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# Master Thesis

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## Improving Company Purchase in Private Equity

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## Summary

Private Equity funds are important agents in the global economy, but in spite of their demonstrated success using the leveraged buyout takeover model, considerable room remains for improving economic efficiency and profitability in takeover transactions. This paper suggests ways to make takeovers more profitable and economically efficient, and analyzes the economic and legal implications of those methods.

The paper begins by reviewing the growth of the private equity industry, and the use of management buyouts as a popular takeover strategy. The management buyout is popular because it has low search costs, cooperative target management, and regulatory simplicity. Drawbacks include its near total reliance on management, and the considerable restrictions on which companies can be acquired using the strategy. As the takeover industry has grown, this has led to a trend of money-chasing deals where an increasing pool of money is investing in a relatively constant supply of suitable companies. This trend motivates the paper's search to identify alternative methods for pursuing takeovers.

Next, Section 2 ascertains the most efficient means for identifying profitable investment opportunities. Proprietary deals generate better returns than deals that have been extensively shopped. Networks effects make specialists more efficient at networking and search than fund managers. This implies that the fund manager should avoid reliance on direct search, but still must focus on exclusive opportunities. The various origination methods are reviewed in terms of how well they balance these dual constraints. Senior Advisor Networks and Executive Recruitment are recommended for their use of industry insiders' existing networks and proprietary deal origination. Lower level employees are considered a potentially valuable source of new opportunities with new techniques available to cheaply aggregate opinion from social media.

In Section 3, the tender offer whereby funds place a single bid for all shares in a company is shown to result in excessive buyout premiums due to the inability to price discriminate. The Efficient Markets Hypothesis contends that such premiums reflect added information and are unavoidable, but based on empirical evidence differing reservation prices actually play a significant role in buyout premiums. Alternative acquisition methods employing price discrimination could reduce the buyout premium but are prohibited by regulations specific to takeovers such as the

United State's Williams Act of 1968 and the EU Transparency Directive of 2004. When viewed under the more stringent standards of the EU Directive on Insider Dealing and Market Manipulation, which prohibits market abuse and insider dealing by all traders, the alternatives are in full compliance. Especially when considering Senator Williams' stated intention to protect management, this raises serious questions over any efficiency-basis of takeover regulation.

Section 4 reviews the 2004 EU Takeover Directive using the model of tender offers by economists Grossman and Hart. In a disclosure-based regulatory regime, Grossman and Hart demonstrate shareholders' tendency to free ride during takeover bids and the limited means for bidders to profit from value creation. In this model, it is assumed bidders must profit at the expense of remaining shareholders, thus forming a basis for the Directive's Mandatory Bid Rule and much of the hostility towards takeovers. This assumption is not an accurate reflection of reality. Company law already prevents appropriation, and control premiums reflect many other factors such as willingness to pay to reduce risk through control. Reducing disclosure requirements would allow bidders profit from operational improvements, avoid the free rider problem modeled by Grossman and Hart, and reduce the threshold for value creating takeovers.

Finally, Section 5 discusses using derivatives contracts, not yet fully regulated within the European Union, to legally price discriminate and trade anonymously. Similar in effect to a tender offer with price discrimination, a derivative-based strategy allows funds to acquire control indirectly in multiple transactions without the risk of holding a partial equity stake. While the loophole allowing it is unlikely to persist, it is worth noting the economic efficiency gains from this strategy, and the potential for allowing derivatives as an alternative to wholesale changes in disclosure laws.

Private equity funds are private by nature, and strategies like the management buyout allow funds to pursue the path of least resistance, confronting neither managers nor regulators. Unfortunately, flawed public assumptions on the effects of takeovers will persist so long as the industry remains absent from the public debate. The best alternative strategy for private equity funds to improve returns is to start being just a little less private.

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## Forward

I would like to thank my supervisors, Soren Hovgaard and Jesper Lau Hansen for their support and for their joint class on Private Equity, without which I would not have developed my interest in the topic. I would especially like to thank Soren for his classes on entrepreneurship and private equity as well as his help with the University of Copenhagen Entrepreneurship Club, and Jesper for his attentive guidance as I dove into the world of regulatory regimes so unfamiliar to an economics student.

I have written this paper in order to more fully understand takeover transactions by examining ways in which to improve them. It is my academic perspective that takeovers play a positive role in the economy by correcting inefficient ownership and management, and that the proper role of regulation is to promote economic efficiency and prevent abuse. I began under the assumption that improving takeovers was a simple matter of identifying sources of inefficiency and proposing new transactional methods to avoid them. I quickly realized that identifying the problem was the easy part, and that my paper would need to challenge the basis for a body of regulation favoring one group of stakeholders over another.

I hope that my suggestions for economically efficient deal origination might prove immediately useful, and that funds take seriously the potential for using newly available information on the outlook of acquisition targets. I also hope that private equity funds become more vocal stakeholders in the public debate over takeovers, challenging inefficient regulations and proposing alternatives that increase the industry's efficiency and create value for everyone.

## Introduction

Private Equity funds pursuing takeovers are important agents in the global economy, but in spite of their great success using the leveraged buyout takeover model considerable room remains for improving economic efficiency and profitability in takeover transactions. This paper discusses the alternate methods by which takeovers can be made more efficient, and the economic and legal implications of these methods. The deal origination process used by funds to find target companies presents a significant cost to fund managers, who are not well suited for search activities, as well as an opportunity for greater returns by focusing on more proprietary deals. The tender offer whereby the funds places a single bid for effectively all shares in a company is shown to result in excessive buyout premiums paid to target shareholders due to the inability to price discriminate between shareholders with differing reservation prices. Alternatives to the tender offer with more economically efficient properties are proposed, but found to suffer from regulations limiting their implementation. The regulatory environment governing takeovers is then demonstrated not to have a valid basis in either promoting economic efficiency or in preventing abuse by acquirers. Derivatives contracts, whose use is not yet entirely restricted within the European Union, are offered as providing a limited opportunity for funds to legally avoid some of these restrictions and increase market efficiency. On a more general level, private equity funds are conspicuously absent from the public debate over takeover regulation and are remarkably poor at presenting their interests at all, let alone in terms of the larger economy. If the returns of the private equity takeover industry are to be maintained or improved, it may be necessary for funds to become just a little less private.

### 1. **“Why not leave it alone?”** ~ Lord Melbourne.

In the past three decades, the leveraged buyout has proven a highly profitable and disruptive innovation to the public company. In his paper, “Eclipse of the Public Corporation”

Michael Jensen declared that the increase in take-private transactions spells the end for the inefficient public company model (Jensen, 1989). In Jensen's view, public corporations suffer from poorly aligned incentives between managers and owners, and due to private equity's ability to solve the principle agent problem through a combination of debt and more involved ownership, the public company was bound for obsolescence. While Jensen's conclusion may have proved overreaching, it is clear that private equity funds focused on take-private transactions have begun to play an increasingly important role in western economies. Even the recent financial crisis, which was especially hard on many private equity funds, has not dimmed the long-term prospects of the industry, at least not from an economic perspective.

"Why not leave it alone?" Lord Melbourne's famous dictum on politics might seem also to apply towards a business model that has generated consistent positive abnormal returns for most of its existence, but simply put, the model for large buyout transactions as it exists today has become overcrowded and further innovation is necessary if the returns investors have grown accustomed to are to be maintained. Since the advent of private equity and buyout investing back in the 80's the industry has expanded to manage several trillion dollars of assets, but with that expansion comes a tendency for more firms to chase deals of increasingly dubious quality.

One highly popular takeover strategy used by private equity is the management buyout offer. Management buyouts offers are popular because they offer reduced search costs, cooperative target company management, and regulatory simplicity. These advantages also reflect many of the challenges to improving the efficiency of takeovers, and so it is important to examine them briefly.

Management buyouts classically occur when the management of a firm believes it can generate value either without the constraints of public ownership or simply with new ownership. The process is often relatively simple. First, managers engage an investment bank to find external financing to enable them to buy out the remaining shareholders. The investment bank finds a suitable buyer, either directly or through an auction process. With a buyer found, management then makes a buyout offer to shareholders for all (or nearly all) shares in the firm. If the required number

of shareholders approve the offer, effectively all shares in the firm are then purchased by the fund and management team.

The management buyout currently has a large number of positive attributes for funds. Firstly, the process of initiating an MBO is generally undertaken by the target's own management. This means reduced search costs for funds because the target's management is actively looking for external financing. Because management plays an active role, they do not need to be convinced to cooperate in the offer. Management also has a strong incentive to ensure both they and the fund receive shares at favorable prices, and is well informed on the firm's future prospects. Further, because management is generally retained and expected to take a substantial equity stake in the firm, the incentives of managers and the fund become aligned to a degree nearly impossible in a public company.

The way these offers are structured has its own benefits. Funds work with management to develop an offer to shareholders. The offer will generally include a premium to the current market price and a stipulation that a certain percentage of shares must be offered before the fund is legally obligated to purchase. This ensures the fund can obtain a controlling interest in the target before actually risking capital. It also reduces the fund's exposure to a host of regulatory constraints against takeovers such as reporting requirements and the Mandatory Bid rule, constraints that have been implemented at the behest of managers and a public weary of takeovers, which will be addressed later.

The greatest advantage of the management buyout offer is that it is so well understood by firms, funds, and service providers. Firm management is aware of the potential for buyouts to increase their personal wealth if their firm is undervalued. Investment bankers and consultants now represent an established market for deal flow. Funds can employ the strategy with clear regulatory and economic risks, and lawyers have precedent on which to draw.

This strength is also the management buyout strategy's great weakness. The management buyout's restrictive nature limits the number of viable acquisition targets. Preceding the financial crash, unprecedented amounts of money flowed into funds pursuing this strategy

without similar growth in the number of suitable targets. Due to the ten year lifetime of investments, it is not yet possible to see the performance of funds in the 2004-2007 vintage, but it is highly likely the industry engaged in money chasing deals. The constraints of the MBO that are so beneficial on the one hand also have the effect of limiting the sources and ways funds can arrange deals, and raise the threshold at which opportunities are viable.

If the takeover industry is to continue to grow and be profitable, it is necessary to look beyond the currently popular strategies to alternatives with greater efficiency and profitability. The following section examines the way in which private equity funds identify suitable investment targets, and seeks to find the identify the optimal balance between efficient search and proprietary opportunities. An analysis of the buyout transactional form follows, with buyout offers and potential alternatives examined from an economic and legal perspective to identify the opportunities and constraints facing any firm looking to improve efficiency.

