Some Reflections on Private Equity: Trends, Valuation, and Challenges

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Abstract

Private Equity or PE has been hailed as one of the most significant sources of capital for enterprises (private in particular) in order to expand business activities both in terms of scale of operations and scope of activities. Unlike Venture Capital (VC) funds, PE funds focus more predominantly on middle-sized businesses that demonstrate enormous potential for growth and expansion. As the major shareholders of PE funds seek to earn attractive rates of return on their investment, it becomes imperative for these funds to be very selective in picking most suitable candidates for investment. The business model of a typical PE fund revolves around taking a strategic stake in the target firm, which is complemented with a representation in the board in the form of a directorial position. PE funds envisage bringing about operational and structural changes in the target firm with an ultimate eye on enhancing the value of the firm. Typical investment horizons for PE funds vary between 5 to 10 years with popular modes of exit being: Public floatation of stock (as in IPOs), Management buyouts, and

Acquisitions. In this paper, we seek to delineate on the following three significant aspects pertinent to PE funds with specific reference to their operational strategies in emerging market economies like India.

a) Trends in PE (India's perspective)

b) Valuation conundrums

c) Challenges

Keywords : *Private Equity; Valuation ; Internal Rate of Return (IRR); Capital Asset Pricing Model (APM)*

Introduction

PE funds have played a major role in fuelling global economic growth. By their ability to pick strategic stakes across enterprises operating in different life-cycles, PE funds continue to drive the growth of enterprises and industries. The traction gained by virtue of infusion of capital across the enterprises represented by diverse industries ultimately contributes in aiding overall economic growth. This is evident from the fact that the total capital invested by PE funds in India increased from a modest $US 2 billion in 2005 to robust $US 12.4 billion in 2014 registering a CAGR of 22.47% (see Exhibit I). The fact that during this period the Indian economy witnessed a stable economic growth rate meant that PE funds have found enormous opportunities across diversified sectors in their quest towards generating attractive rates of return.

PE Investment Trends in India
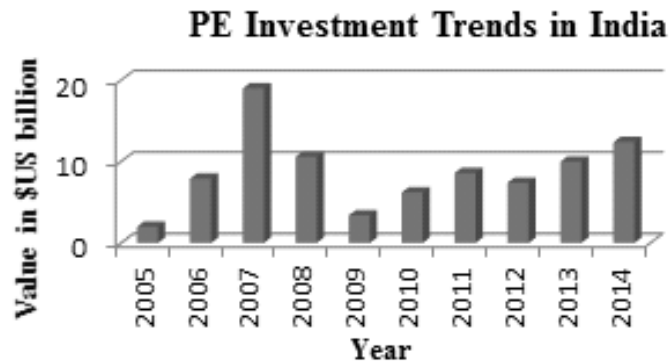
Exhibit I: Growth in PE funds over 2005–2014

(Source: Dealtracker Report 2014, Grant Thornton)

Interestingly, the number of PE deals over the year 2013-14 witnessed a growth rate of 34%, while in terms of value it was 23% for the same period (Grant Thornton, 2014). A significant contributor to the growing expanse of the PE funds in India has been the ubiquitous "E-commerce sector". With the likes of Flipkart, Snapdeal, and Yepme dominating the Indian consumer psyche, PE funds have taken big bets on some of the most promising e-ventures. Considering the fact that E-commerce market has witnessed a steady growth rate of 34% since 2005 with an estimated 38 million active online shoppers generating an estimated sales of $US 2 billion in 2015, it is only reasonable to expect the PE funds to continue to take aggressive positions in India's resurgent E-commerce ventures (McKinsey & Company, 2012).

Notwithstanding the allure of E-commerce ventures, PE funds in recent times have come under intense pressure to

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seek viable exit routes. Given that a typical investment horizon for a PE fund does not normally exceed 10 years, majority of the PE funds have already reached their terminal investment horizon with an exit option looking imminent. Subdued investors' sentiments in the capital markets led by cautious global economic outlook has meant either postponement or a change in strategy in the efforts towards taking the privately held e-commerce ventures public. Concerns ranging from negative bottom-line (in-spite of healthy growth in sales revenues) coupled with the uncertainty arising on the front of tax promulgations as applicable for online retail ventures have made investments by PE funds look riskier.

