

AN ANALYSIS OF THE PERFORMANCE OF PRIVATE EQUITY: AGENCY COST APPROACH

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Abstract

In this paper, we explore the effects of agency costs on the performance of private equity. We discuss why private equity firms generally have much lower agency costs. We show using Capital Asset Pricing Model approach that private equity funds would be better off by investing in firms with low beta than high beta firms.

Keywords: Private equity, Buyout funds, Agency cost, CAPM

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Introduction

Globally, private equity (PE) firms (funds) manage more than \$1 trillion dollars of capital. Typically, each firm manages several PE funds or family of funds. Well known private equity firms in the U.S.A. are: Bain Capital Partners, Blackstone Group, Carlyle Group, Cerberus Capital, Kohlberg, Kravis and Roberts, Warburg Pincus, among others. Private equity funds have grown in importance in the last fifteen years, but still control only a small portion of all the business assets. There are two main types of funds in the private equity industry: venture capital

(VC) funds and buyout (BO) funds. About two thirds of the capital is managed by buyout funds.. In recent years, private equity firms have attracted the attention and curiosity of academics and practitioners through well publicized superior performance of the funds they have invested and managed. This has resulted in an enormous increase in research and publication of articles, both theoretical and empirical, in the area of performance and management of private equity firms and funds. Table -1 provides an idea about the rates of returns earned by these funds.

Table 1. Investment Horizon Performance of Funds through 2006

Fund	Rate of Return 1-Year	Rate of Return 3-Year	Rate of Return 5-Year	Rate of Return 10-Year	Rate of Return 20-Year
Private Equity	23.3%	12.7%	7.5%	11.0%	13.9%
S&P 500	10.8%	8.2%	4.3%	6.7%	9.2%
NASDAQ	4.8%	6.3%	4.3%	6.4%	10.1%

Source: Thomson Financial, 2007.

Table - 1 shows that private equity funds have consistently outperformed the publicly traded funds like S&P 500 and NASDAQ. (It should be noted that several researches have disputed this claim and have tried to estimate the PE fund returns by including various types of fees these funds charge their investors.) [Metrick and Yasuda (2007), Morgan (2008), Phalippou (2008), Phalippou and Gottschalg, and Phalippou and Zollo (2005)]

In this paper we confine our discussions to the BOs. In this paper we propose to analyze the returns of PE funds using agency cost theory and thus try to gain important theoretical insights into the performance and management of PE funds.

Practically, most of the private equity funds are organized as limited partnerships, with private equity firm serving as the general partner (GP) and large

institutional investors and high net worth individuals, providing the bulk of the capital, serving as limited partners (LPs). These limited partnerships are for a specified period of time that is typically 10 years with possible extension for one to four more years. The investors, LPs, commit capital to PE funds, which are run by GPs. Generally, when a GP identifies an investment opportunity like the purchase of a firm called “portfolio company,” it calls money from the LPs for investment to buy the firm. These buyouts can take the form of “leveraged buyouts (LBOs),” or “management buyouts (MBOs). Each BO fund may buy several portfolio companies and manage them. The relationship between the GP and the LPs is governed by limited partnership agreement (LPA) that is signed at the inception of the fund. Generally, LPAs are sophisticated agreements that can stand the

test of time. These agreements clearly define and ensure the parameters of the operation of PE funds like time-frame, boundaries and alignment of interests. In U.S. PE funds, each LP must be an “accredited investor” that is a person or legal entity, such as a firm or trust fund, that meets certain net worth and income criteria and is considered to be sufficiently sophisticated to make investment decisions on complex securities and businesses. The GP manages the day-to-day activities of the partnership and has unlimited liability for the actions of the partnership. In order to mitigate this risk, a GP may also be formed as another partnership or a limited liability company (LLC). LLCs are just like corporations, but with the tax benefits of flow-through of income and losses to individual owners. Additionally, the GP may establish a separate management firm to provide management services to the fund or a family of funds. Various parameters addressed in the LPAs include management fee, carried interest, commitment, takedown, distribution of profits including timing and form of distribution like cash vs. securities, and termination or exit. A private placement memorandum (PPM), a formal document that explains the details of a proposed private equity partnership to potential investors is used to attract LPs. The PPMs include an executive summary, investment performance, investment strategy, competitive advantage, management biographies, board of advisors, summary of the terms of the partnership agreement, potential risks, applicable laws and accounting and reporting procedures. PE funds do not fall under the preview of the SEC. Generally, PPM is the starting point for negotiations among potential LPs and the GP that would culminate in a LPA. In an LPA, “exit” plays a very important role as investors realize returns from their investment. The most popular exit strategies are: merger with another firm; public or private, an acquisition by another firm; public or private, initial public offering (IPO), or a private placement. [McCahery and Vermeulen (2008), McCahery, et.al (2003), Morgan (2007)]

