Does Bribery Pay?
Evidence from Credit Ratings*

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Abstract

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Abstract

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1. Introduction

In a corrupt environment, firms choose to spend resources on corruption and rent-seeking as a means of growth.[1] Research generally focuses on rent-seeking in the public sector. However, some important services with public interest are provided by private firms (sometimes regulated by the government). Credit ratings and high-speed internet are good examples. While fairness and efficiency are at stake, rent-seeking in these services has received little scrutiny in the literature. This paper fills this gap by investigating potential rent-seeking in the credit rating industry in China.

Ratings have the characteristics of a public good because the public enjoys improved information about the rated firms without bearing the cost. High-grade ratings, by definition, are scarce, and this prized certificate of creditworthiness can improve the receiving firms' standing with creditors, customers, and other stakeholders. Rating agencies are entrusted by the public with carrying out objective information production, but this function is difficult to monitor. These conditions are inducive of rent-seeking, in which firms can bribe the analysts and managers of rating agencies for favorable ratings (rents refer to these favorable ratings and associated benefits). In a recent scandal that rocked China's $15 trillion public debt market, the CEO of a major rating agency was charged with taking "massive" bribes to boost client ratings.[2]

Empirically, there are at least two challenges in identifying rent-seeking. First, we need to measure as closely as possible any bribes from firms to rating agencies, which would be secret. Second, we need to circumvent the potential endogeneity of bribes. For example, firms that can afford bribes may have more financial resources, which are correlated with creditworthiness. We

[1] For theories on rent-seeking and economic growth, see, e.g., Murphy, Shleifer, and Vishny (1991, 1993). Empirical evidence on rent-seeking includes, e.g., Fisman (2001), Khwaja and Mian (2005), and Chu et al. (2021).
[2] See "China to prosecute rating agency manager over 'massive' bribes," *Financial Times*, December 14, 2020, https://www.ft.com/content/2905fe80-55c1-4b5e-9297-fe7c38315848. Panel C of Table A1 in the Internet Appendix lists other scandals involving bribery or credit rating agencies in China's bond markets.

tackle these challenges in this paper and provide evidence that firms use excessive entertainment expenses in exchange for favorable ratings.

To construct a proxy for bribes, we follow the literature and collect entertainment and travel expenses (ETC) from Chinese firms' income statements. ETC is commonly used as a proxy for corruption.[3] To purge the portion of ETC that is for legitimate operations, we model the relationship between ETC and firms' ordinary operation needs with a regression analysis on Chinese public firms from 2010 to 2020. We only use firm-years with no rating actions to model the relationship in "normal" times. Then we apply this model to the sample firms in years with rating actions and compute the residual. By design, this residual, *AbnEntX*, is orthogonal to firms' ordinary operation needs and captures abnormal entertainment spending attributable to rating activities.[4] We further validate this measure with data. We find that *AbnEntX* is closely related to firms' corruption behavior as reported by the news media and that it is not related to creditworthiness as measured by the firm's probability of default.

With this proxy for bribes, we next address the challenge of endogeneity. We exploit two natural experiments. The first is an anti-corruption campaign initiated by China's top leadership in 2013. The scope and depth of the anti-corruption campaign are unprecedented and have affected not just government officials but also the business sector.[5] We find the effect of rating-year

[3] See, e.g., Cai, Fang, and Xu (2011), Chen, Liu, and Su (2013), Huang et al. (2017), Jia and Mayor (2017), Zhu (2017), Giannetti et al. (2021), and Griffin, Liu, and Shu (2021). As described in Giannetti et al. (2021), "[f]irms also spend in lavish banqueting, private club membership, and expensive gifts, consisting of European luxury brands, jewelry, and artwork, to attract the favor of government officials. These costs are recorded as entertainment expenses in Chinese firms' profit and loss accounts. Entertainment expenses are likely to include expenses for outright illegal activities, such as bribes, as well as borderline activities." Firms, however, can find ways to disguise these expenses as legitimate. As Cai, Fang, and Xu (2011) explain, "in China it is still the norm to do business transactions in cash. Some common business practices implicitly encourage corruption. For example, many hotels operate boutiques for expensive gifts, and those gifts can be invoiced as room charges, which would be classified as traveling costs under ETC."

[4] This orthogonalization follows Xu, Zhou, and Du (2019) and Zeng, Lee, and Zhang (2016).

[5] We validate the campaign's impact on the business sector by examining the criminal corruption investigations associated with our sample firms reported by the news media. We find that the number of reported cases increased

abnormal entertainment expense on firms' ratings is significantly positive before the campaign. An increase in *AbnEntX* from its 25th to its 75th percentile results in a 10% of a notch increase in the firm's rating. However, after the campaign, the effect is significantly weaker. The second natural experiment is a sequence of regulations issued by China's top financial regulators in 2019 tightening the practices and oversight of the credit rating industry. These regulations targeted potential conflicts of interest in rating practices and significantly curbed rating agencies' receptiveness to quid pro quos. We find that abnormal entertainment expense in rating years has a significantly positive effect on the firm's credit ratings before the regulations, but the effect vanishes post-regulation. These natural experiments suggest a causal effect of potential bribes on enhanced ratings.

We also exploit the geographic distance between a firm and the nearest local branch of the China Securities Regulatory Commission (CSRC) to measure the monitoring intensity to which firms are subject. We find that the positive effect of abnormal entertainment expense on ratings is significantly stronger among firms farther away from local CSRC monitors. This evidence supports our findings so far, in that it suggests that bribes for favorable ratings are more prevalent when regulatory monitoring is scarce.

We further augment our analysis with an instrumental variables approach. Inspired by research documenting a positive relationship between corruption and a culture of disrespect for rules (Fisman and Miguel 2007), we argue that firms located in prefectures with a history of disrespect of rules are more likely to use illegitimate means such as bribes to achieve their goals. We measure this disobedience with the number of rebellion wars against the ruling Qing Empire (1636–1912) that took place in the firm's prefecture. This instrument should predict a firm's

significantly after the campaign, indicating that business corruption is also a major target of the campaign. Note that these investigations can be retroactive to events before the campaign.

tendency toward bribery through its local history and culture. Meanwhile, the instrument should not affect the firm's current financial status. We find *AbnEntX* has a positive and significant impact on ratings in a 2SLS regression. An interquartile range increase in the instrumented *AbnEntX* leads to a 7% of a notch increase in a firm's rating.

While multiple identification strategies indicate a positive effect of rating-year abnormal entertainment expenses on the rating that a firm obtains, it is possible that these potential bribes are directed at a third party such as government officials or underwriters in exchange for favors. In this case, rating agencies would interpret these favors as improving the firm's creditworthiness and therefore assign higher ratings. If this explanation applies, then we expect the effect of abnormal entertainment expense on ratings to be stronger when a favor exchange involving government officials or underwriters is more likely to occur. However, we do not find such evidence. In local areas with more government corruption events, where bribing for favorable government treatment is more likely, our main effect is, in fact, smaller, although the difference is not statistically significant. When the firm switches to a new underwriter, with whom the new relationship should be warmer and more supportive, the effect is not significantly different either. This evidence helps to narrow down the suspects of the quid pro quo to the rating agencies.

We quantify the benefits a firm can obtain through bribery. We find that improved ratings significantly reduce the firm's bond spreads as well as its overall interest costs. An interquartile range increase in *AbnEntX* is associated with a 12- (3-) basis-point decrease in the firm's interest expenses as a fraction of liabilities (the credit spread of the firm's bonds). Another benefit of higher ratings is increased debt capacity. We find firms with higher ratings raise significantly larger amounts of capital in bond offerings. An interquartile range increase in *AbnEntX* is associated with a 3% increase in bond issuance proceeds. We further show that the effect of abnormal

entertainment expense on ratings is stronger when bond market conditions are unfavorable for issuers and when firms have poor access to bank financing. This evidence is again consistent with rent-seeking; in order to improve their access to debt financing, firms may resort to bribes to boost ratings.

We contribute to the literature on corruption and rent-seeking. CRAs, being private firms, have received little scrutiny as far as rent-seeking is concerned. However, credit ratings have become a pillar of the information infrastructure of world capital markets. They are more a public good than the opinions of a private sector (Langohr and Langohr (2008), Duan and Van Laere (2012), Rhee (2014)). With a regulatory license that necessitates their services and privileges their market status, CRAs are prone to rent-seeking. While the literature on corruption and rent-seeking mostly focuses on government authorities (Fisman (2001), Khwaja and Mian (2005), Butler, Fauver, and Mortal (2009), Fisman and Wang (2015), Zeume (2017), Giannetti et al. (2021), Cheung, Rao, and Stouraitis (2021)), we provide the first evidence that CRAs are vulnerable to rent-seeking as well. Because private authorities are present in important economic functions such as securities issuance, market making, and auditing, understanding rent-seeking in these areas is essential for fairness and efficiency. Another important contribution is that we quantify specific mechanisms for bribes to generate value, complementing prior research that studies overall value implications through stock returns (Borisov, Goldman, and Gupta (2015), Zeume (2017)).

We also contribute to the literature on rating inflation. The literature mostly focuses on the conflicts of interest in the traditional investor-pay model as a major driver of rating inflation. We document a different channel through which monetary benefits can flow from firms to rating agencies and influence the latter's objectivity. This finding is important. To make the rating system effective, we recommend that any reform have a comprehensive understanding of potential

conflicts of interest. Hidden monetary links, as we document, could be as damaging as the traditional conflicts of interest in the investor-pay model [6]

Our findings concern firms in China. Can they speak to firms and the rating industry more broadly? We believe the findings are relevant elsewhere. Because credit ratings are used in capital markets and by regulators around the world, a firm's desire for favorable ratings is ubiquitous. Credit ratings in China serve primarily the same functions as credit ratings in other global markets. Ratings in China are an informative and significant determinant of bond risk premiums (Dhawan and Yu (2015), Livingston, Poon, and Zhou (2018)). Although the degree of corruption is lower in developed countries, this fact is orthogonal to our goal of identifying potential rent-seeking and quid pro quos. Given the many preferential and subjective rating treatments documented in the U.S. (Griffin and Tang (2012), Efing and Hau (2015), Kedia, Rajgopal, and Zhou (2014, 2017), Kempf and Tsoutsoura (2021)), backdoor dealings could exist more broadly.[7] Finally, China's bond market is the second-largest in the world. Understanding how bribes affect bond ratings in China is therefore of first-order significance.

2. Institutional Background

2.1. Entertainment and travel expenses in China

Entertainment and travel expenses are incurred when employees are traveling for business purposes or entertaining parties of interest. They are often legitimate expenditures used to build and maintain good business relationships but can also be misused to disguise corruption. In fact,

[6] For rating bias in the investor-pay model, see, e.g., Jiang, Stanford, and Xie (2012), Cornaggia and Cornaggia (2013), Xia (2014), Bolton, Freixas, and Shapiro (2012), Sangiorgi and Spatt (2019), Becker and Milbourn (2011), Griffin, Nickerson and Tang (2013), He, Qian, and Strahan (2016), Opp, Opp, and Harris (2013), and Baghai and Becker (2018).

[7] Also see Cornaggia, Cornaggia, and Xia (2016), Fracassi, Petry, and Tate (2016), Cornaggia, Cornaggia, and Israelsen (2020), and Kisgen et al. (2020).

many firms in the U.S., especially multinational companies, recognize the potential corruption risk associated with entertainment and travel expenses and have compliance guidelines set up to mitigate this risk.[8] However, U.S. firms' entertainment expenses are not reported publicly and are only available from firms' tax filings.