PE Funds in India: Sector-wise Representation

Apart from concentration in the IT/ITES/Online Retail sectors, in recent times, PE funds in India have also invested in diverse set of industries represented by the following: Pharma, Healthcare & Biotech; Retail & Consumer; Banking & Financial Services; Real Estate; Education; Media & Entertainment; and Manufacturing. Major PE funds, as part of their investment strategy seek to identify promising ventures across diversified industries; the selection of which to a very large extent is influenced by the ominous cash-flow pattern. For instance, PE funds have traditionally invested in promising health-care ventures including diagnostic services that have employed technology as their major partner towards delivering quality health services[1]. Funds infused by the PE players have traditionally been utilized towards expansion of the units both horizontally

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(additional services) and vertically (geographical expansion). Stability of cash-flows in the health-care sector has meant that PE funds are exposed to a lesser degree to the vagaries of fluctuating cash-flows reminiscent in cyclical industries such as Real estate and Manufacturing.

Table I (see below) presents some interesting statistics. The growing clout of the traditional industries in attracting PE investments is clearly evident. Even though a distant second, Energy & Natural Resources over the period from 2005–2014 witnessed 175 deals totalling a deal value of $US 9.1 billion. With all the talk by the present government towards giving impetus to renewable energy predominantly represented by Solar and Wind energy, the sector with its promising opportunities is expected to witness bolstered investments going forward.

Real Estate and Telecom sectors in general have traditionally been impacted by the cyclical movements of the economy. The heightened competition reflected in the Telecom sector particularly in the Indian (with extremely competitive ARPUs[2]) landscape renders the selection process of suitable investment candidates by PE funds extremely complicated. Nevertheless, the two sectors have witnessed robust PE activity over the last ten years both in terms of number and value of deals completed.

Banking & Financial Services sectors has been the 5th most active sector among the PE funds in India witnessing a total of 311 deals clocking a deal value of $US 6.4 billion over

2005–2014 period. With the Reserve Bank of India (Business Line, 2015) granting two Universal Banking licences and Small Finance Bank licences to 12 Microfinance Institutions, the sector looks extremely promising in terms of attracting fresh investments from PE funds (Business Line, 2015). The fact that almost all the new entities that have secured licenses have an extremely healthy financial position as measured by highly efficient NPA levels and robust CARs (capital adequacy ratio) augurs well for PE funds.

Lastly, the Manufacturing sector in India is expected to witness exciting times ahead with the fructification of policies pertaining to "Make in India" initiative. With the central government opening FDI in several strategic sectors across the Manufacturing landscape, PE funds in India are literally staring at a vast untapped potential offering humungous opportunities to derive highly attractive rates of return from their strategic investments.

Table 1 : Top Sectors for PE Investment over 2005–2014

Rank	Sector	Number of deals	Value in $US billion
I	IT & ITES	905	13
II	Energy & Natural Resources	175	9.1
III	Real Estate	225	8.6
IV	Telecom	55	7.1
V	Banking & Financial Services	311	6.4
VI	Manufacturing	231	4.5
VII	Pharma & Healthcare	298	4.4
VIII	Retail & Consumer	263	4.1

(Source: Dealtracker Report 2014, Grant Thornton)

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PE Exit Routes

The investment horizon by PE funds in investee corporations typically does not exceed 10 years. By this time, the PE fund is expected to have initiated significant improvements in the operations of the investee firm. Improvements could typically encompass both operational and financial aspects of the firm. At the end of the investment horizon, the PE fund would have ideally achieved an enhancement in the corporate value offering an attractive exit proposition. Theoretically, while several forms of exit are possible, most of the exit routes broadly conform to the three popular routes presented here.

1. **IPOs (Initial Public Offering)** – This remains one of the most popular and frequently adopted exit routes by the PE funds. Here, the PE fund would take the investee corporation public by meeting all the legal and regulatory frameworks in vogue. The strategic stake held by the PE fund usually along with the promoter stake is offered for sale to the public shareholders. The process is implemented in the form of a typical book-building process facilitated by merchant bankers. Like any other IPO, valuation as reflected in the offer-price holds the real key towards making the public issue successful among the investing community. The offer price seeks to compensate the PE investor profitably by generating an attractive rate of return measured as IRR.

2. **Acquisitions** – This is also a popular mode of exit adopted by PE funds. Here, the strategic stake held in the investee firm is sold out to a potential bidder (usually specialized investor, corporation or institutional investor) at a negotiated price. Here again, the PE investor envisages to earn an attractive IRR on the investment committed in the target enterprise.

