The Role of Bond Issuance in the Underwriter-Issuer Relationship

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Abstract

This study investigates the role of bond issuance in establishing cooperative relationships between underwriters and issuers. The results indicate that: First, bond issuance serves as an effective mechanism for underwriters and listed companies to build cooperative relationships. Both bond underwriting experience and stock IPO underwriting experience significantly increase the probability of underwriters participating in the same issuer' s subsequent seasoned equity offering (SEO). Second, underwriters involved in a listed company' s IPO reduce bond risk premiums to stabilize client relationships by enhancing bond issuance quality; correspondingly, listed companies demonstrate a stronger preference for selecting underwriters that participated in their stock IPO to issue bonds, thereby benefiting from lower financing costs. Third, bond issuance utilizing existing cooperative relationships entails higher risk for listed companies: these issuers' stocks are more likely to be specially treated (ST) during the bond' s tenure due to fundamental deterioration. In summary, these findings provide evidence on the function of securities underwriting relationships in China' s capital markets and offer insights for future regulatory policy reforms.

Full Text

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Abstract: This article studies the role of bond issuance in building a cooperative relationship between underwriters and issuers. The results show that,

firstly, bond issuance is an effective means for underwriters to establish cooperative relationships with listed companies. Both bond issuance experience and stock IPO issuance experience can significantly increase the probability of underwriters participating in the next private equity placement by the same issuer. Secondly, underwriters in IPOs of listed companies will reduce the risk premium of bonds to stabilize customer relationships by improving the quality of bond issuance; Listed companies are indeed more inclined to choose underwriters who have participated in their stock IPOs to issue bonds to enjoy lower financing costs. Thirdly, utilizing existing partnerships for bond issuance means that listed companies have higher risks. During the bond' s maturity, these issuers' stocks are more likely to be subject to special treatment (ST) due to deteriorating fundamentals. In summary, these results provide evidence for the role of securities underwriting relationships in the Chinese capital market and also provide a reference for subsequent regulatory policy reforms.

Keywords: Securities Underwriting; Risk Premium; Fundamental Risk
JEL: G24, G12, G20

1. Introduction

Since the 18th National Congress of the Communist Party of China, continuous new achievements have been made in financial sector reforms. The inaugural Central Financial Work Conference held at the end of 2023 explicitly proposed the important goal of "accelerating the construction of a strong financial nation." To achieve this objective, we must unswervingly follow the path of financial development with Chinese characteristics, deepen comprehensive reforms, prevent and control risks, enable finance to better support the real economy, and build a modern financial system with Chinese characteristics.

The bond market constitutes a vital component of the financial system. According to statistics from the People' s Bank of China, by the end of 2022, the outstanding balance of corporate credit bonds reached RMB 32 trillion, demonstrating that bond issuance represents a crucial financing channel for domestic enterprises. Therefore, improving relevant mechanisms and institutional frameworks will enable the bond market to better play its role in revitalizing the economy and maintaining stable development. The bond market exhibits a high degree of specialization. Under Chinese regulatory requirements, enterprises must issue bonds through underwriting intermediaries, making underwriters pivotal players in bond issuance. The primary bond underwriting intermediaries in the domestic market are commercial banks and securities firms, with the latter being qualified to engage in both equity and bond underwriting businesses. When an underwriting intermediary can simultaneously conduct various types of investment banking businesses, mutual influences may arise across different underwriting activities, ultimately altering the behavior of both issuers and underwriters. Understanding the interactive relationship between underwriters

and issuers helps reveal the sources of risk in the bond market and provides a reference for improving the financial regulatory system.

This paper focuses on examining the behavior of securities firms (investment banks) in underwriting businesses and their resulting impacts. Through an analysis of 1,986 private equity placement events and 3,295 bond issuance events, we find that securities firms leverage their ability to underwrite both bonds and stocks for the same enterprise, using bond issuance as a means to establish client relationships and effectively driving future equity underwriting businesses. Empirical results show that after issuing bonds for a listed company, underwriters have a higher probability of obtaining subsequent private placement businesses from the same issuer, with this probability increase being even more pronounced for lead underwriters in the bond issuance process. After controlling for stock issuance experience, participating in bond issuance or acting as lead underwriter in a listed company' s bond issuance can increase the underwriter' s probability of obtaining future private placement business from the same issuer by 1.2 and 7.4 percentage points, respectively. The positive pull effect of bond issuance on future equity underwriting business has transformed bond underwriting into a competitive battlefield among underwriters. Some anecdotal evidence from reality illustrates the intensity of this competition. As early as 2016 and 2018, the China Securities Regulatory Commission (CSRC) responded twice in the "Q&A on Daily Supervision of Corporate Bonds" to the phenomenon of excessively low bond underwriting fees, explicitly stating that it would conduct special inspections on bond issuance projects with abnormal fee quotations. The National Association of Financial Market Institutional Investors (NAFMII) has also issued warnings to underwriters quoting excessively low underwriting fees.[1] The price competition in bond underwriting services sufficiently demonstrates underwriters' emphasis on bond issuance, as bond underwriting business serves as a stepping stone to future equity financing business. Characteristics of China' s bond market facilitate underwriters' use of bond issuance business to establish relationships with clients. Corporate bonds in the domestic market feature high credit ratings, short maturities, and low default rates. When considering only bonds issued by listed companies, these safety characteristics become even more pronounced. The high safety of bonds allows underwriters to appropriately lower screening standards for issuers during bond issuance to establish cooperative relationships with more issuers. The short maturity of bonds leads to frequent rollover financing needs for enterprises, providing underwriters with more opportunities to communicate with issuers. In summary, the unique environment of the domestic bond market makes bond underwriting business particularly suitable as a bridge for underwriters to establish cooperative relationships with issuers.

Both bond issuance and stock underwriting can influence enterprises' future choices of underwriters for securities issuance, creating competition between two types of underwriters: underwriters who participated in a listed company' s stock IPO face competition from bond underwriters. Underwriters involved in a listed company' s IPO have already established cooperative relationships with

the company through the relevant issuance process. However, if bond issuance experience and stock issuance experience contribute similarly to influencing issuers' underwriter selection, this means that any new entrant in the market can establish cooperative relationships with listed companies by issuing bonds for them, thereby competing with IPO underwriters. We find that underwriters who participated in a listed company's stock IPO will prevent other underwriters from seizing bond underwriting opportunities by improving bond issuance quality, thereby maintaining client relationships. When a listed company chooses an underwriter that participated in its IPO to issue bonds, the risk premium of the new bond decreases by approximately 8-12 basis points compared to similar bonds. Listed companies are indeed more inclined to choose underwriters that participated in their stock IPOs to issue bonds and enjoy lower financing costs, demonstrating that the competitive strategy of IPO underwriters is effective and that bond underwriting business is largely regarded by underwriters as a means to establish or stabilize client relationships.