As an accounting category, entertainment expenses serve similar purposes in China. According to Cai, Fang, and Xu (2011), one of the pioneering studies on corruption in Chinese firms, "[e]ntertainment and travel costs are used to cover entertainment (including eating, drinking, gifts, karaoke, and sports club membership) and travel expenditures. In addition to legitimate business travel and other expenses, Chinese managers commonly use the ETC accounting category to reimburse expenditures used to bribe government officials, entertain clients and suppliers, or accommodate managerial excess." On the surface, Chinese firms have strict policies for reimbursing entertainment expenses, which sometimes seem stricter than their U.S. counterparts'. For example, Chinese firms require itemized receipts to justify each particular expenditure, say, a taxi ride. However, some common business practices implicitly encourage illegitimate expenditures. For example, hotels can bill luxury gifts bought at their affiliated boutiques as room charges. Restaurants and taxi drivers can provide highly inflated receipts at the client's request, and these receipts can be used to cover illegitimate expenses incurred elsewhere. As described in Giannetti et al. (2021), "[e]ntertainment expenses are likely to include expenses for outright illegal activities, such as bribes, as well as borderline activities."

Another possible way to bribe rating agencies is for firms to pay higher rating fees. However, the benefits of higher rating fees are likely less salient to rating agency employees than travel and entertainment benefits. That is, higher fees are ultimately passed on to the owners of

[8] For example, GM has clear policies regarding meals, entertainment, etc.: https://investor.gm.com/static-files/d8e937d5-c352-4d13-8488-5c0891e7e4ad

rating agencies. Travel and entertainment expenses are enjoyed directly by the employees of rating agencies who award ratings.

Further, rating fees are more likely to leave a paper trail than entertainment expenses. Specifically, rating fees are clearly recorded on both the rating agency's and the firm's accounting books and can be easily matched between a rating agency and its client firms. If an investigator ever becomes suspicious about the rating of a firm, he/she can easily track down the rating fee paid by the firm to the rating agency. Compared with similar firms, an overly favorable rating accompanied by an unusually high rating fee could raise more suspicion and could also serve as a piece of evidence if any allegation of bribery were filed.

In contrast, entertainment expenses are only recorded on the firm's accounting books, not the rating agency's. Entertainment expense covers a wide range of spending by the firm and often does not indicate the ultimate beneficiary of an expense. Even if an investigator is suspicious of a firm bribing a rating agency, he/she can hardly tease out the entertainment expense used as bribery of the rating agency. Moreover, unlike rating fees, the rating agency does not record being entertained by a firm. Thus, there is little possibility for an investigator to trace a particular expense to the rating agency.

2.2. Bond market and credit rating agencies in China

China's bond market has been growing rapidly in the past decade. The value of outstanding bonds was roughly 15 trillion dollars by mid-2020, which is more than 95% of China's GDP.[9] Accompanying this growth, a domestic credit rating industry that adopts international rating standards has also developed. With Chinese regulators' mandate that all public bonds must be

[9] "China backs China in $15 trillion market resilient to turmoil," *Bloomberg News*, May 29, 2020.

rated, CRAs enjoy a large customer base yet face strong competition. Today, there are ten accredited CRAs in China. They receive accreditations from respective regulators with jurisdiction on different types of bonds.[10] Table A1 in the Internet Appendix lists their accreditations and business model.

Although China's domestic rating scale closely follows global standards, the definition of investment grade differs. In China, AA is generally considered as the lowest investment grade, while this is BBB in global ratings. Despite this higher threshold, issuance of non-investment grade bonds is scarce in China.

Chinese regulators set mandatory minimum ratings for corporate bonds to be qualified for public issuance. But in most cases, only one rating is required. In the interbank market, commercial paper and medium-term note issuers need to be rated AA- or above. Exchange-traded corporate bonds that are issued only to qualified investors generally need a rating of AA. For those issued to the general public, they need a AAA rating, except for issuers in the real estate sector, where a rating of AA or above is sufficient.

These minimum rating requirements are intended to keep low-quality issuers out of the market. They nevertheless encourage rating shopping and favor exchanges. In 2018, Dagong Global Credit Rating, which is estimated to have a 20% market share in China, was found to have "directly provided consulting services to rated companies," which is prohibited, and "charged high fees" that compromised its independence (*South China Morning Post*, August 18, 2018). In December 2020, the general manager of Golden Credit Rating International was charged with

[10] The China Securities Regulatory Commission (CSRC) regulates the exchange bond market. The People's Bank of China (PBoC, the central bank) regulates the interbank bond market, including commercial papers, medium-term notes, and private placement notes. Besides these two major regulators, the National Development and Reform Commission (NDRC) regulates the issuance of enterprise bonds, which may be traded in the exchange or interbank markets.

taking massive bribes to boost numerous clients' credit ratings. Also, anecdotes of credit analysts' luxury shopping mall trips sponsored by issuers are well circulated in the industry.

In Appendix 1, we provide more details about the favor exchanges as confessed by the convicted in the Dagong and Golden investigations. Panel C of Table A1 in the Internet Appendix lists scandals in Chinese bond markets involving rating agencies and/or bribes in recent years. The proliferation and high profile of these scandals indicate that corruption and rent-seeking may be systematic in the rating industry, and a rigorous academic study is called for.

3. Data and Variables

We start with Chinese public firms listed in Shanghai or Shenzhen Stock Exchanges with long-term issuer credit ratings from 2010 to 2020.[11] We exclude financial firms due to their regulated capital structure. We collect entertainment expense as a breakdown item under administrative expense in the income statement. Although disclosure of entertainment expenditure is not mandatory, most public firms in China choose to disclose it. Among all the listed firms in China during our sample period, more than 98% disclose a detailed breakdown of administrative expense, and entertainment expenditure is reported in 87% of these breakdowns. Therefore, although selection bias is possible, it is not a major issue in our sample. Our final sample includes 3,597 unique firms. We collect firm financial data from CSMAR. Credit rating data are from IFIND and WIND.

We convert an issuer credit rating into a categorical variable, *Rating*, which ranges from 0 to 7 according to the following schedule: AAA = 7, AA+ = 6, AA = 5, AA- = 4, A+ = 3, A = 2,

[11] Credit ratings for publicly listed companies in China are scarce prior to 2009. The first corporate bond by a publicly listed company in China was issued in 2007. Livingston, Poon, and Zhou (2018) and Jiang and Packer (2019) provide more background on the Chinese credit rating industry.

A- = 1, and BBB+ and below = 0. Some firms have ratings from more than one CRA. In most cases, these multiple ratings are identical. If they are not identical, we use the rating issued by the CRA with which the firm had interacted the most since the beginning of the sample. If there are multiple ratings issued to a firm in a year, we use the latest one.

To measure potential bribes, we first obtain *EntX*, the natural logarithm of a firm's entertainment expense. We then regress *EntX* on *LnSales*, the logarithm of the firm's sales; *LnAssets*, the logarithm of the firm's total assets; *Marketing Expense*, marketing expense divided by sales; *Capital Intensity*, total assets divided by total revenue; and *Compensation*, the average compensation of the top three executives, together with industry and year fixed effects. To capture the relationship between entertainment expense and legitimate operational needs in normal times, we only use observations in non-rating years for this regression.[12] Then, based on the estimated regression equation, we compute the residual, *AbnEntX* (abnormal entertainment expense), using observations in the rating years. Because *AbnEntX* is orthogonal to the predicted entertainment expense under ordinary circumstances, it is not directly related to a firm's fundamentals but can capture the firm's excessive entertainment spending in rating years.

We conduct further tests to validate that *AbnEntX* is related to corruption but not to creditworthiness. To this end, we use Chinese news data provided by DataGo, a news data processor based in Hong Kong. DataGo searched 13.5 million pieces of news from major news media in China, including newspapers and online news portals, from 2010 to 2020 to collect news of corruption investigations associated with each of our sample firms. We compute *Revealed Corruption*, the number of corruption investigations associated with each firm in each year, which we use as a proxy for firms' corrupt behavior. Note that corruption investigations are often

[12] See Table A2 in the Internet Appendix for the regression results.

retroactive, that is, law enforcement can examine events that occurred before the anti-corruption campaign. Then we examine whether *AbnEntX* is positively related to *Revealed Corruption* in the coming year. As reported in Panel A of Table 2, we find that there is a significantly positive relationship between *AbnEntX* and the next year's *Revealed Corruption*. This relationship remains if we measure corruption using *Corrupt*, a dummy variable that equals 1 if the number of corruption investigations is greater than 0.

Next, we examine the relationship between a firm's creditworthiness, as measured by the firm's probability of default, and *AbnEntX*. We follow Bharath and Shumway (2008) to compute a firm's probability of default (*PD*). It is the normal transformation of distance to default (*DD*): $PD = N(-DD)$, where *DD* is the sum of the inverse of the firm's leverage and the geometric average return on the firm's assets, divided by the volatility of the firm's assets (see equation (12) in Bharath and Shumway (2008)). As reported in Panel B of Table 2, *AbnEntX* has an insignificantly negative relationship with either the current or the next year's probability of default. Taken together, the evidence suggests that *AbnEntX* is a reasonable proxy for firms' corrupt conduct but does not directly affect their creditworthiness.

We construct the following control variables: *SOE* is a dummy variable that equals 1 if the firm is a state-owned enterprise. *LnAssets* is the natural logarithm of total assets. *Working Capital* is working capital scaled by total assets. *Profitability* is net income scaled by total assets. *Leverage* is total liabilities divided by total assets. *Current Ratio* is current assets divided by current liabilities. *Asset Turnover* is sales scaled by total assets. *Cash Flow* is the operating cash flow scaled by sales. *Excess Return* is the firm's return in excess of the market return in the month prior to the rating announcement. *Beta* is the CAPM beta of the firm's stock, estimated using daily

returns in the month prior to the rating announcement. *Sigma* is the root mean squared error from the regression used to estimate *Beta*.

Table 1 reports the summary statistics of the above variables. The average sample firm has a rating of AA. The sample average entertainment expense is 12.1 million yuan (= exp(16.31), or $1.9 million), but it varies greatly in the sample, with a maximum of 541.6 million yuan (= exp(20.11), or $86.7 million) and a minimum of 0.5 million yuan (= exp(13.19), or $0.09 million). AbnEntX ranges from -2.2 to 1.8, with a mean of 0.015 and a standard deviation of 0.82. Approximately half of the sample firms are SOEs. The summary statistics of other control variables are generally in line with research on Chinese bond issuers.

4. Effect of Potential Bribes on Ratings

This section focuses on identifying the effect of potential bribes on credit ratings. We present our baseline results, followed by difference-in-differences analyses based on two natural experiments and a 2SLS regression with a novel instrument variable. We also present corroborating evidence using firms' geographic distance to regulators as a plausibly exogenous variation.

