

The Impact of Transfer Payments on the Issuance Spread of Urban Investment Bonds

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Abstract: *After the reform of tax distribution system, the transfer payment system has become an important tool to balance the financial resources of central and local governments, and the relationship between urban investment bonds and local governments has also attracted attention. Taking the urban investment bonds issued by China during 2018-2024 as the research sample, this paper explores the impact mechanism and heterogeneity characteristics of transfer payment on the issuance premium of urban investment bonds. This paper puts forward the following policy suggestions: optimizing the transfer payment structure, improving the pricing mechanism of urban investment bond market, and promoting differentiated governance based on the actual situation of different regions.*

Keywords: *Transfer Payment; Urban Investment Bond; Issue premium; Debt guarantees; Urban Investment Platform*

1. Introduction

Against the background of the separation of financial power and administrative power between central and local governments in China, the transfer payment system not only directly supplements the local disposable financial power, but also sends a strong signal to the market about the support willingness and support ability of the higher government. In a region that has received more transfer payments, the comprehensive financial strength and anti-risk ability of the government are generally regarded as stronger in the market, so the market tends to believe that when the urban investment platforms in this region are facing solvency crises, the local government is more able and willing to support the urban investment platforms, thus affecting the premium level of urban investment bond issuance. Therefore, studying the impact of transfer payment on the issuance premium of urban investment bond market has become the key to analyze the credit risk and pricing mechanism of urban investment bond.

2. Literature Review

2.1. Urban investment debt and the formation of local government debt

In order to solve the problems of weak central finance and chaotic local fiscal discipline in the early stage of reform and opening up, China started the reform of tax distribution system in 1994. However, the tax distribution system leads to the dilemma that local governments cannot cover their expenditure while undertaking a large amount of public affairs expenditure^[1]. Implicit debt such as urban investment bond gradually grows in this context. During the economic crisis in 2008, facing the downward trend of China's economic growth, the central government proposed a 4 trillion yuan economic stimulus plan. In order to maintain economic stability, local governments raised funds by issuing urban investment bonds through local financing platform companies, and the scale of urban investment bonds increased significantly during this period^[2].

2.2. Transfer payment

There is a close correlation between transfer payment and local government debt and urban investment bond issuance, and the effect has significant regional heterogeneity. The increase in the per capita special transfer payment of the central government will lead to the increase in the issuance of

urban investment bonds by local financing platform companies, and this positive effect only exists in the central and western provinces, and this mechanism is not found in the eastern region^[3]. The transfer payment will bring about the flypaper effect of local fiscal expenditure.

2.3. Influencing factors of urban investment bond issuance premium

The essential attribute of Chinese urban investment bonds is corporate credit bonds, but they are different from credit bonds in Western bond markets and are more similar to "municipal bonds". The credit risk of Chinese urban investment bonds lies between that of corporate bonds and government bonds^[4]. The factors influencing the issuance of urban investment bonds can be classified into three categories: bond characteristics, regional economic conditions, and macroeconomic background. The issuance premium of urban investment bonds is significantly higher than that of local government bonds. The longer the bond's term, the greater the premium difference between the two. The better the regional economy and the fiscal revenue and expenditure situation, the smaller the premium^[5]. Government fiscal revenue and administrative level also affect the spread of unsecured urban investment bonds^[6]. In terms of macroeconomics, macro factors such as GDP, CPI, and bond market indices have a significant impact on the issuance premium of urban investment bonds. GDP is negatively correlated with the premium, while CPI is positively correlated with it^[7]. Land resource allocation reduces the issuance spread of urban investment bonds, and its impact on the issuance premium of urban investment bonds is more significant in economically developed regions^[8].

3. Empirical Research

3.1. Sample Selection and Data Sources

This paper selects the urban investment bonds from 2018 to 2024 as the research sample. This paper defines the premium of urban investment bond issuance as the difference between the coupon rate of urban investment bond issuance and the yield of national bonds of the same maturity and date. Most of the data come from the WIND database, and other data come from provincial statistical yearbooks, China Bond Information Network, the website of the National Bureau of Statistics and the website of the People's Bank of China. On this basis, the samples with missing control variable data are eliminated, and a total of 12,600 samples of urban investment bonds are obtained.

3.2. Empirical Model and Variable Selection

This paper constructs the following benchmark regression model:

$$Spread_{i,t} = \beta_0 + \beta_1 Transfer_{i,t} + \gamma Controls + Year + Province + Industry + Rating + \varepsilon \quad (1)$$

Where Spread represents the issuance premium of urban investment bonds, Controls represents the control variable, ε represents the random interference term, and the fixed effects of year, province, industry and rating are added

See Table 1 for specific variable definitions and descriptions.