3. **Management Buyout** – This exit route has also been gaining considerable popularity among the PE funds in recent times. This route is also particularly suited for family-run enterprises. In the wake of intense competition posed by their professional peers, family-run businesses seek PE investments both with an objective to hasten the capital expenditure process as also to entrust the management of enterprise with a professional team in order to realize operational and financial efficiencies. Once the PE succeeds in realizing these objectives, the family-run management seeks to repurchase the stake held by the PE in return for a negotiated price that seeks to compensate the PE investors by offering them an attractive IRR on their investment.

Table II below reflects significant exits made by PE funds in India in 2014.

Table 2 : Significant PE Exits in 2014

Investor Exited	Investee	Sector
IDFC Alternatives	Galaxy Mercantiles Limited & Blueridge SEZ	Real Estate
Essar Global Fund Limited	Aegis Limited USA Inc - Aegis Group	IT & ITES
Chrys Capital	HCL Technologies	IT & ITES
Bain Capital Partners	Hero MotoCorp Ltd	Automotive
Temasek	Medreich Ltd	Pharma, Healthcare & Biotech
The Carlyle Group	Tirumala Milk Products Private Limited	Retail & Consumer
Providence	Idea Cellular	Telecom
SAIF Partners	Just Dial Pvt Ltd	IT & ITES
The Carlyle Group	Cyberoam Technologies	IT & ITES

(Source: Dealtracker Report 2014, Grant Thornton)

Valuation Conundrums

Valuation of target enterprises plays a very significant role in determining the suitability of investment in target enterprises by PE funds. It is noteworthy to mention here that the typical valuation process surrounding the target firms is somewhat different from the valuation techniques applied in a typical investment setting guided by the all-encompassing fundamental analysis.

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PE funds are primarily driven by their desire to earn superior rates of return on their investment, which is usually represented as internal rate of return (IRR). Investments are considered worthwhile and feasible so long as the PE funds are able to derive IRR, which is greater than the cost of capital. For discussion purposes, we shall represent IRR and cost of capital as Target IRR and CAPM IRR respectively. Before dwelling into the pros and cons surrounding the above approach, it will be useful to carefully understand the above technique by considering an illustrative example as represented below.

ABC PE fund is considering investment in PQR target firm, which is operating in the health-care services sector. For our purposes, say the PE fund is considering picking up 100% stake in the target firm over an investment horizon of 5-years. The cash-out would therefore take place at the end of 5 years. Subsequent to the projections of the income statement for PQR, the following three scenarios emerge depicting the forecasted net income at the end of 5 years[3].

Table 3 : Terminal Equity Values for PQR under different Scenario

Parameters	Pessimistic	Most Likely	Optimistic
P/E Multiple	16.8747	16.8747	16.8747
Projected Net Income at end of year 5	8	9	10
Terminal equity value (P/E x Net Income)	134.997	151.872	168.747

Source: Hypothesized data)

Given that the initial book value of PQR at the beginning of the investment period (year 0) at 10, it is possible to compute the IRR earned by the PE fund – ABC.

IRR will be computed as shown in Eq. 1 below.

$$\text{Book value at start} = \left[\frac{\text{Ter min al value at end}}{(1 + \text{IRR})^{\text{investemen t horizon}}} \right]$$

Eq. 1   (Baldwin, 2001a)

Here, the book value at start is 10, while the investment horizon is 5 years. Terminal values are as reflected in Table III depicting different scenarios. Resolution of the above equation (IRR being the unknown variable) leads to the following values of IRR in each of the scenarios.

Table 4 : Estimated values of IRR under different scenarios

IRR Values	Pessimistic	Most Likely	Optimistic
	68.293%	72.304%	75.973%

(Source: Computed data)

It is obvious from the above that the PE fund would be most desirous to obtain 75.973% return reflected in the Optimistic scenario. However, overlooking the extremes of pessimistic and optimistic scenarios, it is reasonable to believe that the PE fund would encounter the Most Likely scenario at IRR of 72.304%. Readers will observe that even in the Most Likely scenario, an IRR at 72.304% looks excruciatingly high, which is almost reflective of an utopian

scenario with very virtually negligible bargaining power in the hands of the target firm. Reality would dictate otherwise.

A well acknowledged fact within the investment field of PE and M&A (mergers and acquisitions) is that the target firm has the discretion of accepting or rejecting the deal proposed by the acquirer. In the wake of fierce competition, shareholders of the target firm end up as the ultimate beneficiaries as competing PE funds in their inexorable need to pick a stake in the target firm end up sweetening the offer often to the detriment of the shareholders of the investing firm. It is thus logical to presume that the most significant motivation behind the shareholders' willingness to sell their stake in the target entity is most predominantly influenced by the degree of the premium offered.