Governance

Private equity firms rely on small but well balanced boards whose directors come mainly from investor groups and portfolio firms. BO funds acquire troubled or undervalued companies based on turnaround and exit potential within three to five year horizon. The boards of these firms consist of just four or five directors who have weekly or even daily contact between themselves and the management. When outsiders join a private equity board, usually, these are top-notch operating executives who are specialized in their field. They are introduced to provide guidance, to networking with industry, and to work closely with management to achieve clearly defined objectives like increasing the value of the portfolio firm. These directors align themselves with other board members

and closely work the management in representing the interests of the private equity investors as the portfolio company progresses towards its exit strategy. Moreover, boards of private equity held firms are not distracted by public investors, government regulators and potential shareholder activists as in the case of publicly traded firms. Their horizon is not quarterly earnings but have a much longer investment horizon as mentioned earlier. The annual rate of return for the top twenty five percent of U.S. private equity funds ranged between 39% and over 200% during 1969 - 2006 [Metrick and Yasuda (2007)]. Also about forty percent of private equity deals ended up as failures during the same period as they were unable to recover their original acquisition costs. This shows that PE fund investments have a high level of risks associated with them. Generally, earning three times the acquisition costs are considered as benchmark for success within the BO funds. [McCahery and Vermeulen (2008), McCahery, et.al (2003), and Cornelli and Karakas (2008)]

Agency Cost Theory

Agency costs stem from the conflicting interest among parties to a corporate enterprise, such as management, suppliers of capital: shareholders and bondholders, employees, customers, and various levels of government. The term “agency” is used from the fact that decision making powers are delegated to agents who perform on behalf of another entity usually referred to as principal. For example, shareholders delegate the day to day decision making function to managers in a corporation. In this situation, shareholders are the principals and corporate managers are the agents. The managers are expected to act in the interest of the shareholders while making decisions on a day to day basis. There are no compelling reasons to believe that the managers always act in the best interest of the shareholders.

In the principal-agent relationship agent may not always act in the best interest of the principal because of the nature of the contract arrangement. Essentially, these are incomplete contracts, as the actions performed by the manager cannot be completely described in a contract. Hence, the problem of agency costs arises and they manifest in many ways. They are: (a) excessive perquisite consumption; (b) informational asymmetry; (c) time horizon problem; (d) risk aversion problem; and (e) wealth transfer problem. These can be, to some degree, limited by incentive structures and contracts, implicit or explicit (but incomplete), that are specifically designed to induce the managers (agents) to act in the best interest of the shareholders (principal). The divergence of interests of the agents and the principal result in costs and hence the name agency costs. These costs are borne by the shareholders (principal) in the form of reduced value of the firm.

The shareholders have to provide incentives or put constraints on the managers and monitor their

performance, to ensure that they act in their best interest. These actions have costs associated with it. An alternative to the monitoring costs is the compensation, which includes incentives, given to the managers that will induce the managers to act in the best interest of the shareholders.

In most principal - agent relationships, the principal will incur monitoring costs directly or indirectly as a part of the compensation package in order to ensure that the agent will act in the best interest of the principal. These costs can also be thought of as the costs involved in resolving the potential conflicting claims on the firm by the shareholders and the managers. Similarly, there would be costs involved in resolving the potential conflicting claims, of other groups affected by the firm, called stakeholders, like bondholders, employees, customers, suppliers, and the government. All these costs are considered as a part of the agency costs. Cornell and Shapiro (1987) have examined the issue of agency costs incurred by publicly traded firms in the resolution of conflicting claims on the firm by various stakeholders and conclude that these costs are substantial and do affect the performance and hence the value of a firm.

Excessive Perquisite Consumption Problem: Managers do not work in the shareholders' interest out of pure altruism. They expect to be compensated for their effort. Although the pecuniary benefits like salary, bonuses, etc. that the managers receive are stipulated in their employment contract, there are many non-pecuniary benefits that the managers can give themselves because of discretionary power vested in them. As agents of the shareholders, who make the day to day decisions of the firm, managers can also give themselves extra-perquisites (perks) that are not stipulated in their employment contract. As a result of such activities, there is a transfer of wealth from the firm to the managers. When the manager is only a partial owner or an employee of the firm, the agency costs arising out of "excessive perquisite consumption problem" can be substantial.