Because bond issuance can effectively drive future equity financing business, it has become a target of competition among underwriters. Underwriters' behavior in bond issuance may consequently change. Theoretically, underwriters who have repeatedly participated in the same issuer' s securities issuance should have better understanding of the enterprise and possess advantages in risk revelation and pricing. Underwriters may screen issuers based on reputation considerations to ensure the high quality of cooperative enterprises (Fernando et al., 2005). However, if bond underwriting business is linked to future equity underwriting business, underwriters may lower their review standards for issuers for future benefits. In this case, the cooperative relationship 反而 implies risk. This paper finds that if a listed company chooses an underwriter used in its stock IPO during the bond issuance process, the probability that the issuer' s stock will be subject to special treatment (ST) due to deteriorating fundamentals during the bond' s maturity period increases significantly by 1-3 times. This indicates deficiencies in underwriters' risk review of issuers during bond issuance. Our results suggest that when bond issuance becomes a means for underwriters to compete for future business, the cooperative relationship between underwriters and issuers implies higher risk for the issuer. Within this cooperative relationship, underwriters and issuers may indeed form a win-win situation, with underwriters facilitating bond issuance for listed companies and listed companies awarding future stock issuance businesses to the same underwriters. However, this cooperative relationship implies risk for investors, as underwriters may not conduct strict screening of bond issuers in order to compete for bond underwriting opportunities and obtain future equity financing business.

This paper makes three contributions. First, the findings demonstrate that stable cooperative relationships indeed exist between underwriters and listed companies (issuers) in the Chinese market. These relationships influence listed companies' preferences in underwriter selection for securities issuance and improve securities issuance quality, creating a win-win situation within the cooper-

ative relationship. Second, empirical results prove that bond issuance, like stock issuance, is an effective means for underwriters and issuers to establish cooperative relationships. Although bond underwriting and stock underwriting differ significantly in process and regulatory requirements, when underwriters can provide both services for the same issuer, mutual influences arise between stock and bond issuance businesses. Third, we find that cooperative relationships between underwriters and issuers may imply risk. Theoretically, having a cooperative relationship means underwriters have better understanding of issuers, and underwriters' behavior can more accurately reflect issuers' risks. However, when bond issuance becomes a means for underwriters to establish and maintain client relationships, underwriters will no longer conduct strict screening of issuers during the underwriting process, and the corresponding risk revelation function becomes ineffective.

The remainder of this paper is organized as follows: Section 2 reviews the literature and proposes research hypotheses, Section 3 presents sample construction and descriptive statistics, Section 4 proposes empirical models and conducts analysis, and Section 5 concludes.

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2. Literature Review and Research Hypotheses

2.1 Literature Review

Stable cooperative relationships in business operations widely exist between financial intermediaries and their clients. Earlier attention focused on relationships formed between traditional commercial banks and borrowers (enterprises) based on lending businesses. Commercial banks can obtain key information about enterprises from various aspects during credit review processes, and cooperative relationships built on this information can benefit both parties. Commercial banks can set appropriate lending strategies based on their deep understanding of enterprises (Rajan, 1992; Boot and Thakor, 2000), and accurate lending strategies help banks accumulate reputation and attract more clients (Chemmanur and Fulghieri, 1994). Additionally, credit businesses in commercial banks also positively impact their investment banking businesses (Bharath et al., 2007). Borrowers in credit businesses, especially startups and small-micro enterprises, can obtain more financial support through stable business relationships with banks (Petersen and Rajan, 1994; Beck et al., 2018).

As market structures continuously improve and the specialization level of financial intermediaries increases, more enterprises choose to issue bonds and stocks directly in capital markets for financing. Consequently, underwriters have also begun to establish cooperative relationships with issuers based on securities underwriting businesses, which some literature refers to as relationship-specific capital (James, 1992). The underwriter-issuer relationship has multiple dimensions. First, an issuer' s selection of an underwriter to issue securities marks the beginning of their cooperative relationship. Securities underwriting fees,

issuance quality, underwriter reputation, and supporting services such as analyst coverage are all factors issuers consider when selecting underwriters (James, 1992; Krigman et al., 2001; Fernando et al., 2005), and underwriters also compete with each other for future underwriting businesses (Corwin and Schultz, 2005). Second, information asymmetry problems exist in securities issuance. Underwriters can use their reputation to provide "certification" for securities issuance, sending positive signals to market participants (Burch et al., 2005; Fang, 2005) to reduce issuance underpricing and improve issuance success rates. Of course, underwriters also review and screen issuer quality during this process (Fernando et al., 2005). Finally, the market assigns value to the underwriter-issuer relationship. When an underwriter crisis leads to risks or termination of the cooperative relationship, the issuer's market value will be negatively affected (Fernando et al., 2012; Dick-Nielsen et al., 2021).

Another related literature stream focuses on China' s bond market. China' s bond market is rapidly developing toward standardization and liberalization overall (Hu et al. (2018)). According to the classification by Amstad and He (2019), China' s bond market can be divided into government bonds, financial bonds, and corporate (industrial) bonds. We primarily focus on corporate bonds. Within this category, Chinese enterprises can choose corporate bonds, exchange-traded corporate bonds, asset-backed securities, or private placement bonds for debt financing. China' s bond market has some unique institutional backgrounds. In terms of market structure, China' s bond market mainly consists of one interbank market and two exchange markets. Differences between the two types of markets in regulatory authorities, issuance requirements, trading rules, and investor types have led to market segmentation, which Chen et al. (2023) utilize to establish a causal relationship between bond pledgeability and prices. Regarding credit ratings, China' s bond market exhibits strong bias toward the highest few rating grades (Huang et al. (2023)), and rating classifications are relatively coarse such that bonds with the same rating exhibit large risk differences (Livingston et al. (2018)). He and Jin (2010) and Wang et al. (2012) find that higher bond credit ratings and issuer credit ratings imply higher safety for bonds and issuers, both effectively reducing domestic enterprises' bond issuance costs. However, other studies find that after controlling for endogeneity, credit ratings have no significant impact on Chinese corporate bond pricing because issuer-paid and rating shopping mechanisms have caused credit rating information to lose credibility (Kou et al., 2015). Regarding pricing, competition among underwriters leads to overpricing in the bond primary market (Ding et al. (2022)), which significantly differs from the underpricing phenomenon commonly documented in literature. Additionally, government implicit guarantees and bailout expectations arising from state ownership also affect bond prices (Wang and Chen, 2015; Wang et al., 2016; Luo and Liu, 2016; Han and Hu, 2015; Geng and Pan, 2019). Finally, other factors such as internal controls, macroeconomic factors, and social trust also affect bond issuance costs (Fang et al., 2013; Wang et al., 2015; Yang and Pan, 2019).

2.2 Hypothesis Development

Existing literature indicates that stable cooperative relationships between underwriters and issuers can provide enterprises with better securities issuance services, and issuers changing underwriters may incur additional costs (Burch et al., 2005; Dick-Nielsen et al., 2021). Therefore, once underwriters and issuers establish cooperative relationships, issuers tend to award future businesses to related underwriters to enjoy cheap and high-quality services. Consequently, establishing cooperative relationships with issuers becomes one of the key concerns for underwriters. The primary business interactions between listed companies and underwriters are securities underwriting. Before any private placement, underwriters may establish cooperative connections with listed companies through stock IPO issuance or bond issuance. How these two underwriting businesses contribute to relationship building and soliciting future business is a question worth exploring. On one hand, if a listed company chooses an underwriter that previously participated in its IPO for a new stock issuance, the similarity of stock issuance procedures and previous cooperation experience can reduce information costs and improve issuance efficiency. On the other hand, listed companies issue bonds relatively frequently, and underwriters can take this opportunity to continuously deepen their relationships with listed companies, thereby influencing issuers' future underwriter selection. Further, if securities underwriting experience can establish relationships with issuers, the different roles underwriters play in related businesses may contribute differently to relationship building. Intuitively, lead underwriters in securities underwriting businesses underwrite the largest proportion, receive the most profits, and have deeper understanding of issuers. Therefore, compared to co-lead underwriters or distributors, serving as lead underwriter for a listed company' s securities issuance should more effectively establish cooperative relationships. Based on the above analysis, this paper proposes:

Hypothesis 1: Both past stock underwriting experience and bond underwriting experience can significantly increase the probability of underwriters participating in the same issuer' s future stock issuance business.

