# **Research on the PPP Project Mode Financing and Its Risk Control**

## Li Ma

Faculty of Economics, Yunnan University Dianchi College, Kunming, 650228, China 1836362646@qq.com

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**Abstract:** According to the current situation of public PPP projects financing, this paper analyzed the financing characteristics, risks and equity structure of public PPP projects, and concluded the current problems of public PPP project financing. The problems included the difficulty of controlling multi-party contract negotiations, the complex and changeable risks of the project itself, and the strict requirements of raising capital for the project. The paper also put forward corresponding solutions from three aspects: financing subject, contract negotiation and risk sharing, so as to realize the ideal mode for the healthy development of public PPP project financing in China.

#### **1. Introduction**

As an important starting point to relieve the local financial pressure, PPP project is expected in many aspects, such as investment and financing, financial revenue and expenditure innovation, steady growth, promotion of reform, adjustment of structure [1]. However, under the current supply-side reform, the development of PPP in China is far from expected. According to the PPP Center of the Ministry of Finance, as of the end of March 2016, the landing rate of the national PPP comprehensive information platform project bank was only 21.7 percent, and the majority of investors did not have a high willingness to invest. How to reduce the risk of PPP project and how to control the financing risk well have become the key to the promotion of PPP project in the new period [2-3].

### 2. Analysis of PPP Project Financing Risk

#### 2.1 Project investment and financing phase.

Firstly, the government determines the feasibility of urban infrastructure projects to be developed. Secondly, after confirming that the project financing mode can be adopted, the government begins to organize the bidding. Before bidding, the government must produce bidding documents and provide detailed information on the project, including the specific criteria that the project must meet, such as project size, performance criteria, source of project recipients, etc. In addition, the government will publish project information to the community and invite interested and powerful private entities to bid. Thirdly, after the bidding is completed, the government department evaluates the submitted bidding, and the evaluation panel consists of professional government officials and professional advisers in technical, financial, legal and other fields. The evaluation includes the project plan, the bidder's economic and technical strength [4]. Thirdly, after the negotiations and the announcement of the result of the successful bidding, the project company that won the bidding shall handle the relevant matters relating to the establishment of the company within a certain period of time, including holding relevant meetings and formulating the company's articles of association in accordance with the prior agreement, and so on. After registering, the relevant project participants will be organized to carry out the project development.

#### 2.2 Project Construction Phase.

Firstly, the project company and the joint units sign formal contracts, including loan contracts,

design contracts, construction contracts, insurance contracts and other consulting and management contracts. Secondly, the project company organizes each relevant unit to carry on the project construction. During the construction process, the government supervises the construction status of the project at any time, and communicates with the project company in time for the situation that does not conform to the contract, and determines the subject of responsibility. After the completion of the project, the construction phase ends and the project enters the operation stage.

#### 2.3 Project Operational Phase.

Project operations will continue until the expiry of the concession agreement, during which the project company contracts and operates the project directly or through a professional management company. Maintenance of the project facilities as required by the agreement throughout the operation of the project. In order to ensure that the operation and maintenance of the project is carried out, lenders, investors, governments and residents have the right to supervise the project [5].

#### 2.4 Project Transfer Phase.

The project transfer phase is the final phase of project operation, including the transfer of projects and the dissolution of the project company. After the franchise expiring, the project company will transfer the project management right (or ownership and management right) to the government. After the transfer of the project, the business of the project company will be suspended; therefore, the liquidation should be handled by the relevant department. In some cases, the project company may not liquidate, such as re-bidding for other infrastructure projects, owning new projects or transforming operations, etc. But, at this time, it should accept the relevant department to carry on the qualification examination and should carry on the modification to the relevant document [6].

#### 3. Risk Control of PPP Project Financing Based on Analysis Result

#### 3.1 Regulate Organizational form and Optimize Equity Structure.

Firstly, the organization form of financing subject is flexible and diverse. As part of the organizational structure of the project, the financing subject can be either an organization or a consortium of different organizations. In practice, in order to differentiate financing risk, the main body of financing is usually a special project company. If the road construction enterprise and the industrial fund are combined and controlled by the industrial fund, the construction enterprise can complete the construction, and the capital problem will be solved. The industrial fund is responsible for financing and solving the problem of reducing the financing cost, so that the construction enterprise can earn the project construction profit, and the industrial fund also obtains the corresponding capital investment income. It is for this reason that the project company, which is the main body of financing meets certain conditions, and it also can be transformed into each other with the characteristics of flexibility, which provides the investors with the convenience of choice. In addition, it is easier to attract investment for the project company and to raise the project funds more quickly.

Secondly, give full play to the government's policy support and regulatory role. To optimize the capital structure of the financing subject can not be separated from the policy support of the government. There are many ways of government support, mainly including project special fund, PPP project government guidance fund, policy bank loan arrangement, commercial bank loan linkage arrangement, land development and use rights within a certain scope along the project, and so on. The policy support is also applicable to the construction and operation of public PPP projects. At the same time, the government should strengthen the supervision of the flow of project funds to ensure that the policy support funds are fully and effectively invested in the construction and operation of the project.

Thirdly, appropriate access to financial capital is allowed. When the capital amount of public PPP projects is high, it is necessary to introduce financial capital. We should introduce debt-based financial capital into the stock market in a restricted manner. At the same time, we should learn from foreign advanced experience, and further perfect China's financial capital market and broaden the financing channels of public PPP projects.

