0.1777*** (-7.95)	-0.1795*** (-8.20)
SIZE	0.0064 (1.58)	0.0037 (0.92)	0.0045 (1.10)	0.0071* (1.71)	0.0053 (1.30)	0.0056 (1.45)	0.0070* (2.01)	0.0045 (1.26)	0.0053 (1.44)	0.0076** (2.07)	0.0059 (1.60)	0.0062* (1.74)
LIQUID	0.0315	0.0298	0.0287	0.0305	0.0323	0.0335	0.0271	0.0251	0.0238	0.0266	0.0283	0.0296

[illegible]

Table 9. Mechanism: market attention

This table reports the results of cross-sectional analyses on suppliers' market attention. SEO is an indicator variable that equals 1 if the supplier firm conducts a seasoned equity offering in the year, and 0 otherwise. AD is the natural logarithm of one plus advertising expenses. NUMEST is the number of analyst earnings estimates for the supplier firm in the year. The high and low partition is based on industry-year median of different measures. All variables are defined in Appendix. *t*-statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	PSM Sample						Entropy Sample					
	BREAK_LINK						BREAK_LINK					
INV_ALL*SEO	-0.1738*** (-11.68)						-0.1813*** (-9.06)					
INV_ALL *HIGH_AD		-0.1159** (-2.54)						-0.1158** (-2.51)				
INV_ALL * HIGH_NUMEST			-0.4425*** (-5.48)						-0.3451*** (-6.69)			
INV_NON_DISC *SEO				-0.0462 (-0.76)						-0.0560 (-0.90)		
INV_NON_DISC * HIGH_AD					-0.0913 (-0.91)						-0.0840 (-0.84)	
INV_NON_DISC * HIGH_NUMEST						-0.5507*** (-7.18)						-0.4387*** (-6.76)
INV_ALL	0.0574*** (4.78)	0.1376*** (4.20)	0.4817*** (6.04)				0.0561*** (3.95)	0.1355*** (4.44)	0.3827*** (7.52)			
INV_NON_DISC				0.0303 (1.34)	0.1006 (1.26)	0.5738*** (8.71)				0.0304 (1.39)	0.0933 (1.22)	0.4615*** (8.27)
DUMMY	-0.0042 (-0.29)	-0.0204 (-1.32)	0.0128 (0.34)	-0.0474** (-2.10)	-0.0491** (-2.42)	0.0183 (0.49)	-0.0088 (-0.50)	-0.0197 (-1.30)	-0.0033 (-0.07)	-0.0533* (-1.99)	-0.0497** (-2.46)	0.0036 (0.08)
ROA	-0.1636*** (-8.73)	-0.1579*** (-8.69)	-0.1495*** (-9.02)	-0.1622*** (-9.03)	-0.1616*** (-8.83)	-0.1517*** (-8.69)	-0.1891*** (-6.66)	-0.1806*** (-6.69)	-0.1731*** (-7.40)	-0.1863*** (-6.97)	-0.1837*** (-6.95)	-0.1748*** (-7.30)
SIZE	0.0037 (0.82)	0.0077*** (4.33)	0.0045 (1.11)	0.0055 (1.38)	0.0091*** (4.29)	0.0055 (1.44)	0.0043 (1.07)	0.0085*** (6.27)	0.0053 (1.49)	0.0059 (1.60)	0.0097*** (5.55)	0.0062* (1.76)
LIQUID	0.0164 (0.23)	0.0237 (0.34)	0.0308 (0.39)	0.0291 (0.34)	0.0272 (0.35)	0.0331 (0.39)	0.0104 (0.15)	0.0189 (0.28)	0.0258 (0.33)	0.0231 (0.28)	0.0229 (0.31)	0.0287 (0.35)

[illegible]

