

Research on the Causes, Risks, and Countermeasures of Local Debt Problems

Can Zhang^{1,a,*}

¹*Business School, Ningbo University, Ningbo, China*

a. 216002162@nbu.edu.cn

**corresponding author*

Abstract: This study aims to explore the causes, risks, and corresponding risk response strategies of local government debt problems. In the case analysis, the scale of local debt in Ningbo is taken as the specific research object. Although local governments use debt financing for infrastructure construction to promote economic growth in the short term, it also brings potential debt risks. By analyzing the scale of local debt and governance policies in Ningbo, this paper finds that Ningbo is relatively reasonable in debt management and its debt risks are generally controllable. Ningbo has successfully promoted municipal construction and economic development by establishing financing platforms and issuing government bonds. Meanwhile, the Ningbo Municipal Government has strengthened debt information disclosure and external rating management and improved the transparency of debt management. The research results provide a reference for other local governments, emphasizing the importance of rationally planning debt structure and controlling debt risks to achieve sustainable development of the regional economy.

Keywords: Local debt, debt risk, debt governance.

1. Introduction

As a positive financing tool, local debt has significantly promoted China's overall economic growth by investing funds in infrastructure construction and providing public services. This strategy has been widely used in government governance in various countries and has effectively promoted the overall prosperity and development of the national economy [1]. In the past decade, local governments at all levels in China have borrowed a lot of money through various financing platforms for infrastructure investment without establishing an effective debt management system. Yu Haiyue and other scholars believe that although this method has stimulated total demand, driven China's upstream manufacturing industry to expand production capacity, and promoted economic growth, unrestrained debt has led to the expansion of debt scale. If this debt-raising development model continues, it will increase the market equilibrium interest rate, squeeze out private consumption and corporate investment, and expand debt risks [2].

As an important port city on the southeast coast of China, Ningbo is a typical representative of the leap from a second-tier city to a new first-tier city. It is of far-reaching value to study its government debt problem. Existing research mainly focuses on the macro level of local debt, lacks case studies of specific cities, and the literature on Ningbo's local debt is mainly concentrated in 2012. Therefore, this study aims to fill this research gap. By introducing the formation, current situation, and solution

policies of local debt, this study deeply explores the current situation and causes of Ningbo's local government debt, analyzes its impact on economic growth and resource allocation, and studies the challenges and countermeasures faced by debt management, to resolve the potential risks of local debt following local conditions.

At the international level, many countries have explored effective local government debt management models. For example, the municipal bond market in the United States is relatively mature. Local governments raise funds by issuing municipal bonds and strictly comply with federal and state financial regulations to reduce debt risks. Japan has incorporated rigorous regulatory mechanisms and high transparency standards into the local government debt management system to ensure the sustainability of debt levels. These international experiences are of great reference significance for local debt management in Ningbo and even in China as a whole.

To provide a comprehensive understanding of local debt, this study conducted a detailed literature survey and a comprehensive analysis and review of literature and data related to universal local debt issues and the local debt status of Ningbo in the past decade. Analyze the causes and risks of local debt problems and reveal the characteristics and risks of Ningbo local debt problems by analyzing the fiscal data and debt structure of Ningbo government. Use literature review, data analysis, and other methods to analyze the status of Ningbo government.

2. Causes of Local Government Debt Problems

2.1. Macroeconomic Environment: a Discussion on the Rationality of Promoting Economic Growth

As a key fiscal control lever, local debt plays an important role in promoting economic development. It has a significant leverage effect on the regional economy through two main paths. The first is to directly convert it into government investment to stimulate economic growth, and the second is to use industrial land to attract cross-regional investment. In 2014, Zhu Wenwei et al. used the Barro model to establish a mathematical model for local debt data in different provinces. The study found that there is a positive correlation between local debt and regional economic growth [1]. The expansion of local debt is conducive to regional economic growth in the early stage but tends to converge in the later stage. Starting from the perspective of liquidity, Lv Jiannian explored three mechanisms of the impact of local debt on the economy, including the imbalance of the design of the fiscal system on local government affairs and financial power, the system orientation of official performance promotion, and the infrastructure investment channel [3]. After the 2008 economic crisis, China implemented a proactive fiscal policy to stabilize the macroeconomy. The funds obtained from debt were used by local governments for infrastructure investment, driving economic growth and directly converted into GDP through government purchases.

