Do Insurers Listen to Earnings Conference Calls? Evidence from the Corporate Bond Market

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Abstract

We provide novel evidence that insurance companies, who operate under tight regulatory constraints set by the National Association of Insurance Commissioners (NAIC), sell more of BBB- rated (the lowest investment-grade) bonds issued by firms with more negative earnings conference calls. Their trades in the wake of the soft information revealed in conference calls have incremental predictability for future bond downgrades. Consistent with the regulatory constraints, insurance companies particularly react to information related to default risks in the calls. There are broader market implications: insurance companies' trading on conference call tone alleviates fire sale pressures when BBB- rated bonds become fallen-angles in the future and gradually spillovers over to trading of BBB- rated bonds issued by private industry peers.

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Abstract

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Keywords: BBB- rated corporate bonds, insurance companies, earnings conference calls, linguistic tone, default risks

JEL Classifications: G14, G22, M40, D83

1. Introduction

Insurance companies are the largest domestic investors in the US corporate bond market, with a collective holding of 30% at the end of 2019.[1] Their impacts on corporate bond yield (Nanda, Wu, and Zhou, 2019; Chen, Sun, Yao, and Yu, 2020) and liquidity (Chen, Huang, Sun, Yao, and Yu, 2020; Huang, Li, Sağlam, and Yu, 2025) are non-negligible. Existing literature largely focuses on the bond trading by insurance company under regulatory constraints, while ignoring their active trading motivations and consequences. We attempt to fill the gap.

Insurance companies have a comparative advantage in holding and trading illiquid bonds due to the long-term nature of their liabilities. As buyers of last resort, insurance companies provide liquidity, and support bond market resiliency especially during crises (Chodorow-Reich, Ghent, and Haddad, 2021; Coppola, 2025; O'Hara, Rapp, and Zhou, 2025). However, the National Association of Insurance Commissioners (NAIC) and states set tight regulatory constraints for insurance companies when they hold risky bonds.[2] The regulatory constraints become extremely costly when their holding bonds are downgraded, for example from BBB- to BB+, leading to fire sale in the corporate bond market. Thus, we hypothesize that insurance companies would actively analyze and react to information and allocate portfolios strategically beforehand to avoid future fire sale. We test this hypothesis by examining how insurance companies trade BBB- rated bonds, one notch above junk bond,[3] around corporate earnings conference calls.

Earnings conference calls contain rich information about management's outlook for firms' future earnings and sales growth (Chapman and Green, 2018; Kimbrough and Louis, 2011; and Allee, Cating, and Rawson, 2023). The literature has shown that these calls are a primary channel through which managers discuss and disseminate the latest financial and other information to investors and analysts, and contain information that is additive to the more backward-looking

[1] According to data from SIFMA and S&P Global Market Intelligence, U.S. and foreign corporations had about $9 trillion of corporate bonds outstanding in the U.S. corporate bond market by the end of 2019. U.S. insurers held about $3 trillion of these corporate bonds.

[2] NAIC risk-based capital rules impose steeply escalating capital charges as the bond credit risk increases. For example, the capital requirements are 1% for NAIC 2-designated (BBB+, BBB, and BBB- rated) bonds, while sharply increasing to 4.5% for the holdings of NAIC 3-designated (BB+, BB, and BB-) bonds. In addition, different states may impose different levels of regulation on how much junk bonds an insurer could hold. The state-level "basket clause" provisions typically restrict holdings of non-invest-ment-grade assets to around 5-10% of an insurer's admitted assets (e.g., the Ohio state).

[3] Bonds rated BBB+ and BBB can also be downgraded to fallen angles if the rating decreases more than one notch. However, S&P Global Ratings has documented that the highest proportions of rating changes for either a rating category or rating level occur at adjacent rating categories and rating levels. That is to say, the majority of the downgrades are within one step. Source: https://maalot.co.il/Publications/FTS20250331162126.pdf.

earnings and sales achievements typically derived from the hard quarterly earnings numbers conveyed in corporate filings and press releases (see, e.g., Bagnoli and Watts, 2005; Chapman and Steenburgh, 2011; Matsumoto, Pronks, and Roelofsen, 2011; Blau, Delisle, and Price, 2015; and Li and Ramesh, 2009). Moreover, the qualitative information disclosed in conference calls captures incremental information about the firm's credit risk relative to prior credit risk measures and explains within-firm variation in future credit events (Donovan, Jennings, Koharki, and Lee, 2021).

With a sample of daily corporate bond transactions by insurance companies from January 2002 to December 2021, we show that insurance companies are more likely to sell a BBB- rated bond when the tone of issuer's conference call is more negative. Specifically, we analyze insurance companies' trading of BBB- rated bonds in the wake of an issuer's conference call by implementing bond-day panel regressions that include a set of control variables, as well as bond and day fixed effects. We measure the qualitative information contained within conference calls with the "net negative tone," defined as the standardized overall sentiment measure in Hassan, Hollander, Van Lent, and Tahoun (2019), multiplied by -1 (so that a higher score is associated with a more negative tone).

We find that a one-standard-deviation increase in the net negative tone of an issuer's conference call is associated with an increase of 3-basis-points (bps) in the net selling of BBB-rated bonds of that issuer by insurance companies, calculated as daily aggregate selling minus aggregate buying of a bond scaled by its issuing size, in five trading days following the call. Further, insurers' net selling of BBB- rated bonds in reaction to a more negative call accumulates and doubles over 40 trading days following the call, with no evidence of significant reversals afterwards. The impact of the net negative tone on BBB- rated bond selling by insurance companies is robust to same-bond and same-firm stock controls, and is not absorbed by tone measures of mandated firm reports like 10-Q, 10-K filings, and general firm news.[4] We also verify that insurance companies' trading in response to the conference call tone is not driven by a simple delayed reaction to past bond rating changes, nor to stock market returns.[5]

[4] Consistent with the muted effects of mandatory reports on stock markets (Li and Ramesh, 2009), we find that insurance companies do not significantly respond to text-based information in 10-K and 10-Q files.

[5] NAIC and state regulatory requirements limit insurance portfolio allocations to equity. They maintain relatively small allocations to common stocks in their investment portfolios—13.2% at year-end 2022, and tend to be fairly risk-averse equity investors. Given U.S. insurers' modest equity exposure and restrained trading activity, it is unlikely that their bond trading behavior is driven by spillovers from the stock market. In addition, if the trading of BBB- rated

We take a step further to understand the unique information in the conference call tone valuable to insurance companies. Insurance companies are expected to particularly care about credit risks due to regulatory constraints imposed by NAIC. We show corroborating evidence that the conference call tone reflects incremental information about future bond downgrades, which is supposed to be utilized by insurers to trade BBB- rated bonds. Specifically, in the year following the call, BBB- rated bonds issued by firms with more negative conference calls are more likely to be downgraded. Moreover, those heavily sold by insurance companies in response to the more negative tone have much higher probabilities of becoming fallen angels. This finding suggests that insurance companies indeed take advantage of the information related to default risks from conference calls by "selling on bad news".

To directly capture such default-related information, we then construct a default-topic words dictionary from documents, including textbooks and annual reports from credit rating companies, by manually selecting default-related words based on word frequency and topic relevance. Motivated by Hassan et al. (2019), we divide each conference call transcript to the sentence level and transfer the whole articles into a list of bigrams (i.e., all adjacent two-word combinations). The default-related tone is calculated for bigrams having at least one word belonging to the default-topic words dictionary following the method in Hassan et al. (2019). At last, we separate the overall net negative tone into a default-related component and a residual term, and replicate baseline regressions with these two orthogonal components. Evidence suggests that insurance companies trade solely on the default-related component in conference call tone, while ignoring the residual information. A one-standard-deviation increase in the default-related component is associated with a 9-bps increase in net selling by insurance companies over 40 trading days following the call.

We expect insurance companies to be more sensitive to information in conference calls when publicly available information about the bond is limited and when they have high exposure to regulatory constraints. To explore the hypothesis, we turn to cross-sectional heterogeneity tests. We find insurers' selling based on more negative conference calls is stronger for more illiquid BBB- rated bonds, and weaker for those issued by firms followed by a larger number of analysts. In other words, for BBB- rated bonds with higher (lower) levels of information asymmetry, the

bonds stem from information from equity market, bond mutual funds are supposed to respond actively to the conference call tone. However, using quarterly holding change as the proxy for funds' trading of corporate bonds, we do not find significant selling of bonds with negative conference calls by mutual funds.

default-related information in conference calls is more (less) valuable for insurance companies. Besides, the effect of conference call tone on insurers' trading of BBB- rated bonds is more pronounced among insurance companies with lower portfolio rating, a higher proportion of BBB-rated bonds in their portfolios, and higher leverage. Besides, compared to life and health (L&H) insurers, property and casualty (P&C) insurers, who are inclined to take on more credit risks due to less predictable liabilities with high tail risk, actively react to conference calls.

Given the essential role of insurance companies in the US corporate bond market, it is important to investigate the real impacts of their trading in response to the qualitative information conference calls on the underlying market. Here, we provide novel evidence that the conference call tone stabilizes the bond market by alleviating fire sales due to fallen angel downgrades. Specifically, insurers' selling of bonds with more negative calls mitigates the downward price pressure when the BBB- rated bonds are downgraded to non-investment-level in the future. In addition, the selling of BBB- rated bonds by insurance companies in response to the conference call tone slowly spills over to their trading of BBB- rated bonds issued by private industry peers.

Our paper makes several important contributions to the literature. First, we challenge the conventional view that insurance companies are passive investors by providing evidence that they actively process information, particularly default-related insights from corporate earnings conference calls. In addition, their trading of BBB- rated bonds based on conference call tone is informative, exhibiting incremental prediction power for future bond downgrades, which provides an additional useful signal for other investors in the corporate bond market, such as the quantitative bond mutual funds, to predict credit rating changes of corporate bonds.

