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# Audit management of PPP project based on risk oriented

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## Abstract

under the new normal economy, in order to promote the government's transformation, the PPP model, as an innovative mechanism and new way of cooperation between the enterprise and the government, is a new driving force for the development of China's economy. But at the same time, the risk factors are becoming increasingly strong, and bring a lot of threat to stakeholders. Therefore, we must carry out a strong risk identification and prevention. Based on the perspective of risk oriented audit, this paper analyzes the recent development of PPP project from the concept and risk point of PPP business, and puts forward the risk prevention measures to promote the healthy development of the PPP project.

## Keywords

PPP project; risk oriented; risk causes; risk prevention.

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## 1. Introduction

From the international environment, with the implementation of the "one way and one way" policy and the deepening of the reform and opening up, we have been deeply involved in the international division of labor, and the market economy has been fully developed and integrated into the wave of economic globalization. With the development of market economy and economic globalization, China is facing more and more complicated economic environment and more and more risk factors. From the domestic environment, local government debt is heavy and the capital gap of infrastructure construction is huge. With the convening of "13th Five-Year"(Brautigam,D.,and X. Tang. 2013), it is clear that the structural reform of the supply side has become the key point of strategic development. The government and social capital cooperation (PPP) is one of the important measures, so that PPP is not only helpful to the use of the people. The capital construction of public projects to make up for the lack of government investment, improve the efficiency of investment and the efficiency of public services, and the rapid development of the private economy and provide a channel for its participation in the construction of infrastructure. However, with the unprecedented upsurge of PPP, the risk of the PPP project is gradually exposed, and the original risk management awareness and risk management methods are difficult to cope with the complex internal and external risks. This issue has attracted the attention of all sectors of society, affecting the volatility of the stock market. At present, some scholars have recognized this problem and have carried out some related research, but most of the research focused on the PPP project itself in all directions or focused on financial analysis. Only a small number of scholars associate it with risk orientation. Therefore, this paper is based on the concept of risk oriented audit and starting from the concept and risk point of the PPP business to PPP From the perspective of auditing, risk prevention measures are put forward to promote the healthy development of PPP projects.

## 2. PPP project overview and audit risk status

The public-private partnership is a broader concept. It is a series of cooperative models, including management, technology and capital, to achieve the advantages and profit maximization of the public and private sectors, including management, technology and capital. This cooperation is basically

carried out in the implementation of the cooperation of large public projects, but it is not only a financing model, but also a management model for the coordination of risks and interests between the public sector and the private sector.

From the number of PPP projects in China in recent years, the main distribution in these areas: energy, water and sewage treatment and transportation; from the value distribution, mainly concentrated in five areas: transportation, energy, communications, water and sewage treatment, and in recent years, the great heat of ecology, garden greening industry.

### **2.1 The concept and basic mode of risk oriented auditing**

The modern risk oriented audit is the importance of emphasizing the risk assessment, and the different audit procedures for the clients at different levels of risk. Modern risk oriented auditing model can be divided into audit model based on risk control, audit model based on management risk and improved risk oriented audit model. Under the model of risk control based audit model, the audit risk model is defined as  $\text{audit risk} = \text{inherent risk} * \text{control risk} * \text{to check the risk}$ . In general, CPA sets the inherent risk to high level, and starts the whole trial work to control risk assessment and test. In the process of audit implementation, CPAs generally assume that inherent risk and control risk are independent variables of internal and external environment. The risk-oriented audit model based on operational risk is generally considered to be put forward by the four major accounting firms on the basis of exploring strategic management ideas. After the Enron Incident, Sarbanes-Oxley Act proposed to strengthen the supervision of accounting profession and corporate behavior. In order to comply with the requirements of the Sarbanes Oxley act, the improved risk oriented audit model covers a wider range of risks. The auditing standards require the analysis and evaluation of non financial factors such as the corporate governance structure and the internal control environment, and further audit.