Informational Asymmetry: Because managers make day-to-day decisions that may not be in the best interest of the principals, the principals must carefully monitor the managers' activities. This may be easier said than done. It is difficult for the principal to monitor the agent because in most cases the agent, that is the manager, as an insider to the firm has more information on a day-to-day basis about the details of the firm's operations and future plans than do the principals - the shareholders. This "divergence" between the agent and the principal, in the quantity and quality of information available to them, is called the "informational asymmetry." It gives the managers a certain degree of protection while making day-to-day decisions which may not be in the best interest of the shareholders.

Time Horizon Problem: Although firms may have indefinite life, the managers' tenure with a firm is limited to a relatively short period of time. Managers prefer investing in projects that tend to have near term

profits, even though they may not be as good for the firm as other projects would be with more distant pay off on which they would have no claims. This problem becomes even more significant when the firm offers the managers sufficient incentives to increase short term profits and hence could result in a lower value for the firm in the long run.

Risk Aversion Problem: Managers with a specified salary or a specified benefits package are hesitant to undertake profitable but risky projects. That is, if the project is unsuccessful the managers may lose their job, but if the project succeeds, the managers fixed salary will not allow them to share in the profits generated by the successful project. Risk-averse managers may not have sufficient incentives to increase the value of the firm to the shareholders by investing in risky projects. This has the effect of lowering the value of the firm in the long run. [Krishnaswamy et.al. (1994) and Krishnaswamy and Pashley (2007)]

Agency Costs of Private Equity Firms

Renneboog and Simons (2005) have described various agency costs associated with private equity firms. They hypothesize that these agency costs incurred by private equity firms could be much lower than those incurred by equivalent publicly traded firms. This has the potential to provide a higher rate of return for private equity firms as compared to publicly traded firms.

Incentive Realignment: Jensen and Meckling (1976) have described the divergence of interests between managers and shareholders in a publicly traded firm. When the owner-managers of firms are also the sole residual claimants, they receive pecuniary rents and also non-pecuniary benefits (private benefits) with optimum mix being the point where marginal costs and marginal utilities associated with each type of rents or benefits are equated. When owner-managers sell off a portion of their residual claims to outsiders, the marginal cost of non-pecuniary benefits decreases as the manager will bear only a fraction of those costs. Consequently, the manager can increase his or her private benefits and thereby decreasing the value of the firm. Therefore, the need to realign incentives of managers with those of shareholders is potentially important in going-private transactions. Thus, in the case of private equity firms, there is potential for wealth gain as a consequence of a reunification of ownership and control. This can be achieved through a smaller number of directors on the board closely aligned or working with the managers.

Control: In a going private transaction, equity ownership rests in a fewer hands and the investors have better incentives to monitor the actions of the managers. They will also be protecting their reputation as "efficient promoters" of private equity funds. Substantially higher ownership concentration generally results in a reduction in agency costs and thereby providing a wealth gain for the investors in a private equity setting. Also, in the case of publicly traded firms, shareholders owning small number of shares may not have the incentive to monitor

as monitoring is time consuming and expensive. But this situation is somewhat mitigated by the fact that financial markets act as continuous monitors of performance of firms.

Free Cash Flows: Jensen (1986) has provided a definition for free cash flow. It is the cash flow in excess of that is needed to fund all projects that have positive net present value using an appropriate discount rate. He has developed a line of reasoning which shows that managers have incentives to retain resources and grow the firm well beyond its optimal size also referred to as “empire building” that is in conflict with the interests of the shareholders. According to Jensen, many of the benefits of going-private transaction appear to be on account of the control function of debt. Here debt is seen as having a disciplining effect on the managers. Similarly Cotter and Peck (2001) show that increased debt not only permits managers to obtain more of the benefits from their efforts but also simultaneously forces them to run the firm efficiently in order to avoid bankruptcy. Therefore, wealth increases from going private are the consequence of the removal of free cash flow problems. However, relying on debt to motivate managers might result in asset-substitution problem, wherein, managers might have incentive to substitute low-risk assets for high-risk assets. Similarly, high levels of debt may also provide managers with incentives to increase the operational risks also.

Wealth Transfer: There are three main ways through which a firm can transfer wealth from bondholders to stock holders: (a) by an unexpected increase in the risk of investment projects, or (b) through an increase in dividend payments, or (c) by an unexpected issue of debt of higher or equal seniority. Generally, bond covenants that are in place would protect the bondholders. Similar wealth gains may also occur through other stakeholders of the firm like employees and suppliers. The wealth transfer from bondholders or other stakeholder to the equity holders might occur through the expropriation in the course of going private transaction. [Renneboog and Simons (2005)]

The above discussion of agency cost theory and its application to going private transaction suggest that private equity firms might be able increase the value of the firm by reducing agency costs substantially compared to similar firms whose shares are traded in a financial market.