Second, insurance companies extend the information extracted from public firms' conference calls to their trading of bonds issued by private firms within the same industry. This finding contributes to the growing literature on spillover effects from public to private firms (e.g., Shroff, Verdi, and Yost, 2017; Badertscher, Shroff, and White, 2013). Our evidence underscores the significant role of insurance companies in information acquisition in the corporate bond market.

We also shed light on the informational role of earnings conference calls in the US corporate bond market, a dimension largely overlooked in prior research. While existing studies primarily focus on the equity market—such as Frankel, Johnson, and Skinner (1999), who document heightened equity trading volume around conference calls, and Huang and Wermers (2025), who examine institutional investors' use of conference call sentiment for equity price discovery—we

highlight the conference call as an important information source utilized by the largest corporate bond investors, or insurance companies. Information contained in conference calls can help insurers strategically allocate their portfolios beforehand and mitigate bond market fragility associated with fire sales triggered by fallen angel downgrades, complementing findings in Ellul, Jotikasthira, and Lundblad (2011) that the insurance industry turns from net buyers to net sellers of the fallen angels 20 weeks before fallen angel downgrades. Moreover, we decompose the overall conference call tone and show that the component related to default risks guides insurers' trading decisions. In doing so, we extend study of Donovan et al. (2021) to the corporate bond market, who show that qualitative information from earnings conference calls explains variations in firm's credit risk.

Our work distinguishes itself from related studies, such as Huang, Wermers, and Xue (2025), who examine corporate bond mutual funds' trading around social media-driven corporate news. Our paper differs in three key ways. First, we analyze the trading behavior of insurance companies facing strict regulations implemented by NAIC and states, compared to bond mutual funds who are vulnerable to investor redemptions. Second, we focus on earnings conference calls instead of media news, which directly capture managers' emotional sentiments and their interactions with investors and analysts and provides an outlook for firm prospects. Third, we decompose the overall conference call tone and identify the component connected with default-related information, which is particularly relevant to insurance company investment decisions.

The rest of our paper is structured as follows. Section 2 describes our data and sample. Section 3 examines the relationship between the earnings conference call tone and insurance companies' trading of BBB- rated corporate bonds. Section 4 investigates the predictability of insurers' trading in response to conference call tone for future fallen angel downgrades, examines the specific information in conference calls valuable to insurance companies, and conducts cross-sectional tests based on heterogeneities in the BBB- rated bonds and insurance companies. Section 5 studies the impact of insurers' trading on conference call tone on the underlying corporate bond market. Section 6 concludes.

2. Data, Variable Construction, and Summary Statistics

2.1. Data and Sample

Our study combines data from several sources, and assembles a comprehensive bond-day panel from January 2002 to December 2021. Our primary linguistic tone measure of earnings conference calls is based on the sentiment measure in Hassan et al. (2019).[6] They construct an overall sentiment measure by analyzing the entire conference call transcript, defined as the number of positive words minus the number of negative words based on Loughran and McDonald (LM, 2011) sentiment dictionary, divided by the total number of words in the transcript.[7] Specifically, the sentiment of the conference call for firm j on day t is calculated as follows:

$$Sentiment_{j,t} = \frac{\sum_{b=1}^{B_{j,t}} S(b)}{B_{j,t}}, \quad (1)$$

where $S(b)$ is an indicator function that assigns a value of +1 (-1) if the word b is associated with positive (negative) sentiment, and zero, otherwise. We define the net negative tone (Neg_net) as the sentiment measure multiplied by -1, so that a higher score corresponds to a more negative earnings conference call. Following Hassan et al. (2019), we cap the tone measure at the 1st and 99th percentiles, then standardize it to a distribution with a mean of zero and standard deviation of one in the full sample.

Mergent Fixed Income Securities Database (FISD) provides comprehensive data on debt issues. It contains specific bond information, such as coupon rate, interest payment frequency, issue date, maturity date, issuing size, and bond rating. We focus on fixed-rate bonds, and exclude bonds that are preferred, exchangeable, puttable, convertible, or perpetual. We also exclude mortgage-backed, asset-backed, agency-backed and equity-linked securities, Yankees, Canadians, and issues denominated in foreign currency. In addition, FISD also has detailed daily purchases and sales records by insurance companies mandated by NAIC. To retain sales motivated by information, we exclude any security disposals due to maturity, repayment, calls, or other non-trading activities.

Furthermore, following the existing literature, we exclude newly-issued and near-maturity bonds (i.e., time-since-issuance or scheduled maturity within six months), as their trading patterns are likely to be driven by mechanical factors (e.g., "rolling over" to a longer-term bond). We also

[6] The data has been widely used in recent studies, such as Ho, Kagkadis, and Wang (2024) on the equity option market and Gad, Nikolaev, Tahoun, and Van Lent (2022) on credit markets.

[7] We thank the authors of Hassan et al. (2019) for generously providing the overall sentiment data online: https://www.firmlevelrisk.com/download.

obtain firm-level equity information from CRSP, COMPUSTAT, and I/B/E/S databases. After matching issue and issuer data with the conference call tone, there are 2,406 unique BBB- rated bonds issued by 424 public firms, and the final sample contains 7,118 earnings calls.

2.2. Summary Statistics

Table 1 presents summary statistics for variables in our sample. Panel A (B) is based on bond-day (firm-day) observations.

[Insert Table 1 about here]

The BBB- rated bonds in our sample, on average, have a time-to-maturity slightly greater than 9 years, a time-since-issuance of nearly 6 years, and a coupon rate of nearly 6 percent. The average bond issuing size is about $478 million. These characteristics are comparable to the entire corporate bond universe during the sample period.

The key independent variable, the net negative tone measure of earnings conference calls, is relatively evenly distributed. The issuers on average are large firms with a high stock institutional ownership (79%) and are followed by nearly 13 financial analysts. The standardized unexpected earnings (SUE), defined as the net income of the quarter minus that of four quarters ago divided by the standard deviation of quarterly net income over the past four years, is more volatile than the public firm universe with a standard deviation of about 24%.

3. The Effects of Conference Call Tone on Insurance companies' trading

We note that the insurance industry has experienced a technological revolution over the past couple of decades. Emerging capabilities such as telematics, artificial intelligence, big data, aerial imaging, and claims automation have become more prevalent, as insurers have doubled down on using technology for optimization of both cost and processes.[8] Text mining has been an important tool for insurer investments and partnerships. It is reasonable to conjecture that insurance companies utilize information in unstructured texts for investing.

Insurance companies are strictly restricted by NAIC and face exponentially increasing capital charges as the holding bond credit risk increases. For example, the capital requirements would

[8] Source: https://www.mckinsey.com/industries/financial-services/our-insights/insurance-blog/insurtechs-are-increasingly-ripe-for-insurer-investments-and-partnerships.

jump from 1% for NAIC 2-designated (BBB+, BBB, and BBB- rated) bonds, while exponentially increasing to 4.5% for NAIC 3-designated (BB+, BB, and BB-). Previous studies have shown that insurance companies fire sale bonds that are downgraded to non-investment level. Given that most downgrades are within one step and BBB- is only one notch away from non-investment-grade, we expect information-based insurance trading behaviours to be the strongest among BBB- rated bonds.[9]

Unlike mandatory disclosures of "hard information", the very nature of earnings conference calls allows managers to release information with a wide latitude of different connotations or tones. For example, managers may inflate good news (or mitigate bad news) when they read the prepared script at the beginning of the presentation. The subsequent unscripted discussion (i.e., the Q&A part) provides an important opportunity for managers and analysts to express their opinions about firm future prospects in a spontaneous way, acting as an additional layer of information. Indeed, previous literature has shown that conference calls contain more information than mandatory disclosures (Frankel, Johnson, and Skinner, 1999; Brown, Hillegeist, and Lo, 2004; and Price, Doran, Peterson, and Bliss, 2012). In this section, we aim to understand whether insurance companies react to the large amount of unstructured information in conference calls in trading BBB- rated corporate bonds.

3.1. Baseline Results

We investigate the relationship between the bond trading by insurance companies in aggregate and the tone of firms' conference calls by running the following bond-day panel regression:

$$Net\ selling_{i,[t,t+d]} = \alpha_1 + \beta_1 \times Neg\_net_{j,t} + \delta_1 \times controls_{i,t-1} + \vartheta_i + \mu_t + \epsilon_{i,t}, \qquad (2)$$

where $Neg\_net_{j,t}$ is the net negative tone of issuer j's earnings conference call taking place on day t. $Net\ selling_{i,[t,t+d]}$ is the cumulative net selling by insurance companies of bond i from day t to $t+d$, calculated as the difference between par value of selling and par value of buying by all insurance companies holding bond i scaled by its issuing size. Our sample focuses on BBB-rated bonds and is from January 2002 to December 2021.

[9] We also replicate the baseline regressions for different samples containing bonds rated BBB+, BBB, BB+, BB, and BB-, separately. For all of them, there are no significant effects of conference call tone on insurance companies' trading after the calls.

To address the concern that the tone measure may be potentially correlated with other non-observable bond-invariant or time-invariant characteristics, which might confound the relationship between insurance companies' trading and net negative tone, we include bond and day fixed effects. Time-varying bond level controls include time to maturity and age. According to Nozawa, Qiu, and Xiong (2024), there is a significant post-earnings announcement drift (PEAD) in the corporate bond market. Therefore, to rule out the possibility that the tone of conference calls is another proxy for the degree of firm earnings surprise, we control for SUE in the same quarter as the conference call. Other firm-level controls include the logarithm of firm size (Ln(stock size)), the logarithm of book-to-market ratio (Ln(BM)), the stock institutional ownership (IO), and the number of analysts (Analyst) following that stock.[10] Standard errors are calculated using two-way clustering at the bond and quarter levels. The results are reported in Table 2.