### **2.2 The current situation of risk oriented audit under the PPP model**

At present, the audit of PPP projects by audit institutions in China has not been carried out in a large scale, but only partially touched on the investment audit and policy tracking audit. In the case of small coverage, the degree of perfection needs to be strengthened, especially in the whole process of audit, such as small audit, non stage characteristics and unrelated policy guide. After considering the audit cost and the level of lack of system, the audit level and the degree of attention to the PPP project are different in each region, and even some local governments will directly refuse to invest in the PPP project involved in the resource audit. Even if the audit of the PPP project is implemented, it is not a special audit of it, but it is simply carried out in other specialized audit services as an additional item. Such irregularities lead to the spread of PPP risk. On the basis of its overall consideration, the risk of PPP project is mainly divided into economic risk, policy risk, construction and operation risk, competence risk and default risk in the internal and external part of the project(Wang,J.2013).

## **3. Analysis on the cause of PPP project audit risk**

### **3.1 Process audit risk**

As we all know, PPP has three characteristics in its project execution phase: long time, high complexity and wide and complex coverage. There are many participants in this stage. The cooperative supervision relationship between them is mainly formed with the goal of completing the project construction and the economic contract as the link. From the link between the PPP project process and the construction goal, in order to achieve the goal, there are many processes between the different stages of the project construction and the different participants. Various activities involved in the process may affect the identification of audit in some way. In addition, as "full coverage" has become a new normal audit, new requirements have also been put forward for government construction project audit. Therefore, higher requirements for auditors' diversified knowledge and proficiency in auditing are put forward. The ultimate goal of the PPP project is to maximize the social benefits, that is to achieve a multi win or win-win situation. However, the inconsistency of the unilateral goals and the high transaction costs caused by the institutional defects both restrict the

original intention of the PPP project and bring many risks. Therefore, PPP project risk identification should focus on whether or not it is conducive to achieving the general goal of the project.

### **3.2 Internal and external audit risks under the PPP project**

The difference between the PPP project and the common project is that the default risk has a great impact on the construction, operation and management of the project. Therefore, the audit of the default risk of the PPP project is also an important control risk point for the risk oriented PPP project audit. As the PPP project involves more and more basic construction projects related to the national economy and the people's livelihood, the prices of these projects have great stability throughout the country, and the price fluctuations can also be followed in a certain stage, such as public transportation projects, water supply projects, wind protection and sand prevention projects. The two parties can make a complete price adjustment mechanism in advance to minimize the risk caused by price fluctuation. The contract has always been an important basis for protecting the rights and interests of both sides, so the distribution of risks is more convincing. But the construction and operation cycle of the PPP project is long, the contract is often over ten years or even decades, not only the long time span, but also the non - complete contract, the larger uncertainty brings the higher project risk. In addition, the PPP project receivable mode for the enterprise is basically a part of the first collection, the rest is funded by the enterprise, so a large amount of receivables will be generated every year, and the long return period is easy to increase a large number of bad debt risks, which also has a great impact on the audit report which the auditor finally gives, and the audit accident. In addition to the price risk, the scientific and accurate verification of the franchise period and the effective prevention and control of the franchise period risk is one of the key factors that determine the benefits of the PPP project or the interests of both parties before signing the franchise contract. However, this important determinant also bears a lot of uncertainty, it is too much involved, the process of verification is complicated, the negotiation is not formal and strict, which greatly increases the uncertainty of the income of the project.

## **4. Prevention and control of risk oriented audit in PPP project**

At present, supervision, management and control of PPP project construction and operation risks, improve the ultimate goal of PPP project realization rate has become the top priority. In order to solve this problem, the whole process tracking audit is a real time and effective control mechanism for the project management process and results through economic means, which can help control the project cost, improve the engineering management, improve the quality of the project, promote the quality of the project, and promote the quality of the project. To achieve the goal of project construction. It mainly includes the audit environment and key risk point analysis in the five stages of PPP project decision stage, construction stage, completion stage, operation stage and transfer stage, as well as key audit procedure setting.