4.1. Baseline Results

Figure 1 shows that average entertainment expense in rating years is significantly greater than that in years without rating actions. This spike of entertainment expense in rating years is suggestive of excessive entertainment related to rating activities. Could it be potential bribes in exchange for favorable ratings? We thus examine the effect of entertainment expense on credit ratings using the following baseline specification.

$$Rating_{it} = \alpha_s + \gamma_t + \beta \times EntX_{it}(\text{or } AbnEntX_{it}) + \delta \times Controls_{it} + \varepsilon_{it} \quad (1)$$

For each firm i, t is the year in which the firm obtains a credit rating. $Rating_{it}$ is the dependent variable. We use either $EntX_{it}$ or $AbnEntX_{it}$ as the key explanatory variable. α_s is the dummy for industry fixed effects. γ_t is the dummy for year fixed effects. We use industry fixed effects instead of firm fixed effects because ratings for a given firm tend to be stable over time. Our tests will lose statistical power if we solely rely on within-firm variations for identification. Furthermore, firm fixed effects effectively exclude firms that have just one year of rating action. These firms tend to be new issuers or less established firms and may have a stronger motive for rent-seeking. To control for firm heterogeneity, we include $Controls_{it}$, a vector of firm characteristics including *SOE*, *LnAssets*, *Working Capital*, *Profitability*, *Leverage*, *Current Ratio*, *Asset Turnover*, *Cash Flow*, *Excess Return*, *Beta*, and *Sigma*, which are defined above. ε_{it} is the error term. Following the guideline of Abadie, Athey, Imbens, and Wooldridge (2017), we use robust standard errors.[13]

As reported in Table 3, both entertainment expense and abnormal entertainment expense have a positive and statistically significant effect on credit rating. Based on the estimates in column 1 (2), an increase in *EntX* (*AbnEntX*) from its 25th to its 75th percentile can boost ratings by 11% (3%) of a notch. This effect is economically meaningful. In comparison, an interquartile range increase in the firm's ROA raises ratings by 18% of a notch. The results indicate that excessive entertainment expense in rating years helps to increase the firm's credit ratings.

In the following sections, we exploit two natural experiments to show the causal effect of potential bribes on credit rating.

[13] Abadie, Athey, Imbens, and Wooldridge (2017) advise against using clustered standard errors if the assignment of the treatment of interest is not clustered. In unreported tests, we find that clients of none of the rating agencies have abnormal entertainment expense that is significantly higher or lower relative to the overall sample distribution. That is, the treatment of interest does not seem to be clustered. Nevertheless, the results are qualitatively unchanged with clustered standard errors.

4.2. Anti-corruption Campaign as a Natural Experiment

The anti-corruption campaign was initiated by the top leadership, President Xi Jinping, in late 2012. Its implementation was started in earnest in 2013. The campaign targeted corruption in all sectors of the economy, not just the central and local governments but also private businesses and commercial entities. Because our paper focuses on potential corruption in the credit rating business, to use the anti-corruption campaign as a natural experiment, we validate that the campaign has business corruption as a direct target. To this end, we examine whether law enforcement's targeting of business corruption intensified after the campaign. We define a dummy variable, *Anti-corruption*, which equals 1 if the year is after 2012. *Revealed Corruption* is the number of corruption investigations associated with a firm in a year. Then we run the following regression:

$$Revealed\ Corruption_{it} = \alpha_s + \beta \times AntiCorruption_t + \delta \times Controls_{it} + \varepsilon_{it} \quad (2)$$

where α_s is industry fixed effects.

As reported in column 1 of Table A3 in the Internet Appendix, *Anti-corruption* is significantly positively related to *Revealed Corruption*. That is, enforcement of corruption investigations on commercial entities significantly heightened after the anti-corruption campaign. We further include an interaction, *Anti-corruption* × *SOE*, in the above regression. The purpose is to see if the impact of the anti-corruption campaign is more pronounced among those state-backed entities. As shown in column 2 of Table A3, the interaction term is positive but insignificant. The evidence suggests that the campaign targeted both private firms and state-owned enterprises with no apparent preference. These tests validate that the private sector is also a major target of the anti-corruption campaign.

Because the anti-corruption campaign directly targets corruption in private businesses, if there is corrupt rent-seeking in the rating business, we expect the effect of potential bribes on credit ratings to be positive and significant before the campaign and to weaken after the campaign. We therefore run the following regression:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times AbnEntX_{it} \times AntiCorruption_t + \delta \times Controls_{it} + \varepsilon_{it} \quad (3)$$

As before, α_s is a dummy for industry fixed effects. γ_t is a dummy for year fixed effects. There is no individual term of $AntiCorruption_t$ in the regression equation because it is absorbed by year fixed effects.

Table 4, column 1 reports the results. *AbnEntX* has a positive and significant effect on *Rating*. An interquartile range increase in *AbnEntX* is associated with a 10% of a notch increase in *Rating*. That is, before the anti-corruption campaign, excessive entertainment or bribes could help enhance the firm's credit rating. The coefficient on the interaction *AbnEntX* × *Anti-corruption* is negative and significant. This indicates that the effect of potential bribes on credit rating is significantly weaker after the campaign. The point estimate suggests that the bribing effect has declined by 81% (0.757/0.933) from the pre-campaign level. The evidence is consistent with potentially corrupt rent-seeking in the credit rating business, where firms use excessive entertainment or bribes to sway rating agencies for better ratings. And this quid pro quo is curbed only after a major crackdown on corruption.

We use an alternative specification to further examine the effect of potential bribes. We define *Pre-campaign AbnEntX* as a firm's average *AbnEntX* between 2010 and 2012 (the 3 years before the anti-corruption campaign). A high *Pre-campaign AbnEntX* thus marks those firms that likely bribed for better ratings *before* the anti-corruption campaign. We focus on a time window between 2010 and 2016, that is, 3 years before to 3 years after the campaign year (2013), and use

Pre-campaign AbnEntX in place of *AbnEntX* in equation (3). The results are similar, as reported in column 2 of Table 4. Firms that spent excessively on entertainment in rating years prior to the anti-corruption campaign received higher ratings. An interquartile range increase in *Pre-campaign AbnEntX* is associated with a 7% of a notch increase in *Rating*. However, the ratings of these potential bribers dropped significantly after corruption was curbed. Again, the evidence is consistent with the existence of bribe-inflated ratings.

4.3. Rating Regulations as a Natural Experiment

Next, we use another natural experiment to examine the effect of potential bribes on credit ratings. China's National Association of Financial Market Institutional Investors, which is supervised by the People's Bank of China (the central bank), issued "Regulations for Conflicts of Interest in Credit Rating of Debt Instruments of Non-financial Firms in the Inter-Bank Bond Market" in August 2019. Three months later, the People's Bank of China, the National Development and Reform Commission, the Ministry of Finance, and the Securities Regulatory Commission followed up with a joint administrative order titled "Regulatory Guidelines for the Credit Rating Industry." These regulatory actions put the credit rating industry under an unprecedented unified supervisory framework supported by four top authorities responsible for financial regulation. Importantly, many of these new rules marked the first time that regulators at the very top level made a determined joint effort to rein in conflicts of interest in the credit rating business. Because rating agencies are subject to much greater scrutiny of their objectivity after the implementation of these new rules, if firms used to use gifts and entertainment to sway rating agencies' decisions, we expect this influence to be less effective after the regulations. We conduct a difference-in-differences analysis between 2018 and 2020. We define a dummy variable, *Rating*

Regulation, which equals 1 if the year-month is after August 2019, in which the regulation shock started. We run the following regression to assess the effect of potential bribes on credit ratings before and after this regulation shock.

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times AbnEntX_{it} \times Rating\ Regulation_t + \delta \times Controls_{it} + \varepsilon_{it} \quad (4)$$

Column 1 of Table 5 reports the results. *AbnEntX* has a positive and significant effect on *Rating*. An interquartile range increase in *AbnEntX* results in an almost 10% of a notch increase in *Rating* before the regulations. *AbnEntX* × *Rating Regulation*, however, is negative and significant, and the coefficient offsets that on *AbnEntX*. That is, after regulations are tightened on potential conflicts of interest in rating practices, the bribing effect on ratings vanishes. The evidence is again consistent with rent-seeking through a corrupt quid pro quo.

For this second natural experiment, we also conduct an alternative difference-in-differences regression where we use *Pre-regulation AbnEntX* in place of *AbnEntX* in equation (3). In this setting, *Pre-regulation AbnEntX* is defined as a firm's *AbnEntX* in the year 2018. Again, *Pre-regulation AbnEntX* measures potential bribery prior to the rating regulations. As reported in column 2 of Table 5, *Pre-regulation AbnEntX* is positive and significant, indicating bribe-inflated ratings prior to the regulations. *Pre-regulation AbnEntX* × *Rating Regulation* is negative but statistically insignificant.

In order to better understand the results from Table 5, we consider possible scenarios after the regulations that can give rise to a negative effect of *AbnEntX* on *Rating* after the regulations. First, high-quality firms reduce bribes after the regulations, but rating agencies maintain high ratings for these firms. In this case, as bribes drop and ratings remain high after the regulations, there is a negative correlation between *AbnEntX* × *Rating Regulation* and *Rating*. This scenario is likely to occur if, before the regulations, the firm ingratiated itself with the rating agency via

excessive entertainment even if the firm was qualified to receive a decent rating (similar to a "pay-to-play"). When the rating agency is subject to stricter oversight after the regulations, it no longer takes bribes, yet it maintains the high rating for the firm because the high rating is accurate. Meanwhile, *Pre-regulation AbnEntX*, by definition, remains the same after the regulations, while *Rating* remains the same for high-quality firms. This non-variation makes it hard to detect a significant correlation between *Pre-regulation AbnEntX* × *Rating Regulation* and *Rating*. Therefore, in this scenario, we are likely to observe a significantly negative effect of *AbnEntX* × *Rating Regulation* on *Rating* along with a statistically insignificant effect of *Pre-regulation AbnEntX* × *Rating Regulation*. This scenario suggests a prevalent corruption culture, where issuers, whether qualified for good ratings or not, try to cozy up to the rating agencies with excessive entertainment spending.

There are other scenarios that may result in a negative and significant impact of *AbnEntX* × *Rating Regulation* on *Rating*. For example, after the regulations, firms reduce or maintain bribes while rating agencies increase ratings, or firms increase bribes while rating agencies lower ratings. However, these scenarios are unlikely because they would require at least one of the two parties to act irrationally given the tightened regulations on rating agencies.[14]

4.4. Geographic Variations in Regulator Monitoring

[14] We have also considered other possibilities. For example, low-quality firms maintain bribes after the regulations, but rating agencies lower their ratings relative to their prior-regulation levels. In this case, as bribes remain high while ratings drop after the regulations, there is a negative correlation between *AbnEntX* × *Rating Regulation* and *Rating*. This scenario is likely to occur if, before the regulations, low-quality firms approached the rating agencies with bribes and received inflated ratings in exchange. When the agencies are under stricter scrutiny after the regulations, even if the firms still bribe, the rating agencies assign fair ratings to the firms, which are lower than the inflated ratings before the regulations. Meanwhile, *Pre-regulation AbnEntX*, by definition, remains the same after the regulations, while *Rating* decreases for low-quality firms. This change results in a negative correlation between *Pre-regulation AbnEntX* × *Rating Regulation* and *Rating*. Therefore, in this scenario, we would observe both *AbnEntX* × *Rating Regulation* and *Pre-regulation AbnEntX* × *Rating Regulation* having a significantly negative effect on *Rating*.