## **2. Deal Origination**

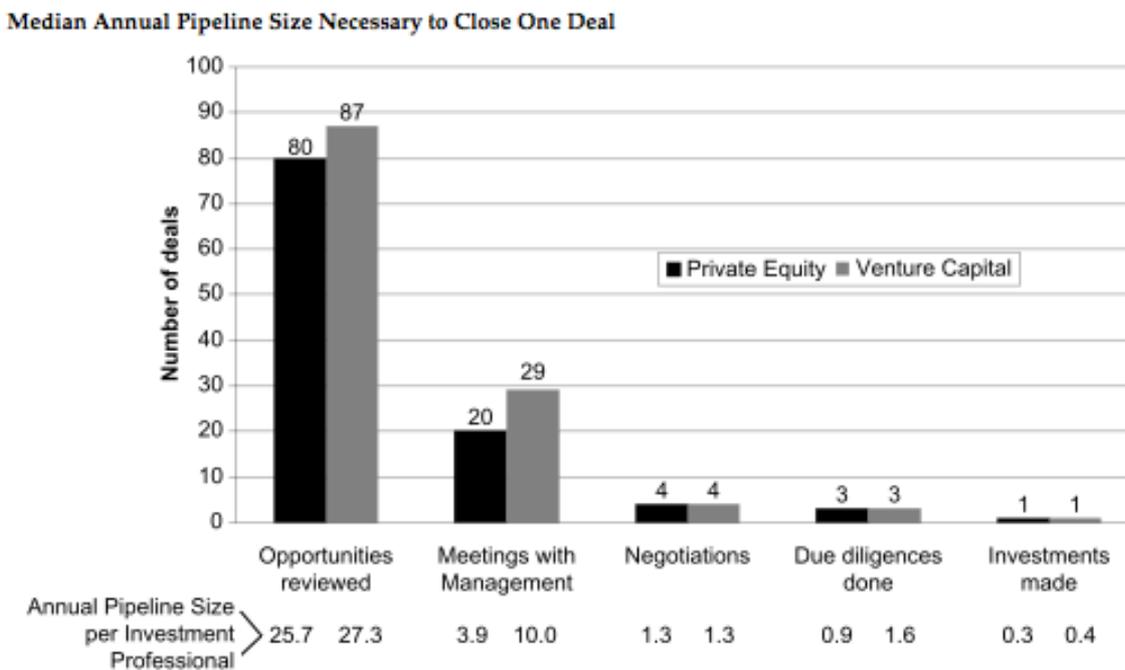
Finding the right companies to acquire is the most important process for any private equity fund. The way in which transactions are structured determines the threshold at which they are profitable, but funds will only outperform their competitors if they have a superior deal origination strategy. Deal origination, or “the stage in the investing cycle when proactive and reactive efforts are made to identify private company securities available for sale”, is a complex and time-consuming process. There is no simple answer for how best to identify targets, and most fund managers claim their secret is nothing more than hard work. This corresponds with finds that “funds that employ a proactive origination strategy have consistently higher returns, driven by both greater quantity and higher relevance of incoming investment opportunities,” but different strategies also impose different costs (Teten, 2010). Direct search by fund managers places a large burden on the manager’s time. Investment banking fees in large mergers generally equal approximately 1% of the

merger value (Hunter and Walker, 1990), and consultancies charge \$300-700 per hour. Before choosing an origination strategy it is important to understand the implications of each option.

This section examines the deal origination process and argues fund managers are not best suited to act as deal originators and should instead develop and use sources that are both specialized in search and provide proprietary opportunities. It begins with a comparison between venture capital and private equity funds' generally similar but slightly divergent origination strategies. Characteristics of an optimal origination strategy are presented, and different classes of service providers are then discussed in terms of their relative tradeoffs. The section concludes by recommending funds use specialists with strong networks and who can provide proprietary recommendations.

## **2.1 Deal Origination Process:**

In their search process, venture capital fund partners evaluate several hundred potential companies every year only to invest in perhaps 5-10. This process of listening to entrepreneurs' presentations is a substantial search cost in venture investing where the partner's expertise in choosing the best start-ups is a key component of the firm's value added. Fund managers often have extensive expertise in their target industries and are often successful entrepreneurs themselves. While in Venture investing the idea underlying a firm may be extremely complex and abstract, the firm itself is generally small and undeveloped from a technical standpoint. Investment decisions are primarily based on the viability of underlying ideas and those executing them but not on technical analysis of the firm itself. The process of search is a costly and yet unavoidably direct part of the venture capitalist's activities, and the partner's own ability to evaluate opportunities is essential to success.

**Figure 1: Median Annual Pipeline Size Necessary to Close One Deal**

(Teten, 2010)

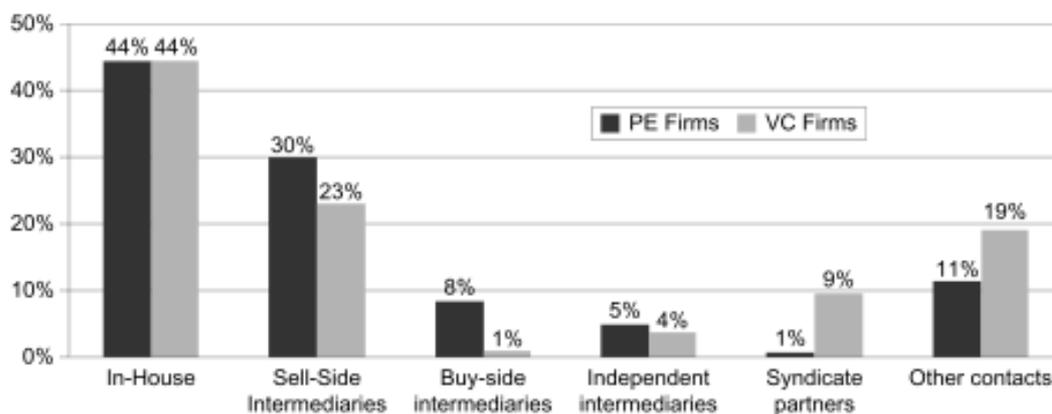
For private equity funds engaged in buyout and public to private transactions, targets are analyzed in a slightly different manner. Instead of primarily analyzing the viability new ideas, buyout fund managers evaluate companies whose business is much better understood conceptually but that by virtue of company size require deeper technical analysis. When evaluating large companies, it is often not possible for one person alone to perform the required analysis. Furthermore, the nature of many post-buyout operational strategies is as much a matter of financial engineering as intuition for a new strategy's potential success. This makes the ability to perform search activities less likely to be a comparative advantage of the large private equity fund manager. It is still of paramount importance that funds source high quality deals, but it is unlikely that partners will be capable of performing this task independently.

Buyout and venture investors approach deal origination quite differently. Venture funds generate deal flow through constant networking, choice of geographic location, and deal-flow meetings to ensure access to new companies and ideas. Syndicate partners, alumni, and other

professional networks play an important role in their deal origination. Buyout funds, on the other hand, “heavily use paid intermediaries, whereas VCs use them to a much lesser extent” (Teten, 2010). These intermediaries include investment bankers and all other service providers specialized in deal-analysis. Teten finds that buyout funds source 44% of their deals from intermediaries while venture capitalists only 28%. Both forms of private equity similarly source nearly half of their deals through in-house research and other efforts.

**Figure 2: Primary Sources of Investments**

**Primary Sources of Investments for PE and VC Investors**



(Teten, 2010)

So much do buyout funds rely on investment banks for ready-to-fund deals that a small handful of investment banks have become arbiters of deal flow throughout the buyout industry (Fraser-Sampson, 2010). Recall that in management buyouts the target’s management team approaches an investment bank to find financing from a buyout fund. Buyouts initiated by targets have many attractive characteristics, such as the friendly nature of target management, but because these deals commonly start with targets engaging an investment bank funds have few alternatives when pursuing this takeover strategy. As the buyout industry has matured, it has become standard for investment banks to auction client companies. This forces buyout funds to compete for the same deals, with higher premiums going to target companies and the investment banks.

Target companies are also, in practice, required by regulation in the US to use investment bankers when fulfilling their fiduciary duty during takeover bids. In the US, public companies' board of directors have a so-called *Revlon* duty that, "the seller's board of directors must obtain the highest possible price in the sale of the company. Traditionally the board would satisfy its *Revlon* duty by canvassing the market (through investment bankers), identifying serious bidders, holding a formal or informal auction among them, and signing a deal with the winning bidder" (Subramanian, 2008). This requirement is designed to protect shareholders during a transaction where bids are made to and recommended by the board of directors to shareholders for adoption with no direct market mechanism ensuring shareholders receive the best price. The *Revlon* duty institutionalizes investment banks' role in the takeover bid and reflects shortcomings of the current takeover transaction model. Fortunately, funds still have other options for originating deals even if they must currently use an investment bank to complete them.

## **2.2 Dual Constraints:**

The widespread employment of investment banks as sell-side intermediaries for nearly one third of all deal origination has resulted in over-reliance by funds and a tendency towards strategic overcrowding. As many funds approach the same service providers, competition bids up prices and funds become dependent on their relationship to secure high-quality deals. To achieve the greatest returns and independence it is important that funds find consistent sources of proprietary origination.

Castle Harlan, a \$3.2 billion private equity fund, in 2009 conducted an internal evaluation of the sources and returns for 68 of their completed transaction (Teten, 2010). In the evaluation, sources such as a "finder" were compared against more proprietary strategies such as "industry expertise". In the evaluation, deals with more proprietary properties generate higher returns while also requiring a larger initial premium, implying that "1) these companies were higher quality than nonproprietary deals, 2) Castle Harlan perceived a lower uncertainty risk, and/or 3) the fund was able to add more value to these transactions after a transaction closed" (Teten 2010). Conversely,

deals originated by finders such as investment banks and other intermediaries required lower initial premiums, but also generated substantially lower returns.

Proprietary deals are superior in that they are based exclusively on the fund's investment criteria rather than shopped to the fund by intermediaries. When deals are less extensively shopped there is greater potential for surplus to remain with the fund rather than the company's shareholders and the intermediary. A study of Venture Capital investing found that while funds benefited from locating their main office near other funds in areas like the Silicon Valley and Boston, investments made outside of these highly concentrated regions, and therefore proprietary through geographic remoteness, earned higher returns than investments in the fund's primary location (Chen, 2009). It is clearly important for funds to develop proprietary channels for deal origination, but this is not a fund's only consideration.

Due to the high technical complexity of target companies in large takeovers and the consequently high costs of evaluation, there are some strong economic arguments for funds to use intermediaries in their deal origination process. Assuming that both the investment bank and the fund have identical ability to research and evaluate target firms, an assumption that is overly generous to most funds, it is more efficient for the investment bank or other intermediary to search because if the target is unsuitable the cost of gathering the information is not lost (Hunter and Walker 1990). If a fund performs costly research on a target and discovers it unsuitable, the cost of gathering this information is an unrecoverable sunk cost. For an investment bank or other intermediary, the cost is not directly recoverable through transaction fees since no deal is immediately executed, but neither is the expense entirely lost. Research can be used in future engagements for other clients. As Hunter and Walker describe the role of investment banks in mergers, "by utilizing merger intermediaries firms can be thought of as purchasing insurance against the sampling errors certain to arise in self-search for potential merger partners." In this way, investment banks and consultancies are well suited to undertake costly and uncertain search activities due to conservation of information.

Service providers also benefit substantially from network effects not available to fund managers. The fund manager's role is to find the right target companies and the right investors, but managers do not profit by establishing connections between investors and companies outside of the context of their own fund. This means any gains to the manager from networking are linear because the manager only benefits by connecting others to herself. Service providers, on the other hand, derive exponential benefit from establishing connections because their payoff is driven by connecting contacts to each other. To illustrate, imagine a fund manager and an investment banker, each with 10 contacts. For the fund manager, meeting a new contact increases her potential direct connections by one. For the investment banker, making a new contact gives him ten new ways to form connections between his contacts. If we assume that performing deep analysis on a firm is similar to making a new contact, when the fund manager analyzes a company and discovers it not to be an appropriate target she has gained nothing. The investment banker, on the other hand will be able to potentially use this information for nine other clients. Obviously, this reduces the banker's risk from an unsuccessful search.