Table 10. Trade volume: pair sales change

This table reports estimates of the impact of supplier SEC investigations on trade volume. $\Delta\text{PSALES}[0,2]$ is the change in pair-level sales from year t to $t+2$. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	$\Delta\text{PSALES}[0,2]$			
INV_ALL	-0.8065*** (-7.43)		-0.6851*** (-6.60)	
INV_NON_DISC		-0.7467*** (-4.86)		-0.7067*** (-3.25)
INV_EARLY_DISC		-0.9333*** (-5.26)		-0.7308*** (-4.92)
INV_LATE_DISC		-0.4062** (-2.41)		-0.3392*** (-2.85)
ROA	-1.4952 (-1.53)	-1.4918 (-1.57)	-0.7735 (-1.09)	-0.7581 (-1.12)
SIZE	-0.0492 (-1.26)	-0.0462 (-0.98)	-0.0856 (-1.66)	-0.0897 (-1.34)
LIQUID	-0.9313 (-1.14)	-0.9790 (-1.14)	-0.9925 (-1.46)	-1.0360 (-1.45)
LEV	0.2024 (1.15)	0.1755 (1.04)	-0.0113 (-0.09)	-0.0336 (-0.27)
MTB	-0.0157*** (-2.73)	-0.0151** (-2.62)	-0.0216*** (-3.10)	-0.0212*** (-2.98)
TANG	-1.3561 (-1.23)	-1.4059 (-1.30)	-1.5861 (-1.53)	-1.5995 (-1.58)
CASH	1.2996 (1.58)	1.2436 (1.59)	1.6667** (2.03)	1.6103** (2.07)
NUM_CUSTOMER	-0.2815** (-2.41)	-0.2686** (-2.29)	-0.5193 (-1.42)	-0.5087 (-1.43)
CUS_PROIR_INV	-0.1323* (-1.78)	-0.0851 (-0.83)	-0.1869 (-1.29)	-0.1789 (-0.91)
CONSTANT	2.3619*** (3.12)	2.3665*** (2.83)	2.8991** (2.48)	2.9507** (2.27)
R-squared	0.4629	0.4630	0.4294	0.4294
N. of Obs.	9262	9262	9262	9262
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 11. Trade volume: pair sales to customers' cogs

This table reports estimates of the impact of supplier SEC investigations on trade volume. $\Delta\text{PSALES2COGS_C}[0,2]$ is the change in the ratio of pair-level sales to customer's cost of goods sold from year t to $t+2$. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	$\Delta\text{PSALES2COGS_C}[0,2]$			
INV_ALL	-0.5229*** (-4.97)		-0.4488*** (-7.84)	
INV_NON_DISC		-0.5351*** (-7.15)		-0.5189*** (-3.39)
INV_EARLY_DISC		-0.5438*** (-2.83)		-0.4045** (-2.30)
INV_LATE_DISC		-0.3487* (-1.73)		-0.3508*** (-2.91)
ROA	-1.6151* (-1.81)	-1.6117* (-1.86)	-0.7242 (-1.25)	-0.7091 (-1.31)
SIZE	-0.0492 (-1.23)	-0.0519 (-1.05)	-0.1022* (-1.75)	-0.1096 (-1.45)
LIQUID	-1.0025 (-1.38)	-1.0253 (-1.32)	-0.9046* (-1.79)	-0.9290* (-1.69)
LEV	0.1376 (0.97)	0.1180 (0.79)	-0.1406 (-1.03)	-0.1508 (-1.04)
MTB	-0.0146*** (-3.11)	-0.0144*** (-2.94)	-0.0227*** (-3.23)	-0.0228*** (-3.05)
TANG	-1.5992 (-1.53)	-1.5937 (-1.56)	-1.8260* (-1.74)	-1.8005* (-1.79)
CASH	1.2779 (1.56)	1.2329 (1.53)	1.6554** (2.13)	1.6382** (2.08)
NUM_CUSTOMER	-0.4215* (-1.88)	-0.4185* (-1.89)	-0.6898 (-1.27)	-0.6890 (-1.27)
CUS_PROIR_INV	-0.5248* (-1.70)	-0.5158 (-1.52)	-0.5899 (-1.33)	-0.6121 (-1.21)
CONSTANT	2.3522** (2.69)	2.3877** (2.47)	3.0202** (2.16)	3.0855* (2.01)
R-squared	0.4472	0.4472	0.4070	0.4070
N. of Obs.	8968	8968	8968	8968
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 12. Trade credit

