

# Research on Risk Management of Ginza Project

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**Abstract.** This paper reviews the basic situation of risk management at home and abroad, starting from the view of project investors, and carries out risk management analysis for specific construction projects in Ginza. Firstly, the concept and classification of project risk management are put forward. Then, the risk management of a city's Ginza is thoroughly analyzed from four risk management processes: risk identification, risk assessment, risk decision-making and risk monitoring. The whole process of risk management is completed by four procedures, so as to reduce risk losses.

## 1. Introduction

### 1.1 Current situation and analysis of risk management at home and abroad

Risk management originated in the insurance industry of the United States. Until the 1960s, risk management was formally established in the United States and began to develop among Western countries. Among the risk management works in various countries, the United States has the richest theoretical research and has a large number of outstanding talents in this field <sup>[1]</sup>.

The research on risk management in our country began in the 1980s. With the economic management system at that time, all risks were borne by the state, and enterprises had no economic benefits. With the development of economic system after reform and opening up, risk management began to be applied in practice. The research direction of risk management is mainly risk identification, risk analysis and evaluation, risk control and decision. However, compared with foreign research on projects' risk management at this stage, risk management still cannot meet the development of market economy, the essence of which lies in insufficient understanding of risk management <sup>[2]</sup>. We should strengthen the understanding and application of risk management in practical projects.

### 1.2 Significance of research

With natural disaster risk, financial risk, economic risk and other risks, "Risk" is beginning to be understood. On August 13, 1953, a fire broke out in the automatic transmission system of General Motors Corporation of the United States, which caused the company to suffer losses up to 50 million dollars. The fire shocked the American business and academic circles, and became an opportunity for the scientific development of risk management <sup>[3]</sup>. We have to admit that risk exists in all kinds of social activities, and for a certain period of time we neglect the existence of it.

Risk is caused by uncertain factors, at the same time uncertainties are manifested in two aspects, one is the uncertainty of objective factors, and the other is the limitation of the subject's understanding



of risk management. There are kinds of risk inducing factors. Effective risk management can improve the success rate of venture capital and induce collect more money to for the venture capital industry, thus promoting the innovation and development of risk management. Therefore, it is necessary and significant to learn risk management.

## 2. Overview of Engineering Project Risk Theory

### 2.1 Theoretical summary of Project Risk

#### 2.1.1 Definition of risk

Risk can be divided into broad sense and narrow sense. The main object this paper discusses is the broad sense of risk one. Generally speaking, risk emphasizes the uncertainty transforming risk into benefit or cost. Simply put, risk refers to the degree of difference between the expected goal and the actual results in a given time or situation.

#### 2.1.2 Risk Characteristics

##### (1) Duality

Duality is mainly manifested in two aspects: objectivity and subjectivity. On the one hand, in engineering projects, risks are the same as those in other projects. They are never changed because of people's will and beyond people's subjective consciousness<sup>[4]</sup>. Risk is not transferred by man's will, but exists independently and objectively in man's consciousness, even beyond man's control, while as for subjectivity, it means that different people have different interpretations.

##### (2) Uncertainty

The construction project is composed of many individual projects. Risks may occur in every link of the project. It is precisely because the objective existence of risks filling of randomness and uncertainty.

##### (3) Relevance

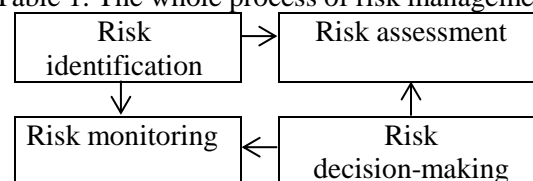
The impact of risk occurrence is often not single, but overall. The occurrence of a risk is related to other processes of the project.

##### (4) Monitorability

### 2.2 Process of Risk Management in Engineering Projects

The high risk and high profitability of venture capital determine that the core of its management is risk, that is, to identify, predict, measure and deal with various possible risk factors beforehand, so as to minimize the risk. If risk management cannot be effectively managed, it will cause huge losses, because of the economic units involved in the project. For example, project owners, project contractors, project design units, project material suppliers, etc. For large-scale construction projects, high investment and complex risk management also increase the difficulty of risk management, and early effective investment risk management becomes very important. To this end, the schematic diagram of risk management is summarized as follows:

Table 1. The whole process of risk management.