Deal flow aside, when is it best for funds to work with intermediaries like investment banks? According to a 1996 study by Servaes and Zenner, service providers find themselves most needed in merger transactions when the transaction value is large, the target operates in a different industry, the target is itself diversified, the bidder is inexperienced, and the offer is unwelcome. In terms of deal origination, it also makes sense to work with service providers whenever the fund's investment objectives do not play into an existing network of the fund manager. Funds that invest only in the specific area of expertise of the general partners may have a comparative advantage in that the manager's own network may be less costly than that of a service provider. Unlike in venture capital, however, it does not necessarily follow that deep understanding of a particular industry is necessary to construct a strong portfolio as many large private equity funds purposely follow a strategy of diversification. In some instances, legal concerns such as anti-trust regulation also prohibit funds from investing too much in any one industry.

Using the criteria proposed by Servaes and Zenner, it follows for fund managers to seek deal flow from service providers if for no other reason than that in most cases they are already needed to manage the transaction. Private equity funds fulfill several of the proposed key criteria for using service providers such as the high value of transactions and tendency for targets to be well diversified and in unrelated industries. The offers used by private equity have several advantages over the mergers analyzed by Servaes and Zenner in that they are usually friendly and in cash, but due to the complexity and total value it is still hard to imagine a fund possessing the necessary expertise to complete an offer without outside help. If the fund employs an alternative strategy designed to minimize the takeover premium it is likely to need several specialists to trade on its behalf.

### **2.3 Types of Intermediaries:**

With more buyout funds competing for a relatively inelastic pool of attractive deals, funds relying on sell-side investment banks must maintain a preferential status to ensure a steady source of quality deal flow, often at the expense of other alternatives. This has given the largest investment banks disproportionate market power, as they find themselves in a near monopoly position supplying of ready-to-fund deals. This position also leaves buyers at risk of being coerced into accepting mediocre deals now on the premise that doing so increases their likelihood of receiving preferred treatment in the future. In order to avoid complete dependence on investment banks for external origination of deals, funds must find alternate sources. Luckily for funds, there are a variety of options available of which not all are fully subscribed.

Management consultancies stand well placed to assist due to their routine work with target management teams. During their engagements with clients, consultants establish strong networks and become very well informed on the attitudes and preferences of management teams beyond what can be readily learned through external research. The willingness or interest of a management team in changing ownership is a key component of the management buyout search process.

Consultancies do not necessarily possess the deep insight that comes with actual industry

experience, but offer excellent external analysis coupled with inside understanding of their clients' management teams. At \$300-700/ hour, consultants are a modestly priced (relatively) source for origination, but due to their external nature, the information they offer is not necessarily proprietary.

Expert networks specialized in connecting funds directly with industry insiders are a rapidly expanding segment of the independent research industry (Integrity Research, 2009, cited by Teten, 2010). These firms do little but establish and sell connections with industry insiders who help identify suitable targets and develop the fund's investment strategy. Similar to consultants, the advice given by expert networks is non-proprietary, but unlike consultants, the insiders provided by these networks have real industry expertise to draw upon.

Senior Advisor networks are networks of fund-sponsored executives who, while generally more involved in helping manage and direct target investment companies, also can assist in deal origination. Unlike expert networks, these advisors are hired by the fund on a longer-term basis to provide expertise, and their advice is proprietary. Because senior advisors neither manage the transactions they originate nor charge directly for their investment advice, they are free from the regulations governing investment bankers despite sometimes being paid in a similar fashion for originating deals. Senior advisor networks represent a more substantial fixed cost than expert advisor networks and consultants due to the longer terms of their engagement, but their deep industry experience, proprietary advice, and commitment through co-investment, make them an excellent competitive advantage for their fund.

Direct partnership with industry executives in a process called Executive Recruitment offers funds the benefit of a deeply integrated relationship with extensively networked insiders. "Some PE firms focus their origination strategy by partnering with executives with deep vertical expertise, and then jointly pursuing companies in that executive's vertical," (Teten, 2010). Funds rely on the recruited executive for both deal origination and post acquisition management, and the executive is rewarded with compensation for successful choice of targets and with long-term employment in target companies. This strategy encourages executives interested in undertaking a buyout in either their own or a related company to contact the fund directly. In many respects this strategy is an

ideal way to cheaply originate targets very likely to benefit from buyout capital. However, care must be taken to ensure the recruited executive's incentives are aligned with the fund and that the executive is competent to carry out the new strategy. Deals sourced by executives shopping for buyout capital are also not necessarily proprietary.

### Figure 3: Comparison of Origination Specialists

Comparison of Senior Advisor Networks with Alternative Talent Sources

	Experts and Consultants	Senior Advisor Network	Executive Recruitment
<b>Relationship Owner</b>	Expert network/ consultancy	Fund	Recruiting firm, then handed over to fund
<b>Duration</b>	One–two hours to three months	Six months–two years+	Permanent
<b>Sample Service Providers</b>	Bain & Co., Boston Consulting Group, Gerson Lehrman, McKinsey	Harvey & Co., Teten Advisors	Accolo, Ignition Search Partners, Heidrick & Struggles, Russell Reynolds
<b>Typical Cost</b>	\$1,000/hour for expert networks; \$300–\$700/hour for consultants	Sometimes retainer, sometimes paid as buy-side investment banker	1/3 compensation
<b>Driver of Executive Compensation</b>	Length of consultation	Value creation and continued involvement with client companies	Winning full-time employment
<b>Confidentiality</b>	NDA possibly, but hard to enforce; consultant may “shop” ideas	Signed, enforceable NDA	NDA unusual

Source: Updated and expanded based on table from Jon Weber, Managing Director, Anchorage Advisors LLC.

(Teten 2010)

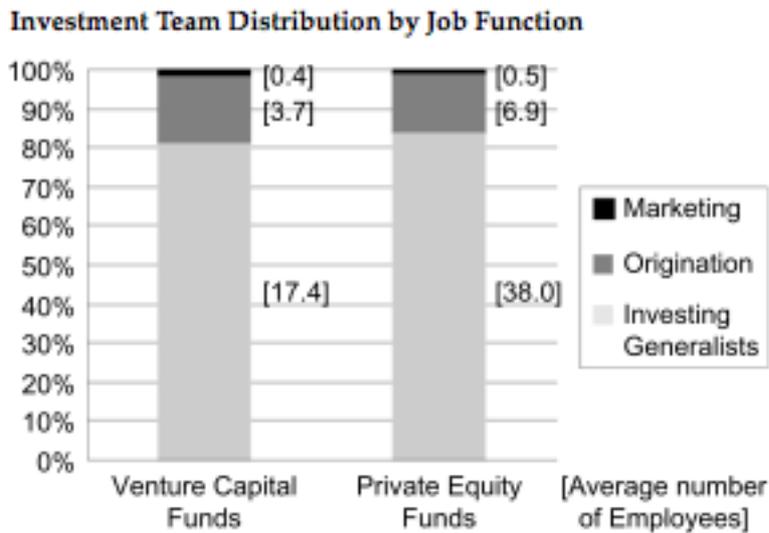
For funds looking to outsource all or parts of the deal origination process, there exist acquisition search companies. These are staffed largely by investment bankers with a, “database of private companies that they will scour on behalf of a client” and differ from investment banks in that their only purpose is for originating deals, not handling transactions (Teten, 2010). Acquisition search companies offer many of the same strengths and weaknesses of investment banks in that they are motivated, highly networked, non-proprietary, and driven primarily by deal closure rather than

quality or price. In comparison to an investment bank, search companies offer a greater flow of candidates but do not perform many of the transaction related services of true investment banks such as valuation. Because of the network effect, search acquisition companies may offer an improvement in origination efficiency over direct search by the fund.

#### **2.4 Recommendations:**

Large Private Equity funds evaluate an average of 80 targets for every deal completed, 44% of private equity's deal origination is performed in-house, and proprietary deals are found to generate the highest returns. Should private equity funds therefore increase their internal resources for proprietary search? While funds realize that "proprietary deal origination clearly creates a competitive advantage, the challenge is that deal origination has a low success rate and typically requires the most time investment of any phase of the investing process" and "more funds are realizing that by the standards of most comparable sales processes, origination today is a very inefficient and labor-intensive process" (Teten 2010). Teten sees this as an opportunity for funds to create competitive advantage through more efficient in-house origination. While it is indeed true that funds can create competitive advantage through more efficient in-house origination, the strong presence of network effects suggests in-house origination alone cannot be the most efficient strategy.

In-house deal origination may be proprietary but it is also inefficient, and the reluctance of funds and their partners to develop more sophisticated in-house sourcing methods is a clear acknowledgement of this fact. On average only 15% of a private equity fund's investment team is devoted to origination.

**Figure 4: Investment Team Distribution by Job Function**

(Teten 2010)

Rather than rely on improved internal processes alone, several origination sources already provide the benefits of network effects and proprietary offerings. Fund-sponsored senior advisor networks offer executives with deep industry experience, enforceable non-disclosure agreements and incentives directly tied to fund performance through co-investment. Similarly, executive recruitment uses executives with existing networks and well-developed ideas on possible acquisition candidates. Because these advisors are also industry insiders they benefit both directly and indirectly from extension of their network in service of the fund's origination process. Their use also frees the fund from developing deep industry expertise and relationships of its own, which frees fund managers more interested in making deals than finding them.

Venture funds often use an accomplished entrepreneur-in-residence to help source and screen deals. If larger private equity funds include a top-flight executive with an extensive network and industry experience as a temporary general partner during the fund's investment phase, they could significantly boost in-house search capability while the executive would benefit from investment in their network once leaving the fund. This could similarly be accomplished by including an executive from the target market as a permanent partner, but such an arrangement

requires willingness and aptitude for career change as it is likely the new partner's professional network, and the competitive advantage derived from such, will degrade over time without the benefits of the network externality to aid in continued investment.

A fund could conceivably try to focus exclusively on companies in an industry in which all partners have prior experience and extensive networks. Such a fund would have the expertise to source its own deals at lower cost by relying on the prior informational investment of the partners. This would simplify deal flow, due diligence, operational strategy development, and the cost of transaction oversight. This strategy relies on the ability of partners to use their networks more cheaply than outsiders. Fund size would be necessarily limited due to the restricted opportunities of working within a single industry. Industry volatility would have a disproportionate impact on fund returns, and due to the function of partners as primary sources of deal flow, a greater burden of time investment is placed on the general partners who must both originate and arrange deals. Even though the financial cost of deal origination using extensive in-house efforts might be lower, there are clear advantages for funds that use specialists.

Working to maintain a strong reputation and brand is a further means for funds to ease their deal origination process. It is widely regarded by fund managers that their brand is important for deal origination and fundraising, but based on a survey by BackBay Communications and Marketwire "Of 109 journalists surveyed, none rated PE firms excellent in communication, and only 30% said their capabilities were good, while 48% rated them fair, and 23% chose poor" (Haynes, 2009). This finding points to wider problems with private equity's tendency to act reclusively, but in terms of deal origination it is important that funds make efforts to treat their reputation as an asset capable of bringing in opportunities and intermediaries.

## **2.5 A New Approach:**

Overlooked in the whole discussion of deal origination are the target's employees themselves. While managers work in their own best interest and consequently rarely volunteer an opportunity to profit by being replaced, the employees have extensive understanding of the

management quality and firm performance relative to the industry. A deal origination strategy using employees to source deals would not only provide funds with a valuable new lineup of proprietary targets, but also increase market efficiency by extending the “disciplinary” function of private equity funds beyond cases where either ownership or management sees deficiency in the other. In researching this paper, not one mention or article was found on employee-based origination strategies.