This table reports estimates of the impact of supplier SEC investigations on trade credit. $\Delta\text{TRADE_CREDIT}[0,2]$ is the change in pair-level trade credit (accounts receivable to sales ratio) from year t to $t+2$. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	$\Delta\text{TRADE_CREDIT}[0,2]$			
INV_ALL	-0.0361 (-1.38)		-0.0488 (-1.48)	
INV_NON_DISC		-0.0122 (-0.66)		-0.0201 (-0.78)
INV_EARLY_DISC		-0.0676* (-1.82)		-0.0856* (-1.91)
INV_LATE_DISC		0.0462* (1.74)		0.0422 (1.61)
ROA	0.2586** (2.28)	0.2667** (2.32)	0.3331** (2.10)	0.3429** (2.13)
SIZE	-0.0145* (-1.76)	-0.0140* (-1.83)	-0.0171* (-1.82)	-0.0163* (-1.84)
LIQUID	-0.2391* (-2.00)	-0.2264* (-2.01)	-0.2482** (-2.27)	-0.2325** (-2.30)
LEV	0.0407*** (3.55)	0.0468*** (4.20)	0.0261 (1.67)	0.0341** (2.50)
MTB	0.0001 (0.39)	0.0001 (0.61)	0.0001 (0.70)	0.0001 (0.80)
TANG	-0.1456*** (-2.78)	-0.1471** (-2.34)	-0.1614*** (-2.99)	-0.1625** (-2.47)
CASH	0.3865** (2.15)	0.3730** (2.14)	0.4561** (2.15)	0.4402** (2.15)
NUM_CUSTOMER	-0.0699 (-1.01)	-0.0696 (-1.03)	-0.1008 (-1.08)	-0.1003 (-1.11)
CUS_PROIR_INV	0.0956*** (5.33)	0.1121*** (5.45)	0.1031*** (5.74)	0.1218*** (5.65)
CONSTANT	0.2668 (1.50)	0.2555 (1.51)	0.3285 (1.56)	0.3133 (1.56)
R-squared	0.0729	0.0732	0.0803	0.0805
N. of Obs.	8434	8434	8440	8440
Industry-pair-year FE	Yes	Yes	Yes	Yes
Customer-year FE	Yes	Yes	Yes	Yes

Table 13. Real impact on customers left: COGS

This table reports estimates of the impact of customers' exit due to SEC investigations on customers' performance. $\Delta\text{COGS_C}[0,2]$ is the change in the customer's cost of goods sold from year t to $t+2$. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	$\Delta\text{COGS_C}[0,2]$			
INV_ALL * BREAK_LINK	-0.2460*		-0.3556*	
	(-1.74)		(-1.73)	
INV_ALL	0.0496		0.0711*	
	(1.52)		(1.67)	
INV_NON_DISC* BREAK_LINK		-0.2513*		-0.3621*
		(-1.69)		(-1.69)
INV_EARLY_DISC* BREAK_LINK		-0.2244*		-0.3286*
		(-1.68)		(-1.70)
INV_LATE_DISC* BREAK_LINK		-0.2877		-0.4071
		(-1.38)		(-1.52)
INV_NON_DISC		0.0428		0.0602
		(1.11)		(1.36)
INV_EARLY_DISC		0.0475		0.0711*
		(1.54)		(1.69)
INV_LATE_DISC		0.1043		0.1354
		(1.29)		(1.42)
BREAK_LINK	0.2510*	0.2500*	0.3676*	0.3665*
	(1.74)	(1.73)	(1.73)	(1.72)
SIZE_C	0.0932	0.0935	0.1014	0.1019
	(0.81)	(0.81)	(0.98)	(0.98)
LIQUID_C	-1.6640	-1.6698	-1.2202	-1.2265
	(-1.05)	(-1.05)	(-0.81)	(-0.81)
LEV_C	0.9166	0.9176	0.7862	0.7874
	(1.14)	(1.14)	(1.10)	(1.10)
MTB_C	0.0000	0.0000	0.0000	0.0000
	(0.73)	(0.72)	(0.63)	(0.62)
TANG_C	0.4917	0.4963	0.7306	0.7364
	(0.65)	(0.65)	(0.92)	(0.92)
CASH_C	3.5462	3.5634	3.1387	3.1597
	(1.03)	(1.03)	(0.94)	(0.94)
ROA_C	0.3972	0.3841	-1.4695	-1.4870
	(0.13)	(0.13)	(-0.45)	(-0.46)
CUS_PROIR_INV	0.0753	0.0744	0.0373	0.0360
	(0.76)	(0.76)	(0.38)	(0.37)
CONSTANT	-1.1546	-1.1576	-1.1362	-1.1411

	(-0.80)	(-0.79)	(-0.87)	(-0.87)
R-squared	0.6598	0.6598	0.6584	0.6584
N. of Obs.	29183	29183	29187	29187
Industry-pair FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	Yes	Yes	Yes