We exploit another exogenous variation in regulators' monitoring intensity to identify the effect of potential bribes on ratings. The China Securities Regulatory Commission is the top regulator of publicly traded firms. It has 36 field bureaus located in each of the 27 provinces, four provincial administrative regions, and five large metropolitan areas. These local branches are responsible for supervising public firms located within their respective province or city. Because of the large geographic expanse of China, there are significant variations in the distance between a firm and its local supervisor. Geographic distance is widely used in the literature as a proxy for information asymmetry and monitoring intensity (see, e.g., Coval and Moskowitz (2001), Malloy (2005), Butler (2008), Kedia and Rajgopal (2011), Chhaochharia, Kumar, and Niessen-Ruenzi (2012)). We therefore use the following regression to examine how the effect of abnormal entertainment expense on credit ratings varies between firms with different distances from local supervisors:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times AbnEntX_{it} \times Distance\ to\ Regulator_i + \delta \times Controls_{it} + \varepsilon_{it} \quad (5)$$

where *Distance to Regulator* is the distance between the firm and the local branch of the China Securities Regulatory Commission responsible for the firm's region. Alternatively, we use *Long Distance*, a dummy variable that equals 1 if *Distance to Regulator* is above the sample median.

Table 6 reports the results. The coefficient on the interaction *AbnEntX* × *Distance to Regulator* or *AbnEntX* × *Long Distance* is positive and significant. The results indicate that the effect of abnormal entertainment expense on ratings is more pronounced among firms located far from regulators. The evidence is consistent with corrupt conduct where firms bribe for favorable ratings, and this misconduct is more likely to occur if regulators cannot effectively monitor the firm due to long distance.

4.5. Historical Rebellion Wars as Instrument Variable

While we have shown a plausibly causal relationship between abnormal entertainment expense and credit ratings using difference-in-differences analysis based on exogenous policy shocks and geographic variations, we further corroborate the identification of this effect with an instrument variable regression.

Our instrument is motivated by the firm's local history and culture, which influence people's tendency to challenge rules and authorities, as this tendency can induce the use of alternative means to achieve goals, such as bribery. The literature has shown that a local culture of disrespect for rules is closely related to corrupt behavior (Fisman and Miguel (2007)). Specifically, we use *Rebellion Wars*, the number of rebellion wars against the ruling Qing Empire (1636–1912) that took place in the firm's prefecture. The Qing Empire was the last dynasty in the imperial history of China. The rebellion wars were clear demonstrations of contempt for the ruling authorities, which could be part of the local culture in the first place. As the stories of those ancestors rising up against the ruling empire passed from one generation to the next, this disobedience was likely to be glorified and further baked into the local culture. In the modern time, such disobedience of authorities and rules can lead to creative ways to circumvent rules for local benefits, such as bribing for higher ratings or other types of backdoor dealings. Meanwhile, controlling for a firm's fundamentals, the number of rebellion wars in history (or a local culture of outwitting authorities) should not affect the firm's credit quality. Therefore, the instrument variable is plausibly valid. Based on this instrument, we run the following 2SLS regression:

$$AbnEntX_{it} = \alpha_{s1} + \gamma_{t1} + \beta_1 \times Rebellion\ Wars_t + \delta_1 \times Controls_{it} + \varepsilon_{it1} \quad (6.1)$$

$$Rating_{it} = \alpha_{s2} + \gamma_{t2} + \beta_2 \times \widehat{AbnEntX}_{it} + \delta_2 \times Controls_{it} + \varepsilon_{it2} \quad (6.2)$$

Table 7 reports the results. Column 1, the first-stage regression, indicates that *Rebellion Wars* is positively and significantly related to a firm's *AbnEntX*. The first-stage F test returns a

solid 9.5, indicating that the instrument is not weak. The second-stage regression in column 2 shows that instrumented *AbnEntX* has a positive and significant effect on *Rating*. An interquartile range increase in the instrumented *AbnEntX* results in a 7% of a notch increase in *Rating*. The evidence is again consistent with the existence of a quid pro quo where firms use excessive entertainment or bribes to sway rating agencies to give them favorable ratings.

4.6. Alternative Explanations

Although our key variable, *AbnEntX*, is orthogonal to the firm's normal operation needs and is attributable to excessive entertainment spending in the rating year, this abnormal entertainment expense could be used on parties other than the rating agencies yet still contribute to rating agencies' favorable assessment of the firm. For example, the firm may bribe local government officials for favorable treatments, and the rating agencies regard these favors as helpful to the firm's credit quality. Alternatively, the firm may bribe its bond underwriter for favorable underwriting terms, and the rating agencies also consider these favors as a plus for the firm's credit quality.

To alleviate these alternative explanations, we focus on situations where these alternative explanations are more likely to occur and examine whether the effect of *AbnEntX* is stronger in these situations. We argue that in areas with more government corruption, firms are more likely to obtain favorable government treatment if they bribe officials. Therefore, if the effect of potential bribes on ratings is caused by bribing government officials for favors, we expect the effect to be stronger in these areas. We define *Government Corruption*, the number of government officials in the firm's province that have been convicted of corruption divided by the total number of government officials in the province (in tens of thousands) in the year. To avoid the confounding

effect of the anti-corruption campaign, we focus on the sample from 2010 to 2012, and we run the following regression:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times AbnEntX_{it} \times Government\ Corruption_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (7)$$

Column 1 of Table 8 shows the results. While *AbnEntX* has a positive and significant effect on *Rating*, the interaction *AbnEntX* × *Government Corruption* is negative and insignificant. That is, the effect of potential bribes on ratings is not particularly strong in areas where bribing for favorable government treatments is relatively easy. The evidence does not support the alternative explanation that excessive entertainment expense is spent to bribe government officials for certain favors, which the rating agencies consider as beneficial for the firm's credit quality.

Next, we focus on the situation where the firm switches to a new bond underwriter. Because of the hold-up problem, it is often costly to switch to a new underwriter. Thus, when a firm with an intention of corruption chooses to switch, the new relationship is supposed to be more receptive to quid pro quos and to breed more mutual benefits than the old one. Thus, if the effect of potential bribes on ratings is caused by bribing underwriters for favors, we expect the effect to be stronger when the firm switches to a new underwriter. We define *Underwriter Change*, a dummy variable that equals 1 if the firm switches to a new lead bond underwriter in the year. And we run the following regression:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times AbnEntX_{it} \times Underwriter\ Chnage_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (8)$$

As reported in column 2 of Table 8, *AbnEntX* has a significantly positive effect on *Rating*. However, the interaction *AbnEntX* × *Underwriter Change* is negative and insignificant. This evidence is inconsistent with higher ratings being driven by bond underwriters' favorable treatment, which the firm obtains with bribes.

The above results further narrow down the suspects of corruption. The evidence is in favor of a quid pro quo directly between the firm and the rating agency.

4.7. Does It Matter Who Pays for Ratings?

We examine whether the quid pro quo also exists if investors pay for ratings. Like in the U.S., most accredited CRAs in China operate under the issuer-pay model. Recognizing the potential conflicts of interest in the issuer-pay model, the National Association of Financial Market Institutional Investors, under the guidance of the People's Bank of China, set up an agency, the China Bond Rating Corporation (CBR), which operates under the investor-pay model in 2010. On average, CBR offers a stricter rating scale, with ratings two or three notches below those given by the issuer-pay model (Amstad and He (2020)). Although the investor-pay model appears to curb rating inflation, we find that the quid pro quo for favorable ratings still works there.

In Table 9, we run the same regressions as our baseline models (Table 3) on a sample of bond issues rated by CBR between 2010 and 2020. We find that entertainment expenses have a positive and statistically significant effect on ratings. An interquartile range increase in *AbnEntX* is associated with an 11% of a notch increase in ratings. This economic magnitude is similar to that under the issuer-pay model. Our evidence confirms that the quid pro quo for favorable ratings works independently of who pays for ratings. This is perhaps not surprising. Because bribes are hidden payments to rating professionals, issuers can use bribes to influence rating professionals' opinion even if they do not pay for the rating service.

5 Benefits of Bribing for Higher Ratings

As we find consistent evidence that some firms use potential bribes to get favorable ratings, in this section we examine the firm value implications of this practice. We focus on debt financing cost and debt capacity. We also examine credit market conditions that induce firms to bribe for favorable ratings.

5.1. Debt Financing Cost

A favorable rating can improve the firm's standing not just in the bond markets, but also with other creditors, suppliers, and customers. With limited information, resources, and/or attention, these stakeholders often rely on the firm's credit rating as a simple and authoritative indicator of creditworthiness and determine their contract terms with the firm accordingly. Thus, a decent rating can lead to benefits in various transactions with these stakeholders. We focus on cost savings in debt financing.

We examine the overall cost of debt as well as cost specific to bond financing. We define the overall cost of debt, *Interest Cost*, as the firm's interest expense divided by total liabilities (in %). We use *Bond Spread* to measure the cost of bond financing. *Bond Spread* is the difference in yield to maturity (in %) between an exchange-traded bond and non-tax-exempt Chinese government bonds with the same characteristics.[15] When an issuer is assigned a new rating, we

[15] We use the Nelson–Siegal (NS) model to fit the term structure of rate securities issued by the National Development Bank. We do not use Treasury bonds because they are tax-exempt. Specifically, we assume that the τ-year spot rate at time t, $r(t,\tau)$, follows $r(t,\tau) = \beta_{0t} + \beta_{1t}\frac{1-e^{-\lambda_t\tau}}{\lambda_t\tau} + \beta_{2t}\left(\frac{1-e^{-\lambda_t\tau}}{\lambda_t\tau} - e^{-\lambda_t\tau}\right)$. Following Diebold and Li (2006), we choose a constant $\lambda_t = \bar{\lambda}$. And we set $\bar{\lambda}$ equal to 0.51235 based on estimation in the Chinese market (Yu and Wang (2010), Wang et al. (2012)). We collect the spot rates of rate securities with $\tau = 0.5,0.75,1,2,\ldots,10,15,20$ from WIND at time t. Then we estimate $\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2$, and get the spot rate for any term τ. We obtain bond transaction data from CSMAR. We drop variable coupon bonds and bonds with a time to maturity of less than one year.

use the first monthly closing quote of the bond after that rating date to measure the spread. We run the following regression:

$$Interest\ Cost_{it}\ (or\ Bond\ Spread_{it}) = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times Rating_{it} + \beta_3 \times AbnEntX_{it} \times Rating_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (9)$$

When regressing *Bond Spread*, in addition to controlling for firm characteristics as before, we also include bond characteristics, *Amount* (the logarithm of offering amount), *Maturity* (months to maturity), *Callable* (an indicator for a callable bond), and *Puttable* (an indicator for a puttable bond) in the vector $Controls_{it}$.

Table 10 reports the results. Column 1 shows that a higher rating significantly reduces the overall interest cost for the firm. A one-notch increase in *Rating* reduces the interest cost by 11 basis points. *AbnEntX* has a positive but insignificant effect on *Interest Cost*. The impact of the interaction *AbnEntX* × *Rating* is also significantly negative. The results indicate that creditors mainly concentrate on *Rating* as a determinant of interest cost. The fact that *AbnEntX* enters the equation with considerable noise suggests that not all creditors pay attention to it or think of it as an important determinant of interest cost. A higher *Rating* further mitigates creditors' attention to *AbnEntX*, as the significantly negative coefficient on *Rating* × *AbnEntX* suggests.

This focus on rating and inattention to abnormal entertainment spending is plausible. Credit rating is regarded as a summary and authoritative gauge of creditworthiness derived from sophisticated analysis of the firm by the rating agency, and creditors can free-ride on it. Entertainment expense, however, is an item buried with many other detailed items under administrative expense, which itself is an item under operating costs in the income statements of Chinese firms. To distill abnormal entertainment expense, as we did, requires further data processing and analysis. Therefore, unaware of the hidden link between abnormal entertainment

expense and ratings, creditors may not pay as much attention to abnormal entertainment expense when deciding how much interest to charge the firm. Creditors' general trust of credit ratings and inattention to unusual entertainment expense makes it possible for a firm to use quid pro quos to obtain favorable ratings and reduce its debt financing cost.