Employee origination poses several real challenges. Employees are dispersed, myopic to their limited dealings, and unused to thinking in strategic terms for their employer. Employees also perceive, unfoundedly, private equity funds to have a negative impact on employment (Romano, 1992). For most employees, a buyout is not something to be sought but rather avoided. To use employee information in origination, employees must be given an incentive to tender information. The fear of ownership change must be offset. Rewarding the “whistleblower” that provides information on suitable targets is one approach. Making assurances on continued employment and fair treatment at firms whose acquisition is originated by employees is another.

There are, of course, many conceivable ways to arrange a strategy based on employee origination. A “middle up” approach would actively search for and encourage mid-level employees not directly in management, but with a sophisticated understand of their firm, to contact the fund and discuss the reasons they think a change in management or ownership would be helpful. This approach is similar to the executive recruitment strategy discussed by Teten in that it involves active recruitment of insiders to find targets and build a strategy. Unlike an executive recruitment strategy, these insiders would not necessarily become key players in post-acquisition management, nor would they necessarily provide information beyond the scope of their firm. It might prove difficult for a fund to initially convince mid-level professionals to approach an outsider, but if the fund were to offer substantial compensation for advisory services and a clear record of fair dealings with employees it is plausible that mid-level executives would find discussion an effective and profitable outlet for frustration with poor management or ownership. The “middle up” approach

offers a way to find and evaluate targets without the direct involvement of management or owners in the information gathering process.

The counterpoint to a “middle up” approach is to start broadly by essentially crowd-sourcing origination by “boiling the ocean” of employee sentiment. As social networking has become more widespread, the amount of available data leaked by employees is staggering. Employees share information directly related to their company on blogs, forums, social networking sites like Facebook, LinkedIn, and Twitter. While posts on small issues within a company might seem innocuous, the combined total of all information released by employees of a large or mid-sized company is a potential goldmine for funds considering employee sentiment. The use of this information is already widespread in marketing and other industries. “WiseWindow, a marketing firm based in Irvine, California, uses social-media activity to forecast demand for products” including for clients paramount pictures and Belkin (Economist 2011).

The data gleaned from social media is so valuable that it does not even have to directly relate to the target company. According to Johan Bollen, of Indiana University Bloomington, a message as seemingly trivial as, “I am certainly not bored. way busy! feel great!” from a user of the social networking site Twitter is actually a valuable expression of emotional sentiment (Economist 2011). Dr. Bollen has created an algorithm for analyzing the emotional content of messages from social networking sites. His findings include improvements in the United States’ collective mood around holidays, and more interestingly he has found a correlation between an increase in measures of anxiety and a subsequent decrease in the Dow Jones Industrial Average stock price index. As the Economist reports, at least one London based hedge fund, Derwent Capital Markets, has found the results promising enough to license the algorithm.

To use data from social media effectively a fund could track employees at multiple firms in the fund’s target industries, analyzing firm-related comments and activity on websites related to job-search such as LinkedIn where increases in activity are highly correlated with changes in employment. By performing a side-by-side comparison of emotional sentiment across competitors, a fund can piece together a detailed understanding of relative firm outlook. This data would provide

a starting point for more directed search. If the fund chose to continue with an employee origination strategy, they are then much better situated to begin recruiting for a “middle up” analysis. The use of aggregated information from social networks on its own is a valuable and inexpensive tool for any fund looking to efficiently narrow and direct its search towards firms with a certain outlook. In many cases, it is likely employees have already released enough information for funds to readily determine target suitability.

That employee opinion is not solicited during origination points to a structural gap in existing strategies geared towards management and owners. Employees are much better situated than owners to determine if their company suffers from mismanagement, and much more willing than the managers themselves to reveal such information. When a fund is able to replace the management team, employees are an excellent resource for locating targets. If employees accurately believe to a greater degree than current owners that a company is mismanaged, current owners underestimate the potential for replacing management, which implies that they also underestimate the expected value of new management to a bidding fund. While employees are unlikely to wittingly provide data that speaks to their redundancy, this gap is already well covered by existing origination strategies.

The tools for extensively considering employee opinion during origination are almost entirely new and need further development, but consequently also offer an untapped source of highly networked and proprietary information to the fund that pursues them. At the very least, considering all stakeholders during the origination process can only lead to better determination of target suitability. At best, employees offer affordable and unique insight not available through other methods into which targets will benefit most from new ownership and management.

## **2.6 Deal Origination Summarized:**

Deal origination is a critically important and time-consuming process for any fund. Comparative advantage implies that those specialized in overseeing deals are poorly suited to spend

time searching for them. Network effects make origination less risky for search specialists, who unlike fund managers can apply the results of unsuccessful search in the future.

Different forms of deal origination offer different returns, and in this regard deals with more proprietary characteristics outperform less proprietary deals. For a fund to theoretically maximize efficiency in deal origination, the best approach focuses on previously established networks and intermediaries who benefit from the network externality. This implies a reduced reliance on investment banks, consultancies, and possibly even funds' own in-house deal appropriate efforts, in favor of an increased reliance on industry insiders and specialists willing to sell their advice or join the fund in a limited fashion. Funds should also consider using new techniques to gauge employee opinion, as these are a currently untapped source of proprietary data.

### **3. Buyout Premiums and Information**

The premium private equity funds pay to buy out target companies is a substantial cost both to private equity funds, but also to the market at large as many potentially profitable changes in ownership fail to occur. While some premium is unavoidable when purchasing control, much of the premium is mandated by regulatory regimes with a poor understanding of market pricing and a misinformed desire to protect incumbent shareholders and management. This section examines the extent of the buyout premium, the role of information in share prices, and the legitimacy of regulations governing information during takeover bids.

#### **3.1 Buyout Premiums and the Efficient Markets Hypothesis:**

Over the past 25 years, U.S. based private equity funds have paid on average 28.5% more for target companies than market price prior to the offer (Bargeron et al, 2008). This premium represents a substantial cost to the buyout industry whose annual investment between \$100 and \$600 billion over the last decade have therefore included \$28 to \$170 billion in annual buyout

premiums (Maslakovic, 2008). These premiums arise because buyout offers are not constructed to price discriminate between shareholders' differing reservation prices.

When investors purchase shares at the market price, they purchase from the shareholder willing to sell their shares at the lowest price. Any shareholder with a lower reservation price will have already sold and conversely those believing the shares are still undervalued remain shareholders. The market price is merely the last price at which one party was willing to buy shares at the same price as another was willing to sell them. While it is a common assumption that a company's market capitalization, the last market price multiplied by total shares outstanding, is the same as its value, this view relies on the efficient markets hypothesis and is not necessarily descriptive of real shareholder valuations.

It might seem adequate to state that those who remain shareholders do so because their reservation price has not yet been reached, and that therefore market capitalization understates firm value, but this assumption is in violation of the efficient markets hypothesis. According to the efficient markets hypothesis, the market price is the price where all potential shareholders are indifferent about whether or not to hold shares. The practical application of this hypothesis assumes that shareholders are generally atomistic with perfect, or at least equal, access to information and hold shared valuations of stock price. "If existing claims "span" the state space, excess supply curves are perfectly elastic," meaning that shareholders valuations are homogeneous and purchasing any amount of shares should not significantly impact prices (Bagwell, 1991). Under the hypothesis, large orders do have the power to change prices, but this result is attributed to new information and not to inelasticity of supply.

Shareholders are assumed to hold rational expectations and to incorporate all knowledge about the future into current prices. This simplifying assumption of the hypothesis was initially intended to help model outcomes rather than accurately describe behavior, and when interpreted strictly leaves little room for funds to hold private expectations of target value. Such expectations are believed already fully incorporated into prices by fully informed and rational shareholders. This idea that funds cannot and, with a little extension, should not hold private information has had a

profound impact on regulation and the economic modeling of takeovers. The efficient markets hypothesis has been accepted by the United States Supreme Court in *Basic v. Levinson*, 485 U.S. 224 (1988) as providing a valid basis for the regulation of capital markets. In Denmark, the hypothesis has also been implicitly accepted as describing behavior by the Danish courts.

Evaluating the validity of the EMH is an important first step in suggesting optimal takeover strategies and in understanding the basis for most takeover regulation. By doing so, it is possible to better understand the impact of informational effects and share accumulation on reservation prices. Unfortunately, shareholders rarely state their private valuations, and testing these assumptions has proven difficult. To determine the extent to which supply curves deviate from perfect elasticity, Bagwell in 1991 evaluated transfers using a Dutch auction. “In Dutch auctions, the company states the number of shares it will repurchase, and a price range within which stockholders can offer to sell their shares. Shareholders fill out tendering schedules indicating how many shares they are willing to sell at each price within this range. It is a dominant strategy for atomistic shareholders to tender their shares at their true valuations,” (Bagwell, 1991). These valuations then provide a very detailed description of the supply curve.

In the auctions Bagwell studied, on average 16.7% of shares outstanding were tendered with a 9.1% price difference between the 1<sup>st</sup> and 16<sup>th</sup> percentile offers. Bagwell finds, “The average arc elasticity of the supply curve is 1.67” and “Formal regression analysis confirms the significant upward slope of these curves.” This finding helps explain much of the 28.5% buyout premium observed by Barger, and points to the more limited role of information in price changes than anticipated by the E.M.H. These results reaffirm what might have appeared common sense, that shareholders hold differing valuations and are not homogeneous. Contrary to the classical assumption of perfect capital markets, any takeover strategy must account for shareholders’ heterogeneity and inelastic supply. By offering one price to all shareholders in a tender offer, the bidder is paying a substantial buyout premium based not on added information, but rather on the need to meet the reservation prices of heterogeneous shareholders. A more efficient strategy seeks to meet each shareholder at his or her reservation price.

### 3.2 Price Discrimination:

When all shareholders are offered one price regardless of their own personal valuations, this is a substantial cost to buyout funds. The problem is that every single shareholder except for the very last needed to establish control is receiving more than they would have asked for. In order to be efficient, shareholders must be induced to sell at their initial reservation price. Theoretically, the open market is an extremely efficient means to do just that. If a fund could efficiently use the market to conduct a bid, every shareholder would voluntarily tender their shares at their own price with no shareholders receiving more or less than their valuation. This process, known as price discrimination, is already a common practice on the open market where large buy orders are executed by filling several smaller sell offers at their asking price. Unfortunately, in the market for corporate control such an efficient solution does not come easily.

Using the open market efficiently is only feasible if the fund can do so anonymously. A bidder expecting to profit by gaining control of and improving a target company is willing to pay up to their extra expected value to gain control. Shareholders know this, and as soon as the nature of the bidder is public they will raise their reservation price to capture the bidder's control premium. This leaves the bidding fund at risk of sudden prohibitive price increases after partially completing a takeover.

Preventing information from leaking into prices is key to achieving transactional efficiency because shareholders' valuations will incorporate any revealed information. While it might be argued that shareholders should be entitled to make decision under full information, the issue here is that an expression of interest by a private equity fund does not in itself reveal new information about the target firm. Because private equity funds are active investors, their higher valuation of the target only applies if they are able to establish control. For existing shareholders, the only significant information gained is that an excellent opportunity exists to engage in rent seeking behavior at the expense of the private equity fund. This is the situation described in Grossman and Hart's model of tender offers discussed later. In short, by learning of a private equity fund's

intention to acquire control, shareholders learn nothing more than that they will be rewarded for taking advantage of the bidder.