Table 1 Variable Definitions.

Variable Type	Variable Name	Metric
Dependent Variable	Spread	The difference between the coupon rate of a bond at issuance and the yield of a treasury bond with the same maturity and issue date.
Independent Variable	Transfer	The total amount of transfer payments received by each province, take the logarithm
Control Variables	Lissueamount	Bond lissueamount
	Term	Bond issurance term
	Regional GDP	The economic development level of a region, take the logarithm.
	GAP	The degree of regional fiscal deficit, take the logarithm of the difference between fiscal expenditure and fiscal revenue.
	ROA	Return on Tontal Assets
	Turnover	Total asset turnover ratio

3.3. Baseline Regression Results and Analysis

The table reports the benchmark regression results. As shown in Table 2, Column (1) shows that the regression coefficient of spread on ln_transfer is -0.067, which is significant at the level of 1%, indicating that the negative correlation between transfer payment and the issuance premium of urban investment bonds remains stable when the variables at the three levels of the bond itself, the regional macro economy and the operating conditions of the enterprise are controlled. In Column (2), the robustness test is conducted by eliminating the extreme values of the top 1% and bottom 1% of spread. It has good robustness.

Table 2 Baseline Regression.

	(1)
VARIABLES	spread
ln_transfer	-0.063*** (0.014)
term	-0.039*** (0.004)
ln_Lissueamount	-0.038*** (0.010)
ln_GDPp	0.803** (0.363)
ln_GAP	-0.481*** (0.095)
ROA	-0.033*** (0.008)
turnover	0.661*** (0.101)
ln_Gdebt	-0.232 (0.146)
Constant	4.378 (3.948)
Observations	12,600
R-squared	0.465
Year FE	Yes
Province FE	Yes
Industry FE	Yes
Rating FE	Yes

3.4. Robustness Tests

To verify whether the research results remain consistent under different variables, with additional control variables, or when the sample period is adjusted, the following robustness tests were conducted in this section. As shown in Table 3, Column (1) conducted a robustness test by excluding the extreme values in the top 1% and bottom 1% of spread. Compared with the base regression, the coefficient of ln_transfer remained negative and was still significant at the 1% level. The number of observations decreased from 12,600 to 12,309, and the R-squared changed by 0.005. This indicates that the model was not affected by extreme values and has good robustness. Columns (2) replaced the explanatory variable with the logarithm of per capita transfer payment scale in each province (ln_tp). By observing the coefficients of the replaced explanatory variables, the coefficient of ln_tp was -0.064 and was also significant at the 1% level. Compared with the coefficient of the base regression (-0.067), it can be seen that the sign direction has not changed and the coefficient size has not changed much, indicating that the base regression results are robust.

Table 3 Robustness Test.

VARIABLES	(1)	(2)
	spread	spread
ln_transfer	-0.075*** (0.012)	
ln_transferP		-0.061*** (0.014)
term	-0.030*** (0.004)	-0.039*** (0.004)
ln_Lissueamount	-0.040*** (0.009)	-0.040*** (0.010)
ln_GDPP	1.265*** (0.310)	1.226*** (0.405)
ln_GAP	-0.557*** (0.082)	-0.470*** (0.095)
ROA	-0.041*** (0.007)	-0.029*** (0.008)
turnover	0.485*** (0.086)	0.646*** (0.102)
Constant	-1.016 (3.296)	-2.637 (4.282)
Observations	12,309	12,600
R-squared	0.455	0.467
Year FE	Yes	Yes
Province FE	Yes	Yes
Industry FE	Yes	Yes
Rating FE	Yes	Yes

3.5. Mediation Effect Analysis

In order to study the mediating effect of the increment of local social financing on the impact of transfer payment on the issuance premium of urban investment bonds, the variable of the increment of social financing AFRE is introduced. As shown in Table 4, Column (1) indicates that when the mediating variable AFRE is excluded, the coefficient of transfer payment (ln_transfer) is -0.063 and significant at the 1% level, suggesting that transfer payment itself can directly reduce the premium of urban investment bonds. It can be seen from Column (2) that in the regression of transfer payment on AFRE, the coefficient of ln_transfer is 0.029 and significantly positive at the level of 1%, indicating that transfer payment will significantly promote the incremental expansion of local social financing. After AFRE is included, it can be seen from the data in Column (3) that the coefficient of AFRE is -0.231 and significantly negative at the level of 1%, indicating that the increment of social financing will indeed reduce the premium of urban investment bonds; At the same time, the coefficient of transfer payment is -0.057, which is still significantly negative at the level of 1% but expands in absolute value, indicating that transfer payment not only has a direct impact on the issuance premium of urban investment bonds, but also affects the premium through the intermediary path of the incremental expansion of regional social financing.