Hypothesis 2: Lead underwriters in securities underwriting businesses have a higher probability of obtaining the same issuer' s future stock issuance business.

If both stock issuance and bond issuance can help underwriters establish cooperative relationships with issuers, this involves competition among underwriters. The earliest group of underwriters to have dealt with a listed company are those who participated in its stock IPO. These underwriters have maintained cooperative relationships with the listed company for a relatively long time and may need to incur certain costs to maintain client relationships, such as providing analyst coverage services (Krigman et al., 2001). However, intermediaries participating in bond underwriting do not need to incur substantial costs. Listed companies issue bonds relatively frequently, and underwriters who have just underwritten bonds for a listed company can immediately establish cooperative

relationships and benefit from them in subsequent stock issuance businesses. These new competitors force early underwriters who have established relationships with listed companies to make extra efforts to maintain client relationships. Competition in the bond issuance market is fierce, and the CSRC has repeatedly warned against vicious price competition in bond underwriting fees, leaving little room for further fee reductions. Issuance quality is an effective means for underwriters to attract clients (James, 1992), so early underwriters who have established relationships with listed companies are likely to focus on bond issuance quality to compete for bond issuance opportunities. These established underwriters compete for bond issuance opportunities by reducing bond risk premiums, thereby increasing their chances of obtaining future business. If bonds issued through established underwriters have higher quality, listed companies should be more inclined to choose these underwriters for bond issuance to enjoy lower financing costs. Accordingly, we propose the following hypotheses:

Hypothesis 3: When listed companies issue bonds through underwriters that participated in their stock IPOs, the bonds' risk premium is lower.

Hypothesis 4: Listed companies tend to choose underwriters from their stock IPOs to issue bonds in order to enjoy lower financing costs.

Underwriters need to conduct some screening when establishing and maintaining cooperative relationships with issuers. Underwriters with better reputations will choose to establish relationships with higher-quality enterprises (Fernando et al., 2005). If underwriters intentionally screen issuers when underwriting bonds, rejecting those with higher risks, then bond issuance through related underwriters may imply higher issuer quality and lower bond risk. However, if bond underwriting business has a significant pull effect on future other businesses, bond issuance becomes a tool for underwriters to establish and maintain client relationships. If screening standards are too strict, underwriters will have to give up some potential clients and consequently give up other businesses from these potential clients. Therefore, when competing for bond underwriting opportunities, underwriters may forgo strict review of bond issuers for future benefits. In this case, the cooperative relationship between listed companies and underwriters has negative implications. Thus, the relationship between underwriter-issuer cooperation and issuer risk is also a question worth exploring. Accordingly, this paper proposes:

Hypothesis 5a: Underwriters conduct strict review of issuers when issuing bonds. Therefore, if an underwriter that has previously cooperated with a listed company agrees to continue issuing bonds for it, this indicates that the issuing enterprise has lower risk.

Hypothesis 5b: Bond underwriting business is a means for underwriters to build client relationships and compete for future business, and underwriters do not conduct strict screening of issuers. Therefore, bond issuance through related underwriters implies that the issuing enterprise has higher risk.

3. Sample Construction and Descriptive Statistics

This paper' s research objects are primarily securities issuance activities of listed companies, including initial public offerings (IPOs), private placements, and bond issuance, with a sample period from 2015 to 2021. Private placement data comes from the WIND database, while stock IPO issuance information, bond issuance information, corporate financial variables, and stock return data come from both WIND and CSMAR databases. To explore the connection between bond and stock underwriting businesses, we limit the scope of underwriters to securities firms that can simultaneously engage in both types of investment banking businesses, excluding commercial banks. Although existing literature proves that lenders in lending relationships are more likely to become underwriters for borrowers' future securities issuance (Drucker and Puri, 2005; Yasuda, 2005; Bharath et al., 2007), domestic commercial banks cannot engage in stock underwriting business. Even if lenders establish cooperative relationships with clients with financing needs through credit businesses, such relationships are difficult to manifest in stock underwriting.

The private placement sample used in this paper is firm-year level data. We process the raw data in the following sequence. First, we exclude securities issuance events of financial enterprises, as banks, securities firms, and other financial institutions can underwrite securities for themselves or agree with partners to provide mutual facilitation in securities issuance, which would affect estimation results. Second, if a listed company has multiple placement records within one year, we retain only the first placement event. Finally, we exclude samples with missing control variables. After screening, we ultimately retain 1,986 private placement events. The sample records underwriter information, placement date, total fundraising scale, new share proportion, and a dummy variable for major shareholder participation for each private placement event. Stock issuance businesses also involve initial public offering (IPO) events. We collect underwriter information and fundraising scale from listed companies' stock IPO events. Some listed companies in the sample had IPO events relatively long ago, and underwriter names have changed due to enterprise restructuring and shareholding system reforms. We manually adjust the former names of IPO underwriters using Tianyancha (www.tianyancha.com) and web searches.

Our bond sample includes corporate bonds, enterprise bonds, short-term financing bills, ultra-short-term financing bills, and medium-term notes issued by listed companies in the Shanghai and Shenzhen exchange markets and the interbank market. We process the bond sample as follows: First, we exclude bonds issued by financial industry enterprises. Second, we retain only bond issuance events where securities firms participated as underwriters, since only securities firms can simultaneously engage in both stock and bond underwriting businesses, facilitating our study of the interaction between the two businesses. Finally, we exclude samples with missing key variables. After screening, we retain 3,295 bonds of various types issued by listed companies.

We record the following variable information for each bond: underwriter information, issuance time, issuance scale, bond maturity, issuer credit rating[2], issuance market, redemption clauses, put clauses, and coupon rate.

Issuer-level control variables include firm size, leverage ratio, sales revenue, cash holdings, return on total assets, state-owned enterprise dummy variable, book-to-market ratio, shareholding ratio of the largest shareholder, and firm age at the time of securities issuance, all measured at year-end. At the underwriter level, we calculate underwriters' annual market share based on underwriting amount and underwriting frequency in the sample.

[2] For short-term bonds with maturities within one year, China has two rating systems: AAA, AA+, AA-, ···and A-1, A-2, ···, A-4, which cannot be converted between each other. To maintain a consistent credit rating system, we use issuer credit rating as an alternative. The bond issuer rating dummy variable contains five categories representing AAA, AA+, AA, AA- and below, and missing credit rating, coded as 1-5 respectively in descriptive statistics. Credit ratings in China' s corporate bond market are generally high, and listed companies have even lower credit risk, resulting in very few cases with issuer credit ratings at AA- or below. Therefore, we group bonds with credit ratings of AA- and below into one category in the model. We separately categorize missing credit ratings as one group, but our main results remain robust when deleting missing values.

Financial control variables all use data from the year-end prior to the corresponding issuance event. We winsorize continuous variables at the 1% and 99% levels to prevent outliers from affecting results. Variable symbols and definitions are shown in Appendix Table A1, and descriptive statistics for securities issuance characteristics are shown in Table 1 .