Consider a firm with the average *Rating* and average *AbnEntX*. Given that an interquartile range increase of *AbnEntX* boosts *Rating* by 10% of a notch (as shown in Table 4), the total derivative of *Interest Cost* on *AbnEntX* indicates that an interquartile range increase in *AbnEntX* ultimately results in a reduction of *Interest Cost* of 12 basis points. This magnitude is equivalent to a 4.6% decrease from the mean or an 8.6% of a standard deviation decrease. This saving in interest cost can be a significant benefit that firms are willing to seek with bribes.

Column 2 of Table 10 shows how *Rating* and *AbnEntX* affect *Bond Spread*. *Rating* significantly reduces bond spread. A notch increase in *Rating* is associated with a 34-basis-point decrease in *Bond Spread*. Meanwhile, *AbnEntX* has an insignificantly positive effect and *AbnEntX* × *Rating* has an insignificantly negative effect. Again, the results indicate that bond investors pay close attention to a firm's credit rating but do not consider a firm's unusual entertainment spending as a significant factor when deciding their lending rates. For an average firm, given that an interquartile range increase of *AbnEntX* boosts *Rating* by 10% of a notch (as shown in Table 4), this increase in *AbnEntX* can lead to a decrease in *Bond Spread* of 3 basis points. This magnitude is equivalent to a 2% decrease from the mean or a 2% of a standard deviation decrease. The evidence suggests that bribing for higher ratings help save the firm's overall debt financing cost as well as bond-specific financing cost.

5.2. Debt Capacity

We examine the effect of *Rating* and *AbnEntX* on the firm's debt capacity using the following regression:

$$Bond\ Issuance\ Amount_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times Rating_{it} + \beta_3 \times AbnEntX_{it} \times Rating_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (10)$$

Bond Issuance Amount is the logarithm of the issuance amount of a bond offering by a firm. It is matched with the firm's latest *Rating* and *AbnEntX*.

In column 3 of Table 10, we find that *Rating* has a significantly positive effect on *Bond Issuance Amount*. A one-notch increase in *Rating* results in a 45% increase in the yuan amount of issuance size. Meanwhile, *AbnEntX* has an insignificantly positive effect and *AbnEntX* × *Rating* has an insignificantly negative effect. The results suggest that firms with higher ratings can issue larger amounts of bonds, and investors do not consider firms' unusual entertainment expenses as a significant factor when participating in the bond issuance. Given that an interquartile range increase in *AbnEntX* boosts *Rating* by 10% of a notch (as shown in Table 4), this increase in *AbnEntX* ultimately leads to a 3.8% increase in the yuan amount of issuance size, or a 35 million yuan ($5.4 million) increase for an average firm. The findings indicate that creditors are more generous to firms with higher ratings, and they are not seriously attentive to (or concerned about) a firm's unusual entertainment expense when lending to it.

As we discussed in section 2, the incentive to bribe for higher ratings can be aggravated by the regulatory requirement that only firms rated AA or above are qualified to issue exchange-traded corporate bonds, which can raise a much larger amount of funding. The average bond outstanding of a firm with an AA rating is 428 million yuan ($ 65 million) greater than that of a firm with an AA- rating. This large increase in debt capacity can incentivize a firm to boost its rating above the regulatory threshold.

Table A4 in the Internet Appendix provides further evidence that bribing for higher ratings is likely motivated by the large debt capacity increase associated with exchange-traded corporate bond issuance. We still use the natural experiment of the anti-corruption campaign. However, instead of testing an average treatment effect across all firms, we examine the effect on two types of firms separately: firms that have qualified for exchange-traded corporate bond issuance vs. those that have not. For firms rated AA or above, *AbnEntX* has a significantly positive effect on *Rating* before the campaign, and this effect is significantly weakened after the campaign. However, for firms rated below AA, the effect of *AbnEntX* on *Rating* is insignificant before the campaign and does not weaken after the campaign. This contrast shows that bribe-inflated ratings mainly exist among firms that have qualified for exchange-traded bond issuance. This evidence indicates that the substantial increase in debt capacity when a firm qualifies for exchange-traded bond issuance is a lure for firms to bribe for higher ratings.

5.3. Credit Market Conditions

Given that higher ratings help improve firms' debt capacity, we expect the incentive to bribe for higher ratings to be stronger when firms have poor access to debt financing or face difficult market conditions in which to issue bonds.

Because bank loans are the major source of external financing in China (accounting for 53% of total external financing in June 2021), we exploit regional differences in banking development as a measure of firms' access to debt finance. We use *Bank Branches*, the number of bank branches per 10,000 people in the firm's province, which we collect from the China Banking Regulatory Commission's website, to measure the development of the local banking sector. We run the following regression with *Bank Branches* interacted with *AbnEntX*:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times Bank\ Branches_{it} + \beta_3 \times AbnEntX_{it} \times Bank\ Branches_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (11)$$

Table 11, column 1 reports the results. *AbnEntX* has a positive and significant effect on *Rating*. The coefficient on *AbnEntX* × *Bank Branches* is significantly negative, indicating that for firms in regions with better access to bank financing, the incentive to use potential bribes to seek higher ratings is weaker. When *Bank Branches* drops from its 75th percentile to its 25th percentile, the effect of abnormal entertainment expenses on ratings increases by 29%. This evidence is consistent with the view that firms using bribes to get higher ratings are motivated by the opportunity to improve their access to debt financing.

Next, we consider cold cycles in bond markets, where higher ratings are particularly helpful. In a cold market, barring the highest-quality issuers, firms usually have a hard time selling bonds. Obtaining a higher rating can greatly facilitate bond financing. Meanwhile, a cold market tends to coincide with poor aggregate economic conditions. In these challenging times, external financing can be a crucial relief to temporary cash flow shocks. Therefore, firms' incentive to bribe for higher ratings should be particularly strong when the bond market is in a cold cycle.

We use *Bond Market Issuance Vol*, the total amount of bond issuance by non-governmental and non-financial entities in the prior month, to measure bond market conditions. A small *Bond Market Issuance Vol* is likely associated with poor market conditions for bond financing. We run the following regression with *Bond Market Issuance Vol* interacted with *AbnEntX*:

$$Rating_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times Bond\ Market\ Issuance\ Vol_t + \beta_3 \times AbnEntX_{it} \times Bond\ Market\ Issuance\ Vol_t + \delta \times Controls_{it} + \varepsilon_{it} \quad (12)$$

Because *Bond Market Issuance Vol* is at a monthly frequency, it is not entirely absorbed by the year fixed effects. As reported in column 2 of Table 11, while *AbnEntX* has a significantly positive coefficient, the coefficient on the interaction, *AbnEntX* × *Bond Market Issuance Vol*, is

negative and statistically significant. When *Bond Market Issuance Vol* drops from its 75th percentile to its 25th percentile, the effect of abnormal entertainment expenses on ratings increases by 9%. The evidence indicates that firms have a stronger incentive to bribe for higher ratings when market conditions make fundraising difficult.

5.4. Efficiency of Asset Allocation

Firms enjoy financing cost savings and increased debt capacity when they have higher credit ratings. These benefits add value to the firm and can incentivize the quid pro quo for favorable ratings. However, when firms seek rents with bribes, do they distort the efficiency of asset allocation? To answer this question, we examine how abnormal entertainment spending interacts with credit rating to affect a firm's return on assets (ROA). Our regression is as follows:

$$ROA_{it} = \alpha_s + \gamma_t + \beta_1 \times AbnEntX_{it} + \beta_2 \times Rating_{it} + \beta_3 \times AbnEntX_{it} \times Rating_{it} + \delta \times Controls_{it} + \varepsilon_{it} \quad (13)$$

Table 12 reports the results. *Rating* has a significantly positive impact on *ROA*. *AbnEntX* has an insignificantly negative effect, and *AbnEntX* × *Rating* has an insignificant positive effect. The results indicate that given the same level of ratings, a firm achieving this rating with more abnormal entertainment spending does not show inferior efficiency relative to an otherwise similar firm with less abnormal entertainment spending. Thus, ratings inflated by potential bribes do not necessarily result in a misallocation of capital to firms with lower efficiency.

This finding is consistent with the recent theory of Goldstein and Huang (2020). According to their theory, CRAs' incentive to inflate ratings is bounded by a partial verification constraint. Specifically, the bias cannot be too large; if the ratings are too biased to be informative, ratings will be ignored, and CRAs will become irrelevant. With informative though potentially biased ratings, their theory predicts that for firms with a reasonable quality, inflated ratings can enhance

these firms' debt capacity and investment efficiency. For firms with lower quality, inflated ratings enable their gambling for resurrection and lead to inefficient investment. In equilibrium, inflated ratings "increase, rather than decrease, economic efficiency, even if they do not lead to the first best outcome."

Our sample consists of public firms. Because of the stringent quota for IPOs in China, these firms tend to have decent quality. Moreover, most firms that can get a qualifying rating for public bond market access (whether through bribing or not) should be of decent quality. This is because CRAs' incentive to give informative albeit biased ratings prevents firms with a quality far below the threshold from getting a qualifying rating. According to Goldstein and Huang's theory, inflated ratings could improve these firms' efficiency. Therefore, the "bribe" channel we document does not necessarily hurt the efficiency of capital allocation. In this regard, the "bribe" channel may be understood as a (black) market mechanism that circumvents certain regulatory frictions that hinder efficient resource allocation, for example, an arbitrary rating hurdle for issuing exchange-traded bonds. This effect is also consistent with the classical view that corruption can serve as the second-best solution to efficiency when there are policy distortions in the first place.

Although we do not find a significant link between bribe-inflated ratings and firm profitability, rent-seeking in credit rating can still cause damage to the public interest. After all, bribes are a deadweight loss that could have been used for more productive purposes. Also, a loss of trust in credit ratings can lead to individuals taking information production into their own hands, consuming resources that could otherwise be saved for more productive use.

6. Conclusion

We find that firms with greater entertainment spending in rating years receive higher ratings. Using exogenous regulatory shocks targeting corruption and rating misconduct, respectively, as natural experiments, we provide evidence of firms using excessive entertainment expenses as bribes for favorable ratings. We quantify the benefits to the firm from bribe-inflated ratings and document significant debt financing cost savings and improvement in debt capacity. These "rents" incentivize firms to use quid pro quos with rating agencies to obtain favorable ratings.

Our findings help us to understand the drivers of rating inflation, which was a major phenomenon leading up to the 2008 financial crisis. Our study uses a sample of publicly listed firms in China, but we reveal a corrupt practice that could exist more broadly. From a policy point of view, revelation of this quid pro quo is important because bribes can cause rating inflation for both issuer-paid and investor-paid ratings. Therefore, effective reform of the current rating system is not simply a choice of the pay-model. More importantly, our evidence of rent-seeking in the credit rating industry suggests that as private entities with immense quasi-governmental power, CRAs are prone to corruption and power abuse. Further research is needed to understand the economic implications of assigning quasi-governmental powers to private entities and how to design the system to maintain fairness and public interest.