Table 4 Mediation Effect Analysis.

VARIABLES	(1)	(2)	(3)
	spread	ln_AFRE	spread
ln_transfer	-0.063*** (0.020)	0.029*** (0.002)	-0.057*** (0.020)
ln_AFRE			-0.231*** (0.026)
term	-0.039*** (0.004)	0.002 (0.001)	-0.038*** (0.004)
ln_Lissueamount	-0.038*** (0.010)	-0.010*** (0.002)	-0.041*** (0.010)
ln_GDPP	0.755** (0.353)	-0.137 (0.174)	0.731** (0.352)
ln_GAP	-0.482*** (0.104)	0.121*** (0.033)	-0.455*** (0.103)
ROA	-0.032*** (0.008)	0.027*** (0.009)	-0.026*** (0.008)
turnover	0.660*** (0.092)	-0.130*** (0.035)	0.628*** (0.092)
Constant	2.949 (3.682)	8.115*** (1.889)	4.762 (3.704)
Observations	12,600	12,594	12,594
R-squared	0.465	0.953	0.467
Province FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Rating FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes

3.6. Heterogeneity Analysis

In order to verify the moderating effect of asset-liability ratio leverage of urban investment platforms, this paper constructs the interaction item transfer_leverage of transfer payment \times asset-liability ratio and incorporates it into the regression model. Observing the regression results, the coefficient of transfer_leverage is -0.003, which is significant at the statistical level of 1% ($p=0.001$), indicating that the asset-liability ratio has a significant moderating effect on the relationship between transfer payment and urban investment bond premium. As can be seen from Table 5, the coefficient of $\ln_transfer$ is 0.104 ($p=0.057$), showing a marginal significant positive effect. The coefficient of leverage is 0.035 ($p=0.013$), showing a significant positive impact. The marginal effect of transfer payment on the issuance premium of urban investment bonds after the asset-liability ratio of urban investment platforms is added can be expressed as $\ln_transfer$ coefficient + interaction term coefficient \times leverage. Combined with the above descriptive statistics, it can be seen that when leverage is at the sample mean level of 65, the marginal effect $=0.104+(-0.003)\times 65\approx -0.091$, that is, the impact of transfer payment on the urban investment bond premium turns from positive to negative in the coefficient of individual items, and H4 is established.

Table 5 Heterogeneity Analysis.

VARIABLES	spread
$\ln_transfer$	0.104* (0.057)
leverage	0.035*** (0.013)
transfer_leverage	-0.003*** (0.001)
term	-0.039*** (0.004)
$\ln_Lissueamount$	-0.031*** (0.010)
\ln_GDPP	0.579 (0.354)
\ln_GAP	-0.532*** (0.104)
ROA	-0.042*** (0.008)
turnover	0.746*** (0.092)
Constant	3.503 (3.733)
Observations	12,600
R-squared	0.470
Province FE	Yes
Year FE	Yes
Rating FE	Yes
Industry FE	Yes

4. Conclusion and Policy Recommendations

4.1. Research Findings

There is a significantly negative correlation between the transfer payment and the issuance premium of urban investment bonds, that is, the larger the transfer payment is, the lower the issuance premium of urban investment bonds is. The impact of transfer payment on the issuance premium of urban investment bonds has significant structural heterogeneity, and the direction and intensity of the effect of general transfer payment and special transfer payment are obviously different. The impact of transfer payment on the issuance premium of urban investment bonds has obvious regional heterogeneity, and the heterogeneity is different in different types of transfer payment. The increment of local social financing plays a significant intermediary role between transfer payment and the issuance premium of urban investment bonds. The asset-liability ratio of urban investment platforms has a significantly negative moderating effect on the relationship between transfer payment and the issuance premium of urban investment bonds, and the moderating effect has regional heterogeneity.

4.2. Policy Recommendations

Based on the above research conclusions, China's policy orientation of "strictly controlling new hidden debt and prudently reducing existing debt" and the core goal of the market-oriented transformation of urban investment platforms, this paper puts forward the following policy suggestions: differentiated allocation of transfer payment types and improvement of policy precision. The pricing mechanism of the urban investment bond market should be improved to weaken the market's dependence on implicit guarantee. We will implement differentiated governance of local government debt by region and accurately guard against debt risks. We will promote market-oriented transformation of urban investment platforms and enhance their ability to repay debts independently.

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