The primary argument against price discrimination is the dual fallacy that it is both unfair to treat shareholders unequally and that the control premium belongs to all shareholders. To rebut the first contention, shareholders are treated unequally, but fairly, in capital markets all the time. This is due to the rarity of any two shareholders holding exactly the same valuation. Shareholders do not complain when sell orders are filled by first filling the highest buy order before the next. So long as funds do not engage in market manipulation or other illegal-trading activities regulated elsewhere, it seems fair that even private equity funds should enjoy the same privilege as buyers to purchase shares at market prices.

What makes takeover bids special in the eyes of many shareholders is that when a fund buys shares for a takeover, there is an informational asymmetry between the seller and the buyer regarding the control premium. Shareholders do not like tendering shares to buyers who do not reveal their willingness to pay extra. For many, this feels like the fund is profiting by withholding information. While it is true that the fund intends to profit from control, the assumption that these gains are being withheld or that the shareholder is entitled to such gains in the first place is based on a fallacy, that “the control premium realized in takeovers is considered an asset that belongs to the company and thus to all shareholders,” “in fact, the takeover premium is not flowing from within the company but reflects a market transaction involving financial instruments, *in casu* shares with voting rights,” (Hansen, 2009). The control premium is simply the amount over the prevailing market price a bidder is willing to pay to establish control, reflecting their expected value.

If a bidder is entirely passive, the control premium is zero regardless of the number of shares purchased. In this way, the value of control is entirely outside the firm and exists only to the bidder willing to pay for it. Consequently minority shareholders who hold no control should be entitled to no premium and controlling shareholders are entitled to a premium only in as much as they incorporate control into their reservation price. In short, minority shareholders are not entitled to compensation for control they never held.

### **3.3 Regulation Mandates Disclosure:**

Insistence by shareholders and regulators that buyers disclose any intention to establish control prevents funds from trading efficiently on their own private valuations and controlling shareholders from realizing their control premium. The inability to purchase anonymously on the open market is a serious disincentive to takeovers that would otherwise be economically efficient.

For a variety of reasons both legal and technical, preventing information from entering prices is nearly impossible. Masking abnormal trading activity such as the accumulation of a control stake is a difficult proposition, with as many algorithms created to detect abnormal behavior as to hide it. From a legal perspective there exist a wide variety of disclosure requirements ensuring that information about the buyer will eventually enter prices. Any strategy seeking to benefit from efficient prices needs to work through the maze of regulations and practicalities that have made tender offers such a popular choice.

In a previous paper I explore the possibility of using third party facilitators to accumulate a large equity stake using open market operations. A facilitator would provide a means for funds to indirectly acquire control without informing the markets. Funds are severely limited in their ability to use the markets in the United States by the Williams Act of 1968, an amendment to the Securities Exchange Act of 1934. The Williams Act stipulates that those accumulating over a 5% stake in any federally registered company must report their holdings to the SEC and any exchanges listing the shares. “This 5% threshold establishes an early warning system that gives both the target and other potential bidders time to prepare, thus its practical effect is to promote auctions and increase the takeover premium that a bidder must offer to secure control” and it strips funds of their ability to trade efficiently after accumulating 5% of target shares (William et al, 2007). In the European Union, the EU Transparency Directive of 2004 similarly places a requirement of disclosure on holding exceeding 5%. This is a far cry from the requirement that a minimum 90% of shares be offered for sale in many tender offers, and leaves funds almost entirely open for exploitation if they accumulate shares in multiple transactions.

The primary legal challenge to using third parties to avoid reporting requirements is that both the Williams Act and the Transparency Directive take into account beneficial ownership. Beneficial ownership is the understanding that while securities might be under one legal person's ownership in name, another might hold full claim to those securities and their voting rights in practice. In the Securities Exchange Act of 1934, rule 13d-3 makes clear that beneficial ownership includes "any person who, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise has or shares: 1. Voting power" and/or "2. Investment power which includes the power to dispose, or to direct the disposition of, such security." This anti-evasion principle of the Act prevents a fund from using conduits on their behalf to accumulate more than the 5% limit without reporting.

The fact that this regulation was not intended to promote economic efficiency becomes clear after an examination of its history. The U.S. Securities Exchange Act of 1934 was an effort to stem the widespread fraud and market abuse of the late 19<sup>th</sup> and early 20<sup>th</sup> century. Due to the fraud of prior decades the act placed great emphasis on investor protection through disclosure rather than attempting to regulate potential transactions based on merit (Colombo, 2010). Full disclosure, it was believed, would provide for efficient markets and prevent abuse. From this attempt to prevent widespread fraud and abuse, regulation was also drafted "protecting" shareholders from changes in corporate control through popular mechanisms of the era such as the proxy campaign. Disclosure, however, was not required for either tender offers or large purchases of stock in privately negotiated transactions.

Responding to managers' and shareholders' desire for protection from takeovers by the increasingly popular tender offer and open market accumulation, Senator Harrison Williams of New Jersey in 1965 began proposing regulation to require disclosure of accumulation of over 5%. After one failed attempt, the Williams Act became law in 1968, with its sole intention, as expressed by Congress, being "the protection of investors" (Hubco, 1985). "Interestingly, this was a shift in Senator William's initial approach, as his earlier (and rejected) version of the Act was explicitly predicated upon protecting incumbent management" (Colombo, 2010). While the Securities

Exchange Act of 1934 was designed to enhance market confidence by protecting investors from fraud and abuse, the Williams Act of 1968 was not initially proposed with the intention of protecting shareholders at all.

The Williams Act, and regulations like it are founded upon a misguided belief that managers and shareholders need protection from takeovers by way of disclosure. Such regulations are a perversion of the 1930's era efforts at preventing fraud and ensuring a level playing field into a regulatory regime aimed at protecting incumbents from financial discipline. This is not helped by regulatory acceptance of the efficient markets hypothesis, as in *Basic v. Levinson*, and its argument that price changes result from new information about target companies rather than heterogeneous shareholders with many reservation prices. Between the desire to protect shareholders and managers and the acceptance of a helpful but flawed description of investor behavior, the regulation of information has become unduly onerous.

### **3.4 Inside Information and Market Abuse:**

Looking beyond disclosure requirements such as the Williams Act and EU Transparency Directive, an open market strategy still requires anonymity to avoid divulging the fund's willingness to pay a control premium. The use of financial intermediaries may not legally offer the opportunity for funds to indirectly accumulate a controlling stake without revealing themselves to the market, but the strategy still provides a variety of potential benefits. By using one or multiple intermediaries such as investment banks, the fund benefits from professional traders working to find the best prices and gains anonymity provided by indirect trading. Furthermore, the strategy provides funds the ability to establish a small toehold, even if a control stake is not possible.

It is therefore worth examining the use of third parties in light of the laws on insider trading to see how this strategy fares under the legal standard applied to all other traders. Insider trading laws are specifically designed to determine when information can and cannot be used in trading, as well as when information must be disclosed before trading can occur. Unlike regulations requiring disclosure of takeover stakes, the laws on insider trading apply to all market participants and are

therefore considerably more efficient at preventing market manipulation and abuse. By holding private equity trades to this standard, it is possible to clearly determine if these trades constitute market abuse from an information-based perspective.

In the US, the laws on insider trading, set forth in the Securities and Exchange Act of 1934, are also based on a tradition of regulating fraud and breach of fiduciary duty. Rule 10b-5 of the Act prohibits the employment of any “device, scheme, or artifice to defraud”, untrue statement or omission, or “practice of deceit”. In the case of *Chiarella v. United States* the US Supreme Court determined that this standard only applies to those who hold a fiduciary duty to the company in whose shares they trade. This interpretation was expanded in a later case to include those who trade on misappropriated information. Regardless, because private equity companies neither trade on inside information from targets, nor hold any fiduciary duty to said targets prior to ownership, it is clear that US law does not prohibit a private equity fund from accumulating on the open market. An intermediary trading on the fund’s behalf is also not in breach of the law because it too holds no fiduciary duty to the target. The intermediary could, however, violate the law by using the information to breach its fiduciary duty to its client, the private equity fund, by activities such as front running.

The European Union’s rules on insider trading are perhaps a better and slightly stricter standard by which to judge the legitimacy of anonymous third party accumulation on behalf of private equity funds. EU Commission Directive 2003/124/EC on insider dealing and market manipulation, as further defined by the European Court of Justice in the *Spector Photo Group* case, defines insider trading as trading on material non-public information that would be incorporated into prices if it were legally available and doing so with the intention of abusing the market. This means that merely possessing inside information and then making a trade is not enough to violate the law. One must also trade with intention of using that information to abuse the market. Of interest is that the directive in no way states that this information need be related to the company itself. Any information that would be incorporated into prices qualifies as potential inside information under the directive. If taken literally, this implies that trading with the intent to

accumulate a controlling stake at a lower price by keeping one's investment intentions private might constitute the use of material non-public information that would be incorporated into prices if it were legally available to abuse the market. Indeed, such an understanding of takeover transactions seems to be the implicit basis for most takeover related disclosure requirements. However, simply because information would be accumulated into prices if it were available does not mean market abuse has occurred.

The case of Spector Photo Group in 2009 determined that merely being in possession of material inside information was not adequate to be in violation of the Directive. The information must have been further used to abuse the market. As discussed before, private equity funds are extremely well informed investors, but their interest in target firms is not necessarily based on any informational advantage *ex ante* about the firm. The information most important for funds to retain is their intention to accumulate a control stake, and in this way a technique to prevent such informational transfer does not constitute abuse of the market.

Private equity funds' intention to pursue a takeover changes prices because investors anticipate the fund is willing to pay a control premium. When a fund abandons an acquisition, investors no longer anticipate the control premium and prices return to prior levels. Because the increased share price during an acquisition stems from investors anticipating the fund's willingness to pay for control rather than from the target company itself, it is not feasible for a fund to profit from increased share prices after disclosure because any sale of shares by the fund signals a lack of commitment to the takeover.

Since the control premium is not an asset flowing from the firm, a fund does not realize a gain from insider trading at the expense of existing shareholders by failing to inform traders of its private control premium. In this way, trading without revealing the investment intentions of the fund averts a loss rather than realizing a gain, especially considering the fund already must pay any incumbent controlling shareholders a premium.

In ruling 2 of the Spector judgment, "Article 14(1) of Directive 2003/6 must be interpreted as meaning that gains realised from insider dealing may constitute a relevant element for the

purposes of determining a sanction which is effective, proportionate and dissuasive.” Because private equity companies are not profiting at the expense of existing shareholders by not disclosing their willingness to pay a premium for control, if sanctions are to be proportionate to gains realized, there can be no sanctions.

When an intermediary trades on behalf of a private equity fund, so long as they do not use the knowledge to profit at shareholder’s expense, for example by buying before and selling after the fund’s intentions are made public, they should not be considered in violation of the directive either. For intermediaries trading while in possession of information that would be incorporated into prices if it were publicly available, the important requirement is that they must not use it to abuse the market. As long as they profit only from fees paid by the fund rather than by capitalizing on their informational advantage over shareholders, market abuse does not occur.

When private equity funds and their intermediaries trade with knowledge that their intentions would be incorporated into prices if legally available, they are most arguably not in breach of either US or EU insider trading laws. These laws exist explicitly to regulate price manipulation and other abusive practices. That both US and EU deem it necessary to create additional regulation specific to takeovers, beyond the scope of laws on insider trading and market manipulation, indicates that takeovers do not constitute an otherwise defined form of market abuse.