[Insert Table 2 about here]

After controlling for bond and stock characteristics, the net negative tone measure is significantly and positively related to aggregate net selling by insurance companies after issuers' earnings conference calls. In Column (2), in five trading days following the conference call, a one-standard-deviation increase in the net negative tone leads to a significant increase of 3-basis-points in net selling by insurance companies. The magnitude is economically significant given that the average of insurance company net selling in five trading days is only 1-bp. The impact remains significant and cumulates, reaching 6-bps over 40 trading days following the call.[11] In comparison, the insignificant coefficients on SUE after five trading days suggest that insurance companies do not continuously respond to the quantitative hard information in the earnings announcement.[12]

To better understand how the conference call tone affects insurance companies' trading behaviors, we conduct the above tests for insurance companies' buying and selling behaviors, separately. Results are shown in Appendix Table A1. We find that the tone significantly affects the selling side, while having no significant impact on the buying side (except for the conference call day). A one-standard-deviation increase in the net negative tone leads to an increase of nearly

[10] Please refer to the Appendix A for detailed definitions of all the variables.
[11] It is possible that insurers concentrating on different industries vary in the sensitivity to the conference call tone. For example, insurers with the investment focus on the technology industry may be more skilled at dealing with the unstructured information and conducting the textual analysis for conference calls. Accordingly, we further include industry fixed effects in the regressions, and the results remain unchanged.
[12] Using the measure of earnings surprise gives qualitatively unchanged results.

10-bps in cumulative selling by insurance companies over 40 trading days following the call, equivalent to 5% of its standard deviation (2%). Given that the average bond market capitalization is $478 million in our sample, 10-bps translates into a dollar impact of $478,000 more selling by insurance companies.

Does the impact of conference call tone on insurance companies' trading hold at the issuer level? To answer this question, we perform panel regressions at the firm-day level in Appendix Table A2. The dependent variable is the average net selling by insurance companies weighted by bond issuing size, or the sum of their net selling, across all BBB- rated bonds issued by the same firm over 40 trading days following the call. A one-standard-deviation increase in the net negative tone is associated with 12-bps (23-bps) increase in the weighted average (sum of) net selling by insurance companies of the issuer, equivalent to 7% (4%) of the corresponding variable's standard deviation.

3.2. Potentially Confounding Factors

In this sub-section, we address a set of potentially confounding factors, other than the conference call tone, which may compel insurance companies to trade BBB- rated bonds.

Sentiment measure from 10-K and 10-Q reports

First, we explore the potential confounding influence of mandated financial reports. To do so, we obtain the sentiment measure of 10-K and 10-Q reports from the "Readability and Sentiment" database from WRDS SEC Filings, which is calculated as the number of LM Financial-Negative deducted by the number of LM Financial-Positive words, divided by the total number of words in the document.[13] We include the sentiment measure in the quarter before the call as an additional control. To make the regression coefficients comparable, we standardize the sentiment variable to the standard deviation of one in the full sample.

Sentiment measure from general firm news

Next, to explore the potential confounding influence of general firm news releases, we utilize the ESS (news sentiment) score from the WRDS RavenPack database. ESS is a granular score that

[13] We match the measures from "Readability and Sentiment" database to our data with the help of CIK-CUSIP and CIK-GVKEY links.

represents the news sentiment for a given entity by measuring various proxies sampled from the news. It ranges from 0-100. Values of 50 indicate neutral sentiment, while values above (below) 50 indicate positive (negative) sentiment.[14] For each firm, we collect the average ESS score across all related news (relevance score = 100, NOVELTY score =100) at the daily level, and then average the daily scores during the same window as the dependent variable. For instance, if we are looking at cumulative net selling by insurance companies over the 10 trading days following the call, we average the issuer's ESS score across the same 10 trading days following the call. Finally, for the average ESS score lower (higher) than 50, the "Firm news sentiment" dummy is equal to 1 (-1), and zero otherwise.

Past bond downgrades and upgrades

Insurance trading behavior can be stimulated by bond rating changes. Therefore, we further control for dummies indicating bond downgrades and upgrades.[15] Specifically, the "Past upgrade (downgrade)" dummy is equal to one if the bond is upgraded (downgraded) in one quarter before a conference call.

Information from stock returns

There is a concern that the stock market quickly reacts to the soft information in earnings conference calls, and insurance companies trade bonds based on the information from equity price changes. We include past 1-month stock returns ("Past stock return") and cumulative daily stock returns in the corresponding window following the call in the regressions ("Contemporaneous stock return").

[Insert Table 3 about here]

In Table 3, after controlling for the above potentially confounding factors, the coefficients on the net negative tone remain significantly positive with magnitudes close to those in Table 2. Our finding that insurance companies sell BBB- rated bonds of firms with more negative conference

[14] Results are unchanged if we use the CSS score which represents the news sentiment of a given story by combining various sentiment analysis techniques.

[15] Data on historical rating changes by major rating agencies are obtained from Mergent FISD. Several rating agencies, including Standard & Poor's, Moody's, Fitch, and Duff & Phelps, provide credit rating for each bond. Rating agencies differ with respect to the timing of the rating. We follow the literature to define the rating change event as the date of the first downgrade or upgrade by a rating agency.

calls is robust after controlling for the sentiment measures of formal firm reports and general firm news. This is consistent with the literature stressing earnings conference calls as the additional source of information (Borochin, Cicon, DeLisle, and Price, 2018; Brown, Hillegeist, and Lo, 2004; Frankel, Johnson, and Skinner, 1999; Kimbrough, 2005; and Price et al., 2012, among others). Moreover, insurance companies' trading based on conference call tone is not a simple response to past rating changes, nor stock price changes.

4. Why do Insurance Companies Sell Bonds with More Negative Conference Calls?

Our findings in Section 3 suggest that insurance companies respond significantly to the linguistic tone of earnings conference calls when trading BBB- rated bonds. In this section, we conduct a detailed investigation of the potential motivation for such trading behaviours by examining the specific information contained in the conference call tone.

4.1. Information in the Earnings Conference Call Tone

Faced with strict regulatory constrains prescribed by NAIC, insurers are expected to especially care about default risks of the BBB- rated bonds, for being downgraded by one-notch to non-investment grade (NIG) would cause them to be subject to much higher capital requirements and to update portfolios to conform with NAIC regulations. In this sub-section, we firstly examine the prediction power of conference call tone together with insurers' trading for future bond default risks. Then, we explicitly separate the tone into a default-related component and an orthogonal residual term to more precisely identify the information in conference call tone used by insurance companies.

4.1.1. Predictability for Future bond default risks

There is sufficient evidence in the literature of investors gathering price (i.e., mean, the first moment) related information from the conference call tone. For instance, Price et al. (2012) demonstrate that the linguistic tone influences investor beliefs with a significantly positive relationship between optimistic call tones and stock returns. Guo, Ying, and Zeng (2023) document a positive relation between firm-specific investor sentiment measured by tone of earnings conference call transcripts and firm's value of cash.

However, there are fewer studies exploring the risk (i.e., variance, the second moment) related information contained in the tone. Borochin et al. (2018) find that measures of conference call tones are negatively related to investors' perceived price risk (i.e., value uncertainty) about firms generated from the equity options market. They demonstrate that the impact of conference call tones extends beyond the simple conveyance of expected value information to market participants to their perceptions of expected risk as well. Using supervised machine learning methods, Donovan et al. (2021) develop a text-based estimate of firm credit risk based on qualitative information disclosed in conference calls, which can explain within-firm variation in future credit events. We extend the evidence to the corporate bond market.

To examine whether conference calls provide any predictability for bond default risks, we regress future bond downgrades on the conference call tone. The dependent variable is a downgrade dummy (DG) equal to one if the BBB- rated bond is downgraded to NIG over the year following the call, and zero otherwise. DG dummy is multiplied by 100. In Column (1) of Table 4, we find that bonds with more negative conference calls are more likely to be downgraded in the future. For a BBB- rated bond, a one-standard-deviation increase in the net negative tone is associated with a 1.4-percentage-points higher probability of being downgraded to a non-investment grade level over the next year, equivalent to 6% of the standard deviation of the dependent variable.

[Insert Table 4 about here]

To observe the role of insurance companies' trading based on conference call tone, in Column (2), we interact the tone with the cumulative net selling by insurance companies after the call, measured over a window of the minimum between 40 trading days and the number of trading days between the call day and the downgrade day (if there is an IG-to-NIG downgrade).[16] The significantly positive coefficient on the interaction term suggests that insurance companies' trading in reaction to the conference call tone has incremental prediction power for future bond downgrades. A one-standard-deviation increase in the interaction term (2.29%) is associated with a 0.7-percentage-point increase in the bond downgrade probability over the next one year. Further, the significantly positive coefficient on the (non-interacted) term of net selling by insurance

[16] For example, if the downgrade happens on the 20th-trading (50th-trading) day following the call, the cumulative net selling by insurance companies is measured from the conference call day until the 19th-trading (40th-trading) day following the call.

companies suggests that insurance companies' trading itself has predictability for future bond default risks.[17] The results are consistent with the hypothesis that insurers are sensitive to the default-related information contained in the conference call tone. They extract value from earnings conference calls and trade before the BBB- rated bonds experience downgrades.

4.1.2. The Default-Related Component

To explicitly demonstrate that the earnings conference call tone serves as an additional information source of default risks for insurance companies, we separate the overall tone measure into two parts: information related to and orthogonal to default risks. If insurers care more about default risks, they should be more sensitive to the former.

We firstly collect more than 100 default-related documents such as credit-related textbooks and annual reports from credit rating companies. Words frequently used in default-related references are shown in Figure 1. The most commonly used word is "rating", followed by "credit," "service," and "information". Words of "debt," "downgrade," and "risk" also appear frequently. We then count word frequencies and manually select the default-related words based on the word frequency and topic relevance. Finally, we create a default-topic words dictionary. A cloud of the most frequent words in the default-related dictionary is provided in Figure 2, with the word list provided in Appendix Table A3. Words highlighted in red are those most frequently used and relevant, such as "downturn," "severity," "difficulty," "shortage," and "inflation".