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Appendix 1 Variable Definitions

Variable	Definition
Rating	The issuer credit rating, with AAA, AA+, AA, AA-, A+, A, A-, and other ratings coded as 7, 6, 5, 4, 3, 2, 1, and 0, respectively. Source: Wind
EntX	Logarithm of travel and entertainment expense. Source: CSMAR
AbnEntX	The residual, ε, from the following regression (Xu, Zhou, and Du (2019)): $$Travel\ \&\ Entertainment\ Expense = \alpha_i + \gamma_t + \beta_1 Sales + \beta_2 Assets + \beta_3 \frac{Marketing\ Expense}{Sales} + \beta_4 \frac{Assets}{Total\ Income} + \beta_5 \frac{Top\ 3\ Exec.Compensation}{3} + \varepsilon$$ where α_i and γ_t are industry and year fixed effects, respectively. We use the sample of non-rating years to estimate the equation and compute the residual for the sample of rating years. Source: CSMAR
SOE	A dummy variable that equals 1 if the firm is state-owned and 0 otherwise. Source: Wind
LnAssets	Logarithm of total assets. Source: CSMAR
Working Capital	Working capital scaled by total assets. Source: CSMAR
Profitability	Net income scaled by total assets. Source: CSMAR
Leverage	Total liability scaled by total assets. Source: CSMAR
Current Ratio	The ratio of current assets to current liabilities. Source: CSMAR
Asset Turnover	The ratio of sales to total assets. Source: CSMAR
Cash Flow	The ratio of operating cash flow to sales. Source: CSMAR
Excess Return (%)	The firm's return in excess of the value-weighted index in the month prior to the rating announcement, expressed in percentage points. Source: CSMAR
Beta	The market model beta estimated from a regression of a firm's daily stock returns on the value-weighted index return in the month prior to the rating announcement. Source: CSMAR
Sigma	The root mean squared error from the regression used to estimate β. Source: CSMAR
Revealed Corruption	The number of criminal corruption cases associated with the firm that are reported by major news media in the year. Source: DataGo
Corrupt	A dummy that equals 1 if *Revealed Corruption* > 0.
Probability of Default	Following Bharath and Shumway (2008), the probability of default (*PD*) is the normal transformation of distance to default (*DD*): $PD = N(-DD)$. DD is the sum of the inverse of the firm's leverage and the geometric average return on the firm's assets, divided by the volatility of the firm's assets (see equation (12) in Bharath and Shumway (2008)). Source: CSMAR
Pre-campaign AbnEntX	A firm's average AbnEntX between 2010 and 2012 (before the anti-corruption campaign). Source: CSMAR

Pre-regulation AbnEntX	A firm's AbnEntX in 2018 (before the rating regulation). Source: CSMAR
Anti-corruption	A dummy that equals 1 if the year-month is after December 2012, when the anti-corruption campaign was initiated by the top leadership of China. Source: The 18th Meeting of the Politburo of the Chinese Communist Party
Rating Regulation	A dummy that equals 1 if the year-month is after August 2019, when Chinese authorities implemented new regulations disciplining credit rating practices. Source: Regulations for Conflicts of Interest in Credit Rating of Debt Instruments of Non-financial Firms in the Inter-Bank Bond Market and Regulatory Guidelines for the Credit Rating Industry
Rebellion Wars	Number of rebellion wars against the ruling Qing Empire (1636–1912) in the prefecture where the firm is located. Source: Chronology of Warfare in Dynastic China, 2003, Press of People's Liberation Army
Distance to Regulator	The distance between the firm and the local branch of the China Securities Regulatory Commission responsible for the firm's region. Source: CSMAR, CSRC
Long Distance	A dummy that equals 1 if *Distance to Regulator* is above the sample median. Source: CSMAR, CSRC
Underwriter Change	A dummy that equals 1 if the issuer switched to a new lead underwriter in the year and 0 otherwise. Source: Wind
Government Corruption	The number of government officials in the issuer's province that have been convicted of corruption divided by the total number of government officials in the province (in tens of thousands) in the year. Source: China Statistical Yearbook
Interest Cost	Interest expense divided by total liabilities, expressed in %.
Bond Spread	The difference in yield to maturity (in %) between the bond and non-tax-exempt Chinese government bonds with the same characteristics. Source: Wind
Bond Issuance Amount	The logarithm of the issuance amount of a bond offering. Source: Wind
Bank Branches	Number of bank branches per 10,000 people in the province where the firm is located. Source: CSMAR
Bond Market Issuance Vol.	Total amount of bond issuance by non-governmental and non-financial entities in the prior month, where bond issuance includes enterprise bonds, corporate bonds, mid-term notes, and commercial papers. Source: Wind
ROA	Net income scaled by total assets. Source: CSMAR

Appendix 2 Corruption in Credit Rating as Revealed by Criminal Investigations

Case 1:

In December 2020, Jin Yongshou, former general manager of Golden Credit Rating International Co., Ltd., and Cui Runhai, former general manager of the Jiangsu province branch of Golden Credit Rating, were accused of assigning inflated credit ratings to some companies in exchange for huge kickbacks, according to the Central Commission for Discipline Inspection and the National Supervisory Commission. No mention was made of the amount involved.

Cui Runhai recounted his first corruption experience with ratings: "The client expressed his willingness to pay more kickbacks for higher ratings. In order to pass the review smoothly, I asked the chair of the review committee to help. I also arranged for the client to dine with our chief executive in charge of rating review, so as to get the chief's acquiescence. I thought it was no big problem to raise the client's rating. So I agreed to the client's request, and the client suggested 2 million yuan as a reward. To make sure nothing went wrong, I also worked on the other members of the review committee individually. Eventually, the rating was issued as the client had wished, and the client also honored the reward."

Jin Yongshou confessed: "In order not to get caught, I influenced the projects through indirect means. Although I didn't engage in or direct the review process, I hinted at my inclination many times via communications with the director and some members of the review committee or by arranging for the client firm to visit our office. This way I could influence the review outcome."

Source: Sohu.com

https://www.sohu.com/a/438089502_114986

Case 2:

Founded in 1994, Beijing-based Dagong Global Credit Rating is authorized to issue credit ratings for all debt instruments – except sovereign bonds – and entities active in China's capital markets. Dagong and its affiliates offered consulting services to 13 fundraising firms, charging total fees of over CNY 78 million (USD 12 million), and to 18 corporate bond issuers, charging total fees of over CNY 120 million (USD 18 million). Between 2017 and 2018, Dagong signed CNY 9.7 million (USD 1.5 million) service contracts with Tunghsu, Neoglory Holdings Group, and Jiangsu Nantong Sanjian Holdings (Group), respectively, to help them build an enterprise credit management system. The CNY 9.7 million (USD 1.5 million) consulting fees were much higher

not only than the rating service fees Dagong generally charges, but also than the common charges for such services by its peers in the sector. It normally costs about CNY 100,000 (USD 15,385) to have agencies issue a rating for a single entity and CNY 150,000 (USD 23,077) for a single debt. The three agreed to disburse a set amount each year for the relevant enterprise credit management reports. Dagong revised Neoglory's entity rating from "AA stable" to "AA+ stable" two working days after Neoglory paid the fees, while Nantong Sanjian's entity and bond ratings were upgraded from AA to AA+ a few months after it signed a consulting service agreement with Dagong.
Source: Yicai Global
https://www.yicaiglobal.com/news/dagong-global-bumped-up-bond-issuers-ratings-for-a-bonus-csrc-charges

Figure 1. Entertainment Expense in Rating Years vs. Non-rating Years
The bars represent the average entertainment expense (in millions of $) of firm-years with no rating actions and with rating actions, respectively. Variables are defined in Appendix 1. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020.

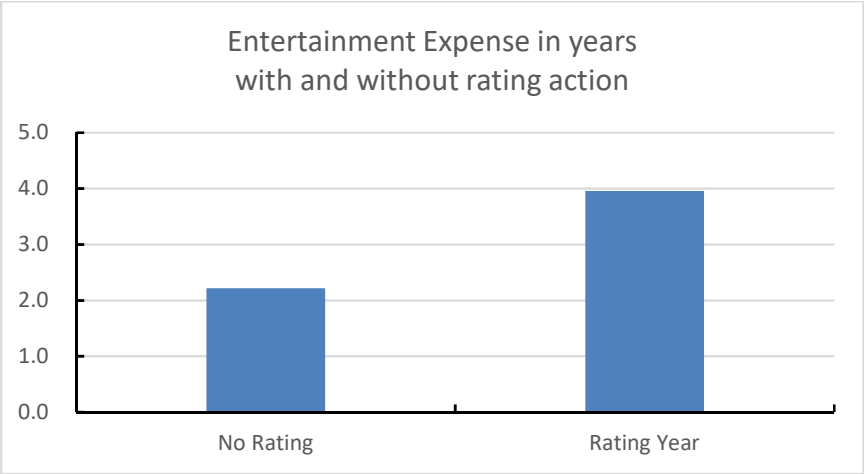

Table 1. Summary Statistics

This table reports the summary statistics of the main variables. Variables are defined in Appendix 1. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

Variable	N	Mean	Median	Std. Dev.	Min	Max
Rating	5,281	5.118	5.00	1.238	0.00	7.00
EntX	5,281	16.31	16.24	1.253	13.19	20.11
AbnEntX	5,206	0.0153	0.0644	0.8167	-2.209	1.830
SOE	5,281	0.519	1.00	0.500	0.00	1.00
LnAssets	5,281	23.19	23.05	1.198	20.86	26.66
Working Capital	5,281	0.126	0.115	0.215	-0.372	0.660
Profitability	5,281	3.168	2.538	4.081	-8.296	16.35
Leverage	5,281	0.551	0.556	0.168	0.161	0.891
Current Ratio	5,281	1.529	1.276	1.009	0.275	6.362
Asset Turnover	5,281	0.571	0.463	0.435	0.0462	2.357
Cash Flow	5,281	-0.0207	0.0243	0.365	-1.914	0.838
Excess Return (%)	5,281	-0.0793	-1.422	10.10	-23.45	38.35
Beta	5,281	1.151	1.162	0.289	0.411	1.876
Sigma	5,281	0.342	0.328	0.118	0.134	0.742
Anti-corruption	5,281	0.828	1	0.377	0	1
Rating Regulation	5,281	0.141	0	0.348	0	1
Rebellion Wars	5,281	4.995	4	3.523	0	14

Table 2. Validation Tests for Abnormal Entertainment Expense

This table reports tests that validate *AbnEntX* as a close proxy for bribes but not a close proxy for credit quality. In Panel A, we regress a firm's corruption scandals revealed by news media in the year after the rating action on the firm's abnormal entertainment expense in the year of rating. *Revealed Corruptions* is the number of criminal corruption cases associated with the firm that have been reported by major news media. *Corrupt* is a dummy if *Revealed Corruptions* is positive. Column 1 uses the next year's *Revealed Corruption* as the dependent variable. Columns 2 and 3 use OLS and Logit model, respectively, with the next year's *Corrupt* as the dependent variable. In Panel B, we regress a firm's *Probability of Default* on *AbnEntX*. *Probability of Default* is the normal transformation of a firm's distance to default (Bharath and Shumway (2008)). Columns 1 and 2 use the current and next year's *Probability of Default*, respectively. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