### **3.5 Buyout Premiums and Information Summarized:**

Buyout premiums represent a substantial cost to private equity investing. Unfortunately these costs are mandated for the industry by a regulatory regime with a mistaken view of the role of information in price changes and the need for protecting shareholders and managers. From the standpoint of economic efficiency, some form of open market accumulation offers the most logically efficient alternative by enabling funds to trade at shareholders’ reservation prices. Bagwell’s examination of the E.M.H. shows the great extent to which shareholders’ reservation prices differ, and such supply elasticity seems to account for a large portion of the buyout premium. To the limited extent information does affect prices, it is primarily due to funds’ anticipated control

premium and not endogenous to targets. However, funds pursuing an open market strategy face risk from shareholders acting in a rent-seeking fashion, and for this reason it is not unreasonable for funds to be allowed to keep their investment intentions private. Such a request by funds also appears to be entirely in accordance with regulations on insider trading and market manipulation. The substantial body of regulation mandating disclosure by private equity funds is not working towards the goal of economic efficiency.

#### **4. Modeling Tender Offers and the Takeover Directive**

Profits from takeovers are often seen as a form of value appropriation by selfish raiders willing to destroy target companies for personal gain. This notion is the basis for much of the anti-private equity sentiment exhibited by regulators and much of the general public, but is grounded in a flawed understanding of how takeover profits are derived. Back in 1980, economics Grossman and Hart made a simple and eloquent representation of these assumptions in their model for tender offers. As their model inadvertently shows, the selfish behavior takeover bidders are believed to exhibit is only anticipated under a regulatory regime where disclosure prevents bidders from profiting by improving target companies. This counterintuitive finding suggests further enforcing the assumptions of the Grossman and Hart model through regulation is not necessarily the best way to prevent such abuse. The section examines the economics of tender offers under a disclosure regime as modeled by Grossman and Hart, extends the model to the components of the European Union's 2004 Takeover Directive, and argues for alternate ways to eliminate the problems feared by regulators while increasing economic efficiency.

##### **4.1 Free-Riding Behavior during Takeovers:**

Takeover bids face the risk that minority shareholders will attempt to free-ride on the bidder's expected value of obtaining corporate control (Grossman, 1980). Back in 1980, Grossman and Hart examined minority shareholders' tendency to free-ride on improvements made by so-

called “raiders” such that economically desirable takeover bids became prohibitively expensive. While their paper focuses on the use of various exclusionary devices in corporate governance to overcome the free-rider problem, their description of the inefficiency plaguing takeover bids is still just as relevant three decades on for modeling the offer most used by private equity funds.

Grossman and Hart demonstrate the problem by considering a firm with dispersed ownership that becomes the subject of a tender offer by an outside bidder. In this model,  $q$  is the current share price of the firm under the current management. To simplify, assume that  $q$  is also the value of each share in the future under incumbent management (Burkart, 2003). Suppose then that the bidder makes a tender offer for all shares at price  $p$ , and the offer succeeds if at least 50% of shares are tendered. Following a successful offer the bidder is assumed to make changes that lead to new share value  $v$  for all shares, including those held by the bidder. How should shareholders respond to this offer?

With a successful offer, shareholders receive either the tender price  $p$  or the value of shares under the bidder’s control  $v$ , and if unsuccessful the initial share value  $q$  remains unchanged. With dispersed ownership, shareholders hold sufficiently small stakes so as not to believe their own choice materially affects the success or failure of the bid. Shareholders also know that the fund will never pay more for shares than the fund believes they will be worth following the acquisition,  $v$ , and so therefore  $p < v$ . This means that from the atomistic shareholder’s perspective, retaining shares and receiving  $v$  is always preferable to tendering and receiving  $p$  in the case of a successful bid. To induce shareholders to sell, the fund has to offer  $p \geq v$ , leaving itself zero profits. Under these circumstances, funds have no incentive to pursue a takeover no matter how much value they can possibly create such that  $v > q$ .

During this tender offer process, shareholders can free-ride on the firm’s increased post-takeover value, capturing any profit the fund expects to realize by not tendering their shares. “Therefore, individual rationality by shareholders concerning the tender decision leads to an outcome which is highly undesirable for all shareholders- there are no takeover bids and bad management is not penalized” (Grossman, 1980). This therefore presents an interesting paradox; it

is not possible to provide shareholders with the maximum protection and disclosure while simultaneously looking after the shareholder's best interests, let alone the interests of the market at large.

In practice, this equilibrium is not as strict as it appears and takeovers do occur frequently, but as Grossman and Hart argue, the essential requirement for control-stake takeovers to occur in a market with fully informed shareholders is that there must be some form of unequal treatment of shareholders once the takeover is complete. If shareholders anticipate that their post-takeover value per share  $v_s$  is less than the fund's share value  $v$  than they have an incentive to sell for any  $p \geq v_s$ , leaving the fund all  $v - p \geq 0$ . From here Grossman and Hart argue for changes in corporate governance allowing profits to accrue to the "raider", but for the purposes of this paper it is sufficient to note that tender offers leave shareholders with a significant incentive to withhold shares in hopes of capturing the fund's profits, and that such behavior can easily be prohibitive towards an otherwise efficient takeover.

For a takeover to be feasible, at least enough profit to cover transaction costs (not included in the previous simplified model) must accrue to the party bearing those costs. When regulations mandate full disclosure during acquisitions, they essentially prohibit funds from capturing profits through efficient trading. Disclosure requirements such as the Williams Act mandate that the fund reveal its intentions to gain control ownership and make operational changes such that shareholders accurately understand post-takeover share value to be  $v$  rather than  $q$ . Once shareholders can anticipate this value  $v$ , the fund is no longer able to trade efficiently and the takeover becomes less appealing. Unlike Grossman and Hart's argument for the formulation of unequal treatment in corporate charters, reducing disclosure requirements while enforcing or strengthening laws requiring shareholder's equal treatment post acquisition eliminates the model's requirement for some form of private benefits to encourage economically efficient takeovers. In this way everyone can be treated fairly, and there need not be a presumption otherwise.

#### **4.2 Discussion of Rules in EU Directive on Takeovers:**

The European Commission's 2004 Directive on Takeovers, currently in the phase of implementation, has important implications for funds pursuing takeovers in the EU single market. The Directive has its roots in British takeover regulation from the 1970's as well as from the 1986 Single European Act to establish a common market, and is an effort to balance both British and German legal traditions on company law, which often include similar provisions for very different reasons. After an attempt to pass a takeover directive in 2001 was defeated, Dutch Law Professor Jaap Winter lead a group of company law experts to create a recommendation for another attempt at comprehensive regulation. The resulting Directive based on the Winter Group's recommendations, passed in 2004, remains controversial in nearly every way except for being almost universally disliked (Hansen, 2011). Due it its basis in law from the same era Grossman and Hart wrote their model of tender offers, the assumptions help the model help explain the intentions of the Directive.

#### **4.3 Mandatory Bid Rule:**

In the EU Commission's Takeover Directive, the Mandatory Bid Rule obliges any bidder who acquires a controlling stake to offer all remaining shareholders a chance to sell at the highest price paid by the bidder in the previous 6 -12 months. While no threshold has been stated in the Directive for what constitutes a "controlling stake", in the UK, where the rule originated, it is defined as 30% or more of shares. Ostensibly the rule is designed to protect shareholders, but economic analysis casts doubts on that claim.

From the firm's perspective, the mandatory bid rule is a practical prohibition on partial bids seeking to establish control through a more limited control stake rather than full ownership. Despite the rule's billing as an earnest attempt to protect minority shareholders, it has the effect of discouraging value-creating bidders in the manner described by Grossman and Hart as the cost of providing limited protection against the possibility of bidders intent on value appropriation.

To model the Mandatory bid rule, an extra variable is added to the previous simplified Grossman and Hart model to account for the private benefits they had discussed. Incumbent shareholders are assumed to enjoy control benefits  $Z_I$  and underlying share value  $q_I$ . The rival bidder is then assumed to hold benefits  $Z_R$  and share value  $q_R$  (Berglöf, 2003). It is worth noting that these private benefits,  $Z$ , are distinct from the impact of control change on share price, which is already incorporated in  $q$ . This implies that the control premium,  $Z$ , is believed to entirely reflect private benefits rather than any privately expected change in underlying security price.

Using this model, without the mandatory bid rule, a bidder interested in acquiring a control stake approaches a controlling shareholder with an offer to acquire their fraction,  $\phi$ , of the return rights (shares) (Berglöf, 2003). Any combination of the bidder's private benefits and expected share price  $Z_R$  and  $q_R$  such that  $(Z_R/\phi + q_R) > (Z_I/\phi + q_I)$  makes a trade between rival and incumbent mutually beneficial. In the absence of the mandatory bid rule, "due to the free-rider behaviour, small shareholders are not willing to sell their shares for less than the value of the share after the block trade. Consequently, the rival does not gain from making a voluntary tender offer and merely acquires the controlling block" (Berglöf, 2003). Bidders are therefore able to acquire private control benefits directly from the incumbent and avoid purchasing all shares.

If a bidder's strategy is to pillage the company so that shareholder value decreases following the purchase, the bidder will also realize the loss on their own holdings,  $(q_R - q_I)*\phi$ , but will receive compensation through the increased private benefits,  $Z_R$ . If shareholders know they will soon own shares of lesser value,  $q_R < q_I$ , they are willing to tender for any offer price,  $p$ , where  $p \geq q_R$ . In this case, regardless of the current share price, shareholders, acting in self-interest, hedge the risk of a value-destroying takeover by tendering. If indeed the bidder is pursuing an appropriation strategy, without the mandatory bid rule the per-share losses,  $q_R - q_I$ , are an externality realized primarily by remaining minority shareholders on their holdings  $1 - \phi$ . The mandatory bid rule prevents truly value-destroying takeovers where  $q_R < q_I$  by forcing the bidder to internalize the entire loss (Grossman and Hart, 1988). Because shareholders choose to sell in equilibrium, under the mandatory bid rule the bidder realizes the loss for all shares and is less likely to receive

sufficient compensation through increased private benefits. This makes it unlikely the bidder will offer substantially below the current share price.

Arbitrage provides a lower bound for the offer price under the mandatory bid rule. If a rival's offer is less than the current share price, a third party could conceivably make a risk-free profit by offering slightly more than the rival and making no operational changes. Such an opportunity cannot occur in equilibrium, and therefore the mandatory bid rule imposes the current market price as a lower bound on offers (Burkart 2003). In this way, takeovers that would destroy value are prevented.

This protection of shareholders from destructive bidders comes at a high cost. The requirement that remaining shareholders must be offered the highest price paid by the bidder means that the bidder must share the control premium required by any incumbent to all shareholders at a cost of at least  $(Z_I/\phi + q_I)$  per share for the entire firm instead of  $q_R$ . If  $q_R$  is higher than  $(Z_I/\phi + q_I)$  the bid will take place much the same as in Grossman and Hart's unrestricted bid model where the bid is accepted if and only if it is  $\geq q_R$ . In this case, the bidder's only compensation is the private benefits  $Z_R$ , which must cover at least the unmentioned costs of the takeover transaction. If  $q_R < (Z_I/\phi + q_I)$  and the fund is forced to offer  $(Z_I/\phi + q_I)$  it becomes even less clear that a takeover is feasible. In this case the private benefits per share  $Z_R$  must be able to cover the extra expense  $(Z_I/\phi + q_I) - q_R$ . For all cases where  $Z_R < (Z_I/\phi + q_I) - q_R$  the extra cost per share is more than the derived control benefits and the bid will not be made even though  $q_R > q_I$  and shareholders would have benefited.