[Insert Figure 1 about here]

[Insert Figure 2 about here]

Earnings conference call transcripts data are obtained from Capital IQ Transcripts, which provides historical conference call transcripts covering more than 8,000 public companies. The database records the details of each transcript, partitioned by the responses of chief and other top executives to each question asked by analysts or investors. Motivated by Hassan et al. (2019), we divide each transcript to the sentence level and transfer the whole articles into a list of bigrams (i.e., all adjacent two-word combinations), with necessary adjustments such as excluding stop

[17] Given that the average of "net_neg" measure in our sample is zero, a one-standard-deviation increase in the single term of "insurance net selling" (2.20%) leads to a 0.7-percentage-point increase in the bond downgrade probability over the year following the call, similar to the economic magnitude of the interaction term.

words, reducing a word to its word stem, and switching a word to its base root mode (i.e., lemmatization). We classify each bigram into a default-related group if the bigram has at least one word belonging to the default-topic words dictionary.[18]

For the group consisting of default-related bigrams, we calculate the corresponding net negative tone:

$$Net\_neg\_def_{j,t} = \frac{\sum_{b=1}^{B_{def,j,t}} S(b)}{B_{def,j,t}}, \quad (3)$$

where $B_{def,j,t}$ is the total number of bigrams in the default-related group of issuer j's earnings conference call on day t. $S(b)$ is an indicator function that assigns a value of +1 (-1) if the bigram b contains at least one word in the LM (2011) negative (positive) dictionary, and zero otherwise. The default-related net negative tone is then standardized to the standard deviation of one and mean of zero in the full sample.

The overall net negative tone is regressed on the default-related net negative tone at the issuer level as in Equation (4). In this way, the original overall tone $Net\_neg_{j,t}$ can be separated into two parts: the default-related component ($\gamma \times Net\_neg\_def_{j,t}$) and the residual term ($residual_{j,t}$) which does not contain information about default risks. We then run bond-day panel regressions of cumulative net selling by insurance companies over 40 trading days following the call on the two parts as in Equation (5).

$$Net\_neg_{j,t} = \gamma \times Net\_neg\_def_{j,t} + residual_{j,t}, \quad (4)$$

$$Net\ selling_{i,[t,t+40]} = \alpha_2 + \beta_2 \times Default - related\ component_{j,t} + \rho_2 \times residual_{j,t} + \delta_2 \times controls_{i,t-1} + \vartheta_i + \mu_t + \epsilon_{i,t}, \quad (5)$$

The result is shown in Column (1) of Table 5. Over 40 trading days following the call, a one-standard-deviation increase in the default-related component (0.66) is associated with an increase of 8-bps in net selling by insurance companies. In comparison, the coefficient on the residual term is insignificant.[19] The results suggest that it is the default-related information in conference call tone that is most salient to insurance companies.

[18] On average, the default-related bigrams count for 22% out of the total bigrams in the conference call transcripts.
[19] Results are similar if we regress cumulative net selling by insurance companies on the default-related component and the overall tone simultaneously. Only the coefficient on the default-related component is significant and positive.

[Insert Table 5 about here]

Sethuraman (2019) develops a credit risk dictionary, including words that are most commonly used by firms in providing credit risk-related information in the "Liquidity and Capital Resources" section of the MD&A, and that most commonly occur in the MD&A section of disclosures provided by firms that are tending toward a Chapter 11 or Chapter 7 bankruptcy filing. Nearly 22% of the words in Sethuraman (2019) are included in our default-related words dictionary, such as "severity," "difficulty," "rating," "deficit," "leverage," "volatility," and "liquidity." In comparison, our words dictionary is obtained from a broader default-related source including credit-related textbooks and annual credit rating reports. Therefore, our dictionary contains a broad range of meaningful default-related words including "downturn," "shortage," "distress," "risk," "constraint," "deterioration", etc.

For each conference call transcript, we recalculate the default-related tone and the two components (the default-related component and the residual term) using Sethuraman's credit risk dictionary and conduct Equation (5) with the new measures. Result is shown in Column (2) of Table 5. The coefficient on the default-related component is still significantly positive, with a lower magnitude than that of using our default-topic words dictionary. In the last column, we combine the two dictionaries and replicate the above procedures, and result is essentially unchanged.

4.2. Heterogeneities

In this section, we explore heterogeneities in bond trading by insurance companies in reaction to the earnings conference call tone, from two perspectives: 1) levels of information asymmetry of bonds (issuers), and 2) portfolio compositions and types of insurance companies.

4.2.1. Heterogeneities at Issue and Issuer Levels

So far, our findings suggest that conference call provides additional information about bond future default risks. If the bonds, or the issuers, have a higher degree of information asymmetry, the incremental information in the tone is supposed to be more valuable to insurance companies in making investment decisions for BBB- rated bonds. We consider two common attributes as proxies for information asymmetry: bond illiquidity and firm analyst coverage. The information asymmetry is supposed to be higher (lower) among bonds with higher illiquidity (bonds of firms

followed by more analysts). In each quarter, we define a dummy variable (high) indicating bond illiquidity or issuer analyst coverage ranked in the highest quintile cross-sectionally.

In Table 6, we interact the net negative tone measure with the high dummy, and include it in our baseline regressions. The positive impact of the tone on cumulative net selling by insurance companies is significantly stronger for BBB- rated bonds with lower liquidity, while weaker for those issued by firms followed by more analysts. For example, for a BBB- rated bond with illiquidity ranked in the highest quintile, a one-standard-deviation increase in the net negative tone leads to a significant increase of nearly 16-bps in net selling by insurance companies over 40 trading days after the conference call, more than double of the corresponding impact in the full sample. For BBB- rated bonds issued by firms most widely covered by analysts, the impact of conference call tone on insurance companies' net selling turns to negative. These results imply that, for BBB- rated bonds with a higher degree of information asymmetry, insurance companies more actively extract value from conference calls.

[Insert Table 6 about here]

4.2.2. Heterogeneities at the Insurer Level

Next, we explore whether insurers' responses to the conference call tone vary with respect to their portfolio compositions and financial conditions. Given that it is the default-related information in the tone that matters for insurance companies in trading BBB- rated bonds, we expect them to care more about the tone when they have riskier portfolios and higher capital constraints.

Here, we obtain quarterly insurance bond holdings from Thomson Reuters Lipper eMAXX, which is survivorship-bias free and contains quarter-end security-level corporate bond holdings of about 20,000 institutional investors, including insurance companies, mutual funds, pension funds, and so on. The eMAXX data on corporate bond holdings by insurance companies are nearly complete as they are based on insurance companies' regulatory disclosure to the NAIC.[20]

In each quarter for each bond in our sample, we sort the insurance companies with transaction records into equal halves based on certain characteristics. Specifically, the sorting variable is the par value-weighted average rating of all holding bonds and percentage of BBB- rated bonds in

[20] Thomson Reuters Lipper eMAXX is widely used in academic studies (Manconi, Rossi, and Yasuda, 2012; Cai, Han, Li, and Li, 2019, among others).

insurers' portfolios in Panels A and B of Table 7, respectively. In Panel C, we use insurers' leverage, calculated as total liabilities over net assets as the sorting variable. We then regress the aggregate net selling from the corresponding insurance companies over 40 trading days following the call on the net negative tone, for those insurers ranked in the top half (>P50) and bottom half (<P50) groups, respectively.

[Insert Table 7 about here]

Panels A and B of Table 7 demonstrate that insurers significantly react to conference call tone only when they hold portfolios with worse credit ratings and more BBB- rated bonds. That is to say, if there is already a high proportion of BBB- rated bonds in insurers' portfolios, they are more likely to sell the BBB- rated bonds of firms with more negative conference calls, due to the higher probability of future fallen angel downgrades for these bonds. Panel C provides similar results by sorting on insurers' balance-sheet leverage, which proxies for overall insurance company equity holding risk as well as the extent of capital requirement pressure from NAIC constraints. The higher the leverage, the more constrained insurers are, and the more selling of BBB- rated bonds with more negative calls.

There are two main types of insurers: life and health (L&H) insurers, and property and casualty (P&C) insurers. They differ substantially in their preferences for portfolio investments (Bretscher, Schmid, Sen, and Sharma, 2025). Life insurance companies, for instance, tilt portfolios to long-dated bonds. On the other hand, property and casualty insurers with more short-term liabilities like mutual funds have a preference for short maturity bonds. Koijen and Yogo (2023) show that P&C insurers have always taken less credit risk than life insurers, presumably because of the less predictable nature of their liabilities with tail risk. In addition, different from L&H insurers, P&C insurers hold speculative-grade assets at historical cost. When an asset is downgraded to speculative grade, P&C insurers must recognize its value as the lower of book or market value. Therefore, we expect P&C insurers to trade BBB- rated bonds more frequently and are more sensitive to the default-related information in conference calls than L&H insurers.

To test the effects of the conference call on the trading of different types of insurance companies, we conduct baseline regressions for L&H and P&C insurers, separately in Table 8. Consistent with our expectation, the coefficient on the net negative tone measure is significantly

positive for P&C insurers. In comparison, although positive, the impact on L&H insurers is insignificant with a much smaller magnitude.

[Insert Table 8 about here]

To sum up, the above results provide heterogeneities of insurers' investment of corporate bonds in response to issuers' earnings conference call tone. We find the effect of the tone on insurance companies' trading is more pronounced for BBB- rated bonds with higher level of information asymmetry, for insurance companies having portfolios with worse rating and more BBB- rated bonds, and with higher leverage.

5. Market Impact

The previous results show that insurers are more likely to decrease their holdings of BBB- rated bonds issued by firms with more negative conference calls. In this section, we examine whether insurers' trading based on the earnings conference call tone more broadly impacts the underlying corporate bond market.