2.2. Economic Policies and Incentive Mechanisms: an Unreasonable GDP-focused Official Promotion Mechanism

Ke Xie established a game model among local governments and deeply analyzed the deficiencies in the performance evaluation index system and the official promotion evaluation system and pointed out that these systems urgently need to be optimized [4]. Government officials at the same level compete fiercely for political promotion, and the indicators for winning the competition are mostly related to the GDP growth rate. This performance evaluation standard that focuses too much on economic development has led some local government officials to excessively pursue the growth of economic indicators during their tenure, and thus tend to invest in infrastructure construction through government-scale debt, which will increase the reliance on local government officials on the mechanism of debt to achieve economic growth.

2.3. Fiscal System Factors: the Imbalance between the Central Government's Power and Financial Power

In recent years, with the acceleration of urbanization, many rural Chinese have flocked to cities, resulting in a sharp increase in the urban population. This phenomenon has brought unprecedented pressure on urban public services and infrastructure. At the same time, infrastructure construction has a significant driving effect on economic growth and often brings a higher rate of return on investment. The government raises liquidity funds through debt and invests them in infrastructure construction, which can reflect greater growth power. Lü Jian believes that since 2011, China has been facing increasing structural deceleration pressure. This method of driving economic growth through infrastructure investment has almost become the only means for local governments to achieve economic growth [3].

3. Analysis of Local Government Debt Risks and Consequences

3.1. Debt Risk

3.1.1. Credit Risk

The repayment of special bonds issued by local governments usually depends on the corresponding government fund revenue or special revenue. Under the influence of the COVID-19 pandemic, the scale of new bond issuance in 2020 has increased significantly, but this is accompanied by the extension of project construction cycles and the slowdown in the recovery of special revenues, which directly leads to an increase in the default risk of special bonds. Based on the calculation of the fiscal guaranteed ratio of different provinces in China, Wu Tao and Zhang Liang used the KMV model to estimate the expected default rate of local bonds in various provinces in China. The study found that the credit default rate of local government bonds in various provinces will increase year by year starting from 2018, and the proportion of provinces in the high default rate range will account for 66.67% in 2021 [5]. As an important investment target of financial institutions such as banks and insurance companies, the default of local debt will lead to the deterioration of the balance sheet structure of such institutions, change investors' market expectations, and lead to an increase in the overall risk premium of the financial market. In the case of a large-scale default, there is a probability of triggering a systemic financial crisis.

3.1.2. Liquidity Risk

When promoting infrastructure construction, local governments usually focus on key areas such as municipal construction, transportation, ecological protection, and environmental governance. Such projects are generally characterized by large investment volumes and long payback periods. However, in China's local government debt structure, short-term and medium-term debts of less than five years account for a high proportion [6]. This maturity mismatch between debt and investment cycles has significantly aggravated liquidity pressure in the short term, making debt repayment risks not to be ignored. Land transfer fees, as an important source of local revenue, are also the main source of local debt repayment. As net land income has declined year by year, the government's compensation costs for land acquisition and demolition are high, and the gradually declining land revenue in recent years has been unable to cover the interest expenses of local government debt.

3.2. Expected Consequences

3.2.1. Regional Fiscal Transfer and the Neglect of the Tertiary Industry

To ease the fiscal burden caused by local governments' debt, some places tend to over-rely on land finance, trying to obtain higher land transfer fees by intervening in the land market. This land transfer behavior may cause a waste of land resources, hinder the adjustment and upgrading of regional industrial structures, and inhibit the service-oriented nature of industrial institutions [7]. At the same time, considering the different investment directions of debt funds in different regions, as well as the significant differences in the efficiency of debt funds and the bearing capacity of local governments, the negative impact of local debt on the regional economy in regions with relatively low economic development levels is greater. In such regions, with limited public service levels, land finance dependence has rapidly increased housing prices, causing resources to enter specific real estate industries. Such regions are also more likely to have inefficient resource allocation due to excessive competition among local governments, hindering the upgrading of the overall industrial structure.