Table 1 Descriptive Statistics of Selected Variables

Variable	Mean	75%	Variance	Sample Size
Private Placement Sample				
scale_p	23.069	24.000	37.624	1,986
ppfraction	0.171	0.194	0.159	1,986
ppfirst	0.496	0.438	1,986	
Bond Sample				
scale_b	12.390	15.000	12.573	3,295
bondterm	1.985	3.000	1.893	3,295
creditlevel	0.869	1.775	3,295	
interbank	0.433	0.750	3,295	
couponrate	4.102	4.980	1.416	3,295
Δpremium_{median}	0.037	0.475	0.956	3,295
Δpremium_{mean}	-0.009	0.473	0.920	3,295
creditrisk	0.196	0.397	3,295	

4. Empirical Models and Results Analysis

4.1 The Contribution of Underwriting Experience to Private Placement Business

When conducting securities issuance, listed companies select underwriters, which has important implications for issuance quality and subsequent secondary market trading (Fang, 2005; Dick-Nielsen et al., 2012). Enterprises tend to choose underwriters they have previously cooperated with when issuing new securities, as changing underwriters or attempting to establish relationships with new underwriters may incur high switching costs (Dick-Nielsen et al., 2021). If past underwriting experience can establish relationships between underwriters and issuers, then underwriters with cooperative experience have a higher probability of being selected for the issuer' s next stock issuance. To verify the contribution of stock issuance experience and bond issuance experience to future underwriting business, we establish Model (1) as follows:

$$ppchoice_{pij} = \beta_0 + \beta_1 \times bond(main)choice\_1_{pij} + \beta_2 \times ipo(main)choice_{ij} + {}_3 \times \mathbf{X_{pi}} + \delta_s + \mu_a + \lambda_y + \varepsilon_{pij}$$

Three key variables in Model (1) all record listed companies' underwriter selection during corresponding securities issuance. The dependent variable *ppchoice* is a dummy variable for lead underwriter selection in private placements. It records whether listed company i selected underwriter j as lead underwriter in private placement event p. The dummy variable for underwriter selection in stock IPOs is *ipochoice*, which records whether listed company i selected underwriter j during the stock IPO underwriting process. Since each listed company has only one stock IPO, this variable does not vary with private placement event p. The dummy variable for bond underwriter selection is *bondchoice_1*, indicating whether listed company i used underwriter j for bond issuance within the 1-year period before private placement event p. Slightly different from the previous two stock issuance dummy variables, bond issuance frequency is relatively high, and issuers may issue bonds multiple times within one year before a private placement. As long as underwriter j issued bonds for listed company i during this period, regardless of frequency, this variable is recorded as 1. If a listed company did not issue any bonds within the year before its private placement, all corresponding *bondchoice_1* variables are recorded as 0. Variables *ipomainchoice* and *bondmainchoice_1* further require that the dummy variable be recorded as 1 only when underwriter j was selected as lead underwriter by the issuer in the corresponding securities underwriting process.

The key to sample construction lies in retaining complete records of underwriter selection in securities issuance: in each private placement event, regardless of whether an underwriter is selected, it constitutes a new observation[3]. We update the optional set of underwriters annually, requiring that underwriters have at least one underwriting record in the current year to be included in the optional set. If securities underwriting experience cannot establish client relationships or

attract future business, and thus cannot influence issuers' underwriter selection in subsequent securities issuance, then listed companies would randomly select underwriters for their next securities issuance. However, if past underwriting experience can generate client stickiness and change issuers' preferences for underwriters, we expect coefficients β_1 and β_2 to be significantly positive. To retain more observations, we limit past stock underwriting experience to IPOs rather than using adjacent private placement events to capture the contribution of equity financing business to itself, because most issuers have only one private placement during the sample period, making it impossible to construct two sets of stock underwriter selection variables using private placements. Meanwhile, private placement issuers we focus on are A-share listed companies, so they must have conducted one IPO equity financing before this private placement, which ensures a complete set of underwriter selection records in equity financing. In addition to the above underwriter selection variables, Model (1) includes other control variables at the private placement, issuer, and underwriter levels, as well as industry δ_s, province μ_a, and year λ_y fixed effects, with standard errors clustered at the issuer level.

[3] For each private placement event p, a listed company is equivalent to making a selection from the set of available underwriters in the market.

Table 2 The Contribution of Underwriting Experience to Private Placement Business

	(1) OLS	(2) Probit	(3) OLS	(4) Probit
ppchoice				
bondchoice_1	0.036***	0.306***		
	(4.407)	(3.894)		
ipochoice	0.146***	1.203***		
	(17.779)	(30.877)		
bondmainchoice_1			0.195***	1.004***
			(5.884)	(6.952)
ipomainchoice			0.280***	1.640***
			(22.257)	(38.091)
logscale_p	0.002***	0.054***	0.002***	0.051***
	(6.567)	(5.804)	(6.623)	(5.397)
ppfraction	-	-0.126**	-0.004**	-0.021**
	0.006***	(-2.151)	(-2.275)	(-1.406)
	(-3.120)			
ppfirst	-	-0.028***	-0.001**	-0.021**
	0.001***	(-2.661)	(-2.412)	(-2.013)
	(-3.379)			
logasset	0.001**	0.036**	0.001	0.036**
	(2.227)	(2.552)	(-0.400)	(2.183)
leverage	-0.001	-0.126**	-0.001	-0.094***
	(-0.688)	(-2.439)	(-0.423)	(-2.699)

	(1) OLS	(2) Probit	(3) OLS	(4) Probit
logsales	-0.002**	-0.235***	-0.002**	-0.077**
	(-2.220)	(-2.956)	(-2.102)	(-2.140)
logcash	0.001**	0.034**	0.001	0.208*
	(2.186)	(2.183)	(0.870)	(1.922)
top1hold	-0.002**	-0.094***	-0.002	-0.094***
	(-2.220)	(-2.699)	(-0.806)	(-2.699)
firmage	-0.001	-0.028	-0.001	0.127
	(-0.937)	(-0.293)	(-0.469)	(0.550)
logipofund	-	-0.035***	-	-0.027***
	0.001***	(-5.161)	0.001***	(-3.997)
	(-4.490)		(-3.174)	
lognumber	1.134***	19.616***	1.065***	19.274***
	(18.478)	(22.590)	(17.608)	(22.263)
logmoney	-	-3.161***	-	-3.317***
	3.452***	(-4.809)	3.452***	(-4.295)
	(-0.130)		(0.301)	
Constant	0.020***	-2.204***	-	-2.897***
	(3.221)	(-10.782)	2.897***	(-14.629)
			(-1.303)	
Observations	171,987	171,987	171,987	171,987
Adj. R^2 / Pseudo R^2				
Industry FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: Numbers in parentheses are t-statistics. All regression results use two-tailed tests. , , * represent significance at the 10%, 5%, and 1% levels, respectively. The same applies below.*

Table 2 presents regression results for Model (1), showing the contribution of underwriting experience to private placement business. The dependent variable is the dummy variable for lead underwriter selection in private placements. Therefore, in addition to OLS estimation, we also conduct probit regression for Model (1). Columns (1) and (2) show the contribution of IPO issuance and bond issuance experience to obtaining private placement business, while columns (3) and (4) further explore the contribution of lead underwriting experience to stock issuance business. We have several main findings: First, all dummy variables representing underwriting experience have significantly positive regression coefficients, indicating that cooperative experience between underwriters and issuers in both stock and bond issuance can significantly increase the probability of underwriters being designated as lead underwriters by listed companies in subsequent private placement businesses. Second, comparing corresponding coefficients in columns (1)-(2) with those in columns (3)-(4) reveals that lead underwriters in various securities issuance businesses have higher probabilities of

participating in issuers'future equity financing businesses than co-lead underwriters or distributors. Calculating marginal effects from probit regression results shows that underwriters participating in bond issuance (as lead underwriter) have their probability of obtaining future private placement business increase by 1.2 (7.4) percentage points, while underwriters participating in IPO issuance (as lead underwriter) have their probability increase by 10.4 (20.4) percentage points. Third, among control variables, only underwriters' market share by underwriting frequency significantly predicts their business acquisition probability, while firm fundamental factors have insignificant or economically meaningless effects on the cooperative relationship between issuers and underwriters. These results indicate that securities underwriting experience can effectively influence listed companies' underwriter selection in future securities issuance. The relationship between IPO underwriters and listed companies is closer, and these underwriters are more likely to directly obtain future equity financing business again. Notably, after controlling for IPO issuance experience, bond issuance provides additional contribution to future underwriting business. Compared to equity financing, listed companies issue bonds more frequently, and underwriters can effectively establish cooperative relationships with listed companies through this channel, thereby influencing their underwriter selection in future businesses.