While it can be argued the mandatory bid rule prevents value destroying takeovers, the rule also clearly prevents many takeovers that would have created value. "Which of the effects dominates is an empirical question (Berglöf, 2003). In a study on the effects of 106 large-percentage block trades in the United States, Barclay and Holderness find "cumulative abnormal stock returns average 5.6% a year after the trade", and are even higher for firms that are subsequently acquired (Barclay, 1991). The finding of an abnormal share price increase following large block trades in the US is important because the US does not have the mandatory bid rule to

prevent supposedly destructive block trades. This implies that the primary effect of the mandatory bid rule is to prevent value creation, as large block orders with control transfer do not result in negative returns for shareholders in a developed market without any mandatory bid rule.

The modified Grossman and Hart model of mandatory bids closely follows the reasoning given by the rule's proponents, but even when accepting these assumptions it is clear the rule entails a costly tradeoff. The rule's value in promoting economic efficiency becomes even less clear under a basic review of its assumptions.

In the view of takeovers modeled by Grossman and Hart, a takeover is only feasible if the bidder can derive private benefits,  $Z$ , at the expense of other shareholders. The  $Z$  variable does not include profits from improvement in share price under the new owners, as the price under the rival,  $q_R$ , fully accounts for appreciation. By requiring the rival to justify their ownership intentions and to make a public bid for all shares, shareholders can anticipate share price improvement to post-bid price,  $q_R$ , leaving the bidder zero profits. Rivals are therefore assumed to profit through allocation of the firm's resources as private benefits,  $Z_R$ , derived at the expense of other shareholders. Since the private benefit of control,  $Z_R$ , is seen as an asset flowing from the firm, it therefore appears reasonable that the rival should compensate minority shareholders for the private benefits it would derive at their expense.

The problem with this reasoning is that it makes the presumption of *mala fides* on behalf of the rival bidder and does not incorporate other reasons a bidder might be willing to pay more for control. In the model's view, the only conceivable way for rival bidders to profit is by inventing some abuse more substantial than the incumbent controlling shareholder. Even if the existence of large blockholders did reduce the wealth of minority shareholders, an assumption without basis as "it has not been definitely established whether the impact of blockholders on firm value is positive or negative", regulating takeovers is an extremely inefficient way to enforce fiduciary duty (Holderness, 2002).

Given the disciplining role of takeovers, it does not follow that making it more difficult to change ownership and management reduces the incumbent's incentive to abuse the minority. Nor is

it clear why, if all owners have the same incentive to maximize their private returns, a firm is intrinsically more at risk of one controlling shareholder acting abusively than another. Minority shareholders enjoy no such protection if the incumbent decides to take greater benefits, and the minority faces this risk all the time, not just during takeovers. “If the justification rests also on the assumption that enforcement of fiduciary duties is a weak remedy, then strengthening those remedies may be more effective and will correlatively detract from the exit right rationale” for the existence of a mandatory bid rule (Jennings, 2005). Company law seems a more optimal way to enforce fiduciary duty than during the rare occurrence of a takeover.

While the constraints of the Gross and Hart based model for the mandatory bid rule imply that control benefits flow from the firm rather than the ability to direct post-acquisition value creation. “It must be cautioned, however, that private benefits need not reduce the wealth of minority shareholders. This is an assumption of some analyses, but it is wrong” (Holderness 2002). Bidders are willing to pay control premium for any number of reasons, and control premium are found to exist in markets with effective company law such as Sweden. Control of a company gives non-monetary personal benefits such as prestige and fulfillment, but more importantly control reduces risk. Modern portfolio theory dictates that investors should avoid substantial exposure to one asset, but by obtaining control a bidder is able not only to potentially increase returns, but also reduce the risk of their substantial investment. A large non-controlling shareholder has no capacity to make operational changes if the investment performs poorly, and for that reason might be willing to pay a great deal to gain control, thereby reducing their risk. It is very likely the “private benefits” modeled by Grossman and Hart largely reflect the value of reduced risk, but this possibility is not included in the assumptions of either Grossman and Hart or proponents of the mandatory bid.

#### **4.4 Squeeze-Out Right:**

The common squeeze-out right is a more bidder-friendly component of the EU Takeover Directive. The squeeze-out right as defined in Article 15 is that “Member States shall ensure that an offeror is able to require all the holders of the remaining securities to sell him/her those securities at

a fair price”... “where the offeror holds securities representing not less than 90 % of the capital carrying voting rights and 90 % of the voting rights in the offeree company” or has “contracted to acquire” those rights through a successful bid. Member states may set the threshold higher at up to 95% of shares, but this discretion is only one of degree. The squeeze out right ensures that bidders have a means to take full control of targets following a successful bid. In Denmark, the right was originally part of the body of law regulating mergers and was designed to enable large companies to complete their merger bids after only a small minority of shareholders remained.

The squeeze-out right is an effective solution to the free-rider problem described by Grossman and Hart. In their model of a tender offer under dispersed ownership, shareholders faced with a takeover bid have an incentive to free-ride on the success of a bid by not tendering their shares in order to receive the post-acquisition share value  $v$  instead of the lower bid price  $p$ . The squeeze out right gives bidders who accumulate over 90% of shares the right to compel remaining minority shareholders to sell to them at a fair price, and “the consideration offered in the bid shall be presumed to be fair where, through acceptance of the bid, the offeror has acquired securities representing not less than 90 % of the capital carrying voting rights comprised in the bid.” In essence, the squeeze out rule limits minority shareholder compensation to the offering price in the bid,  $p$ , because any remaining minority shareholders will no longer receive post-acquisition security value,  $v$ , but instead will be forced to accept a squeeze-out sale at price  $p$ . Because they can no longer receive  $v$  by withholding, shareholders no longer have incentive to free-ride and reject an offer even if bid price  $p$  is greater than their valuation. Using the squeeze-out right, funds are able to realize all profits,  $v - p$ , from share price improvement above the bid price.

That the squeeze-out right solves the free-rider problem and allows firms some profit from operational improvement would seem a great victory on behalf of funds working to create value. While the rule itself is a great tool, it does not do enough to reduce market distortion and promote efficient takeovers. Furthermore, while it resolves the tendency for dispersed shareholders to free-ride, the rule also eliminates the rights of as many as 10% of shareholders to trade on their valuations.

The problem with the squeeze-out right from the fund's perspective is that it must be used in conjunction with a tender offer. This means that a tender offer for at least 90% of shares must be approved before the fund has the ability to apply their right to squeeze out the remainder. As discussed previously, shareholder supply is elastic and in order to secure 90% of shares, the fund must pay a substantial buyout premium to all shareholders. Any incumbent will also require compensation for their own control premium, and the incumbent's reservation price ( $Z_I/\phi + q_I$ ) is therefore the minimum price for all shares. Because the control premium does not flow from within the company, the squeeze out rule requires undue compensation of minority shareholders. While this buyout premium can be partially rationalized as necessary for the purchase of a single large block from the controlling majority, and so therefore in aggregate deserving of a control premium, there is no such justification for squeezing out the remaining minority at a price that still incorporates the control premium. By setting the squeeze out price equal the bid price, the shareholders who did not tender are compensated as controlling shareholders. By expanding the costs of a takeover to the price of the 90<sup>th</sup> percentile share, the tender offer used in conjunction with the squeeze out right still prevents economically justified takeovers and reduces returns to the fund for creating value.

From the minority shareholder's perspective, the squeeze out right is objectionable because it limits their right to trade based on personal valuation. While the squeeze out right eliminates the incentive to free-ride, remaining shareholders may have held exceptionally high valuations prior to the offer announcement. Whether these shareholders have any basis for such abnormally high valuations is debatable, but for them a squeeze out is an infringement of property rights. This perception is especially strong if a shareholder correctly held an optimistic valuation and is excluded from its realization by the bidder (Bierman, 2006). The problem with this reasoning, however, is that funds are active investors, and a shareholder's ex ante valuation ceases to have meaning following the offer. Hoping to realize their valuation by preventing the bid, they chose not to tender, but with the bid's success they must form a new valuation, one that necessarily incorporates any control premium the fund would pay for their shares. The squeeze out right is a

credible mechanism that prevents rent-seeking behavior by these shareholders following a bid, just as it prevents rent seeking behavior before the bid (Burkart, 2003). Furthermore, if a shareholder is certain in their valuation, the opportunity exists for them to bid (or find another fund to bid) marginally higher than the rival, and therefore earn a risk-free profit. That they do not implies the transaction costs of bidding are greater than any the error in the offer price.

The squeeze-out right is a valuable tool for discouraging free-rider behavior and obstructionism by remaining shareholders during a takeover. The primary concern is that it must compensate remaining shareholders fairly. For this purpose, in the US a “fairness opinion” on the squeeze out price is written by two investment banks and is subject to judicial review (Bates et al, 2006), and in the EU the price of the successful tender offer is assumed to be fair. Fairness must be balanced between competing considerations that remaining shareholders likely held the highest valuations but are not entitled to a control premium. Evaluating the wealth effects of squeeze outs, Bates, Lemmon and Linck find that the “legal standards and economic incentives are sufficient to deter self-dealing by controllers during freeze-out (another term for squeeze out) bids” and in fact the fairness standard is probably far too generous to remaining minority shareholders who “receive approximately 11% more than their pro rata share of deal surplus generated at the bid announcement” (Bates et al, 2006). It appears that while the squeeze out right is an effective tool for funds, it is also unnecessarily expensive and requires an inefficient transaction model.

#### **4.5 Sell Out Right and other Directive Components:**

Included in the directive is a counterpart to the squeeze out right entitled the sell out right, giving remaining minority shareholders the right to compel a fund to buy their shares at a fair price once the fund has accumulated over 90% of shares. In many ways, the sell out right is quite similar to the mandatory bid rule, but with a far more reasonable threshold. Unlike during a mandatory bid, shareholders are not under pressure to tender because the sell out right acts as an extension of the tender offer and gives shareholders who initially reject a chance to opt in. While the sell out right is often framed in terms of private benefits, which as with the mandatory bid rule are best addressed in

company law rather than takeover regulation; the squeeze out provides shareholders reasonable protection in the final phases of a takeover. Following a bidder's accumulation of more than 90% of a company's shares, the market is bound to be small, illiquid, and inefficiently priced. The sell out right gives remaining minority shareholders a fair opportunity to exit given the sudden disappearance of the market (Burkart et al, 2003). When the bidder has already accumulated more than 90% of shares, the possibility for minority shareholders to be bought out is neither particularly onerous like the mandatory bid nor out of line with the bidder's likely investment objects. Indeed, from a fund's perspective, the sell out right is not of any particular strategic importance as it is already likely to exercise its right to squeeze out remaining shareholders following a successful bid for 90% of shares.

Based on the far more limited scope of the sell out right, funds may be very well served to embrace it publicly as an alternative to the mandatory bid rule. So long as the threshold remains high, funds should emphasize that the rule offers minority shareholders much of the protection they clamor for, is a counterpart to the squeeze out right, and makes the mandatory bid rule redundant. Whereas the scope of the mandatory bid rule has always been intended to work against the interests of bidders and of economically efficient takeovers, the sell out right has never been intended as broadly and protects shareholders better by not pressuring them to tender.