3.2.2. Social Governance and Residents' Life Happiness

Local debt is used to promote the construction of municipal infrastructure, science, education, culture, health, and other livelihood projects, aiming to improve the living standards of residents. However, it cannot be ignored that with the continuous expansion of local debt, its potential negative impact has gradually emerged, which may hurt people's livelihood and well-being. These debt funds are mainly used to fill the shortfall of local finances and meet the public's growing social welfare needs. Wang Binbin et al. conducted a panel data test on the scale of local government fiscal expenditure and the scale of local debt in Ningbo from 2003 to 2012 and found that there is a moderate scale of local government debt. The management of the local debt scale should always be based on meeting the needs of the public and achieving people's livelihood development as the basic goal, as a criterion for judging whether local debt funds are effectively allocated [8].

4. A Case Study of Local Government Debt in Ningbo

4.1. Basic Information of Ningbo

The economy of Ningbo's districts and counties is generally developed, and the urban-rural gap is relatively small. In 2023, the economic growth rate of various districts and counties will slow down relatively, and the role of investment in driving economic growth will weaken. The growth rate of the central urban areas such as Jiangbei and Haishu will fall. Due to the overall decline in the real estate industry, Ningbo's tax revenue and government fund revenue have turned into short-term income, but the quality and self-sufficiency of fiscal revenue are generally good. Due to the increase in funding demand for municipal construction, Ningbo's government debt has continued to grow since 2022. However, due to the strong income-generating ability of regional industries, the overall risk of regional government debt is controllable.

4.2. Analysis of Ningbo Local Government Debt

4.2.1. Debt Development History

Ningbo's local debt is inseparable from the overall development of China's local government debt. Since China's tax-sharing reform in 1994, local governments have gained greater autonomy while also shouldering the task of paying principal and interest. When the 2008 financial crisis swept the world, local governments in various provinces and cities established local government financing

platforms under the policy support of the central government's 4 trillion investment plan, rapidly expanding the scale of local debt. From 2011 to 2016, Ningbo's municipal government continued to expand its debt scale under the circumstances of rapid economic development and continuous growth in fiscal revenue, bringing many hidden dangers to Ningbo's economic development [9,10]. With the increasing attention of the central government to the local debt problem, Ningbo Municipal Government successively issued the "Ningbo Municipal Government Debt Interim Measures" and "Ningbo Municipal Government Debt Limit Management Interim Implementation Measures" in 2014, and gradually revised a relatively complete and standardized local government management system. Since 2015, Ningbo has publicly disclosed information such as the issuance of each bond, project status, and debt disclosure on its government website, and completed all debt swaps in 2018.

4.2.2. Debt Size and Composition

According to the 2024 Ningbo Municipal Government budget data, Ningbo's local debt has shown a certain scale. As of the end of 2023, Ningbo's total government debt balance is 324.89 billion yuan, of which general debt is 128.264 billion yuan and special debt is 196.626 billion yuan. From the perspective of the government level: the city level and district and county (city) levels are 94.514 billion yuan and 230.376-billion-yuan, accounting for 29.09% and 70.91% respectively. This scale is relatively large, but compared with Ningbo's total economic volume, this debt level is still within a controllable range.

In terms of debt maturity, Ningbo has 13.059 billion yuan of debt due in 2024, and this figure will rise sharply to 31.197 billion yuan in 2025. This increasing amount of maturing debt means that the government will face increasing pressure to repay its debts in the coming years, especially in 2025 and beyond [11].

From the perspective of debt limits, Ningbo's local debt limit in 2023 is 329.835 billion yuan, including 128.747 billion yuan for general debt and 201.088 billion yuan for special debt. Ningbo's local government debt limit budget for 2024 is 29.5 billion yuan, including 600 million yuan for general debt and 28.9 billion yuan for special debt. Most of Ningbo's new local government debt limit in 2024 is special debt. This indicates that future debt pressure will mainly focus on special projects. This special debt is usually used for specific infrastructure or public service projects, indicating that the government may have a large spending demand in these areas.