We investigate the market impacts from two perspectives: 1) For two BBB- rated bonds, one with more negative conference calls in the past while the other with more positive calls, when they are downgraded to NIG, we expect the downward price pressure to be weaker for the former. The reason is that insurance companies have gradually responded before the fallen-angel downgrade (with supporting evidence from Table 4) and thus, the fire sale pressure should be lower. 2) Previous studies have documented an information spillover across firms in the same industry (e.g., Shroff, Verdi, and Yost, 2017). Would the effect of earnings conference call tone on insurance companies' trading of BBB- rated bonds extend to BBB- rated bonds issued by same-industry private firms that do not conduct calls?

5.1. Impact on Fire Sales Around Fallen Angel Downgrades

When bonds are downgraded from IG to NIG and become fallen angels, there can be fire sales by insurance companies facing regulatory constraints, leading to significant price discounts from fundamental values (Ellul, Jotikasthira, and Lundblad, 2011). We expect the fire sales to be weaker for BBB- rated bonds of firms with more negative calls in the past. Insurance companies utilized

information from conference calls and have gradually sold bonds with more negative calls, and hence, the fire sale pressure on these bonds is weaker when a fallen angel downgrade really occurs.

We obtain downgrades from BBB- to NIG from Mergent FISD, and separate the downgrade events into two halves based on the average tone measure of the issuer's conference calls in one year before the downgrade, while skipping the most recent quarter.[21] Those with average tone above (below) the sample median are downgrades with more past negative (positive) calls. In Figure 3, we plot the cumulative of average monthly abnormal bond return from four-month before to four-month after the fallen angel downgrade (0 is the downgrade month), for downgrades with more negative and positive (past) calls, separately.[22]

[Insert Figure 3 about here]

Before the fallen angel downgrades, the cumulative abnormal returns are generally lower for bonds with more negative past calls. For example, in two months before the downgrade, bonds of firms with more negative (positive) past calls, on average, have a cumulative return of -4.07% (-2.28%). During the downgrade month, bonds in the group with more negative past calls have a cumulative return of -9.19%, as compared to -11.78% for the group with more positive past calls. One month later, the return reversal is much stronger for bonds of firms with more positive past calls, reversing back to -5.54%. These results suggest that the downward price pressure and subsequent return reversal are smaller for bonds issued by firms with more negative calls in the past. The pattern is consistent with the previous finding that insurers' selling of BBB- rated bonds with more negative calls has significant prediction power for future bond downgrades. Therefore, when downgrades occur, the downward price pressure and return reversal due to fire sales by insurance companies are more subdued.

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[21] Our previous findings show that insurance trading of BBB- rated bonds based on the conference call tone cumulates until 40 trading days after the call. Therefore, we skip the quarter before the downgrade to allow insurers to gradually incorporate information from the most recent call. Results remain essentially unchanged if we use the average tone measure over the past two years, skipping this most recent quarter.

[22] We first calculate raw monthly bond returns following Gebhardt, Hvidkjaer, and Swaminathan (2005):

$$r_{i,t} = \frac{P_{i,t}+AI_{i,t}+C_{i,t}}{P_{i,t-1}+AI_{i,t-1}} - 1,$$

where $P_{i,t}$ is the month-end price of month t for the individual corporate bond i, $AI_{i,t}$ is the accrued interest and $C_{i,t}$ is the coupon payment, if any, from the end of month $t-1$ to the end of month t for corporate bond i. Bond i's excess return at month t is, $R_{i,t} = r_{i,t} - r_{f,t}$, where $r_{f,t}$ is the risk-free rate proxied by one-month Treasury bill rate. Bonds are sorted into five groups based on time-to-maturity—smaller than one year, one to five years, five to ten years, or larger than ten years—in each month. The monthly abnormal bond return is computed as the raw monthly return, minus the size-weighted average return of the pool of bonds at the same time-to-maturity group in that month.

To summarize, insurance companies could learn from and react to the earnings conference calls. Their reaction to the tone could mitigate the downward price pressure driven by fire sales caused by fallen angel downgrades. In other words, the call tone reduces market frictions by alleviating the magnitude of fire sales and subsequent reversals.

5.2. Spillover to Bonds of Private Industry Peers

Our paper, thus far, has focused on insurers' trading of BBB- rated bonds issued by public firms, as these firms are required to provide the details of their financial performance and most of them opt to hold regular earnings conference calls to offer additional information.[23] In contrast, privately held companies are not required to disclose financial information and they do not hold conference calls as well. Thus, it is more challenging for bond market investors to access information for bonds issued by private firms. In this subsection, we attempt to study whether the information in conference calls of public firms is useful for insurers to make decisions for trading bonds issued by private firms.

Firms in the same industry are exposed to common shocks and the disclosure of public firms reveals industry information. For example, Badertscher, Shroff, and White (2013) document that public firm corporate disclosures enrich the industry's information environment and improve the average investment efficiency of private firms in the same industry. Thus, we expect that the tone of public firms' conference calls conveys information related to their private industry peers and affects the trading decisions of insurers holding bonds of private firms.

To test this hypothesis, we examine the relation between the conference call tone of public firms and the average insurance companies' trading of BBB- rated bonds issued by private firms in the same industry. We use the Fama-French 5 industry classification to ensure the public firms in our sample could be matched to a sufficient number of private industry peers. The dependent

[23] In addition, Brown, Call, Clement, and Sharp (2019) state that institutional investors who hold the vast majority of corporate debt and dominate trading in fixed income secondary markets typically have the option of meeting privately with managers or investor relations personnel (whether in person, on the phone, or via e-mail exchanges). Moreover, De Franco, Shohfi, Xu, and Zhu (2022) state that the fixed income conference call is a unique form of voluntary disclosure deviating from the traditional multipurpose firm disclosures intended for all stakeholders and allows firms to address debt-specific investor questions as well. These calls give debt investors better access to firm management, and, to some extent, substitute for the private meetings. Therefore, we also create the overall and default-related tones of the fixed income conference call transcripts and replicate our baseline regressions. Here, we find no significant coefficients on the tone measures from fixed income conference calls, but this is likely due to the limited number of available fixed income conference call transcripts that we could locate for our sample.

variable is the bond issuing size-weighted average of net selling by insurance companies across all BBB- rated private bonds of industry peers, in various windows following the public firm's conference call.[24] Time-to-maturity and age are also averaged across these bonds of the same issuer. We control for industry and quarter fixed effects. Results are shown in Table 9.

[Insert Table 9 about here]

Consistent with the argument that disclosure by public firms contains industry-wide information, we find a spillover effect of conference call tone on insurance companies' trading of bonds issued by private industry peers, significant at the 10% level. Over the 80 trading days following the call, a one-standard-deviation increase in the public firm's net negative tone leads to an increase of 4-bps in net selling by insurance companies of bonds issued by private peers, equivalent to 3% of its standard deviation (1.31%). The results suggest that insurers make use of the tone of public firms to trade BBB- rated bonds issued by private firms in the same industry.

Our previous finding in the sample of public BBB- rated bonds is that insurance companies significantly trade the bonds right after the issuers' conference calls, cumulating for about 40 trading days. In comparison, their trading of private BBB- rated bonds based on the peer public firm's conference call becomes significant after 80 trading days and accumulates for about 110 trading days. This implies that it takes additional time for insurers to utilize information from public firms' conference calls to adjust their positions of bonds issued by private industry peers.

6. Conclusion

Insurance companies are the largest domestic investors in the US corporate bond market and operated under tight regulatory constraints set by NAIC and states. Prior research suggests that they have non-negligible impacts on the pricing and liquidity of corporate bonds. However, little is known about how they trade and their information sources. In this paper, we fill the gap by conducting a detailed investigation on how insurance companies actively utilize earnings conference calls to trade BBB- rated, one notch above non-investment-level, bonds.

We provide novel findings that insurance companies actively sell a larger amount of BBB-rated bonds issued by firms with more negative conference calls. The impact of conference call

[24] Results for equal-weighted average trading of private bonds are essentially the same, with lower absolute magnitudes.

tone on insurance companies' trading is not affected by alternative sentiment measures from formal firm filings and general firm news. Insurers' trading behavior based on conference call tone is not a simple response to bond rating changes, nor to information from the stock market, while exhibiting incremental prediction power for bond future default risks. Moreover, by decomposing the overall conference call tone, we explicitly show that the component related to default risks is especially valuable to insurance companies.

For the underlying market, insurers' ex-ante trading of BBB- rated bonds based on the conference call tone could alleviate fire sale pressures caused by fallen angel downgrades. Besides, their trading behaviours based on conference call tone would gradually spill over to BBB- rated bonds issued by private industry peers. Collectively, our results suggest that insurance companies, who are conventionally viewed as passive buy-and-hold investors, actively analyze and utilize information related to default risks in earnings conference calls to trade BBB- rated bonds.

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Appendix A. Variable Definitions

Dependent Variables	
Net selling by insurance companies	The difference between the par value of selling and buying by all insurance companies holding a bond scaled by its issuing size.
DG	A dummy variable equal to one if the bond is downgraded to non-investment-grade over the year following the conference call, and zero otherwise.
Independent Variables	
Net negative tone of earnings conference calls (Neg_net)	Hassan et al. (2019) derive the sentiment measure in an earnings conference call as the number of positive words minus the number of negative words, based on the Loughran and McDonald (LM, 2011) sentiment dictionary, divided by the length of the transcript. The sentiment of the conference call for firm j in quarter t is as follows: $$Sentiment_{i,t} = \frac{\sum_{b=1}^{B_{i,t}} S(b)}{B_{i,t}},$$ where $S(b)$ is an indicator function that assigns a value of +1 (-1) if the word b is associated with positive (negative) sentiment, and zero otherwise. We define the net negative tone measure (Neg_net) as the sentiment measure multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample.
Default-related component	After creating the default-topic words dictionary, we divide each transcript to the sentence level and transfer the whole articles into a list of bigrams (i.e., all adjacent two-word combinations), with necessary adjustments such as excluding stop words, reducing a word to its word stem, and switching a word to its base root mode (i.e., lemmatization). We classify each bigram into a default-related group if the bigram has at least one word belonging to the default-topic words dictionary. For the group consisting of default-related bigrams, we calculate the corresponding net negative tone: $$Net\_neg\_def_{j,t} = \frac{\sum_{b=1}^{B_{def,j,t}} S(b)}{B_{def,j,t}},$$ where $B_{def,j,t}$ is the total number of bigrams in the default-related group of issuer j's earnings conference call on day t. $S(b)$ is an indicator function that assigns a value of +1 (-1) if the bigram b contains at least one word in the Loughran and McDonald negative (positive) dictionary, and zero otherwise. The default-related net negative tone is then standardized to standard deviation of one and mean of zero in the full sample. We regress the overall net negative tone on the default-related net negative tone. In this way, the original overall tone can be separated into two parts: the default-related component and the residual term which does not contain information about default risks.
Rating	The average of credit ratings provided by S&P and Moody's when both are available, or the rating provided by one of the two rating agencies when only one rating is available. Numerical score of 1 refers to AAA rating by S&P and Aaa rating by Moody. Numerical score of 21 refers to C for both S&P and Moody. Investment-grade (low yield) bonds have ratings from 1 to 10. Non-investment-grade (high yield) bonds have ratings above 10. A larger number indicates higher credit risk or lower credit quality.