Table 14. Real impact on customers left: EBITDA

This table reports estimates of the impact of customers' exit due to SEC investigations on customers' performance. $\Delta\text{EBITDA_C}[0, 2]$ is the change in the customer's EBITDA from year t to $t+2$. All variables are defined in Appendix. t -statistics (in parentheses) are based on robust standard errors clustered by supplier industry at the two-digit SIC level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	PSM Sample		Entropy Sample	
	$\Delta\text{EBITDA_C}[0, 2]$			
INV_ALL * BREAK_LINK	0.2543*		0.3680*	
	(1.78)		(1.78)	
INV_ALL	-0.0549		-0.0767*	
	(-1.63)		(-1.77)	
INV_NON_DISC* BREAK_LINK		0.2622*		0.3750*
		(1.75)		(1.75)
INV_EARLY_DISC* BREAK_LINK		0.2227		0.3322*
		(1.61)		(1.70)
INV_LATE_DISC* BREAK_LINK		0.3105		0.4371
		(1.46)		(1.62)
INV_NON_DISC		-0.0558		-0.0717
		(-1.38)		(-1.59)
INV_EARLY_DISC		-0.0489		-0.0741*
		(-1.47)		(-1.70)
INV_LATE_DISC		-0.0924		-0.1259
		(-1.13)		(-1.31)
BREAK_LINK	-0.2667*	-0.2650*	-0.3838*	-0.3821*
	(-1.84)	(-1.83)	(-1.79)	(-1.79)
SIZE_C	-0.0774	-0.0775	-0.0917	-0.0921
	(-0.66)	(-0.66)	(-0.86)	(-0.86)
LIQUID_C	2.4333	2.4341	1.9700	1.9717
	(1.43)	(1.43)	(1.21)	(1.21)
LEV_C	-0.3874	-0.3880	-0.3403	-0.3415
	(-0.37)	(-0.37)	(-0.36)	(-0.36)
MTB_C	-0.0000	-0.0000	-0.0000	-0.0000
	(-0.61)	(-0.62)	(-0.52)	(-0.52)
TANG_C	0.3475	0.3411	0.0847	0.0776
	(0.34)	(0.33)	(0.08)	(0.07)
CASH_C	-3.0779	-3.0927	-2.8900	-2.9089
	(-0.88)	(-0.88)	(-0.86)	(-0.86)
ROA_C	-1.5834	-1.5733	0.2235	0.2384
	(-0.51)	(-0.50)	(0.07)	(0.07)
CUS_PROIR_INV	-0.3535	-0.3537	-0.2243	-0.2240
	(-1.18)	(-1.18)	(-1.08)	(-1.08)
CONSTANT	0.5418	0.5453	0.6416	0.6475

	(0.34)	(0.34)	(0.45)	(0.45)
R-squared	0.6260	0.6260	0.6362	0.6362
N. of Obs.	29172	29172	29176	29176
Industry-pair FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Customer FE	Yes	Yes	Yes	Yes

Appendix. Variable definitions

Variable	Definition	Source
BREAK_LINK	Indicator variable that equals 1 if the supplier-customer relationship is active in year t but inactive in year t+1, and 0 otherwise.	Compustat Segment
INV_ALL	Indicator variable that equals 1 if the SEC has an open investigation on the supplier firm in the year, and 0 otherwise.	SEC FOIA Request (Blackburne et al.,2020)
INV_NON_DISC	Indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is not publicly disclosed, and 0 otherwise.	SEC FOIA Request (Blackburne et al.,2020)
INV_EARLY_DISC	Indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed within one year, and 0 otherwise.	SEC FOIA Request (Blackburne et al.,2020)
INV_LATE_DISC	Indicator variable that equals 1 if the SEC opens an investigation on the supplier in the year and it is publicly disclosed after one year, and 0 otherwise.	SEC FOIA Request (Blackburne et al.,2020)
ROA	The ratio of earnings before interest, taxes, depreciation and amortization to the total book assets, representing the return on assets. $[EBITDA / AT]$	Compustat
SIZE	The natural logarithm of a firm's market value of equity. $[PRCC * CSHO]$	Compustat
LIQUID	The liquidity of the firm. $[(CHE+RECT) / AT]$	Compustat
LEV	The financial leverage of the firm. $[(DLTT + DLC) / AT]$	Compustat
MTB	The market-to-book ratio of the firm. $[(PRCC * CSHO) / CEQT]$	Compustat
TANG	The tangibility of a firm's assets. $[PPENT / AT]$	Compustat
CASH	The proportion of cash to total book assets. $[CH / AT]$	Compustat
NUM_CUSTOMER	The natural logarithm of one plus the number of customers a supplier has in a given year.	Compustat Segment
CUS_PROIR_INV	Indicator variable that equals 1 if the SEC opens an investigation on the customer in the year prior to the current year, and 0 otherwise.	SEC FOIA Request (Blackburne et al.,2020)
HO_BUSY	The number of open enforcement cases in the SEC's home office (Washington, DC), measured as of the end of the month prior to the earlier of (1) the supplier's fiscal year-end or (2) the initiation of an SEC investigation. For example, if the fiscal year ends in September 2010 and no investigation is initiated, the backlog is measured as of August 31, 2010; if an investigation starts in August 2010, it is measured as of July 31, 2010.	SEC FOIA Request (Blackburne et al.,2020)