4.2.3. Debt risk and Impact Analysis

The maturity structure of Ningbo Municipal Government debt is relatively reasonable, and the concentrated repayment pressure is relatively small. From 2024 to 2027, the government debts due to be repaid by Ningbo Municipal Government are 13.059 billion yuan, 31.197 billion yuan, 24.670 billion yuan, and 21.882 billion yuan, respectively, accounting for 4.0%, 9.6%, 7.6%, and 6.7% of the debt balance, respectively. There is no large-scale concentrated maturity of government debts.

The government debt due to be repaid in 2028 and later years is 234.083 billion yuan, accounting for 72.1% of the debt balance. In terms of debt repayment funds, the funds available for Ningbo Municipal Government to repay government debts mainly come from public budget revenue, government fund revenue, and superior subsidy revenue, and the source of debt repayment funds is stable.

From 2021 to 2023, the coverage ratio of Ningbo's fiscal revenue to government debt was 1.37 times, 1.09 times, and 0.91 times respectively. The coverage ratio has declined due to the increase in the overall debt scale and the decline in comprehensive financial resources. However, considering that the debt maturity structure is relatively reasonable, the coverage ratio of fiscal revenue to government debt is generally good.

During the bond life, the Ningbo Municipal Finance Bureau commissioned Dongfang Jincheng International Credit Rating Co., Ltd. to conduct a follow-up rating once a year. As of March 21, 2024, according to the credit rating report issued by Dongfang Jincheng International Credit Rating Co., Ltd. on the first to fourth phases of Ningbo Municipal Government Special Bonds in 2024, the rating was AAA [12]. This proves that Ningbo has strong fiscal strength, a high degree of fiscal self-sufficiency, a relatively reasonable government debt maturity structure, and controllable overall debt risks.

4.3. Analysis of the Debt Governance of Ningbo Local Government

4.3.1. Effectiveness of Local Debt Management

According to rating agencies and public data on government websites, compared with Ningbo's debt burden rate in 2015, which far exceeded the domestic warning line by 15%, the current balance of local debt in Ningbo is growing within the limit, and the debt burden rate has been reduced to near the warning line year by year. The local government can repay government debts.

Ningbo government departments have implemented the spirit of the National Financial Work Conference at the local level, comprehensively considered the financial situation, deeply explored the debt repayment capacity and potential risks of project implementation, judged whether the project start and construction progress were reliable, paid attention to the financial situation and debt repayment pressure of the project units, and eliminated debt repayment risks. At the same time, an effective supervision system has been established to conduct penetrating supervision of government debt throughout the entire process, formulate clear verification requirements, and strengthen the control of bond investment, fund payment, project progress, and supporting financing.

In addition, the Ningbo Municipal Government has also established a relatively complete information disclosure system in the management of local debts. This system ensures the effective statistics and timely updating of various debt information. In addition to the internal government rating system, the Ningbo Municipal Government has also introduced external rating agencies to identify local government debt risks.

4.3.2. Inadequate Governance of Local Debt

After analyzing the risks of local debts of Ningbo Municipal Government, although the overall local debt risk of Ningbo is within the controllable range, there are still some indicators that have not been completely reduced to below-low risk, indicating that future risks still need to be continuously paid attention to and addressed.

In the long run, the introduction of high-tech talents by the Ningbo government is not as strong as that of cities such as Shanghai and Hangzhou. The government should increase subsidies and benefits for talents to attract talents to flow into the local area, develop various industries, enhance the core competitiveness of local economic development, coordinate multi-faceted stable economic development, break through the bottleneck of social upward development, and fundamentally solve the problem of excessive debt issuance to promote economic growth. At the same time, continue to assess the debt risks of local governments, and keep the debt risks within a reasonable range under the premise of maximizing the effectiveness of debts.