Agency Costs of Publicly Traded Firms

The goal of a publicly traded firm is to maximize the wealth of the shareholders. In this context agency costs are ultimately borne by the shareholders. Thus, it is in the interest of the shareholders to minimize the agency costs. Large private corporations are owned by individuals who can buy or sell shares of the firm, which represent ownership claims on the firm at a price in the financial markets. The price of these shares provides a signal to the owners about the performance of the firm. Because of the fact that there

is a clear separation of ownership and control of these firms, most types of agency costs described in the last section are incurred by publicly traded firms. These costs are substantially higher for publicly traded firms and thus could ultimately lower the value of the firms. [Krishnaswamy and Pashley (2007)]

In this context the Capital Asset Pricing Model (CAPM) provides a norm for the required rate of return on any firm.

$$E(R_i) = R_F + b_i[E(R_M) - R_{RF}] \quad \text{----- (1)}$$

Where,

$E(R_i)$ = Expected rate of return for firm i

$E(R_M)$ = Expected rate of return on the market portfolio

R_{RF} = Risk-free rate

b_i = beta of firm i

Albuquerque and Wang (2005) have incorporated agency costs to asset pricing using a continuous time framework. Krishnaswamy et. al.(1994), and Krishnaswamy and Pashley (2007) using one period CAPM have shown that by incorporating the agency costs, the Capital Asset Pricing Model is modified as shown below when agency costs are incorporated.

$$E(R_i) = [R_{RF} + C_i] + b_i[E(R_M) - (R_{RF} + C_M)] \quad \text{----- (2)}$$

Where,

C_i = agency costs incurred by the firm expressed as a percent of the ending market value of the firm i .

C_M = agency costs incurred by all firms expressed as a percent of the ending value of the market portfolio

The capital asset pricing model is modified in two ways. First, the agency cost premium is added to the risk-free rate. Second, the risk-premium is reduced by an amount which is the average of the agency costs for all firms. In other words, the intercept is increased and the slope is reduced. This may be an important extension that should help explain the performance of publicly traded firms.

Managers of publicly traded firms generally use capital asset pricing model to make project selection decisions. If they use net present value approach, then the discount rate that is used to calculate the net present value would be based on the required rate of return on the equity. Any error made on the low risk projects would be more than compensated by the opposite type of error made on the high risk projects. Therefore the use of capital asset pricing model which ignores the agency costs would not substantially affect the overall performance of publicly traded firms in the long run.

In the case of private equity firms, the shares of these firms are not trade in a financial market and therefore cannot apply the CAPM directly. But many authors have used CAPM to estimate the rate of return for private equity firms by using the construct of proxy firms. If we are able to find an equivalent firm whose shares are traded in the financial markets then we can use the beta of that firm as the proxy for the private equity firm. [Metrick and Yasuda (2007)]. Hence, if C_i and C_M are substantially lower for private equity firms

as discussed above, we can come to some very interesting insights about types of firms private equity firms should be targeting for buyouts. This shows that the cost of equity of for PE firms that have low beta portfolio firms is lower than for an equivalent publicly traded firm. The cash flows from these firms are discounted using a lower rate and would end up with a higher value. Hence, PE firms would be better off by targeting and buying out low beta portfolio firms. In other words, those PE funds which have low beta portfolio firms would perform better. On the other hand, cost of equity for PE firms with high beta would higher than those of equivalent publicly traded firms. Hence PE firms should not be targeting and acquiring these firms as it would lower the value of PE firms [Heel and Kehoe(2005)]. In other words, those PE funds which have high beta portfolio firms would perform poorly. Bargerion et. al. (2007) have shown that PE funds usually pay less for their acquisitions that public acquirers.

Conclusion

Our exploration so far, allows us to make the following interesting observations. Firstly, there are good theoretical basis for the PE funds to outperform publicly traded firms. Secondly, through the reduction of agency costs of portfolio firms, PE funds may be able increase its value possibly substantially. Lastly, PE funds would perform better with the acquisition of low beta portfolio firms than with high beta portfolio firms. Some of the drawbacks of the above analysis are that it is very difficult to measure agency costs. The role of debt, in the going private transactions is difficult to assess. This paper provides some important insights for future empirical research.

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