From the above discussion, it becomes clear than unless the PE fund is willing to taper its expectation on generating the desired IRR, it becomes impossible for the shareholders of the target firm to exit at a premium[4]. It is for this reason that PE funds abandon the 'theoretical' IRR in favour of a more realistic target IRR. Target IRR may be defined as the most competitive rate of return that must be earned by the PE fund in order to justify investment in the target enterprise. Empirical research provides that the typical target IRR earned by PE funds range from 25% to 40%.

An important part of the discourse at this stage pertains to deriving a benchmark rate of return against which the

target IRR could be compared in order to make investment in the target enterprise an economically sustainable proposition. This benchmark would lend the role of a cost of capital. Like any other capital project proposal, comparison to the cost of capital in place may be facilitated with the project's IRR in order to determine the feasibility of the project. From a PE perspective, the benchmark rate is more appropriately known as the Marketing IRR or CAPM IRR. Given the very wide practical application of the CAPM model, this rate derives its formulation from the underlying logic as enunciated in the original model. The CAPM model is expressed as shown below.

$$\left[K_e = R_f + \left(R_m - R_f \right) \left(\beta_i \right) \right]$$ (Sharpe, 1970)   Eq. 2

Continuing with our above example, let us also incorporate the element of leverage into the investee firm – PQR. Typically, it is observed that at the beginning of the investment phase, investee firm tends to depict higher degree of leverage represented by higher (Debt/Equity) ratios. However, with the gradual progress of time, PE fund seeks to turnaround the business by gradually embedding operational and financial efficiencies. The management of PE fund works closely with the existing management of the investee firm in order to implement structural changes within the firm. In our illustration, let us say the investee PQR reflected the following pattern of leverage over the 5 year investment horizon.

Table 5 : Estimated pattern of leverage for PQR over 5 year investment horizon

	0	1	2	3	4	5
Debt %	0.9000	0.8041	0.7006	0.5895	0.4707	0.3442
Equity %	0.1000	0.1959	0.2993	0.4105	0.5293	0.6558

(Source: Hypothesized data)

As we observe from the above table that the leverage ratios depict variation over the investment horizon of the PE fund. Cost of equity (K_e) therefore needs to be estimated for all the projected years. Since K_e values are changing, we also need to compute $(1+K_e)$ in order to discount the terminal value from year 5 through year 0. This approach within valuation is also more popularly known as the backward integration approach.

Table V below provides the estimated values of $(1+K_e)$ over the investment horizon from year o through 5.

Table 6 : Estimated values of $(1+K_e)$ over the PE fund investment horizon

Para meters	0	1	2	3	4	5
Beta-un levered[a]		1.0000	1.0000	1.0000	1.0000	1.0000
Beta-levered[b]		3.8740	2.6385	2.0053	1.6225	1.3674
K_e^1		0.2537	0.1919	0.1603	0.1411	0.1284
$(1+K_e)$		1.2537	1.1919	1.1603	1.1411	1.1284
Equity value[c]	68.029	85.287	101.656	117.948	134.594	151.872

(Source: Computed data)

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Notes

a) Unlevered beta also known as the asset beta represents the risk scenario impacting a security without considering the influence of financial leverage. Here, we have presumed a stable unlevered beta of 1, which is remains constant across the investment horizon. Keeping this value constant enables us to critically study the impact of variations of leverage on the overall equity risk of the firm.

b) Levered beta is computed using the following mathematical notation.

Levered beta $(\hat{a}_l) = \beta_u \times \left[1 + (1-t) \times \dfrac{D}{E} \right]$ (Hamada, 1972) Eq. 3

where

$\hat{a}_l$ = Levered beta

$\hat{a}_u$ = Unlevered beta

t = Tax rate

D/E = Leverage

c) Equity value has been computed using the backward approach as described earlier.