In Model (1), underwriters'bond issuance experience is limited to within one year before the private placement. We now examine the robustness of this selection criterion. After changing the scope of bond underwriting experience to within half a year or two years before the private placement, we re-run the regressions in Model (1). Results are shown in Table 3 . Due to space limitations, we only report key variable coefficients and omit control variables. After changing the search range for bond underwriting experience, the magnitude and significance of main variables remain largely unchanged. This result also indicates that the underwriter-issuer relationship established through bond issuance is relatively stable, showing no obvious decay within at least two years.

Table 3 Robustness Test: Scope of Bond Underwriting Experience

	Underwriting Experience: Half Year		Underwriting Experience: Two Years	
	(1) OLS	(2) Probit	(3) OLS	(4) Probit
ppchoice				
bondchoice_{half}	0.039*** (4.140)	0.316*** (3.704)		
ipochoice	0.146*** (17.788)	1.203*** (30.881)	0.146*** (17.780)	1.202*** (30.875)

	Underwriting Experience: Half Year	Underwriting Experience: Two Years	
bondmainchoice_{half}	0.222*** (5.269)	1.083*** (6.596)	
ipomainchoice	0.280*** (22.242)	1.640*** (38.075)	0.280*** (22.253) 1.639*** (38.067)
bondchoice_2		0.033*** (4.756)	0.307*** (4.393)
bondmainchoice_2		0.183*** (6.773)	1.011*** (8.458)
Observations	171,987	171,987	171,987 171,987
Adj. R^2 / Pseudo R^2			
Controls	Yes	Yes	Yes Yes
Industry FE	Yes	Yes	Yes Yes
Province FE	Yes	Yes	Yes Yes
Year FE	Yes	Yes	Yes Yes

In summary, Model (1) results indicate that underwriters can establish cooperative relationships with listed companies by underwriting bonds for them, thereby obtaining more business from these companies. For any underwriter in the market, as long as they can issue bonds for a listed company, regardless of their role in the issuance or whether they have previously participated in the company' s IPO, these bond underwriters are more likely to obtain future equity financing business from the same enterprise. This demonstrates that bond issuance has a significant pull effect on profitable equity financing business, independent of stock underwriting experience and prevalent among underwriters playing different roles in bond issuance. Overall, Model (1) results are consistent with Hypotheses 1 and 2, proving the role of bond underwriting business in establishing cooperative relationships between underwriters and issuers.

4.2 Underwriter Selection and Bond Issuance Quality

Underwriting fees, securities pricing, issuance-related supporting services, and underwriter reputation are important factors issuers consider when selecting underwriters (James, 1992; Burch et al., 2005; Krigman et al., 2001; Fernando et al., 2005). Stable cooperative relationships between underwriters and issuers can alleviate underpricing issues in securities issuance (Fang, 2005), and the market makes negative evaluations of issuers when they lose cooperative relationships with underwriters (Dick-Nielsen et al., 2021). Burch et al. (2005) find that firms continuously choosing the same underwriter for multiple stock issuances can save costs, but the opposite holds true for bond issuance. Ding et al. (2022) find that when underwriting corporate bonds, Chinese bond underwriters attract issuers

to continue choosing them for future bond underwriting through overpricing, self-purchasing, and rebates.

Model (1) empirical results show that both stock underwriting and bond underwriting experience can significantly change issuers' underwriter selection. Bond underwriting experience can help any underwriter in the market establish connections with listed companies, independent of the underwriter' s past cooperation experience with the issuer or the role played in bond issuance. Obviously, new intermediaries that underwrite bonds in the short term pose a challenge to established underwriters that built relationships with listed companies through IPOs. These established underwriters have invested significant time and resources in cultivating and maintaining client relationships and are obviously unwilling to see their business taken by others, so they may take measures to counter new competitors. However, fierce competition in the bond issuance market and increasingly strict CSRC supervision on issuance fees have ruled out the option of further reducing fees to wage price wars. Therefore, established underwriters are likely to focus on bond issuance quality, winning bond issuance opportunities by reducing bond risk premiums to save financing costs for issuers, thereby competing with new underwriters. If bonds issued through established underwriters can reduce financing costs, listed companies should be more willing to choose these underwriters with higher issuance quality for bond issuance. To test Hypotheses 3 and 4, we establish Models (2) and (3):

$$\Delta Premium_{ib} = \beta_0 + \beta_1 \times bondipo(main)_{ib} + \ _{\mathbf{2}} \times \mathbf{X_{ib}} + \delta_s + \mu_a + \lambda_{ym} + \varepsilon_{ib}$$

$$bondchoice_{ijb} = \beta_0 + \beta_1 \times ipo(main)choice_{ij} + \ _{\mathbf{2}} \times \mathbf{X_{ib}} + \delta_s + \mu_a + \lambda_{ym} + \varepsilon_{ijb}$$

The dependent variable in Model (2) is the risk premium difference $\Delta Premium$, which calculates the difference between a sample bond' s risk premium and the benchmark risk premium. The specific calculation method is as follows: First, we use a sample bond' s coupon rate minus the risk-free rate as the bond' s risk premium. Then, we find bonds issued by issuers in the same industry with the same credit rating and similar maturity within one year before this bond' s issuance as benchmark bonds[4]. We calculate the median or average of these benchmark bonds' corresponding risk premiums as the benchmark risk premium. Finally, we subtract the benchmark risk premium from the individual bond' s risk premium to obtain the dependent variable in Model (2): risk premium difference $\Delta Premium$. This variable reflects the issuance quality of an individual bond relative to similar bonds. If this variable is negative, it indicates that the bond' s issuance yield is lower than the benchmark, representing higher issuance quality. Since benchmark risk premium calculation involves some subjectivity, we will verify the robustness of the calculation method later. Results

show that changing the benchmark calculation method does not affect our main conclusions.

[4] In the benchmark model, the classification standard for bond maturity is: less than 1 year, 1-4 years, 4-7 years, 7-10 years, and more than 10 years, while the search interval for benchmark bonds is one year before each bond' s issuance. In subsequent robustness tests, we will discuss maturity classification and benchmark bond search intervals to verify the robustness of our conclusions.

