A Study on the System and Calculation of the Investment Return Distribution in Partnership Private Equity Funds

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Abstract. Nowadays, the private equity investment is developing dramatically. For the partners of the private equity funds, the principles of return distribution have the special importance. This article concludes, through the induction of the methods of profit distribution and the calculation of the returns of the partnership PE funds, that the different profit distribution methods have different influences on the returns of partners. The barrier return rate raises the threshold for the bonus of performance received by the General Partners (GP), which facilitates better risk control and GP drive. Using the financing from the financial institutions, the PE funds can allow full play to their leverage to achieve the low-cost financing for the funds.

Introduction

In the New Normal Economy of China, the central government calls for the Supply-side reform, State-owned enterprise reform, Industry and finance integration, Financial support to industry, the PE investment is entering the gold time. There are 9124 investment projects in 2016, a year-on-year increase of 9.1%, with the total amount of investment of RMB744.91, an increase of 41.8% over RMB525.496 of the previous year. From 2006 to 2016, the number of investment projects and the amount of investment recorded the compounded annual growth of 35.0% and 20.8% respectively [Private Equity Statistics by Qingke Group, 2016].

Meanwhile, with the upgrading of the consumption structure, AI, comprehensive health, sharing economy, consumption finance and grand tourism become the new hot points, the transformation of the PE investment strategy in China is accelerating. The PE investment becomes increasingly professional and diversified.

The Profit Distribution System of the Partnership PE Fund

In the first half of 2017, 267 Chinese firms were listed at home and abroad, a year-on-year increase of 225.6%, and 27.1% increase over the second half of 2016 [Private Equity Statistics by Qingke Group, 2016]. With the speed-up of IPO, a harvest time arrives for the PE funds to gain profits by exiting the investment through IPO. The process of the PE investment can be roughly divided into 4 stages: financing, investing, managing and exiting. Among them, profit distribution, the most important link in exiting of the PE investment, is directly related to the interests of the investors.

The Timing of Profit Distribution

At present, there are two popular kinds of profit distribution time in PE investment industry: One is to distribute the profit when an investment project generates returns (Deal-by-Deal), that is, when the investment exits, the returns of the invested project are distributed right away among the general partners (GP) and limited partners (LP) according to the regulations of the limited partnership agreement (LPA). Another is to distribute the profit after the principal is remitted (also called By Fund), that is, the investment profits are distributed to GP after the cost of investment is paid back to the LP. Compared with the Deal-by-Deal, the By Fund approach offers more powerful protection to the LP. The time arrangement of this mode is more favorable to the LP.
The Forms of Distribution for the Funds

Investment gains (also called Carry) have to be distributed between the GP and the LP. Currently the usual practice of the industry is to distribute 20% of the net capital gains to the GP, and 80% to the LP. Meanwhile, a variety of distribution forms exist on the basis of the agreements among different partners when the fund was established. There are basically four forms of distribution:

**Uni-structure Form: No Classification among Priority and Inferior Level LP, GP Contribute 1%.** The fund company calculates the profits after exiting the project. The surplus capital, after deducting various costs of the fund (current expense, management cost and trustee fee), is to be distributed to the partners: 1. To return all the paid-in capitals to the LP and GP; 2. If there were still surplus funding, when the net return on investment reaches 8% p. a. (simple or compounded yield) or above, 20% of all the net return is to be given to the GP as their performance gains. The left 80% is distributed among all the partners (including the GP) according to the rate of the paid-in capital of each of them. Or the left 80% is distributed among the entire LP according to the rate of the paid-in capital of each of them.

**Uni-structure Form: To Set Threshold Rate of Return (Also Called Internal Rate of Return), GP Contribute 1%.** The fund company calculates the profits after exiting the project. The surplus capital, after deducting various costs of the fund, is to be distributed to the partners: 1. To return all the paid-in capitals to the LP and the GP; 2. If there were still surplus funding, pay the LP, according to their rates of contribution, to accumulated 8% p.a. threshold rate of return; 3. If there were still surplus funding, pay the GP, according to their rates of contribution, to accumulated 8% p.a. threshold rate of return; 4. If there were still surplus funding after the above payments, 80% of the distributable surplus (surplus return) is to be paid to all the partners (or all the LP) according to the rate of contribution of each of them; the left 20% is to be paid to the GP (fund management company).