#### 3.2 Focus on Contract Negotiations and Lay the Foundation for Financing.

The success of the public PPP project financing depends on the contract negotiation between the project company and the participating parties in the initial stage of the project. Firstly, public PPP project contract negotiation is the core. Only after determining the terms of the project contract, can the financial institutions such as banks make a preliminary assessment of the financing risk of the project; the contents of insurance contract, shareholder agreement, engineering contract, material supply contract and operation service contract also directly affect the project company's ability to resist risks, the ability to disperse risks and the size of operation risk [8]. This provides the lender with a further basis for risk assessment, so the entire contract system has a bearing on the success or failure of the financing. To this end, the project company should attach great importance to each contract negotiation and form a professional negotiation team composed of lawyers and business negotiators. Companies should try to minimize risk at the initial stage of the project, reducing financial institutions' misgivings about contract risk when making loans.

Secondly, we should attach importance to the renegotiation of contracts during the period of operation. While it is possible to agree on terms in the PPP project contract and to trigger a dynamic price adjustment mechanism for future changes in the price of public charges, no one can accurately predict the actual situation over the next 20 to 30 years. When there is a mismatch between the duration of the project and the term of the financing vehicle, secondary financing is usually required during the operation period. At this time, if there are some new situations that can not be predicted at the beginning of the project implementation, and when the cash inflow of the project is affected, we should do a good job of re-negotiating with the government, operators and financial institutions, so as to prevent the risk of the secondary financing of the project.

#### 3.3 Refine Risk Sharing and Reduce Financing Risk.

Firstly, according to the general risk sharing matrix, the risk sharing mechanism is refined. After years of development, a set of risk sharing matrix has been established in China's public PPP project. The risk sharing mechanism of public PPP project is based on a set of risk matrix. In the preparation of implementation programmes, in order to simplify work procedures and save costs, consultants often apply templates of risk sharing matrix [9-10]. This makes the risk sharing mechanism and the actual situation of the project do not match, and there is a risk loophole. Therefore, the project implementing agencies should strictly supervise the preparation of the implementation plan, consider the actual situation in the local area, and make the risk concrete.

Secondly, we should carry on the quantitative examination to the risk responsibility undertaking. For example, the risk of early land expropriation and demolition is usually borne by government departments. Under such circumstances, if the implementation of the demolition work is not in place and the progress of the project is affected, the responsibility must be borne by specific departments. How much responsibility the leaders of departments assume should be quantified and be incorporated into performance appraisal of relevant responsible persons. According to extent of the damage, leaders should get demotion or even dismissal. This will enable the relevant responsible person to strengthen the project management and reduce the project risk; the financing risk is borne by the social capital side. If the financing is not in place and the project progress is affected, the performance bond can be confiscated, and even the penalty of disqualification to win the bidding can be given [11]. Only by linking and quantifying the factors such as risk and performance, can the enthusiasm of all parties be fully mobilized. The attention paid to the project should be enhanced, the mechanism of risk sharing should be strictly fulfilled, and the risk of project financing should be reduced.

### 4. Summary

At present, China's PPP is in the initial stage of separation from the old pattern, and more detailed rules and development paths still need theoretical exploration and practical verification. In this case, the development of financing risk control based on PPP project will help to solve the worries of social capital, and it is of great practical significance for the sustainable development of China's PPP project.

## References

[1] Mo Lvqun, Chen Zhendong, Guo Jiyue, Yuan Jingfeng. Infrastructure PPP Project Financing Risk Analysis and Case Study[J]. Journal of Engineering Management, 2016, 30 (05): 71-76.

[2] Song Bo, Wu Ruijuan, Niu Fayang. Study on Risk Assessment Method of Urban Rail Transit PPP Financing Based on OWA and Grey Clustering[J]. Tunnel Construction, 2017, 37 (04): 435-441.

[3] Li Zongwu, Liu Meilian. Research on PPP Project Financing Risk Sharing Proportional Model Based on Utility Theory[J]. Journal of Systems Science, 2018, 26 (01): 111-114.

[4] Liu Hong, Sun Hao. Risk Analysis of PPP Project Financing Based on Utility Theory[J]. Journal of Systems Science, 2018, 26 (01): 131-135.

[5] Han Xiaochen, Ji Yunan, Hou Yangyang. Risk Analysis of PPP Project Financing in Foshan Yunfu Industrial Park[J]. Journal of Liaoning University of Engineering and Technology (Social Science Edition), 2018, 20 (03): 202-209+216.

[6] Meng Xianwei, Han Xisha. Study on Financing Risk of Quasi-operational PPP Project[J]. Journal of Engineering Management, 2018, 32 (03): 58-63.

[7] Xia Liang, Zhang Yan, Wang Sheng. Research on Early Warning Model for Financing Risk of Major Infrastructure Projects under PPP Model[J]. Journal of Pu'er College, 2018, 34 (03): 57-58.

[8] Wan Shu, Xu Yu Sheng, Zhang Zhaojun, Zhang Xin. Analysis on the Financing Risk of Characteristic Small Town PPP Model under the Strategy of Rural Revitalization[J]. Southwest Financial, 2018 (10): 11-16.

[9] Zhang Ping, Liu Yue. Study on the Measurement of Financing Risk Level under the PPP Model of Urban Infrastructure[J]. Journal of Engineering Management, 2015, 29 (02): 65-70.

[10] Xiang Pengcheng, Song Xianping. Risk Assessment of Urban Infrastructure Financing under PPP [J]. Journal of Engineering Management, 2016, 30 (01): 60-65.

[11] Li Wenjuan, Jin Changhong. Analysis of Financing Risk of Shantytown Renovation PPP Model Based on Analytic Hierarchy Process[J]. Journal of Anhui University of Architecture, 2016, 24 (02): 75-81.