The key explanatory variable in Model (2) is the dummy variable *bondipo*, which is recorded as 1 if there exists an underwriter among bond b' s underwriters that participated in issuer i's stock IPO. To explore the impact of underwriter identity differences, the dummy variable *bondipomain* further requires that the variable equals 1 only when there exists a lead underwriter among bond b' s underwriters that participated in issuer i' s stock IPO. In other words, these two variables reflect whether there is overlap between bond issuance underwriters and stock IPO underwriters. Model (2) is a bond-level regression, so we can include bond-related control variables. Since bond risk premium is the dependent variable, we no longer include bond coupon rate among control variables. The regression also absorbs industry δ_s, province μ_a, and bond issuance year-month λ_{ym} fixed effects, with standard errors clustered at the bond issuance date.

Table 4 The Impact of Underwriting Experience on Bond Risk Premium

	(1) Δpremium_{mean}	(2) Δpremium_{median}	(3) Δpremium_{mean}	(4) Δpremium_{median}
bondipo	-0.093***	-0.085***	-0.127***	-0.124***
	(-2.733)	(-2.647)	(-2.661)	(-2.733)
bondipomain			-0.154*	-0.140*
			(-1.237)	(-1.359)
logscale_b	-0.006***	-0.126**	-0.004**	-0.021**
	(-3.120)	(-2.151)	(-2.275)	(-1.406)
bondterm	-0.001***	-0.028***	-0.001**	-0.021**
	(-3.379)	(-2.661)	(-2.412)	(-2.013)
creditlevel(AA+)	-0.001	-0.126**	-0.001	-0.094***
	(-0.688)	(-2.439)	(-0.423)	(-2.699)
creditlevel(AA)	-0.002**	-0.235***	-0.002**	-0.077**
	(-2.220)	(-2.956)	(-2.102)	(-2.140)
creditlevel(<AA)	-0.295**	-0.364**	-0.261**	-0.350***
	(-2.152)	(-2.541)	(-2.006)	(-2.581)
creditlevel(missing)	0.606**	0.524*	0.229**	0.208*
	(1.523)	(1.243)	(2.019)	(1.800)
interbank	0.045**	0.059**	0.051**	0.065***
	(2.084)	(2.275)	(2.564)	(2.694)
logasset	-0.070**	-0.067*	-0.076**	-0.077**
	(-2.102)	(-1.744)	(-2.406)	(-2.140)

	(1) Δpremium_{median}	(2) Δpremium_{median}	(3) Δpremium_{mean}	(4) Δpremium_{mean}
leverage	0.111**	0.110**	0.124***	0.122**
	(2.425)	(2.056)	(2.872)	(2.461)
logsales	0.045**	0.059**	0.051**	0.065***
	(2.084)	(2.275)	(2.564)	(2.694)
logcash	-0.070**	-0.067*	-0.076**	-0.077**
	(-2.102)	(-1.744)	(-2.406)	(-2.140)
top1hold	0.111**	0.110**	0.124***	0.122**
	(2.425)	(2.056)	(2.872)	(2.461)
firmage	0.045**	0.059**	0.051**	0.065***
	(2.084)	(2.275)	(2.564)	(2.694)
logipofund	-0.070**	-0.067*	-0.076**	-0.077**
	(-2.102)	(-1.744)	(-2.406)	(-2.140)
Constant	-2.423***	-3.140***	-2.437***	-3.317***
	(-3.233)	(-3.853)	(-3.419)	(-4.295)
Observations	3,295	2,650	3,295	2,650
Adj. R^2				
Industry FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year_{Month} FE	Yes	Yes	Yes	Yes

Table 4 presents Model (2) results, which examine the impact of underwriting relationships on current bond issuance spreads. Columns (1)-(2) use the median of benchmark bonds' corresponding risk premiums as the standard risk premium, while columns (3)-(4) use the average. The two sets of results show no significant differences in magnitude or significance. Results show that when issuing new bonds through underwriters that participated in the issuer' s stock IPO, bond yields significantly decrease by 8-9 basis points. To explore the impact of underwriter identity differences on bond issuance quality, we impose certain restrictions on the bond sample in columns (2) and (4): only bonds where bond underwriters have no overlap with the issuer' s stock IPO underwriters and bonds where the issuer uses the lead underwriter from its stock IPO are retained, resulting in a smaller sample size. Regression results now show that compared to issuing bonds through new underwriters, using the lead underwriter from the stock IPO further reduces the bond' s risk premium relative to the benchmark risk premium, with a difference of approximately 12 basis points. In terms of economic significance, based on the median bond issuance scale of RMB 1 billion from descriptive statistics, choosing the issuer' s IPO lead underwriter for bond issuance can save the issuer approximately RMB 1.2 million in financing costs per bond annually.

Currently, there is no consistent mathematical model for the absolute level of reasonable bond pricing. Therefore, in Model (2) we use the difference between an individual bond' s risk premium and that of similar bonds as the comparison

standard to judge bond issuance quality. In the above results, in addition to the same industry and same issuer credit rating, our classification standard for bond maturity is: less than 1 year, 1-4 years, 4-7 years, 7-10 years, and more than 10 years, while the search interval for comparable similar bonds is one year before each bond' s issuance. To demonstrate result robustness, we now change these two relatively subjective standards regarding bond maturity classification and search interval. Table 5 presents corresponding results. The search range section shows regression results after shortening the benchmark bond search period to half a year, while the maturity grouping section shows results after setting the similar bond maturity standard to 1-year intervals (with 11 maturity groups for bonds: less than 1 year, 1-2 years, 2-3 years, ···, 9-10 years, more than 10 years). Due to space limitations, we still report only key variable coefficients and omit control variables. Results show that except for a decrease in sample size due to narrower screening conditions, the magnitude and significance level of other regression coefficients remain largely unchanged, indicating that our previous findings are not caused by subjective setting biases.

Table 5 Robustness Test of Bond Issuance Quality

	Search Range: Half Year		Maturity Grouping: 1-Year Interval	
	(1) Δpremium_{median}	(2) Δpremium_{mean}	(3) Δpremium_{median}	(4) Δpremium_{mean}
bondipo	-0.086** (-2.452)	-0.076** (-2.295)	-0.089*** (-2.731)	-0.088*** (-2.803)
bondipomain	-0.123** (-2.348)	-0.120** (-2.366)	-0.140*** (-2.892)	-0.144*** (-3.077)
Observations	3,043	2,439	3,166	2,541
Adj. R^2				
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year_{Month} FE	Yes	Yes	Yes	Yes

Model (2) results show that if listed companies choose established underwriters to issue bonds, these bonds indeed have lower risk premiums compared to benchmark risk premiums, with the risk premium reduction further increasing when issued through IPO lead underwriters. This indicates that underwriters that participated in listed companies' IPOs choose to improve bond issuance quality to counter threats from new competitors. If choosing established underwriters can significantly improve bond issuance quality and reduce financing costs,

listed companies should tend to select these underwriters for bond issuance. We use Model (3) to test Hypothesis 4: listed companies are more inclined to use established underwriters for bond issuance to enjoy lower financing costs.

Model (3) uses the same bond sample as Model (2). In this model, we focus on underwriter selection for each bond issuance in the sample. The sample construction process is similar to Model (1): for each bond issuance, we completely record the issuer' s underwriter selection. Dummy variables for underwriter selection during stock IPO, *ipochoice* and *ipomainchoice*, have the same definitions as in Model (1). The construction of *bondchoice* here differs slightly from Model (1): this variable now records underwriter selection for each individual bond issuance, without merging underwriter selections across multiple bond issuance events as in Model (1). The regression includes all issuer-, bond-, and underwriter-level control variables and all fixed effects from Model (2). We now include coupon rate as a control variable and cluster standard errors at the issuer level, consistent with Model (1).

