

PRIVATE EQUITY VALUATION

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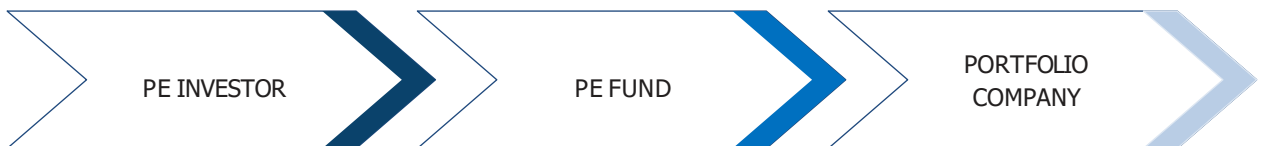
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Valuations

This thought leadership paper provides insights on valuation of private equity

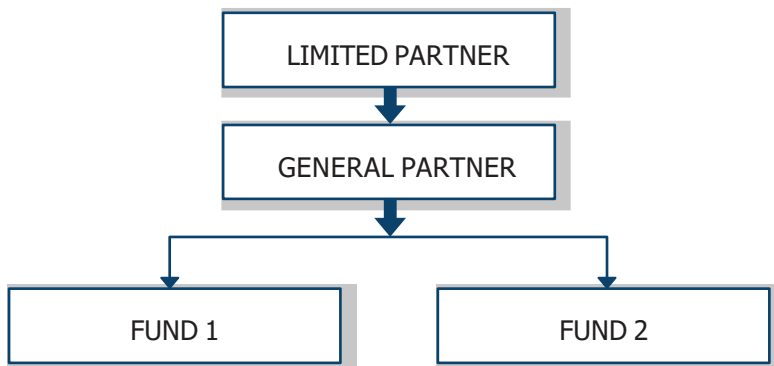
INTRODUCTION

Private equity (“PE”) as a category of alternative investment, has gained momentum in recent times. Private equity is composed of funds that either directly invest in private companies or engage in buyouts of public companies resulting in the delisting of public equity. The companies in which the PE fund invests are commonly known as portfolio companies.

The basic structure of a private equity transaction is depicted below:



Fund participation in a private equity is classified in two ways. The PE fund’s partners are known as general partners. Their responsibility involves attaining capital commitments from investors who are known as limited partners. Considering that the structure of a PE fund is usually a partnership, in substance the general partners constitute the PE firm. A diagrammatic representation of this description is as follows:



VALUATION IN PRIVATE EQUITY TRANSACTIONS

The need for valuation in private equity transactions arises at

- i. at negotiation stage before the investment is made,
- ii. periodic reporting of the performance of the investee companies to the limited partners, and at exit.

Before discussing the valuation techniques of PE investments, it may be pertinent to make a distinction between the price and value of the PE investment. The price paid i.e. the amount invested is significantly driven by the bargaining power of the parties involved and is not always representative of the fair value. The fair value of the underlying business in which a PE invests is a function of multiple factors other than the bargaining powers.

The conventional methods of valuation are not usually applicable for valuation of private equity investments in portfolio companies owing to the nature of such investments discussed below.

There are other methods of valuation depending on the nature of the private equity investment i.e. whether it is venture capital or buyout. The following characteristics of venture capital investments and buyouts drive the difference between valuation techniques:

VENTURE CAPITAL	BUYOUTS
Cash flows are unpredictable and unrealistic	Steady and predictable cash flows
Lack of market history and unproven market future	Established market position
Weak asset base	Significant asset base
Primary equity funding and less use of leverage	Extensive use of leverage
Risk assessment is difficult	Risk is measurable
Extensive working capital requirements	Low working capital requirements
Markets for products yet to be established	Established products

1. VENTURE CAPITAL:

Two fundamental concepts of valuation of venture capital investments are pre and post money valuation. Post money valuation is the value of the company after the financing or investing round. Some of the commonly used methods in valuation of venture capital investments are the venture capital method and real option methodology.

• REAL OPTION METHODOLOGY

A real option is a right to take a business decision modelled in the form of a call or put option. Generally, applies to situations in which the management or shareholders have significant flexibility in making radically different strategic decisions (i.e., option to undertake or abandon a high risk, high return project). Therefore, it applies to some companies operating at the seed or start-up phase because it demands a plethora of decisions. This methodology thus can be applied to value venture capital investments in start-up companies.

• VENTURE CAPITAL METHOD

The venture capital method involves determination of the potential year of exit of a PE investment and the expected exit value. The post-money value is the potential exit value discounted to the present at the rate of return expected by the PE investor.

This concept of the venture capital method can be symbolically represented as follows:

where;

- $POST = V / (1+r)^t$ *POST = Post money valuation*
- $PRE = POST - I$ *V = Exit value expected a.k.a. terminal value*
- $F = I / POST$ *r = rate of return expected by the PE investor*
- $y = x(F / (1 - F))$ *t = time to potential exit*
- $p1 = I / y$ *I = investment*

PRE = Pre-money valuation
F = fractional ownership of investor after investment
x = Number of shares the founders intend to hold in the company post investment
y = Number of shares the investors require to achieve the desired fractional ownership
p1 = Price per share

2. BUYOUT

• The LBO Model

This model typically helps to determine the maximum price that one should pay for a particular investment. Thus, it is not a valuation method technically, but it provides a range of prices one should pay. The following value accretive factors contribute to determining the maximum price

- Earnings growth
- Multiple growth
- Debt reduction

ILLUSTRATION:

Consider an example of a \$ 5,000 million investment in a private equity transaction financed with 50% equity and 50% debt. The \$ 2,500 million equity investment is further broken down into \$ 2,400 million of preference shares owned by the PE fund, \$ 95 million of equity owned by the PE fund and \$ 5 million of management equity. The preference shares have been promised a return of 12% per annum. The PE fund equity is promised 95 percent of the residual value of the firm after creditors and preference shares are paid, and management equity holders are promised the remaining 5 percent. Assumed that at the exit at year 5, the investment is worth \$ 8,000 million and debt of \$ 900 million has been paid off using operational cash flows. The payoffs to the claimants in order of preference are as follows:

CLAIMANT	AMOUNT OF PAYOFF (in USD million)	RETURN (%)	MULTIPLE
Debt	1,600	NA	NA
Preference shares - PE fund	$2,400 \times (1.12)^5 = 4,230$	12%	NA
Equity - PE fund	$0.95 \times (8,000 - (4,230 + 1,600)) = 2,061$	20%	2.5
Equity - Management	$0.05 \times (8,000 - (4,230 + 1,600)) = \$ 109$	85%	21.8

DETERMINING THE APPROPRIATE DISCOUNT RATE TO USE IN THE VENTURE CAPITAL METHOD

It may generally not be feasible to incorporate the idiosyncratic risk of start-up in the discount rates developed using conventional methods. Various studies have been published which provide a range of discount rates based on the stage of development of the company. Examples of such studies include Plummer, James L.'s QED Report on Venture Capital Financial Analysis and Scherlis, Daniel R. and William A. Sahlman's: A Method for Valuing High-Risk, Long-Term Investments: The Venture Capital Method. Extracts from the same are as follows:

	STAGE OF DEVELOPMENT					
	Start-up	First stage	Second stage	Third stage	Fourth stage	Bridge/ Mezz
Plummer	70% - 50%	60% - 40%	50% - 35%			35% - 25%
Scherlis and Sahlman	70% - 50%	60% - 40%	50% - 35%			35% - 25%
Management team	√	√	√	√	√	√
Business Plan	√	√	√	√	√	√
Financing		√	√	√	√	√
Expense History		√	√	√	√	√
Prototype		√	√	√	√	√
Established Market			√	√	√	√
Revenue Growth				√	√	√
Profitable					√	√

STAGE	COMPANY CHARACTERISTICS
Start-up	Generally, less than a year old and are involved in early product development and testing.
First stage	Performing market studies, testing prototypes, and manufacturing limited amounts of products.
Second stage	Viable product and an established market. They have either received or are looking for financing in order to begin expanding the business. Net income is usually negative or insignificant.
Third stage	Experiencing significant revenue growth. Net income may be positive but internally generated cash is probably insufficient to meet expansion requirements.
Fourth stage	Profitable and growing rapidly. Additional capital may still be needed to fuel growth, but the risk associated with investing in an early-stage company has diminished significantly.
Bridge/ Mezzanine	Planning for their IPO but need additional funds to carry them through to the completion of the offering. As a rule of thumb, mezzanine rounds are done within six months of a scheduled IPO.

ILLUSTRATION:

Let's consider a start-up ABC which is seeking financing from a venture capital fund. Based on their projections, the founders expect to sell the company for \$ 25 million in 4 years. At this point they need to raise \$ 3 million. The appropriate rate of discount is 50%. The founders intend to hold 1 million shares in the Company post investment.

Solution: Step 1: Determine the post money valuation

The post money value i.e., the value of the Company post the initial investment is the net present value (NPV) of the terminal value of \$ 25 million. It is computed as $\$ 25 \text{ million} / (1.5)^4 = \$ 4,938,272$.

Step 2: Determine the pre-money valuation

Pre-money value = Post money value – Investment = $\$ 4,938,272 - \$ 3,000,000 = \$ 1,938,272$

Step 3: Determine ownership fraction of venture capital

Fraction of ownership = $\$ 3,000,000 / \$ 4,938,272 = 60.75\%$

Step 4: Compute the number of shares to be issued to venture capital

As the founders want to intend to hold 1 million shares in the Company post investment, the number of shares to be issued to venture capital (y) = $1,000,000 * (0.6075 / (1 - 0.6075)) = 1,547,771$ shares.

Step 5: Determine the per share price

Price per share = $\$ 3,000,000 / 1,547,771 = \$ 1.94$

GUIDANCE ON VALUATION OF PRIVATE EQUITY AND VENTURE CAPITAL INVESTMENTS

Private equity managers may be required to carry out periodic valuations of investments as part of the reporting process to investors in the funds they manage. The International Private Equity and Venture Capital Valuation Guidelines (“IPEV Guidelines”) is one such set of guidelines that outline recommendations, intended to represent current best practice, on the valuation of private equity investments.

The objectives of the IPEV Guidelines are to provide high-quality, uniform, globally-acceptable, principles-based valuation guidelines for private equity and venture capital practitioners in order to assist their compliance with accounting and regulatory requirements, in a form that is simple for all practitioners, regardless of size, to implement.

The IPEV Board confirms fair value as the best measure of valuing private equity portfolio companies (from the perspective of PE fund) and investments in private equity funds (from the perspective of PE investor). The Board's support for fair value is underpinned by the transparency it affords investors in funds that use fair value as an indication of the performance of a portfolio.

The International Private Equity and Venture Capital Board ("IPEV Board") has entered into an understanding with the International Valuation Standards Council ("IVSC") with the objective of promoting consistency between the IPEV Board's Valuation Guidelines and the IVSC International Valuation Standards ("IVSS") and to enable these Valuation Guidelines to be positioned as providing sector specific application guidance of the principles in IVS. A valuation of private equity investments prepared in accordance with the IVSs and following the Valuation Guidelines will be consistent with the requirements of applicable financial reporting standards and will also maximize investor's trust and confidence.



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