5. Conclusion

This study analyzes the causes and risks of local debt in the macroeconomic environment. Local governments use debt financing to achieve infrastructure construction and public service supply, which can stimulate aggregate demand and promote economic growth in the short term, but debt risks

also come with it. Excessive debt expansion may increase market interest rates, squeeze out private consumption and corporate investment, and affect the long-term healthy development of the economy. The opaque financing platform and the expansion of debt scale increase credit risks and affect the stability of the financial market. The unreasonable debt maturity structure and inefficient use of funds may cause liquidity risks and debt repayment pressure, further exacerbating the possibility of a debt crisis.

Through an in-depth analysis of the current situation, causes and impacts of local debt in Ningbo, the study found that Ningbo's management of debt scale, composition and maturity structure is relatively reasonable, and debt risks are generally controllable. Ningbo has successfully raised funds for municipal construction, transportation facilities and environmental protection through the establishment of local government financing platforms and the promotion of government bond issuance, effectively promoting sustained economic growth and the modernization of the city. Meanwhile, the Ningbo Municipal Government has actively taken measures to improve the transparency and management level of local debt by formulating a strict debt management system, strengthening debt information disclosure, and introducing external rating agencies.

The analysis of local government debt in Ningbo is of reference significance to other local governments that also need to control local debt risks. Other local governments should also strengthen the supervision of government debt issuance, strictly abide by the local debt limit, and reasonably plan the debt maturity structure to avoid situations where long-term projects are difficult to recover and cause credit risks. Efforts should be made to give full play to the positive role of debt issuance in economic development and improve the living standards of residents through the improvement of infrastructure, thereby achieving a virtuous cycle of healthy economic development and promoting the coordination and sustainable development of the regional economy.

References

- [1] Zhu, W.W. (2014) *Research on the Nonlinear Relationship Between Local Government Debt and Regional Economic Growth in China*. *Journal of Finance and Economics*, (12), 24-30.
- [2] Yu, H.Y., Kang, S.L. (2020) *Local Government Debt Expansion, Corporate Financing Costs and Investment Crowding-out Effect*. *World Economy*, (07), 49-72.
- [3] Lv, J. (2015) *Analysis of the Impact of Local Government Debt on Economic Growth - From the Perspective of Liquidity*. *China Industrial Economy*, (11), 16-31.
- [4] Ke, X. (2020) *Research on the Mechanism and Causes of Local Government Debt Growth in China* (Dissertation, Chinese Academy of Fiscal Sciences).
- [5] Wu, T., Zhang, L. (2018) *Research on Credit Default Risk Assessment of Local Government Bonds in China*. *Journal of Beijing Technology and Business University (Social Sciences Edition)*, (05), 81-91.
- [6] Chen, Z.Y., Mao, H., Zhang, J. (2015) *Maturity Mismatch of Local Government Debt: Risk Characteristics and Formation Mechanism*. *Economic Management*, (05), 12-21.
- [7] Chen, S.Y., Zeng, L. (2017) *Analysis of the Impact of Local Government Land Transfer Behavior on Industrial Structure Upgrading - Spatial Econometric Analysis Based on 281 Cities at Prefecture Level and Above in China*. *Industrial Economics Research*, (06), 89-102.
- [8] Wang, B.B., Liu, W.N. (2018) *Expansion of Local Government Debt Scale and People's Livelihood Development*. *Financial and Economic Issues Research*, (01), 85-90.
- [9] He, X.L. (2011) *Research on Local Government Debt Risk Management in My Country* (Master's Thesis, Fudan University). Master's Degree.
- [10] Yu, Y.M., Wang, B. (2015) *Government Debt Scale and Local Fiscal Risk Prevention: Taking Ningbo's Public Debt Crisis as an Example*. *Journal of Central University of Finance and Economics*, (09), 17-22.
- [11] Ningbo Municipal Finance Bureau. (2024) *Information Disclosure Document of Ningbo Local Government Refinancing General Bonds (First Phase) in 2024*.
- [12] Ningbo Municipal Finance Bureau. (2024) *Announcement on Adjusting the Use of Some Government New Special Bond Funds*.