Table 6 Underwriter Selection in Bond Issuance

	(1) OLS	(2) Probit	(3) OLS	(4) Probit
bondchoice				
ipochoice	0.017***	0.330***		
	(3.253)	(10.222)		
ipomainchoice			0.043**	0.451***
			(2.540)	(5.892)
Observations	276,471	276,471	276,471	276,471
Adj. R^2 / Pseudo R^2				
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year_{Month} FE	Yes	Yes	Yes	Yes

Table 6 presents regression results for Model (3). Since the dependent variable is a dummy variable for underwriter selection, we discuss this model using both OLS and probit regression. Results show that experience participating in IPO issuance can significantly increase the probability of underwriters underwriting bonds for the same issuer, and the probability of IPO lead underwriters being selected for bond issuance increases further. Model (2) has already proven that listed companies can reduce bond risk premiums and save financing costs by issuing bonds through IPO underwriters. Model (3) further demonstrates that when issuing new bonds, listed companies do intentionally choose underwriters that can provide higher issuance quality—those that previously participated in their stock IPOs. These results are consistent with Hypotheses 3 and 4: IPO underwriters improve bond issuance quality to compete with other industry peers, and listed companies are willing to issue bonds through these underwriters to

enjoy lower financing costs. Established underwriters effectively counter competition from new underwriters by improving bond issuance quality, preventing other underwriters from "intercepting" future equity financing business through recent bond underwriting activities. We summarize the relationship network among securities underwriting businesses demonstrated by these empirical results as follows:

Figure 1 [Figure 1: see original paper] The Relationship Network Among Securities Underwriting Businesses

4.3 Competition and Risk in Bond Issuance

Models (1)-(3) demonstrate the important position of bond underwriting business between underwriters and issuers. Bond underwriting experience can help underwriters solicit future stock issuance business. Regardless of the role underwriters play in bond issuance, bond underwriting experience can significantly increase the probability of obtaining future business from the same issuer. Underwriting intermediaries engage in fierce competition for bond underwriting because bond issuance essentially serves as an entry ticket to future stock underwriting business. Despite significant differences in underwriting processes and regulatory policies between bonds and stocks, we still observe that the two securities underwriting processes are not independent, and there exists a mutually reinforcing relationship between stock underwriting and bond underwriting businesses. The underwriting relationship network centered on bond issuance benefits both underwriters and issuers: issuers can obtain financing at lower costs, and underwriters can secure more stock issuance business. However, this win-win situation between underwriters and issuers only reflects internal benefits of their cooperation. The following section discusses the external risk issues of this cooperative relationship.

Dick-Nielsen et al. (2021) and Wang (2021) mention that the bond issuance process in the U.S. market is extremely urgent, sometimes taking only a few hours from announcement to completion, leaving investors no time to collect information about the bonds and issuers. Similarly, China' s bond market also faces difficulties in information acquisition. For instance, the existence of issuer-paid rating mechanisms means that even with third-party information such as credit ratings, their role in revealing corporate risk is very limited (Kou et al., 2015). In this context, bond underwriters may become information providers. Fernando et al. (2005) argue that underwriters screen issuers when taking on businesses, and stable cooperative relationships between underwriters and issuers reflect enterprise quality. Underwriters provide "certification" for bonds, vouching for issuing enterprises and corresponding securities with their own reputation (Burch et al., 2005; Fang, 2005). In this case, stable cooperative relationships imply lower bond risk. However, some characteristics of China' s bond market may cause underwriters to relax standards when screening issuers. Ding et al. (2022) provide a detailed description of China' s bond market, finding that short-term bonds from high credit rating enterprises dominate the market, with

extremely low default rates. Additionally, underwriters in China' s market have no obligation to stabilize bond prices in the secondary market. Characteristics such as high ratings, low default rates, and short cycles all indicate that bonds themselves are not high-risk, which reduces underwriters' motivation to strictly review issuer quality. Combined with our findings in Models (2) and (3) that bond issuance is a battlefield for underwriters competing for future business, strict screening standards would force underwriters to voluntarily give up some potential clients, which is also undesirable for underwriters. If underwriters simply treat bond issuance as a means to solicit future business and maintain client relationships without conducting strict review of issuers, then cooperation in bond underwriting may imply certain risks for issuers. To explore the risk revelation role of cooperative relationships built through bond underwriting, we establish Model (4):

$$creditrisk_{ib} = \beta_0 + \beta_1 \times bondipo(main)_{ib} + {}_{\mathbf{2}} \times \mathbf{X_{ib}} + \delta_s + \mu_a + \lambda_{ym} + \varepsilon_{ib}$$

Model (4) is a bond-level regression. The dependent variable on the left side, *creditrisk*, is a dummy variable reflecting issuer fundamental risk. The specific construction method is: for each bond in the sample, if the issuer' s stock is marked as ST or *ST due to fundamental reasons such as consecutive losses, asset shrinkage, or audit disclaimers after bond issuance but before maturity, the variable is recorded as 1; otherwise, it is recorded as 0. The key explanatory variable $bondipo(main)$ has the same definition as in Model (2), taking a value of 1 when there is overlap between bond issuance and stock IPO (lead) underwriters. In China' s corporate credit bond market, bonds are characterized by short maturity, high credit ratings, and low default rates, with listed companies' bonds having even lower default rates. Even if underwriters lower their review standards for issuers in bond underwriting business and fail to use their information advantages to screen issuers, the market environment can largely guarantee bond redemption. Therefore, bond default is not suitable for measuring issuers' true risk. Additionally, domestic credit ratings have low sensitivity in reflecting real credit risk and are also not suitable as direct risk measures. Consequently, we do not use bond-level variables (e.g., default, rating changes) to measure risk. If underwriters conduct in-depth investigations of issuers and purposefully screen bond underwriting projects, we expect β_1 to be negative, indicating that stable cooperative relationships imply lower issuer risk. Conversely, if underwriters mechanically complete bond underwriting work in expectation of obtaining more future stock underwriting business without actively identifying issuer risk, the coefficient β_1 may be positive. The regression includes all bond- and issuer-level control variables and fixed effects from Model (2), with standard errors clustered at the bond issuance date.

Table 7 Underwriter Selection and Bond Risk Analysis

	(1) creditrisk	(2) creditrisk	(3) creditrisk	(4) creditrisk
bondipo	0.008**	0.012**		
	(2.103)	(2.081)		
bondipomain		0.015*		0.027**
		(1.736)		(2.326)
Observations	3,295	2,650	1,280	1,105
Adj. R^2				
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year_{Month} FE	Yes	Yes	Yes	Yes

Table 7 presents regression results for Model (4), which explores the relationship between underwriter-issuer cooperative relationships and issuers' fundamental risk after bond issuance. In columns (1) and (2), we impose no requirements on bond maturity and include all sample bonds in the regression. Column (1) results show that if bond issuers use underwriters that participated in their stock IPOs for bond underwriting, the probability of the issuer' s stock being marked as ST or *ST during the bond' s maturity period significantly increases by 0.8%. Column (2) includes only bonds where the issuer' s stock IPO underwriters have no overlap with bond underwriters and bonds where the issuer chooses the lead underwriter from its stock IPO. Results show that if the lead underwriter from the stock IPO participates in subsequent bond issuance, the risk of the issuer' s stock being ST during the bond' s maturity period increases by 1.2%, indicating higher fundamental risk for the issuer. We need to interpret these results cautiously. In descriptive statistics, sample bonds are primarily short-term, with a median maturity of less than one year. Therefore, results in columns (1) and (2) may be underestimated. Since stocks are specially treated mainly due to consecutive years of losses, we retain only bonds with maturities greater than two years in columns (3) and (4) to verify long-term effects. Coefficients for underwriter overlap dummy variables increase in columns (3) and (4), confirming our speculation that the presence of short-term bonds underestimates results in the first two columns. We find that if listed companies issue long-term bonds through underwriters that participated in their IPOs, the probability of the issuer' s stock being specially treated due to deteriorating fundamentals such as performance decline during the bond' s maturity period increases by 1.5%-2.7%. In the bond sample, the unconditional probability of fundamental risk represented by the dependent variable *creditrisk* is 0.79%, meaning that utilizing existing underwriting relationships for new bond issuance increases the probability of issuers experiencing fundamental risk during the bond' s maturity period by approximately 1 to 3 times. Analysis of Model (4) indicates that cooperative relationships between underwriters and issuers imply greater risk. The regression already controls for bond maturity and coupon rate, so this increased

risk is not merely caused by longer bond maturities, nor is it fully priced by the coupon.