### **4.1 Risk oriented audit in decision making period**

The audit work in the decision stage of the PPP project will make the participants conscientiously do the preparatory work, allocate the project risk reasonably, select the appropriate operation mode, promote the standardization and scientification of the project preparation, and prepare for the follow-up purchase phase of the follow-up construction and operation of the PPP project. It also plays an important role in achieving economic and social benefits. In the decision-making stage audit, the auditor should combine the audit environment to see whether the PPP project has realized the reasonable allocation of the project risk in the decision making phase [Yan Xiaoyan, Xu Xiang. Risk oriented PPP project risk identification and prevention of [J]. financial education research, 2018,31 (02): 47-53.]. Although in practice, because of the lack of specific implementation rules, it is not only different, but also weak in how to assess the risk and risk sharing mechanism of different PPP projects in different regions, but the requirements of the audit work are still flexible and process based on the general experience. In this context, the auditors should pay attention to whether the PPP project has formed a comprehensive and systematic risk management strategy and overall planning at the

decision-making stage, whether it provides a detailed and systematic PPP project risk management plan, as well as the overall audit environment, specific evaluation criteria, control procedures and key audits. In addition, PPP project risk management planning should also start from the perspective of comprehensive audit coverage, through the design of risk tracking, monitoring measures and coping strategies, major risk contingency plans and other important contents, and constantly improve the overall risk management plan of the PPP project.

On the basis of understanding the audit environment, auditors should pay attention to the key risk points and design the audit procedures more specifically. First of all, in the early stage of the audit plan, the auditors can find the key points of the audit and expand the key points of the audit by investigating, asking, evaluating and calculating various methods, according to the characteristics of different PPP projects. At the same time, through a variety of investigations, inquiries, assessments, calculations and necessary internal control tests, the key areas of the PPP project audit risk distribution are effectively identified in order to more scientifically evaluate and prevent PPP project design, potential risks, and determine the critical audit scope, thus finding the corresponding PPP project risk management for the drug. The means of management and control. In the audit identification stage of PPP projects, auditors should mainly consider setting up the following risk-oriented audit procedures: First, determine the important evaluation and information. In the audit phase, the auditor should focus on the integrity and effectiveness of the "PPP project implementation plan report, the value argument report, the financial burden assessment report and other important information". Taking the audit feasibility study report as an example, the auditor should focus on examining whether the signing process of the feasibility study report strictly adheres to the signature procedure of the management, whether the examination results are scientific and referential, and whether the review process has passed the expert argument. Second, check whether the PPP project has a comprehensive and systematic risk management plan, including the overall project risk assessment, critical and major risk assessment criteria, audit process and audit points, and the review of the PPP project evaluation of the value of material value and the assessment of financial capacity. Third, for general projects, the decision stage is the most influential stage in investment, and the PPP project is no exception. After scientific identification and proper selection of investment opportunities, the concept guidance based on full coverage, full factor audit and the successful experience of related PPP project audit are formed to form the PPP project. The overall plan and support plan of the audit work. In short, for PPP projects, this stage should not only be clear about the feasibility of the project investment, but also specific planning objectives. Therefore, the auditors must take a rigorous attitude and scientific methods to deal with the audit work at the decision-making stage and make scientific decision making use of the external experts to analyze and demonstrate. That is, after scientific identification and correct choice of investment opportunities, a successful guidance based on full coverage, full factor audit and the guidance of the concept of PPP project audit is formed to form a PPP project with the overall planning and support plan of the audit work. To sum up, for PPP projects, this stage is not only to determine whether the project has investment feasibility, but also to plan specific objectives. Therefore, the auditor must take an independent and prudent attitude and a scientific and effective method to deal with the audit work at the decision-making stage, and make full use of the related specialties of the external experts, and make scientific decisions on the basis of professional analysis and demonstration.

#### **4.2 Risk oriented audit in construction period**

At present, in order to meet the objective requirements of stable growth audit and to better realize the concept of full coverage audit and all factor audit, the national audit institution has gradually changed the view point from the audit of the project audit to the quality and benefit audit. And will focus on improving the quality and efficiency of PPP project construction phase audit. First, auditors should use audit procedures such as inspection, inquiry, evaluation, prediction and observation to confirm the integrity and legitimacy of key information. Second, the correctness of the important data of the PPP project and the approval process and authenticity of the original data acquisition are examined by the audit procedures such as recalculation and reimplementation. For example, as the construction