**Structural Form: LP Are Classified into Priority and Inferior Levels, GP Contribute 1%.** The fund company calculates the profits after exiting the project. The surplus capital, after deducting various costs of the fund, is to be distributed to the partners: 1. To return all the paid-in capitals to the priority level LP; 2. To pay the priority level LP their fixed interest income according to the rate of contribution of each of them (if there were installment contribution, calculate the fixed interest by accumulating the interest to each installment); 3. To return all the paid-in capitals to the inferior level LP; 4. To return all the paid-in capitals to the GP; 5. If there were still surplus funding, 80% of the surplus return is to be paid to all the inferior level partners according to the rate of the paid-in contribution of each of them (or to distribute among all the inferior level partners and GP); 6. The left 20% is to be paid to the GP.

**Uni-structure Form: To Set Threshold Rate of Return (Also Called Internal Rate of Return), GP Contribute 1%.** The fund company calculates the profits after exiting the project. The surplus capital, after deducting various costs of the fund (current expense, management cost and trustee fee), is to be distributed to the partners: 1. To return all the paid-in capitals to the priority level LP; 2. To pay the priority level LP their fixed interest income according to the rate of contribution of each of them (if there were installment contribution, calculate the fixed interest by accumulating the interest to each installment); 3. To return all the paid-in capitals to the inferior level LP; 4. To return all the paid-in capitals to the GP; 5. If there were still surplus funding, pay the inferior level LP and the GP, according to their rates of contribution, to accumulated 8% p.a. threshold rate of return (or the internal rate of return); 6. If there were still distributable surplus funding, 80% of the surplus return is to be paid to all the inferior level partners according to the rate of paid-in contribution of each of them (or to distribute among all the inferior level partners and GP); 6. The left 20% is to be paid to the GP (fund managers).
The Calculation of the Investment Return in Partnership Private Equity Funds

The Management Fee of the Fund

The management fee is the fee the GP charges the LP in the PE fund. It is especially important for the proper operation of the fund because it covers various expenses for the daily operation and investment decision making by the fund managers, including the office rents, wages, firm registration fee, travel expense, hospitality allowance and financial consultant charges. The usual practice in the industry is 2% of the total amount of LP’s paid-in contribution. Sometimes there are arrangements of progressive increase or decrease over time.

The Taxation Payments of the Fund

According to Document [2008] 159 issued by the Taxation Bureau of the Ministry of Finance covering the payment of income tax of the PE funds, in a partnership firm, every partner acts as a taxpayer. If the partner is a natural person, he pays individual income tax. If the partner is a legal person or other organization, he pays corporate income tax whose rate is generally 25%. The principle “distribution before taxation” is applied to business gains and other gains of partnership firms.

According to Article 12 of Securities Investment Fund Act, fund managers include firms and partner enterprises. If they were firms, they pay corporate income tax as corporate legal persons. If they were partner enterprises, they shall abide by the principle “distribution before taxation”. The partners pay taxes directly [Xiamen Huitong Property, 2015]. The incomes of the fund managers basically include management fee, consulting fee and excess investment earnings, while their tax burdens include value-added tax and income tax. The corporate income tax rate of the fund managers is 25% that of value-added tax is about 6%. The total rate of tax is about 30%, including surtax.

The Subscribed Contribution System

The subscribed contribution is a feature of limited partnership fund. In the course of raising the fund, the contributors only need to pay in a certain proportion of the subscribed amount, the fund can be founded. The remaining part will be paid in subject to development of the projects until the accumulated actual contribution reaches the subscribed amount.

The Calculation of the Return to Investment

The model of installment contribution by the LP in accordance with the development of the invested projects is often applied to the PE investment funds. Suppose:

1. The structure of the contribution to the fund is: 49% financing from banks, 50% LP contribution, 1% GP contribution; (2) The threshold rate of return is 8% p. a., simple rate; the rate of return to investment is 25% p. a.; (3) The size of the fund is RMB1 billion, the LP contribute in two years; the term of investment is 5 years, and the fund exits in 2 years at 50%, 50% after the close-up of the investment; (4) The fixed cost of bank financing is 6% p. a., simple rate.