In summary, for bonds issued by listed companies, if underwriting syndicates include underwriters from previous stock IPOs, the risk of the corresponding issuer's stock being specially treated increases during the bond's maturity period. If the lead underwriter from the issuer' s stock IPO joins the bond underwriting syndicate, the risk of the corresponding issuer' s stock being specially treated during the bond' s maturity period is even higher. Moreover, this risk increases correspondingly with bond maturity. This indicates that securities firms do not conduct serious screening of issuers when underwriting bonds but simply treat bond underwriting as a tool for building and maintaining client relationships in expectation of obtaining future stock issuance business. These conclusions support the conjecture proposed in Hypothesis 5b.

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5. Conclusions and Policy Recommendations

This paper finds that bond underwriting is an effective tool for securities firms to establish or maintain cooperative relationships with listed companies, and such relationships are win-win for participants. On one hand, securities firms that have underwritten bonds for listed companies are more likely to participate in these companies' future private placement businesses. One could say that underwriters with bond underwriting experience for a listed company have an entry ticket to participate in its future stock issuance business. On the other hand, listed companies in such cooperative relationships can also enjoy lower debt financing costs. Underwriters that have already cooperated with listed companies will try their best to reduce credit spreads during bond issuance to consolidate client relationships, thereby competing with other underwriters for bond issuance opportunities. Listed companies are also willing to issue bonds through these familiar underwriters to enjoy lower debt financing costs. However, cooperative relationships built around bond issuance cannot demonstrate underwriters' information advantages in risk revelation. Listed companies that use cooperative underwriters for bond issuance have higher inherent risk.

The Central Financial Work Conference pointed out that improving regulatory methods and adapting regulatory concepts are important means to enhance regulatory capacity and achieve comprehensive financial coverage. The policy implication of this paper' s empirical findings is that, in addition to regulating the bond underwriting process, regulatory policies may also need to strengthen "ex-post" supervision of corporate bond issuance by incorporating issuers' fundamental risk indicators during bond maturity into underwriters' comprehensive evaluations. Due to the significant contribution of bond underwriting business to future other businesses, underwriters may abandon strict screening of issuers during the bond underwriting process, leading to insufficient risk identification. We find that the concealed risks may be reflected in the stock market through

issuers' fundamental volatility. During bond maturity, issuers' performance deterioration, consecutive losses, and other situations all indicate that underwriters may not have fully leveraged their information and professional advantages as underwriting intermediaries, allowing higher-risk bond issuers to "pass the test while sick," which harms bond investors' interests. Therefore, if regulatory policies can conduct ex-post tracking of bonds underwritten by securities firms, it may urge underwriters to improve practice quality during bond issuance and avoid blind competition for short-term benefits.

Appendix

Table A1 Variable Definition Table

Variable	Definition	Model Usage
Private Placement Variables		
scale_p	Private placement fundraising scale	1, 2, 3, 4
ppfraction	Ratio of new shares issued in private placement to total shares outstanding	1, 2, 3, 4
ppfirst	Dummy variable for major shareholder participation in private placement	1, 2, 3, 4
Bond Variables		
scale_b	Natural logarithm of bond issuance scale	1, 2, 3, 4
bondterm	Bond maturity	1, 2, 3, 4
creditlevel	Bond issuer credit rating, divided into five groups: AAA, AA+, AA, AA- and below, missing, with separate dummy variables for each group	1, 2, 3, 4
interbank	Dummy variable for bonds issued in interbank market	1, 2, 3, 4
couponrate	Bond coupon rate (%)	1, 2, 3, 4

Variable	Definition	Model Usage
Δpremium	Difference between bond coupon rate and benchmark bond coupon rate (benchmark calculated using median or mean)	1, 2, 3, 4
creditrisk	Dummy variable for issuer' s stock being ST during bond maturity	1, 2, 3, 4
bondipo	Dummy variable for bond underwriters including underwriters that participated in issuer' s stock IPO	1, 2, 3, 4
bondipomain	Dummy variable for bond underwriters including lead underwriters that participated in issuer' s stock IPO	1, 2, 3, 4
Issuer Variables		
logasset	Natural logarithm of securities issuer' s total assets	1, 2, 3, 4
leverage	Securities issuer' s leverage ratio	1, 2, 3, 4
logsales	Natural logarithm of securities issuer' s sales revenue	1, 2, 3, 4
logcash	Natural logarithm of securities issuer' s cash holdings	1, 2, 3, 4
roa	Securities issuer' s return on total assets	1, 2, 3, 4
soe	Dummy variable for securities issuer being state-owned enterprise	1, 2, 3, 4
bm	Securities issuer' s book-to-market ratio	1, 2, 3, 4
top1hold	Securities issuer' s largest shareholder shareholding ratio	1, 2, 3, 4
firmage	Age of securities issuing enterprise	1, 2, 3, 4

Variable	Definition	Model Usage
logipofund	Natural logarithm of securities issuer' s IPO fundraising scale	1, 2, 3, 4
Underwriter Variables		
ipochoice	Dummy variable for an underwriter participating in listed company' s IPO	1, 2, 3, 4
ipomainchoice	Dummy variable for an underwriter participating as lead underwriter in listed company' s IPO	1, 2, 3, 4
ppchoice	Dummy variable for an underwriter participating as lead underwriter in listed company' s private placement	1, 2, 3, 4
bondchoice_1	Dummy variable for an underwriter underwriting bonds for listed company within 1 year before private placement	1, 2, 3, 4
bondmainchoice_1	Dummy variable for an underwriter underwriting bonds as lead underwriter for listed company within 1 year before private placement	1, 2, 3, 4
bondchoice	Dummy variable for an underwriter participating in bond issuance	1, 2, 3, 4

Variable	Definition	Model Usage
lognumber	Natural logarithm of ratio of an underwriter's annual underwriting count to total sample underwriting volume plus 1 (calculated separately for private placements and bonds)	1, 2, 3, 4
logmoney	Natural logarithm of ratio of an underwriter's annual underwriting amount to total sample underwriting amount plus 1 (calculated separately for private placements and bonds)	1, 2, 3, 4
Fixed Effects		
Industry FE	Industry fixed effects	1, 2, 3, 4
Province FE	Province fixed effects	1, 2, 3, 4
Year FE	Year fixed effects	1, 2, 3, 4
Year_{Month} FE	Year-month fixed effects	1, 2, 3, 4

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Note: Figure translations are in progress. See original paper for figures.