period is long and the construction conditions are complex(Christensen,B. E., S. M. Glover, and C. J. Wolfe.2014), the auditors should regularly or unregularly carry out the field audit, obtain the first hand information of the project field, and understand the construction process, quality and technology of the project. In the field audit, we should attach importance to auditing, enquiry, evaluation, prediction, observation and so on. It should be noted that auditors should strengthen post audit even if they have issued unqualified audit opinions. In addition, in the scope of the project stipulated in the tender documents, whether the quantity of the project is calculated according to the drawings is accurate and accurate. When it is necessary to recalculate the project, the auditor must abide by each process. From the characteristics of the long time of the PPP project, it can be seen that the project must not be the same in the process of implementation. In order to realize the effective supervision of the whole process of the construction period and ultimately improve the economic and social benefits of the PPP project, the auditors should master the detailed information and make good records, especially the PPP item in the audit process. The occurrence of risks may lead to changes in risk losses.

#### **4.3 Risk oriented audit in completion period**

In the PPP project completion settlement audit stage, on the one hand, it involves the key issues of project cost and finance. For auditors, starting from the main line of funds, the main audit is whether to obtain and use funds, whether the funds are allocated and wasted, and the use of the key. On the other hand, it involves important issues such as project completion and quality licensing. Auditors should have a comprehensive and comprehensive understanding of the PPP project completion settlement related information. Under this goal, obtaining first-hand information of on-site audit is very important for PPP project completion settlement audit. The auditors should go into the deep construction site, field investigation, contrast the construction drawings and site construction, and then compare the project settlement manual and strengthen the field tracking audit to obtain the information related to the price and design changes, so as to truly understand the problems and quality of the project. In addition, the changes in the whole course of the PPP project must be recorded dynamically, and the key information is updated at the moment. At this time, inspection, inquiry, evaluation, prediction and observation can be adopted to collect and record the completion time information, so as to realize the whole process of supervision and management of the completion period. In addition to observing, investigating and checking audit procedures as well as collecting appropriate and appropriate audit evidence, auditors also need to review audit procedures, such as re examination of key information and communication with key personnel, and pay attention to the capital flow PPP project, (Brasel,K.,M. M. Doxey,J. H. Grenier,and A. Reffett.2016)to understand whether the cost of the project is reasonable and the quality of the service up to the standard. And supervise the supervision of other departments on project operation. For PPP projects requiring government subsidies, auditors should also examine whether subsidies are reasonable and appropriate and avoid excessive subsidies.

#### **4.4 Risk oriented audit in operation period**

One of the major features of the PPP project is the operation of the operation period, that is, the enterprise and the government can not obtain the full income, but within a certain period of recognition, the enterprise can make profit by using the public facility. For example, enterprises cooperate with the government to build a road, stipulating that within 20 years, the toll of the road section should be legally collected by enterprises, and the government should not intervene. At this stage, the key to developing risk oriented procedures is to identify key risks and attach importance to performance auditing(Hatherly,D., T. Brown, and J. Innes. 1998). Auditors need to judge the applicable limits of pre -, post - and post - control based on the actual situation of PPP projects. According to the scientific and effective assessment of the possible misstatements, the specific system audit procedures are determined. In addition, under the PPP protocol, the auditors should take the stakeholders as the main body, carry out performance audit on PPP projects, and carry out feedback evaluation procedures, focusing on the effectiveness of the project construction. This procedure

mainly focuses on the effect of the implementation and implementation of national investment policies, and reasonably divides the rights and responsibilities of PPP projects, especially the heavy responsibilities. At the same time, we should also pay attention to the use of public funds in order to achieve economic, quality, efficiency and environmental audit results.

#### 4.5 Transfer period risk oriented audit

The audit procedure at the handover stage needs to be based on understanding the key control of audit. Auditors need to judge the application scope of event control, event control and ex post control according to the actual situation of PPP project. Through the scientific assessment of possible false positives, we can determine the specific audit process and the specific audit process.

### 5. Summary

To sum up, PPP project risk prevention is of great significance, and its important means is risk oriented auditing. In order to achieve the ultimate goal of PPP projects, stakeholders should cooperate with each other to achieve a win-win or win-win situation. Participants and even the public should actively participate in the project risk prevention to build a multi-dimensional risk prevention system. As an auditor, a reasonable and effective audit strategy should be formulated on the basis of cost-effectiveness. At the same time, the PPP project is audited with a development and dynamic perspective, and the final cooperation with the project participants will ensure the smooth landing of the PPP project.

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