Panel A

	(1) Revealed Corruption (t+1)	(2) Corrupt (t+1) OLS	(3) Corrupt(t+1) Logit
AbnEntX	0.0318**	0.0155*	0.0765*
	(0.0145)	(0.00808)	(0.0427)
SOE	0.0303	0.0301*	0.157**
	(0.0294)	(0.0159)	(0.0785)
LnAssets	0.0935***	0.0704***	0.367***
	(0.0143)	(0.00770)	(0.0402)
Working Capital	0.0673	0.111*	0.566*
	(0.109)	(0.0652)	(0.325)
Profitability	0.000317	0.00188	0.0106
	(0.00340)	(0.00195)	(0.0101)
Leverage	-0.155	-0.116*	-0.648**
	(0.113)	(0.0632)	(0.324)
Current Ratio	-0.0268	-0.0152	-0.0915
	(0.0213)	(0.0121)	(0.0647)
Asset Turnover	0.0888**	0.0272	0.144
	(0.0382)	(0.0204)	(0.0999)
Cash Flow	-0.00270	-0.00332	-0.0315
	(0.0318)	(0.0192)	(0.100)
Excess Return	0.000900	0.000594	0.00275
	(0.00115)	(0.000637)	(0.00322)
Beta	-0.0599	-0.0343	-0.181
	(0.0479)	(0.0266)	(0.136)
Sigma	0.0436	-0.0187	-0.0994
	(0.122)	(0.0703)	(0.362)
Industry, Year, Agency FE	Yes	Yes	Yes
Observations	5,206	5,206	5,187
R-squared	0.111	0.139	0.138

Table 2. Continued

Panel B

	(1) Probability of Default (t).	(2) Probability of Default (t+1)
AbnEntX	-0.00148	-0.00264
	(0.00191)	(0.00226)
SOE	-0.00757**	-0.0111**
	(0.00381)	(0.00455)
LnAssets	0.0113***	0.0123***
	(0.00173)	(0.00193)
Working Capital	-0.0240	-0.0141
	(0.0146)	(0.0176)
Profitability	-0.000583*	0.000645
	(0.000348)	(0.000485)
Leverage	0.0956***	0.106***
	(0.0145)	(0.0167)
Current Ratio	0.00984***	0.00810***
	(0.00205)	(0.00268)
Asset Turnover	-0.0114***	-0.0209***
	(0.00389)	(0.00382)
Cash Flow	-0.00383	-0.00914
	(0.00770)	(0.00906)
Excess Return	-0.000404***	-9.84e-05
	(0.000129)	(0.000173)
Beta	0.00437	-0.0114
	(0.00699)	(0.00744)
Sigma	0.0706***	0.0727***
	(0.0188)	(0.0230)
Industry, Year FE	Yes	Yes
Observations	5,169	4,556
R-squared	0.144	0.150

Table 3. Entertainment Expense and Issuer Rating

This table reports the OLS regression results examining the effect of entertainment expense or abnormal entertainment expense on a firm's credit rating. The dependent variable is *Rating*, the issuer credit rating, with AAA, AA+, AA, AA-, A+, A, A-, and other ratings coded as 7, 6, 5, 4, 3, 2, 1, and 0, respectively. The key independent variables are *EntX* and *AbnEntX* in columns 1 and 2, respectively. *EntX* is the logarithm of travel and entertainment expense. *AbnEntX* is computed from the following regression:

$$EntX = \alpha_i + \gamma_t + \beta_1 Sales + \beta_2 Assets + \beta_3 \frac{Marketing\ Expense}{Sales} + \beta_4 \frac{Assets}{Total\ Income} + \beta_5 \frac{Top\ 3\ Exec.Compensation}{3} + \varepsilon$$

where α_i and γ_t are industry and year fixed effects, respectively. The coefficients are estimated on firm-years without a rating action. *AbnEntX* is the residual, ε, computed using observations in rating years. Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

Table 3. Continued

	(1)	(2)
EntX	0.0728***	
	(0.0141)	
AbnEntX		0.0290**
		(0.0141)
SOE	0.462***	0.437***
	(0.0290)	(0.0282)
LnAssets	0.741***	0.796***
	(0.0192)	(0.0144)
Working Capital	0.337**	0.360***
	(0.131)	(0.132)
Profitability	0.0446***	0.0451***
	(0.00396)	(0.00402)
Leverage	-2.370***	-2.388***
	(0.116)	(0.118)
Current Ratio	-0.100***	-0.107***
	(0.0215)	(0.0215)
Asset Turnover	0.207***	0.244***
	(0.0423)	(0.0426)
Cash Flow	-0.108***	-0.124***
	(0.0398)	(0.0405)
Excess Return	0.00484***	0.00486***
	(0.00122)	(0.00123)
Beta	0.173***	0.174***
	(0.0533)	(0.0539)
Sigma	-1.043***	-1.030***
	(0.152)	(0.154)
Industry, Agency, Year FE	Yes	Yes
Observations	5,281	5,206
R-squared	0.656	0.652

Table 4. Quasi-Natural Experiment: Anti-corruption Campaign

This table reports the OLS regression results examining the effect of abnormal entertainment expense on a firm's credit rating before and after the initiation of the nationwide anti-corruption campaign at the end of 2012. The dependent variable is *Rating*. *Anti-corruption* is a dummy variable that equals 1 if the year-month is after December 2012, when the anti-corruption campaign was initiated by the top leadership of China. *Pre-campaign AbnEntX* is a firm's average *AbnEntX* between 2010 and 2012 (before the anti-corruption campaign). Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020 in column 1 and between 2010 and 2016 in column 2. For a given firm, only years with rating actions are included.

	(1)	(2)
AbnEntX	0.0933***	
	(0.0312)	
AbnEntX * Anti-corruption	-0.0757**	
	(0.0338)	
Pre-campaign AbnEntX		0.0798***
		(0.0300)
Pre-campaign AbnEntX * Anti-corruption		-0.0756**
		(0.0385)
SOE	0.432***	0.357***
	(0.0283)	(0.0360)
LnAssets	0.796***	0.863***
	(0.0144)	(0.0191)
Working Capital	0.361***	0.0433
	(0.132)	(0.179)
Profitability	0.0449***	0.0419***
	(0.00402)	(0.00557)
Leverage	-2.391***	-2.279***
	(0.118)	(0.170)
Current Ratio	-0.108***	-0.0564
	(0.0215)	(0.0343)
Asset Turnover	0.245***	0.194***
	(0.0427)	(0.0583)
Cash Flow	-0.124***	-0.122*
	(0.0405)	(0.0695)
Excess Return	0.00487***	0.00240
	(0.00123)	(0.00152)
Beta	0.174***	0.0705
	(0.0539)	(0.0711)
Sigma	-1.029***	-0.430**
	(0.154)	(0.173)
Industry, Agency, Year FE	Yes	Yes
Observations	5,206	2,267
R-squared	0.653	0.725

Table 5. Quasi-Natural Experiment: Regulation of Rating Practices

This table reports the regression results examining the effect of abnormal entertainment expense on a firm's credit rating before and after the 2019 government regulation of rating practices. The dependent variable is *Rating*. *Rating Regulation* is a dummy variable that equals 1 if the year-month is after August 2019, when top authorities implemented unprecedented regulations disciplining the credit rating business. *Pre-regulation AbnEntX* is a firm's *AbnEntX* in 2018 (before the rating regulation). Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2018 and 2020. For a given firm, only years with rating actions are included.

	(1)	(2)
AbnEntX	0.0837**	
	(0.0360)	
AbnEntX * Rating Regulation	-0.0884**	
	(0.0438)	
Pre-regulation AbnEntX		0.133**
		(0.0642)
Pre-regulation AbnEntX * Rating Regulation		-0.141
		(0.0990)
Shock	-0.216	-0.305
	(0.132)	(0.208)
SOE	0.582***	0.567***
	(0.0650)	(0.0564)
LnAssets	0.712***	0.682***
	(0.0281)	(0.0363)
Working Capital	1.006***	1.006**
	(0.279)	(0.433)
Profitability	0.0383***	0.0447***
	(0.00728)	(0.00765)
Leverage	-2.724***	-2.668***
	(0.221)	(0.204)
Current Ratio	-0.226***	-0.196***
	(0.0420)	(0.0509)
Asset Turnover	0.276***	0.195*
	(0.0804)	(0.1000)
Cash Flow	-0.123	-0.0768
	(0.0750)	(0.0770)
Excess Return	0.0108***	0.0140***
	(0.00269)	(0.00295)
Beta	0.383***	0.507***
	(0.109)	(0.104)
Sigma	-1.949***	-2.555***
	(0.308)	(0.368)
Industry, Agency, Year FE	Yes	Yes
Observations	1,810	1,466
R-squared	0.633	0.618

Table 6. Regulator Monitoring: Distance to Local Branch of CSRC

This table reports the regression results examining the effect of abnormal entertainment expense on a firm's credit rating, considering the varying distance between the focal firm and its local branch of the China Securities Regulatory Commission. The dependent variable is *Rating*. *Distance to Regulator* is the distance between the firm and the local branch of the China Securities Regulatory Commission. *Long Distance* is a dummy variable that equals 1 if *Distance to Regulator* is above the sample median. Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

	(1)	(2)
AbnEntX	0.0417**	-0.000735
	(0.0170)	(0.0208)
Distance to Regulator	-0.0312***	
	(0.00815)	
AbnEntX*Distance to Regulator	0.0192**	
	(0.00869)	
Long Distance		-0.0967***
		(0.0304)
AbnEntX*Long Distance		0.0808***
		(0.0302)
Other Controls	Yes	Yes
Industry, Agency, Province, Year FE	Yes	Yes
Observations	4.057	4,057
R-squared	0.667	0.667

Table 7. 2SLS: Rebellion Wars against Qing Empire (1636–1912) as Instrument

This table reports the 2SLS regression results examining the effect of abnormal entertainment expense on a firm's credit rating. *AbnEntX* is instrumented by *Rebellion Wars*, the number of rebellion wars against the ruling Qing Empire (1636–1912) in the prefecture where the firm is located. Column 1 reports the first stage. Column 2 reports the second stage, where the dependent variable is *Rating*. Variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

	(1) First-Stage Y: AbnEntX	(2) Second-Stage Y: Rating
AbnEntX		1.463***
		(0.563)
Rebellion Wars	0.0104***	
	(0.00337)	
SOE	-0.366***	0.951***
	(0.0257)	(0.208)
LnAssets	0.127***	0.615***
	(0.0135)	(0.0756)
Working Capital	0.322***	-0.120
	(0.114)	(0.274)
Profitability	-0.00372	0.0506***
	(0.00337)	(0.00672)
Leverage	0.0448	-2.449***
	(0.112)	(0.193)
Current Ratio	-0.0738***	0.00229
	(0.0215)	(0.0561)
Asset Turnover	-0.0897***	0.367***
	(0.0347)	(0.0812)
Cash Flow	-0.104***	0.0291
	(0.0368)	(0.0883)
Excess Return	-0.000917	0.00617***
	(0.00108)	(0.00199)
Beta	-0.104**	0.329***
	(0.0457)	(0.102)
Sigma	0.349***	-1.524***
	(0.124)	(0.300)
Industry, Agency, Year FE	Yes	Yes
Observations	5,206	5,206
First Stage F-statistic	9.540	
R-squared	0.1566	0.6554

Table 8. Alternative Explanations

This table reports the regression results examining the effect of abnormal entertainment expense on a firm's credit rating, considering situations where bribes to government officials or bond underwriters are likely. The dependent variable is *Rating*. *Government Corruption* is the number of government officials in the issuer's province that have been convicted of corruption divided by the total number of government officials in the province (in tens of thousands) in the year. *Underwriter Change* is a dummy variable that equals 1 if the issuer switched to a new lead underwriter in the year and 0 otherwise. Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating or between 2010 and 2012 in column 1 and between 2010 and 2020 in column 2. For a given firm, only years with rating actions are included.