Year 5 = 151.872 (terminal value)

Year 4 = $\left[\dfrac{151.872}{(1.1284)} \right] = 134.594$

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$$\text{Year 3} = \left[\frac{151.872}{(1.1284)(1.1411)} \right] = 117.948$$

$$\text{Year 2} = \left[\frac{151.872}{(1.1284)(1.1411)(1.1603)} \right] = 101.656$$

$$\text{Year 1} = \left[\frac{151.872}{(1.1284)(1.1411)(1.1603)(1.1919)} \right] = 85.287$$

$$\text{Year 0} = \left[\frac{151.872}{(1.1284)(1.1411)(1.1603)(1.1919)(1.2537)} \right] = 68.029$$

With all the given values of K_e and $(1+K_e)$, it is possible for us to estimate the CAPM IRR, which is simply computed as the geometric mean of all the K_e values estimated across the investment horizon of the PE fund. That is,

CAPM IRR =

$$\left[\left(1+K_{e_1}\right)\left(1+K_{e_2}\right)\left(1+K_{e_3}\right)\left(1+K_{e_4}\right)\left(1+K_{e_4}\right)\left(1+K_{e_5}\right) \right]^{\frac{1}{5}} - 1$$

(Baldwin, 2001b)   Eq. 4

= 17.42%

Interestingly, we observe that with a CAPM IRR of 17.2%, the PE fund would be offering a price of 68.029 to the target firm commanding a book value of 10. While the offer might be very enticing to the shareholders of the target firm, management of the PE fund may deem it as exorbitant and unviable. Ultimately, the shareholders of the target firm would demand a significant premium over and above the book value to consent for stake sale. As we already noted, the PE fund need not really go by the extreme alternatives represented by the Implied IRR at 72.304% or the CAPM IRR at 17.42%. At a target IRR of 40%, the PE fund is in a comfortable position to offer premium to the target firm by offering a price of 28.238 (computed from Eq. 1).

The investment in the target firm would be deemed feasible as the PE fund is able to achieve a target IRR of 40%, which is greater than the CAP M IRR of 17.42%. Should the negotiation between the PE fund and target firm get into a deadlock over disagreement on the offer price, the PE fund would well serve to keep the CAPM IRR as the benchmark. That is, the PE fund must necessarily ensure that the target IRR is always at the very least marginally greater than the CAPM IRR. If the PE fund were to accept the CAPM IRR, given the excessive premium offered, the risk arising out of erosion of value in the target firm in the light of an uncertain economic environment remains extremely high. PE fund would have to therefore calibrate a right strategy aimed at maximizing the value of investment on one hand and offering a price to the target on the other that is capable of ensuring a very fast transition of the PE led management into the target firm.

Challenges Surrounding PE Valuation

It becomes clear from the above example that the valuation dynamics surrounding the PE industry is significantly different from the valuation applied in the context of securities as relevant to a typical fundamental analyst. One of the important challenges that surround the PE firm pertain to the determination of the most desired rate of return as measured by IRR. Illustratively, while the task may look simpler; in reality, however, estimating the true rate of return becomes quite challenging. The usual IRR range applied to the PE industry, which varies from 20% to 40% may not after all be fully representative of the unique complexities applicable for certain kinds of industries. PE funds would naturally demand higher return for investments bearing higher risk. It is perhaps for this reason, at least in the Indian context that we witness an overcrowding of interest in investments in businesses pertaining to IT and related industries.

The stability of the cash flows reflected in defensive industries like Health care and Education should also explain the sustained interest among PE funds to invest in these businesses. In recent times, with the explosion of e-commerce firms in India, PE funds of late have come under increasing pressure to devise strategies aimed at embracing a feasible exit route. Highly depressed bottom-lines coupled with complex regulatory and operational environment presents PE funds with enormous challenges to arrive a realistic valuation for E-Commerce firms.

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Conclusions

Private Equity, notwithstanding the challenges, will continue to play a leading role in heralding the growth of the industries particularly representing sunrise sector that offer enormous opportunities for scaling the business going forward. In emerging market economies like India and China, PE funds would continue to evince heightened interest in promising ventures (both young and middle-aged) representing diverse sectors so long as opportunities remain towards ensuring a profitable exit route. As PE funds particularly evince interest in investing in private ventures, existence of a robust and an expanding capital market permits a necessary precondition.

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End Notes

[1]   For instance, Vasan Healthcare Pvt. Ltd. in 2012 received a PE infusion of S$100 million from Government of Singapore Investment Corp. Pte. Ltd (GIC)

(Livemint, 2012)

[2]   ARPU – Average Revenue Per Unit

[3]   In keeping with the objective of the illustration to drive the concept of valuation process as applied to a PE fund, the need to depict the detailed break-up of the projected income statement is obviated. Readers requiring further elaboration on the same are encouraged to contact the author over email.

[4]   This also stems from the simple logic of time value of money, which dictates an inverse relationship between the discount rate and present value (PV) implying higher the discount rate, lower will be the PV and vice-versa.

[5]   Here, we assume a risk-free rate of 6% and risk-premium of 5% throughout the investment horizon.