Maturity	Years to maturity.
Age	Years since issuance.
Coupon	Individual bond's coupon rate.
Bond illiquidity (per thousand $)	It is the bond Amihud illiquidity measure. First, we remove a trade if its price change is more than 20% from the previous trade within the same day. Then, we compute per transaction the Amihud measure as the absolute value of return divided by the trading volume and then average across all trades of a bond within a quarter. We require at least 2 trades per quarter to report the measure.
Ln(bond size)	Logarithm of the offering amount of individual bond.
Ln(stock size)	The natural logarithm of the market value of the firm's equity at the end of last year.
Ln(BM)	The natural logarithm of book equity for the fiscal year-end in a calendar year divided by market equity at the end of December of that year, as in Fama and French (1992).
Institutional ownership (IO)	The percentage of common stocks owned by institutions.
Analyst	The number of analysts following the firm in the previous quarter.
Standardized unexpected earnings (SUE)	SUE is defined as the net income of the quarter minus that four quarters ago, divided by the standard deviation of quarterly net income over past four years.

Figure 1. Frequently Used Words in Default-Related References

This figure provides the most frequently used words in default-related references such as credit-related textbooks and annual reports from credit rating companies.

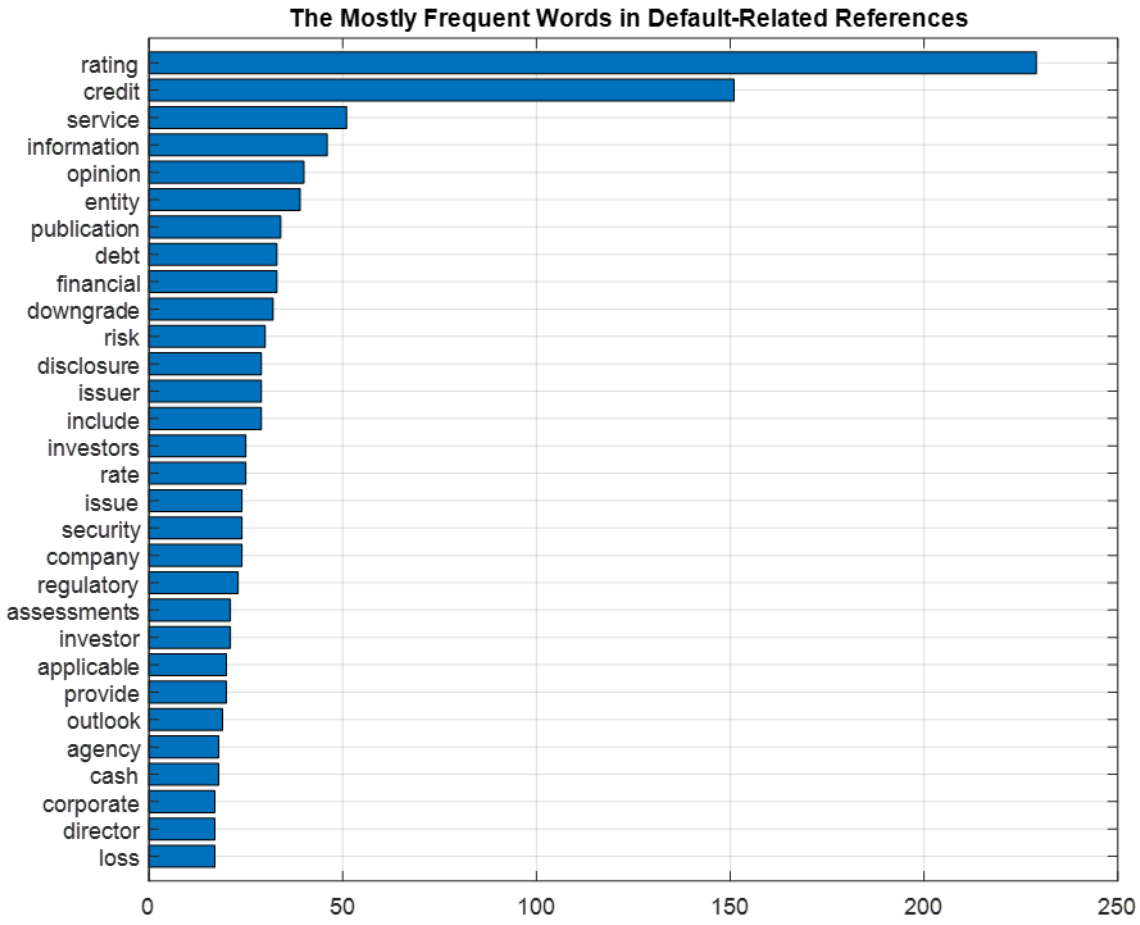

Figure 2. Word Cloud of the Default-Related Dictionary

This figure plots the cloud of the most frequently used words in the default-related dictionary. We count word frequencies and manually select words related to default topic based on the word frequency and topic relevance from more than 100 default-related references. The complete list of words is provided in Appendix Table A3.

Figure 3. Cumulative Abnormal Bond Returns Around Fallen Angel Downgrades

This figure plots the cumulative of average monthly abnormal returns around downgrades from BBB- to non-investment-grade (NIG), i.e., fallen angel downgrades, over the period from January 2002 to December 2021. We split the downgrade events into two halves based on the average net negative tone of the bond issuer's conference calls in one year before the downgrade, skipping the most recent quarter. Those with the average tone above (below) the sample median are downgrades with more past negative (positive) calls. The cumulative of average abnormal bond returns are shown in the [–4, +4] month window around the downgrades (0 is the downgrade month), for those with (past) more negative and positive calls separately. The monthly abnormal bond return is computed as the raw return subtracted by the size-weighted average return of the pool of bonds that share similar time to maturity in that month.

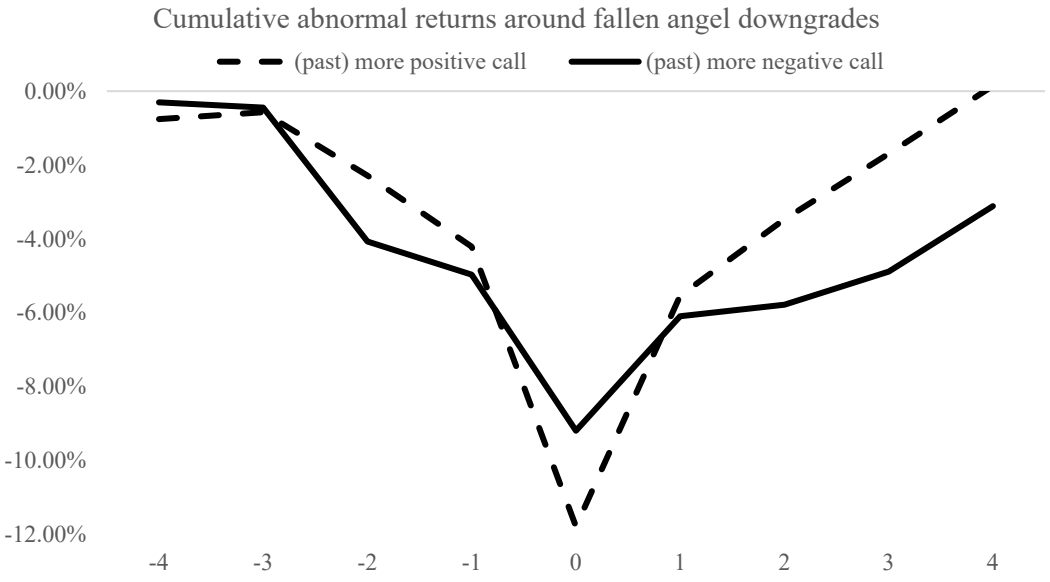

Table 1. Summary Statistics

This table provides descriptive statistics of the data used in our empirical analysis over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. Panel A reports the number of bond-day observations (N), sample mean, standard deviation (Std), lower quartile (Q1), median, and upper quartile (Q3) for bond characteristics including bond time-to-maturity (Maturity) in years, time-since-issuance (Age) in years, coupon rate in percentage, and the logarithm of bond issuing size (Ln(bond size)). Panel B reports corresponding summary statistics for firm-day variables. Hassan et al. (2019) derive the sentiment measure of earnings conference calls as the frequency of mentions of positive words, deducts the frequency of mentions of negative words, based on Loughran and McDonald (LM, 2011) sentiment dictionary, divided by the length of the transcript. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure multiplied by -1. The higher the value, the more negative tone of earnings conference call. Following Hassan et al. (2019), we cap the tone measure at the 1st and 99th percentiles and standardize it to mean of zero and standard deviation of one in the full sample. Other firm characteristics include the logarithm of firm size (Ln(stock size)), logarithm of book-to-market ratio (Ln(BM)), stock institutional ownership (IO), number of analysts (Analyst), and unexpected earnings surprise (SUE) in percentage. The variable definitions are provided in Appendix A. We focus on fixed-rate bonds, and exclude bonds that are preferred, exchangeable, puttable, convertible, or perpetual. We also exclude mortgage-backed, asset-backed, agency-backed and equity-linked securities, Yankees, Canadians, and issues denominated in foreign currency. We delete observations with age or maturity of less than 6-month. All the variables are winsorized each quarter at the 0.5% level.

