

OPTIMIZATION STUDY ON INVESTMENT RISK MANAGEMENT OF PROJECTS IN PRIVATE EQUITY FUND COMPANIES

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Due to opacity and high liquidity, private equity (PE) investment funds are still confronted with more risks in their operation, which thus makes it vital to strengthen the investment risk management in PE fund projects. This requires the PE investment funds to further elevate their risk management level, thereby to guarantee benign development.

1. *Benefits of PE fund.* Research findings of Richardson et al. (2003) showed that returns on the PE investment were related to the investment opportunities discovered and the size of the fund. Agrawal et al. (2015) argued that under the background of studying the degree of leverage for M&A of PE investment, the employees of the acquired company could be compensated by PE investors for the related technical costs, which alleviated PE investment's weakness in relatively backward labor skills caused by technical changes and thus helped the invested enterprises utilize cutting-edge technologies and promote further development. Amess et al. (2016) upheld that PE investment funds, when investing in a company, usually had relatively lower requirements on the financial status of the target company, but instead valued its development opportunities. A new industry or a new prospect will easily be favored by PE investment funds, who often gain higher investment earnings through investment in the players in the target industry.

2. *Risks of PE.* Robinson et al. (2016) found that the cash flow of PE investment was usually diversified over the entire period, while the cash flow and performance of PE investment funds were periodically related to each other. This thus requires the PE investment fund to conduct related research on the periodicity of both the enterprise and the PE investment fund, and on this basis, to select the target companies for investment, in order to obtain higher returns while protecting funds security.

Zhang Ruibin (2009) concluded that large-scale M&A funds usually had some negative external influences. Changes in external conditions might, to some degree, impact the fund's earnings and risks, thereby to cause some systemic risks. In his research, he described the common risks of large-scale M&A funds, and proposed corresponding countermeasures against these risks to further reduce the incidence of systematic risks, thereby safeguarding the safety of funds. Yin Zhijun et al. (2009) stated that the risks of PE investment funds existed in the entire process of PE investment fund. Zhao Jun et al. (2011) believed that PE investment funds failed to establish sound systems concerning their establishment, fundraising and exit. Wei Jingfen (2015) asserted that the PE investment funds should adopt some early warning methods and strategies to strengthen their management, which would not only help to further reduce their investment risks, but also provide a good investment decision suggestion to investment decision makers, thereby to create greater returns while controlling investment risks to a certain degree.

Overview of the PE fund development – China is gradually consummating its legal system for the PE industry and exercising more stringent supervision, which will further improve the supervision system of the equity investment industry. So far, the basic legal framework of limited partnership system, trust system and company system PE fund has been formed.

General risk control of PE fund.

Project selection risks and their control: industry selection, region selection, stage selection, project selection.

Project management risks and their control: project portfolio investment, phased control.

Single investment project risk control: staged investment, share allocation ratio adjustment, contract restriction, remedies for breach of contract, valuation adjustment mechanism (VAM) and equity incentives by the top management.

Classification of project investment risk factors and risk breakdown structure.

Effective risk management is based on accurate identification of risks. Only through clarifying the actual situation and influence degree of risks can a scientific and effective risk management system be established to increase earnings while reducing risks.

External risks.

1. Risks from the target invested enterprise: the invested enterprise will expose the PE fund to joint pressure due to its limitations in management, technology, market and finance and so on.

2. Market fluctuation risk: the fluctuations in securities prices, exchange rate and bank interest rates in the financial market will affect the implementation of PE investment, making the actual rate of return on investment fall short of expectation. The market economy also faces a risk of inflation, which reduces the purchasing power of currencies and hence causes adverse effect on the expected earnings of the PE fund.

3. Risks from policies and regulations: for lack of complete laws and regulations to protect and supervise the interests of both parties in PE investment and financing, the overall process of PE investment and financing activities is confronted with huge legal risks. Local governments or private groups will play a negative role since they only consider their own interests, which explains the risk of local protectionism existing in the implementation process: the state has no coherent laws and policies on PE investment.

Internal risks.

1. Operational risk: in the process of PE investment, the risks caused by factors such as the technical level of products, competency of the top management and failure of internal control.

2. Ethical risk: as far as PE funds are concerned, investment managers, for their own benefits, have failed to be objective and fair in the due diligence process, and are attracted to the immediate interests pictured by the investor. Or in order to obtain higher commissions and bonuses, during preparation of the report, they are likely to favor the target invested party or present a higher valuation than the actual case.