The result of the calculation is as follows:

Table 1. The cash flows of the fund (RMB million).

|                        | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Total |
|------------------------|------|------|------|------|------|------|------|-------|
| Cash outflow for other operations | -100 | -100 | --   | --   | --   | --   | --   | -200  |
| Cash inflow from financing      | 500  | 500  | --   | --   | --   | --   | --   | 1000  |
| Cash outflow for investment    | -400 | -400 | --   | --   | --   | --   | --   | -800  |
| Total returns to investment    | --   | --   | --   | 0    | 720.7| 720.7| 1441.41|
| Investment capital exits       | --   | --   | --   | 0    | 500  | 500  | 1000 |
| Fixed gains by financial institutions | 14.7 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4 | 14.7 | 176.4 |
In the period of investment of the fund, financial institutions receive total interest payment of RMB176 million (6% p.a. simple rate). The accrued management fee is RMB200 on the basis of 2 installments of actual contribution. The amount of the fund available for investment is RMB800 million. The return to the investment when it exits in the 6th year, based on 25% compounded annual rate of return, is RMB720 million. That in the 7th year is RMB720 million.

Table 2. The return to the fund partners before tax (RMB million).

|                  | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | total  | Annualized rates |
|------------------|------|------|------|------|------|------|------|--------|------------------|
| Total returns to investment after exit | --   | --   | --   | 0    | 0    | 720.7| 720.7| 1441.4| 1             |
| Fixed returns to the financial institutions | 14.7 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4 | 14.7   | 176.4           |
| LP1 (30%)        | --   | --   | --   | 0    | 205.1| 307.6| 7    | 307.6  | 410.23          |
| LP2 (20%)        | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 75.17| 75.17| 239.43 | 478.86%         |
| Management firms (1%) | 9.9  | 19.8 | 19.8 | 19.8 | 19.8 | 75.17| 75.17| 167.6  | 335.2%          |

From the above table we can get, the return of the inferior level LP after exit is RMB410 million, annualized rate being 41%; that of the management firm (GP) is RMB240 million, annualized rate being 478.9%.

Table 3. The return to the fund partners after tax (RMB million).

|                  | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | total  | Annualized rates |
|------------------|------|------|------|------|------|------|------|--------|------------------|
| Total returns to investment after exit | --   | --   | --   | 0    | 0    | 720.7| 720.7| 1441.4| 1             |
| Fixed returns to the financial institutions | 14.7 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4 | 14.7 | 176.4           |
| LP1 (30%)        | --   | --   | --   | 0    | 205.1| 307.6| 7    | 307.6  | 410.23          |
| LP2 (20%)        | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 75.17| 75.17| 239.43 | 478.86%         |
| Management firms (1%) | 9.9  | 19.8 | 19.8 | 19.8 | 19.8 | 75.17| 75.17| 167.6  | 335.2%          |

From the above table we can get, the return of the inferior level LP after exit is RMB307.67 million, annualized rate being 31%; that of the management firm (GP) is RMB168 million, annualized rate being 335.2%.

Conclusions

In PE funds, the distribution of returns may follow different orders. Different rates of contributions and different forms of exits can lead to different returns to investment. Clear stipulations are required when the partners draw up the fund partnership agreement. The agreement of threshold return rate in contract is an effective protection to the interests of the investors. The excess return of the investment return is distributed among the LP and GP after the threshold return is met. The threshold return rate raises the threshold for the GP to get the performance award, which can better control the risks and motivate the GP.

For the PE funds, on one hand, utilizing the financing from the financial institutions can explore the leveraging function of the fund. The higher the rate of financing, the higher the rate of return to investments will be. From the above calculation, we can see that the investment return of the LP
reaches 41% before tax, much higher than the general rate of return to investment of 25%. On the other hand, through financing from the financial institutions, the funds can open the channel of low-cost financing, realize quick investment, and achieve strategic merger and acquisition.

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