RO_BUSY	The number of open enforcement cases in the SEC regional office with jurisdiction over the supplier's headquarters location, measured as of the end of the month prior to the earlier of (1) the supplier's fiscal year-end or (2) the initiation of an SEC investigation. For example, if the fiscal year ends in September 2010 and no investigation is initiated, the backlog is measured as of August 31, 2010; if an investigation starts in August 2010, it is measured as of July 31, 2010.	SEC FOIA Request (Blackburne et al.,2020)
PROMOTIONR	The promotion rate at the SEC regional office-year level, calculated as the number of lawyer promotions within a regional office over the next two years divided by the number of lawyers employed in the current year. A promotion is inferred from an increase in an employee's SK-pay scale ranking.	OPM FOIA Request
TURNOVERR	The turnover rate at the SEC regional office-year level, calculated as the number of lawyer turnovers within a regional office over the next two years divided by the number of lawyers employed in the current year. A turnover is inferred from the final year a lawyer appears in SEC payroll records.	OPM FOIA Request
TRADE_CREDIT	The ratio of pair-level accounts receivable to pair-level sales for the supplier-customer relationship.	Freeman (2025)
CUS_DEPEND	The ratio of pair-level sales to the customer's cost of goods sold: (PSALES / COGS_C).	Compustat Segment
SUP_DEPEND	The ratio of pair-level sales to the supplier's total sales. [PSALES / SALE].	Compustat Segment
NEW_CEO	Indicator variable that equals 1 if the supplier firm appoints a new CEO in the year, and 0 otherwise.	Compustat Execucomp
SHARED_DIRECTOR	Indicator variable that equals 1 if the supplier and customer share at least one common board director in the year, and 0 otherwise.	BoardEx
COM_INS_OWNER	Indicator variable that equals 1 if the supplier and customer have at least one common institutional owner (based on 13F filings) in the year, and 0 otherwise.	Institutional (13F)
SEO	Indicator variable that equals 1 if the supplier firm conducts a seasoned equity offering in the year, and 0 otherwise.	SDC
AD	The natural logarithm of one plus advertising expenses.	Compustat
NUMEST	The number of analyst earnings estimates for the supplier firm in the year.	IBES
Δ PSALES[0,2]	The change in pair-level sales from year t to t+2: [PSALES(t+2) - PSALES(t)].	Compustat Segment
Δ PSALES2COGS_C[0,2]	The change in the ratio of pair-level sales to customer's cost of goods sold from year t to t+2: [PSALES2COGS_C(t+2)] - PSALES2COGS_C(t)].	Compustat Segment
Δ TRADE_CREDIT[0,2]	The change in pair-level trade credit (accounts receivable to sales ratio) from year t to t+2: [TRADE_CREDIT(t+2) - TRADE_CREDIT(t)].	Freeman (2025)

$\Delta\text{COGS_C}[0,2]$	The change in the customer's cost of goods sold from year t to t+2: $[\text{COGS_C}(t+2) - \text{COGS_C}(t)]$.	Compustat
$\Delta\text{EBITDA_C}[0,2]$	The change in the customer's EBITDA from year t to t+2: $[\text{EBITDA_C}(t+2) - \text{EBITDA_C}(t)]$.	Compustat