3. Credit risk: credit risks exist in the entire process from project selection to final exit. Therefore, it is key to control the credit risk to guarantee the smooth operation of the PE investment process.

Phased risk analysis of project investment in PE fund companies.

Through expounding the classification of project investment risk factors and risk breakdown structure, the risks of project investment in the PE fund companies are analyzed from the pre-investment stage, the mid-term stage, the later stage and the exit stage of the project.

1. Pre-investment stage: project investigation risk, qualified investor identification risk, promotion risk, contract signing risk.

2. Mid-term stage of project investment: investment evaluation risk, overvaluation of the invested company, insufficient control over PE fund projects, and incomplete guarantee terms and conditions.

3. Later stage of the project investment: contract risks due to contract loopholes, lack of capital supervision, ethical hazards of whitewashing information, incomplete post-investment management systems, control risks of conflicting decision-making opinions, and insufficient attention to later-stage management.

PE fund project investment risk management shall strictly follow the following principles:

1) the principle of all-sidedness: the risk control system shall cover personnel at all levels and all tasks in the PE fund business, and penetrate into all sections such as feedback, supervision, execution, and decision-making;

2) the principle of prudence: the core of internal risk control is to effectively prevent various risks. The establishment of the internal management system and the organizational structure of PE funds shall be based on prudent operation and risk prevention;

3) the principle of independence: risk control shall be highly authoritative and independent and run through each specific section of the PE fund business;

4) the principle of effectiveness: no exceptions shall exist during the implementation of the risk management system, and no employee shall have the power beyond the system or violate the rules. The risk control system shall comply with national laws and regulations and the regulations of the supervisory department, with a high degree of authority, and serve as action guidelines to be strictly followed by employees;

5) the principle of timeliness: with the development of the PE fund business, changes in the internal environment such as PE fund risk management concepts, business policies, and business strategies, as well as changes in national laws, regulations, and policies, the risk control system shall be improved and modified in a timely manner;

6) the principle of firewall: the PE fund and the affiliated company are independent and strictly separated in terms of operation and management, accounts, funds, office space, institutions, personnel, and businesses, and strictly prevent the transmission of risks to PE funds as a result of conflicts of interest and risks.

Response plan for the pre-investment stage.

1. Formulate clear and strict investment standards.

2. Conduct a complete and in-depth due diligence: due diligence of laws and regulations, due diligence of financial status, due diligence of the business and industry of the invested company, and other due diligence.

3. Valuation negotiation.

4. Select qualified investors: formulate unified standards and classifications, and investors' self-commitment.

Response plan for the mid-term stage of project investment.

1. Introduction to risk control terms and conditions: multiple guarantee, anti-dilution clauses, VAM clauses, preferred stocks, repurchase by major shareholders or top management.
2. Investment decision process.

Response plan for the later stage of the project investment.

1. Implement the inventory preparation and project evaluation mechanism.
2. Improve the regular + random inspection mechanism.
3. Coordinate the "Post-investment Department Responsibility System" and "Investment Manager Responsibility System".

Response plan for the exit stage of the project investment.

1. Improve the exit channels.
2. Establish a restraint and incentive mechanism: sign a VAM and provide equity incentives.

Conclusions.

Risk control of the PE fund involves multiple sections and stages, as well as its internal management activities. This article has made analysis to verify and optimize the study on the project investment risk management in the PE fund company, and proposed the PE fund should take into account of the internal control issue of the company to continuously improve its own management and conclude a host of institutional and systematic improvement measures and experience on the whole, with the aim to provide reference for the risk management of small and medium PE investment institutions in China. There must be inevitable deficiencies. In addition, optimization measures shall be tested with more time and practice so that they can be gradually improved in practice.

Optimization suggestions.

1. External risk control optimization: in order to reduce risks from policies, regulations and market to a controllable range, PE funds may make selections from common defense, timely feedback or portfolio investment.

2. Internal risk control optimization: the PE fund shall not only improve its own corporate governance, but also strengthen its internal control while improving the internal control framework and intensify the external supervision of third parties.

3. Flow risk control optimization of investments in the PE fund projects: in the specific investment process of PE funds, all stages, from project investigation to investment review, from post-investment management to investment exit, all have risks. Accordingly, the control of process risk is a prerequisite for PE fund to gain investment earnings.

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