In the process of risk management, the risks of engineering projects are changing all the time, and the measures of risk management are adjusted accordingly. However, the risk management in practical work is a cyclical process<sup>[5]</sup>. From the beginning of risk identification to risk monitoring, when new

changes are found by risk monitoring and information feedback, it will enter the next round, and continue to carry out risk analysis, assessment and decision-making management measures. This cycle of risk management process promises to achieve the desired objectives

### **3. Risk Management Analysis of Ginza Project**

#### *3.1 Overview of Ginza Project*

The Ginza is located at the original bus station of a city. The Ginza is the city's first large-scale complex project integrating commerce, housing and apartments. Ginza is surrounded by educational, medical, catering, entertainment and administrative financial institutions to meet multi-level living requirements. The project was contracted in November 2009 and completed in May 2012.

#### *3.2 Risk Management Procedure of Ginza Project*

##### *3.2.1 Identification of Risk Management in Ginza Project*

At the first step of risk management, risk identification aims to provide the basis for risk management and decision-making. In the process of identifying risk factors in Ginza project, the risk identification process is divided into the following four stages.

In the stage of project investment decision-making, because of the subprime mortgage crisis during the execution period of the project, the investment timing is obviously important. The project is the first complex project in the city, and there are potential risks in the selection of project types. Therefore, in the stage of investment decision-making, the main risks are: policies, regional site, investment timing, project type and other risks.

In the early stage of construction, the cost of Ginza is relatively high, so the choice of financing methods needs to be considered, and there are financing risks. Originally an old bus station in the city, there are risks in site and land acquisition. Before the construction of the project, it is necessary to carry out investigation and design, invite tenders, identify contractors and sign contracts. Therefore, in the early stage of the construction, the main risk factors are: financing, land acquisition survey and design project bidding, and contract risks.

In the construction stage, the Ginza project lasts a long time. In the construction project, the existence of various problems will affect the construction and its cost. At the same time, the contractor's technology certainly has certain risks and safety problems in the construction process, which are also important. Therefore, the main risk factors in the construction stage are: time limitation, safety problems, cost and technical problems.

At the stage of lease sale, there are also some uncertain factors from the market. At the same time, the marketing method of investment will play a very important role. At this stage, the main risk factors are: market risk, marketing risk.,

##### *3.2.2 Risk Management Assessment of Ginza Project*

From the above risk identification results, we can get the risk factors of the Ginza project. According to the actual situation of the Ginza project, we analyze each risk factor and conclude that among all the risk factors, the influence of the variable factors varies with the situation. Some important ones are the contract, financing, duration, cost and market. For the high risk factors, investors are required to make adequate preparations and measures before the occurrence of risks, so as to minimize the occurrence rate of accidents.

##### *3.2.3 Risk Management Decision of Ginza Project*

The risk identification and evaluation of the project shows that there are many risk factors in the Ginza project, and the uncertainty of the risk is large. The project is decided from the following aspect: Pay attention to the research and management of engineering projects to ensure the correctness of investment decisions. Effective research and management work provides a basis for investment

decision-making. The Ginza project ensures that the contractor can work in a unified and coordinated manner with local technical, economic and management professionals, and provide construction suggestions while ensuring the integrity of the project construction.

#### 3.2.4 Risk Monitoring of Ginza Project

Project monitoring is based on risk identification, risk assessment and risk decision-making. It monitors uncertain risks in time and adopts corresponding measures.

(1) Risk supervision. As the project will change continuously after implementation, it requires repeated risk management process. The project mainly carries out risk supervision on the determination of risk control objectives and implementation of project responsibility system.

(2) Risk control. There will be different risk factors at different stages of the project, and the undertakers need to take appropriate measures to control the deterioration of risk according to the nature of risk factors. The project can take such risk control measures as improving organizational measures, purchasing insurance, signing contracts and strengthening risk monitoring by itself.

#### 4. Conclusion

At present, although many domestic scholars have studied the project, most of the research ideas and methods were borrowed from the results of other fields and industries, and they have a shallow view on risk management. The research results are not fully be used in actual construction projects. The risk prevention is not good enough and people have strong subjectivity in their papers. The future development of risk management can be strengthened from the risk awareness and apply it into practice, and then get more economic benefits.

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