	(1)	(2)
AbnEntX	0.0625**	0.0296**
	(0.0293)	(0.0146)
Government Corruption	0.00110	
	(0.00405)	
AbnEntX × Government Corruption	-0.00226	
	(0.00435)	
Underwriter Change		0.0688*
		(0.0372)
AbnEntX × Underwriter Change		-0.0114
		(0.0381)
Other controls	Yes	Yes
Industry, Agency, Year FE	Yes	Yes
Observations	886	5,206
R-squared	0.770	0.652

Table 9. Effect of Abnormal Entertainment Expense on Issuer Rating under the Investor-Pay Model

This table reports the regression results examining the effect of abnormal entertainment expense on a firm's credit rating for a sample of ratings paid for by investors. The dependent variable is *Rating*. Variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating provided by the China Bond Rating Corporation, a rating agency operated on the investor-pay model, between 2010 and 2020. For a given firm, only years with rating actions are included.

	(1)	(2)
EntX	0.250***	
	(0.0575)	
AbnEntX		0.101*
		(0.0596)
Other Controls	Yes	Yes
Industry, Year FE	Yes	Yes
Observations	1,048	1,048
R-squared	0.726	0.722

Table 10. Benefits of Higher Ratings: Cost of Debt and Debt Capacity

This table reports the regression results examining the effects of abnormal entertainment expense on debt financing cost and debt capacity. In column 1, the dependent variable is *Interest Cost*, which is the firm's interest expense divided by the firm's total liabilities. The unit of observation is a firm-year. In column 2, the dependent variable is *Bond Spread*, which is the difference between an exchange-traded bond's yield to maturity and the yield to maturity of rate securities estimated by the Nelson–Siegel model. When an issuer is assigned a new rating, we use the first monthly closing quote of the bond after that rating date to measure the spread. In column 3, the dependent variable is *Bond Issuance Amount*, which is the Yuan amount issued in a bond offering. The unit of observation is a bond issue. In parentheses are robust standard errors clustered by firm-year. The unit of observation is a bond-year-month. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020.

	(1) Interest Cost	(2) Bond Spread	(3) Bond Issuance Amt
AbnEntX	0.0247	0.295	0.148
	(0.0201)	(0.395)	(0.172)
Rating	-0.109***	-0.343***	0.374***
	(0.0206)	(0.0729)	(0.0627)
AbnEntX × Rating	-0.0294*	-0.0153	-0.0339
	(0.0161)	(0.0689)	(0.0356)
Controls	Yes	Yes	Yes
Firm, Year-Month FE	-	Yes	Yes
Industry, Agency, Year FE	Yes	-	-
Observations	6,608	2,696	1,173
R-squared	0.353	0.768	0.774

Table 11. Effects of Abnormal Entertainment Expense under Different Credit Market Conditions

This table reports the regression results examining the effect of abnormal entertainment expense on a firm's credit rating, considering different bond market and bank market conditions. The dependent variable is *Rating*. *Bank Branches* is the number of bank branches per 10,000 people in the province where the firm is located. *Bond Market Issuance Vol.* is the total amount of bond issuance by non-governmental and non-financial entities in the prior month, where bond issuance includes enterprise bonds, corporate bonds, mid-term notes, and commercial papers. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

	(1)	(2)
AbnEntX	0.0366**	0.0323**
	(0.0155)	(0.0140)
Bank Branches	0.0119	
	(0.0353)	
AbnEntX × Bank Branches	-0.101**	
	(0.0419)	
Bond Market Issuance Vol.		0.000494
		(0.0394)
AbnEntX × Bond Market Issuance Vol.		-0.0617***
		(0.0205)
Other Controls	Yes	Yes
Industry, Agency, Year FE	Yes	Yes
Observations	4,472	5,206
R-squared	0.655	0.653

Table 12. Abnormal Entertainment Expense and ROA

This table reports the regression results examining the effects of abnormal entertainment expense on the firm's return on assets. The dependent variable, *ROA*, equals the firm's net income divided by total assets. Variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020.

	(1)	(2)
AbnEntX	-0.0795	-0.0800
	(0.0776)	(0.0795)
Rating	0.550***	0.550***
	(0.122)	(0.122)
AbnEntX × Rating		0.00921
		(0.0897)
Other Controls	Yes	Yes
Industry, Agency, Year FE	Yes	Yes
Observations	6,892	6,892
R-squared	0.356	0.356

Internet Appendix

Table A1. Credit Rating Agencies and Credit Ratings in China

Panel A reports the accredited domestic credit rating agencies in China, their accreditations by major regulators, and their business models. PBoC stands for the People's Bank of China, the central bank. CSRC stands for the China Securities Regulatory Commission, the Chinese counterpart to the Securities and Exchange Commission in the U.S. NDRC stands for the National Development and Reform Commission, a government agency overseeing reform of state-owned enterprises. Panel B reports the breakdown of ratings issued by each rating agency between 2010 and 2020. Panel C reports scandals in China's bond markets involving bribery and/or credit rating agencies between 2010 and 2020.

Panel A: Rating Agencies

CRA	Sub-CRAs	Full name	PBoC	CSRC	NDRC	Business model
Chengxin	ChengxinS	China Chengxin Security Rating Co, Ltd.	No	Yes	No	Issuer-pay
	ChengxinI	China Chengxin International Credit Rating Co., Ltd.	Yes	No	Yes	Issuer-pay
Lianhe	LianheR	Lianhe Rating Co., Ltd.	No	Yes	No	Issuer-pay
	LianheC	Lianhe Credit Information Services Co., Ltd	Yes	No	Yes	Issuer-pay
Brilliance		Shanghai Brilliance Investors Service Co., Ltd.	Yes	Yes	Yes	Issuer-pay
Pengyuan		Pengyuan Credit Rating Co., Ltd.	No	Yes	Yes	Issuer-pay
Dagong		Dagong Global Credit Rating Co., Ltd.	Yes	Yes	Yes	Issuer-pay
Orient		Golden Credit Rating International Co., Ltd.	Yes	Yes	Yes	Issuer-pay
FarEast		Shanghai Far-East Credit Rating Co., Ltd.	No	Yes	Yes	Issuer-pay
CBR		China Bond Rating Corporation	Yes	No	No	Investor-pay

Table A1. Continued

Panel B: Ratings

Rating	Dagong	Orient	LianheR	LianheC	Brilliance	ChengxinI	ChengxinS	Pengyuan	Total
AAA	95	8	42	91	84	289	120	9	738
AA+	134	25	153	142	185	213	137	61	1050
AA	125	84	484	181	393	313	283	394	2257
AA-	122	23	94	48	154	119	49	220	829
A+	50	8	47	43	33	45	10	48	284
A	4	0	8	13	6	4	7	8	50
A-	0	1	0	2	3	3	0	0	9
<A-	4	5	15	3	6	11	5	15	64
Total	534	154	843	523	864	997	611	755	5281

Panel C: Recent Scandals

Year	Institution	Issuer	Misconduct
2011	ChinaLin Securities	New Head Line	New Head Line provided help for ChinaLin Securities in undertaking corporate bond underwriting business. After the successful issuance of bonds, ChinaLin Securities gave the company 5 million yuan as a rebate.
2017–2018	Dagong Global Credit Rating	Tunghsu Group, Neoglory (China) Holdings Group, Nantong No.3 Construction Group, etc.	Dagong Global Credit Rating, while providing credit rating services for enterprises, directly offered consulting services to enterprises and charged high fees.
2018	Shenwan Hongyuan Securities	Zhonghengtong (Fujian) Machinery Manufacturing Co., Ltd	The staff of Shenwan Hongyuan Securities who issued the private placement bond for Zhonghengtong illegally received the benefit fee of 1.5 million yuan paid by the company.
2019	Golden Credit Rating	Not disclosed	Cui Runhai, general manager of Golden Credit Rating Jiangsu Branch, conspired with others to help an enterprise in Jiangsu raise its credit rating and collect huge benefits.

Table A2. Regression to Estimate Abnormal Entertainment Expense

This table reports the regression through which *AbnEntX* is computed:

$$EntX = \alpha_i + \gamma_t + \beta_1 Sales + \beta_2 Assets + \beta_3 \frac{Marketing\ Expense}{Sales} + \beta_4 \frac{Assets}{Total\ Income} + \beta_5 \frac{Top\ 3\ Exec.Compensation}{3} + \varepsilon$$

where α_i and γ_t are industry and year fixed effects, respectively. The coefficients are estimated on firm-years without a rating action. *AbnEntX* is the residual, ε, computed using observations in rating years. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	EntX
Sales	0.474***
	(0.0333)
Assets	0.132***
	(0.0342)
Marketing Expense/Sales	1.611***
	(0.216)
Assets/Total Income	0.0298**
	(0.0131)
Avg. Exec. Compensation	0.254***
	(0.0236)
Constant	-0.951**
	(0.374)
Observations	9,551
R-squared	0.499

Table A3. Validation Test of the Anti-corruption Campaign

This table reports the regression results examining the effect of *Anti-corruption* on *Revealed Corruption*. *Revealed Corruption* is the number of corruption cases associated with the firm that are reported by major news media in the year. *Anti-corruption* is a dummy that equals 1 if the year is after 2012, when the anti-corruption campaign was initiated by the top leadership of China. Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

Dependent Variable: Revealed Corruption	(1)	(2)
Anti-corruption	0.161***	0.118***
	(0.0253)	(0.0384)
SOE	0.0483	-0.0131
	(0.0299)	(0.0440)
Anti-corruption × SOE		0.0735
		(0.0491)
LnAssets	0.119***	0.119***
	(0.0136)	(0.0136)
Working Capital	0.122	0.118
	(0.112)	(0.112)
Profitability	-0.00116	-0.00102
	(0.00355)	(0.00356)
Leverage	-0.169	-0.169
	(0.117)	(0.117)
Current Ratio	-0.0279	-0.0274
	(0.0225)	(0.0224)
Asset Turnover	0.0852**	0.0854**
	(0.0387)	(0.0387)
Cash Flow	-0.0500	-0.0496
	(0.0396)	(0.0396)
Excess Return	0.000496	0.000523
	(0.00128)	(0.00128)
Beta	-0.0863**	-0.0879**
	(0.0434)	(0.0435)
Sigma	0.316**	0.320**
	(0.125)	(0.125)
Industry FE	Yes	Yes
Observations	5,281	5,281
R-squared	0.086	0.087

Table A4. Threshold Rating for Public Bond Issuance and Incentive to Bribe

This table reports the regression results examining the effect of entertainment expense on a firm's credit rating before and after the initiation of the nationwide anti-corruption campaign at the end of 2012, using two samples of issuers with different qualifications for issuing exchange-traded corporate bonds. The dependent variable is *Rating*. Column 1 (2) is an OLS regression on the sample of firms whose ratings in the prior year are above or equal to (below) AA, the minimum rating for exchange-traded corporate bond issuance. Other variables are defined in Appendix 1. In parentheses are robust standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. The sample consists of non-financial public firms with a long-term issuer credit rating between 2010 and 2020. For a given firm, only years with rating actions are included.

	(1)	(2)
	Prior rating ≥ AA	Prior rating < AA
AbnEntX	0.0999***	0.0396
	(0.0334)	(0.0652)
AbnEntX × Anti-corruption	-0.0941***	0.0595
	(0.0354)	(0.0784)
Other Controls	Yes	Yes
Industry, Agency, Year FE	Yes	Yes
Observations	4,279	920
R-squared	0.657	0.454