	N	Mean	Std	Q1	Median	Q3
Panel A: Bond-day variables						
Maturity (in years)	25,074	9.24	9.58	3.47	6.40	9.58
Age (in years)	25,074	5.78	5.44	2.12	4.07	7.30
Coupon (%)	25,074	5.65	1.81	4.30	5.60	7.00
Ln(bond size)	25,074	19.74	0.74	19.34	19.81	20.21
Panel B: Firm-day variables						
Neg_net	7,118	0.00	1.00	-0.67	-0.01	0.66
Ln(stock size)	7,099	8.64	1.10	7.85	8.57	9.37
Ln(BM)	6,936	-0.61	0.69	-0.97	-0.54	-0.15
IO	6,268	0.79	0.17	0.72	0.82	0.90
Analyst	7,118	12.62	7.32	7.00	12.00	17.00
SUE (%)	7,052	0.10	23.97	-0.38	0.13	0.60

Table 2. Effect of Conference Call Tone on Insurance Companies' Trading

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative net selling of bond i by insurance companies over different trading windows following the call, calculated as the difference between par value of selling and par value of buying by all insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. Controls include bond characteristics (maturity and age), and stock characteristics (unexpected earnings surprise (SUE), logarithm of firm size (Ln(stock size)), logarithm of book-to-market ratio (Ln(BM)), stock institutional ownership (IO), and number of analysts (Analyst)). All the variables are winsorized each quarter at the 0.5% level. All columns include day and bond fixed effects. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies						
Trading window	0	[0, +5]	[0, +10]	[0, +20]	[0, +30]	[0, +40]
	(1)	(2)	(3)	(4)	(5)	(6)
Neg_net	0.017***	0.030***	0.032**	0.050**	0.058**	0.062*
	(2.91)	(2.71)	(2.02)	(2.24)	(2.03)	(1.93)
Maturity	-0.002	-0.003	-0.003	-0.008*	-0.010	-0.013*
	(-1.05)	(-1.12)	(-1.16)	(-1.79)	(-1.66)	(-1.79)
Age	-0.008	0.005	0.000	0.055	0.143*	0.163*
	(-1.03)	(0.22)	(0.02)	(0.67)	(1.71)	(1.94)
SUE	-0.021	-0.193*	-0.154	-0.277	-0.332	-0.568
	(-0.77)	(-1.86)	(-1.27)	(-1.39)	(-0.99)	(-1.36)
Ln(stock size)	0.009	0.032	0.005	0.024	0.023	0.002
	(0.75)	(1.11)	(0.15)	(0.43)	(0.27)	(0.02)
Ln(BM)	0.017*	0.057*	0.063	0.067	0.096	0.104
	(1.82)	(1.83)	(1.60)	(1.09)	(1.17)	(1.07)
IO	0.003	-0.144*	-0.183*	-0.395**	-0.174	-0.227
	(0.10)	(-1.91)	(-1.68)	(-2.20)	(-0.67)	(-0.66)
Analyst	0.001	-0.003	-0.003	-0.001	0.008	0.002
	(0.81)	(-1.18)	(-0.80)	(-0.16)	(1.45)	(0.29)
Day FE	Y	Y	Y	Y	Y	Y
Bond FE	Y	Y	Y	Y	Y	Y
Adj-R^2	0.037	0.052	0.080	0.090	0.103	0.113
# of obs	20,642	20,642	20,642	20,642	20,642	20,642

Table 3. Effect of Conference Call Tone on Insurance Companies' Trading: Confounding Factors

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative net selling of bond i by insurance companies over different trading windows following the call, calculated as the difference between par value of selling and par value of buying by all insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We additionally control for potentially confounding factors. The first type of factor is the sentiment measure of 10-K and 10-Q files in the quarter before the call, calculated as the frequency of negative words minus the frequency of positive words based on the sentiment dictionary in Loughran-McDonald (2011). To make the regression coefficients comparable, we standardize the sentiment variable in the full sample. The second type is the average tone of daily firm news. For each firm, we collect the average ESS score across all related news (relevance score = 100, NOVELTY score =100) at the daily level, and then average the daily scores during the same window as the dependent variable. For firms with average ESS lower (higher) than 50, the "Firm news sentiment" dummy is equal to 1 (-1), and zero otherwise. The third type of factor relates to past rating changes. The dummy of "past upgrade (downgrade)" is equal to one if the bond experienced an upgrade (a downgrade) in one quarter before the call. We also control for past 1-month stock returns (past stock return) and cumulative daily stock returns in the corresponding window following the call (contemporaneous stock return). We include all the bond and stock controls. All the variables are winsorized each quarter at the 0.5% level. Day and bond fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies						
Trading window	0	[0, +5]	[0, +10]	[0, +20]	[0, +30]	[0, +40]
	(1)	(2)	(3)	(4)	(5)	(6)
Neg_net	0.013**	0.040***	0.037**	0.058**	0.081**	0.076**
	(2.20)	(3.28)	(2.44)	(2.38)	(2.64)	(2.12)
10-K/10-Q sentiment	-0.010	-0.014	-0.015	-0.016	0.016	0.035
	(-1.46)	(-1.22)	(-1.16)	(-0.60)	(0.52)	(0.88)
Firm news sentiment	0.006*	0.004	0.017	0.016	0.045	0.032
	(1.82)	(0.50)	(1.33)	(0.81)	(1.60)	(0.96)
Past upgrade	-0.050	-0.186**	-0.172**	-0.279***	-0.304***	-0.308*
	(-1.43)	(-2.46)	(-2.32)	(-2.81)	(-2.66)	(-1.72)
Past downgrade	-0.000	-0.105**	-0.044	-0.037	0.031	0.061
	(-0.01)	(-2.11)	(-0.79)	(-0.32)	(0.21)	(0.35)
Past stock return	-0.031	-0.095	-0.013	0.154	0.097	-0.216
	(-1.00)	(-0.66)	(-0.07)	(0.58)	(0.36)	(-0.66)
Contemporaneous stock return	0.009	0.254	0.216	0.453	0.593**	0.424
	(0.12)	(1.28)	(1.00)	(1.42)	(2.31)	(1.53)
Bond Controls	Y	Y	Y	Y	Y	Y
Stock Controls	Y	Y	Y	Y	Y	Y
Day FE	Y	Y	Y	Y	Y	Y
Bond FE	Y	Y	Y	Y	Y	Y
Adj-R^2	0.051	0.061	0.090	0.102	0.115	0.123
# of obs	17,297	17,297	17,297	17,297	17,297	17,297

Table 4. Predictability of Conference Call Tone and Insurance Companies' Trading for Future Bond Downgrades

This table presents regressions for the relation between the earnings conference call tone and future bond downgrades, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is the downgrade dummy (DG) which is equal to one if the BBB- rated bond is downgraded to non-investment-grade over the year following the call, and zero otherwise. DG dummy is multiplied by 100. The independent variables are the most recent available values before the conference call day and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. "Net selling by insurance companies" is the cumulative net selling by insurance companies after the call, measured in a window of the minimum of 40 trading days and the number of trading days between the call day and the downgrade day if there is a downgrade. We include all the bond and stock controls. All the variables are winsorized each quarter at the 0.5% level. Day and bond fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: DG		
	(1)	(2)
Net_neg	1.412**	1.343**
	(2.10)	(2.03)
Net_neg × Net selling by insurance companies		0.287***
		(2.99)
Net selling by insurance companies		0.324***
		(3.87)
Bond Controls	Y	Y
Stock Controls	Y	Y
Day FE	Y	Y
Bond FE	Y	Y
Adj-R2	0.658	0.659
# of obs	20,642	20,642

Table 5. Effect of the Default-Related Component on Insurance Companies' Trading

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative net selling of bond i by insurance companies over 40 trading days following the call, calculated as the difference between par value of selling and par value of buying by all insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We first create a default-topic words dictionary from more than 100 default-related documents such as textbooks and annual reports from credit rating companies, and manually select default-related words based on the word frequency and topic relevance to defaults. We divide each transcript to the sentence level and transfer the whole articles into a list of bigrams (i.e., all adjacent two-word combinations), with necessary adjustments such as excluding stop words, reducing a word to its word stem, and switching a word to its base root mode (i.e., lemmatization). We classify each bigram in a conference transcript into the default-related group if the bigram has at least one word belonging to the default-topic words dictionary. For the group consisting of default-related bigrams, we calculate the corresponding net negative tone measure as the number of bigrams containing at least one word in Loughran and McDonald (LM) negative dictionary, deducting the number of bigrams containing at least one word in LM positive dictionary, divided by the total number of bigrams. We regress the overall net negative tone measure on the tone constructed from the default-related group, and separate the overall tone into two parts: the default-related component and the residual term. In Column (2), we replicate above procedures with an alternative credit risk-related dictionary in Sethuraman (2019), and combine the two dictionaries in Column (3). We include all the bond and stock controls. Day and bond fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies			
Dictionary	Our	Sethuraman	Combined
	(1)	(2)	(3)
Default-related component	0.127**	0.117**	0.114**
	(2.51)	(2.12)	(2.39)
Residual term	-0.012	0.001	-0.017
	(-0.25)	(0.03)	(-0.38)
Bond Controls	Y	Y	Y
Stock Controls	Y	Y	Y
Day FE	Y	Y	Y
Bond FE	Y	Y	Y
Adj-R^2	0.146	0.146	0.146
# of obs	14,641	14,641	14,641

Table 6. Effect of Conference Call Tone with Information Asymmetry on Insurance Companies' Trading

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative net selling of bond i by insurance companies over 40 trading days following the call, calculated as the difference between par value of selling and par value of buying by all insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. In each quarter, we sort bonds into five quintiles based on bond Amihud illiquidity in Column (1), and firm analyst coverage in Column (2), respectively. The dummy variable high is equal to one for bonds and issuers ranked in the highest quintile, in Columns (1) and (2), respectively. We include all the bond and stock controls. All the variables are winsorized each quarter at the 0.5% level. Day and bond fixed effects are included in the columns. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies		
Sorting variable	Bond illiquidity	Analyst coverage
	(1)	(2)
Neg_net	0.057	0.095***
	(1.37)	(2.79)
Neg_net×High	0.101**	-0.139*
	(2.05)	(-1.99)
High	0.054	-0.270**
	(0.86)	(-2.13)
Bond Controls	Y	Y
Stock Controls	Y	Y
Day FE	Y	Y
Bond FE	Y	Y
Adj-R^2	0.152	0.113
# of obs	15,732	20,642

Table 7. Effect of Conference Call Tone on Insurance Companies' Trading: Heterogeneous Insurers

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. In each quarter for each bond in our sample, we sort the insurance companies with transaction records into equal halves based on certain characteristics. Specifically, the sorting variable is the holding par value-weighted average rating of all bonds in insurers' portfolios, and percentage of BBB- rated bonds of their portfolios in Panels A and B, respectively. In Panel C, we sort on the leverage of insurance companies, calculated as total liabilities over net assets. The dependent variable is cumulative net selling of bond i from the corresponding insurance companies over 40 trading days following the call, calculated as the difference between par value of selling and par value of buying by the corresponding insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. We include bond and stock controls. Regressions are performed for insurers ranked in the top half group (>P50) and bottom half (<P50) group, separately. All the variables are winsorized each quarter at the 0.5% level. Day and bond fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies		
	>P50	<P50
	(1)	(2)
Panel A: Sort on portfolio rating		
Neg_net	0.047**	0.007
	(2.50)	(0.52)
Adj-R^2	0.076	0.042
Panel B: Sort on proportion of BBB- rated bonds		
Neg_net	0.040**	0.012
	(2.02)	(0.86)
Adj-R^2	0.070	0.040
Panel C: Sort on leverage		
Neg_net	0.050**	0.017
	(2.10)	(1.37)
Adj-R^2	0.088	0.046
Bond Controls	Y	Y
Stock Controls	Y	Y
Day FE	Y	Y
Bond FE	Y	Y
# of obs	20,642	20,642

Table 8. Effect of Conference Call Tone on Insurance Companies' Trading: P&C and L&H

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative net selling of bond i by insurance companies over 40 trading days following the call, calculated as the difference between par value of selling and par value of buying by the corresponding insurance companies holding bond i scaled by its issuing size and in percentage. The independent variables are the most recent available values before conference call day and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. We include bond and stock controls. Regressions are performed for Property and Casualty insurers (P&C) and Life and Health insurers (L&H), separately. All the variables are winsorized each quarter at the 0.5% level. Day and bond fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies		
Insurer type	P&C	L&H
	(1)	(2)
Neg_net	0.034***	0.021
	(3.22)	(0.75)
Bond Controls	Y	Y
Stock Controls	Y	Y
Day FE	Y	Y
Bond FE	Y	Y
Adj-R^2	0.058	0.105
# of obs	20,642	20,642

Table 9. Spillover Effect of Conference Call Tone on Insurance Companies' Trading of Bonds Issued by Private Industry Peers

This table reports bond-month panel regression results for the relation between the conference call tone of public firms and the average insurance companies' trading of BBB- rated bonds issued by private firms in the same industry, over the period from January 2002 to December 2021. The dependent variable is the bond issuing size-weighted average of net selling by insurance companies across all BBB- rated private bonds of industry peers, in various windows following the public firm's conference call and in percentage. Bond controls including time-to-maturity and age are also averaged across these bonds. We control for industry and quarter fixed effects. We use the Fama-French 5 industry classification. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. We control for the average bond time-to-maturity and age across BBB- rated bonds of the same firm. Industry and quarter fixed effects are included. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies			
Trading window	[0, +80]	[0, +100]	[0, +110]
	(1)	(2)	(3)
Neg_net	0.043*	0.049*	0.059*
	(1.91)	(1.79)	(1.85)
(Average) Bond Controls	Y	Y	Y
Industry FE	Y	Y	Y
Quarter FE	Y	Y	Y
Adj-R^2	0.256	0.267	0.266
# of obs	6,929	6,929	6,929

Appendix Table A1. Effect of Conference Call Tone on Insurance Companies' Buying and Selling

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond buying and selling by insurance companies in aggregate in subsequent days following the call, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is cumulative buying (selling) bond i by insurance companies of over different trading windows following the call, calculated as the par value of buying (selling) by all insurance companies holding bond i scaled by its issuing size in Panel A (B) and in percentage. The independent variables are the most recent available values before day t and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. We include all the bond and stock controls. All the variables are winsorized each quarter at the 0.5% level. All columns include day and bond fixed effects. Standard errors are clustered at the bond and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Trading window	0	[0, +5]	[0, +10]	[0, +20]	[0, +30]	[0, +40]
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Insurance companies' buying						
Neg_net	-0.008**	0.006	0.008	0.016	0.019	0.028
	(-2.18)	(0.70)	(0.66)	(0.77)	(0.86)	(1.20)
Day FE	Y	Y	Y	Y	Y	Y
Bond FE	Y	Y	Y	Y	Y	Y
Adj-R^2	0.026	0.062	0.123	0.150	0.179	0.211
# of obs	20,642	20,642	20,642	20,642	20,642	20,642
Panel B: Insurance companies' selling						
Neg_net	0.010**	0.041***	0.043***	0.067***	0.081***	0.100***
	(2.46)	(2.97)	(2.67)	(3.14)	(3.02)	(2.86)
Day FE	Y	Y	Y	Y	Y	Y
Bond FE	Y	Y	Y	Y	Y	Y
Adj-R^2	0.076	0.081	0.092	0.123	0.150	0.169
# of obs	20,642	20,642	20,642	20,642	20,642	20,642

Appendix Table A2. Effect of Conference Call Tone on Insurance Companies' Trading: Issuer Level Test

This table reports bond-day panel regression results for the relation between the earnings conference call tone and the bond trading by insurance companies in aggregate in subsequent days following the call at the issuer level, over the period from January 2002 to December 2021. The sample consists of BBB- rated bonds issued by public firms holding earnings conference calls. The dependent variable is the bond issuing size-weighted average (sum of) cumulative net selling by insurance companies across all BBB- rated bonds of the same firm over 40 trading days following the call in percentage in Column (1) ((2)). The independent variables are the most recent available values before day t and defined in Appendix A. We define the net negative tone of earnings conference call (Neg_net) as the sentiment measure (Hassan et al., 2019) multiplied by -1. The higher the value, the more negative tone of earnings conference call. The tone measure is winsorized at the 1st and 99th percentiles and standardized to standard deviation of one and mean of zero in the full sample. We control for the (average) bond and stock characteristics. All the variables are winsorized each quarter at the 0.5% level. Day and firm fixed effects are included. Standard errors are clustered at the firm and quarter levels, with corresponding t-values in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent variable: Net selling by insurance companies at issuer level		
	Average across bonds of the same issuer	Sum up bonds of the same issuer
	(1)	(2)
Neg_net	0.124***	0.226*
	(3.06)	(1.66)
(Average) Bond controls	Y	Y
Stock controls	Y	Y
Day FE	Y	Y
Firm FE	Y	Y
Adj-R^2	0.106	0.092
# of obs	5,113	5,113

Appendix Table A3. Word List of the Default-Related Dictionary

This table is the word list of the default-related dictionary. We create a default-topic words dictionary from more than 100 default-related documents such as textbooks and annual reports from credit rating companies. We then manually select default-related words based on word frequency and topic relevance to defaults.

severity	difficulty	downturn	shortage	distress	deficit	risk
rating	drop	deterioration	uncertainty	pandemic	fluctuation	leverage
detriment	constraint	downgrade	credit	debt	bond	volatility
disruption	resilience	vulnerability	inability	safety	recession	barrel
decline	liquidity	liability	doubt	impairment	reliability	depreciation
loan	limit	fall	problem	slowdown	borrowing	delays
shock	decade	challenge	repayment	restructuring	cost	loss
crash	burden	recovery	cash	deployment	refinancing	reconciliation
resolution	competition	exposure	concerns	pressure	compression	reduction
hedges	expense	revenue	discount	break	cut	productivity
return	maintenance	strain	flexibility	inflation	mitigation	continuation
preliminary	profitability	insurance	grade	reserves	model	pipeline
outlook	sensitivity	intensity	quality	headwinds	utility	efficiency
capacity	yield	runs	expenditures	negotiation	valuation	landscape
regulation	infrastructure	strength	investment	reform	conditions	push
offering	charge	ratio	stop	litigation	completion	material
premium	prospects	earning	savings	spending	improvement	authorization
occupancy	obligations	demand	growth	utilization	concentration	transaction
resource	venture	trend	value	potential	renewal	expectation
cycle	operation	consolidation	rival	consideration	aggression	participation
discretion	force	environment	implementation	organization	outbreak	retail
expansion	segment	agreement	replacement	opportunity	storage	settlement
commitments	overview	legacy	compliance	application	metrics	schedule
requirement	capital	review	repurchase	bank	inventory	balance
maturity	change	proceed	contract	margin	solutions	capability
wholesale	persistency	incentives	opportunities	surprise	synergies	expertise
compensation	approach	focus	swing	system	dividend	status
variety	progress	availability	proposition	initiative	comment	excuse
intention	tax	evaluation	transition	retention	rate	