The Takeover Directive also includes an optional "breakthrough rule" and a requirement for board neutrality. In the EU Commission's report on the implementation of the Takeover Directive, the breakthrough rule is described as an "efficient tool designed to make robust takeover defences contained in the target's articles of association or in shareholders' pacts unenforceable against a bidder during the bid period and to facilitate takeovers by lifting incumbent shareholders' disproportional control rights that might have played an important role in fund's takeover decisions," which would be extremely useful to funds except that implementation is entirely optional and "a mere 1% of listed companies in the EU will apply this rule on a mandatory basis." While these rules may or may not be desirable, from a fund's perspective they are not currently a meaningful part of the Directive.

#### **4.6 Tender Offers and the Takeover Directive Overview:**

When takeovers are conducted via a public bid or tender offer the potential exists for shareholders to act in a rational but suboptimal fashion, rejecting bids that would create wealth. This occurs because shareholders have an incentive to free ride on share price improvements the bidder is expected to create for the target. Shareholders know that any bid must offer less than this expected value, and so have an incentive to not tender in the hopes of benefiting fully from improvements made by the bidder. This tendency is modeled by Grossman and Hart in their 1980 study of tender offers, which not only provides a model that is still used as the basis for understanding tender offers, but is also an eloquent model for the economic effects of a regulatory disclosure regime.

The European Union's Takeover Directive of 2004 incorporates many of the assumptions used by Grossman and Hart. The mandatory bid rule, included in the directive, works on the erroneous assumption that a fund's willingness to pay a control premium entirely reflects the controller's ability to misappropriate assets of the firm, rather than a private valuation of control, such as for reduced risk. This leads the mandatory bid rule to impose a costly requirement that bidders who accumulate partial control extend an offer to all remaining shareholders, causing many potential value-creating bids to become prohibitively expensive, and eliminating bidders' ability to accumulate gradually using the market.

The Squeeze-out Right included in the Directive offers a solution to the free-rider problem discussed by Grossman and Hart by enabling funds to compel remaining shareholders to sell their shares at the public offer price. While the price offered to remaining shareholders is arguably far more than the shares are worth given their complete lack of control rights. The squeeze out is worth embracing for its ability to prevent the remaining shareholders from acting as rent-seeking obstructionists.

While none of the other rules in the Takeover Directive are currently of substantial impact to funds, the sell-out right's more limited scope should be advocated by funds as a regulatory alternative to the mandatory bid rule. Overall, the directive provides little room for funds to work

outside of the traditional public bid structure, and it is worth noting that the model describing the basis for much of the regulation only predicts funds will seek private benefits because full disclosure makes it impossible for funds to profit from private expectations of share price improvements and alternative sources of control premium fail to be anticipated. A more limited regulatory requirement for disclosure combined with full enforcement of existing company law preventing abuse of minority shareholders is a much more effective means of eliminating the modeled negative effects of takeovers.

## **5. Derivative Contracts' Potential in Takeovers**

Given the regulatory and economic challenges facing an open-market strategy, derivatives, such as options contracts, are a useful means for efficient trading. This section evaluates derivatives' potential to help funds efficiently reach their investment objectives. In both the EU and the US, regulation mandates disclosure once an investor gains beneficial ownership of securities. The section begins by examining to what extent the regulations consider derivative contracts in reporting requirements. Finding that an opportunity currently exists within parts of the EU for extensive use of derivative contracts in takeovers, the section continues by evaluating the ways in which these contracts can assist in achieving a takeover. While in general usage the term "option" refers to a derivative contract where the bearer upon exercise is entitled to shares of equity, the term here is also used to refer to "cash-settled derivative contracts".

### **5.1 Cash-Settled Derivatives in the European Union:**

Perhaps the most famous recent example of the potential to quietly establish control over a company using derivatives is Porsche's October 2008 squeeze on Volkswagen (The Economist). Porsche was able to accumulate options giving indirect control over 75% of Volkswagen's shares without the market's knowledge. In the end, Porsche squeezed the hedge funds that had sold Volkswagen's inflated stock short for an estimated \$7.5-15 billion in temporary profits. While the

story of Porsche and Volkswagen after the squeeze is an ironic change in fortune, the relevance of this case is that by using derivatives Porsche was able to accumulate indirect control over 75% of its rival's shares without a group of very sophisticated hedge funds realizing who was on the other end of their positions. In the case of an acquisition, it is possible for a private equity fund to use the same contracts to quietly accumulate a controlling interest.

In the EU, the Transparency Directive was created to harmonize disclosure regulation across the common market. Because the directive acts as a minimum harmonization requirement, a variety of regimes exist across the different EU member states. While some member states such as Britain, Switzerland, and now France have more comprehensive regulation including derivatives in their disclosure requirements, the EU Transparency Directive Article 13.1 omits a variety of derivative instruments and is therefore incomprehensive (Mazars, 2009). The inconsistent regulation of derivatives coupled with the Directive's restrictive conditions on equity accumulation has resulted in a slew of high profile derivatives transactions including "Porsche / VW, Schaeffler / Continental, SGL Carbon, TCI / CSX, Laxey Partner / Implenia, Victory / Sulzer, Glencore International / Austral Coal, Fiat" (Mazars, 2009).

The primary instrument used recently by Porsche and others is the cash-settled derivative. These contracts are different than traditional equity-settled options because on exercise the purchaser does not receive equity but instead cash for the difference between the underlying share price and the strike price. In this way, the owner of the derivative has no claim on the securities of the company. The issuer of the contract however, must hedge their position to prevent a potentially unlimited loss and is therefore likely to purchase the underlying equity when issuing the contract. Upon the contract's exercise or expiration, the issuer needs to unwind their position, and the derivative's purchaser can easily step in and buy all real shares from the issuer. If this is done with multiple issuers so that no one intermediary's hedge exceeds the disclosure requirement, the purchaser can theoretically direct anonymous accumulation for almost all shares in the target.

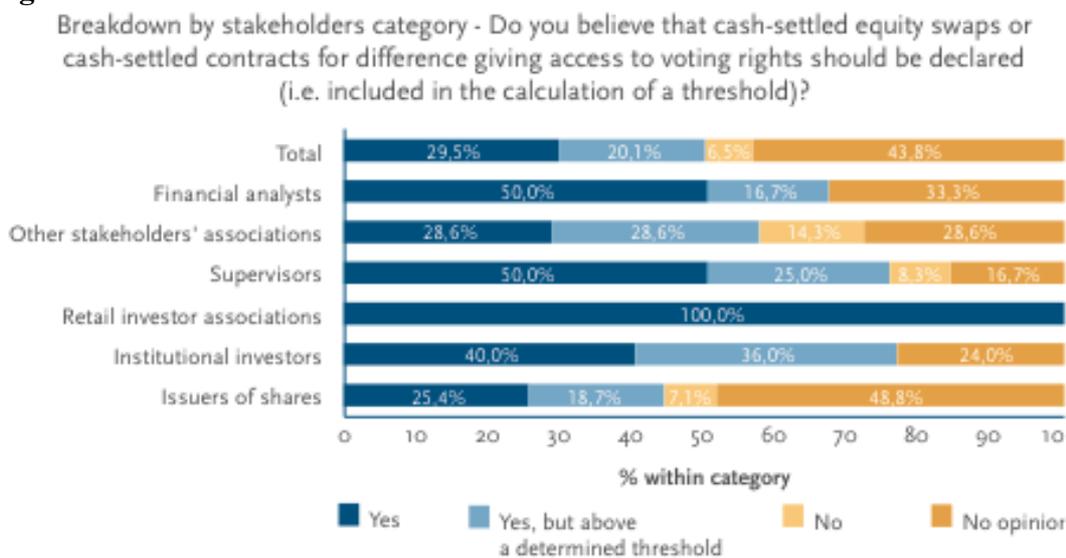
**Figure 5: Is Disclosed Information Useful for Investment?**



(Mazars, 2009)

In their 2009 Transparency Directive Assessment Report for the EU Commission, the Mazars Group asked various stakeholders their views on the Directive to form recommendations for improvement. Many different stakeholders were included, but whether by design or oversight, private equity funds and others whose business it is to pursue takeovers are conspicuously not represented. Institutional investors dominated by pension funds whose interests often lie in preventing takeovers were the only group of large investors surveyed. Not surprisingly, 84% of institutional investors are found to appreciate the disclosure required of other shareholders crossing the threshold, and 0% of institutional investors state that cash-settled derivatives should not be declared.

**Figure 6: Should Cash-Settled Derivatives be Declared?**



(Mazars, 2009)

No counterargument is given for the restrictions imposed by disclosure requirements, and with the apparent non-inclusion of private equity funds and others interested in pursuing takeovers the surveyed stakeholders clearly indicate a preference for increased disclosure. Based on these views, the study determines that cash-settled derivatives represent a harmful loophole that needs to be closed. Following the Assessment, the EU Commission in 2010 recommended to the EU Council that disclosure requirements be strengthened and the loophole for cash-settled derivatives closed.

In the U.S. the Williams Act of 1968 has a similar effect, requiring that any beneficial owner of over 5% of a firm's equity make a disclosure to both the SEC and the exchanges. The anti-avoidance provision establishes that beneficial ownership extends also to derivatives, but interestingly not to derivative contracts granting the right to purchase shares at least 60 days in the future. While the Williams Act has not been amended to include such contracts, a body of case law has begun to establish precedent limiting the loophole. Unlike in the EU where legislation tends to be more rule based, judgments in the US have more broadly found that actions meant to circumvent the Williams Act are in violation of the anti-evasion principle. This makes the Williams Act both more comprehensive and difficult to enforce on a consistent basis. For the purposes of this paper, the Williams Act will be construed as effectively ruling out derivatives as an alternative to other forms of equity to conduct anonymous accumulation.

The validity of the EU Commission's recommendation based on stakeholder opinion may be questionable, but it remains that as of yet no comprehensive restriction of derivatives exists within the EU. This leaves the opportunity for their use as a substitute to open market equity accumulation that avoids disclosure requirements and restrictions such as the mandatory bid rule.

## **5.2 Useful Properties of Derivatives:**

Derivatives are a close but imperfect substitute for equity. On the positive side, they can be used to hedge the risk of price movement in the underlying shares. They are also an effective way to gain access to large numbers of shares for a modest initial premium, allowing an investor to be

certain of share availability before any final decision to purchase equity. Even in the absence of disclosure requirements, if a fund were to accumulate shares on the open market, it is directly exposed to the risk that it might not be able to accumulate an adequate stake after substantial investment. If a fund needs over 90% of shares, but discovers after purchasing 70% that all remaining shareholders hold too high a reservation price, the fund is left with a large and very exposed position that must be unwound. By using options, the fund can indirectly accumulate the rights to shares at the cost of the options premium rather than the share price. If after accumulating 70% using derivatives the fund discovers that remaining shareholders hold far too high a reservation price, it has no equity to unwind and can either exercise or possibly sell back the contracts for partial recovery of the premium.

The main drawback of derivatives is the premium paid to the writer, which degrades over time and disappears upon exercise. This premium is not an insignificant expense, and the longer until the contract's expiration, the higher its value. When a fund exercises its accumulated options this premium is lost entirely. While generally an options holder would sell the option and recover any remaining premium, a fund's en-masse sale would nullify said premium by flooding the market. Further complicating a secondary sale, the options used by Porsche and others were not publicly traded but directly written by financial intermediaries. It is likely given these circumstances that any resale value takes the form of a punitive buyback provision and rather than sale to a third party. Funds must to some extent regard the premium as a sunk cost.

The relationship between equity and derivative prices is also an important investment consideration. Derivative contracts are generally priced at the difference between the contract's strike price and that of the underlying equity with an added premium incorporating a variety of risk factors, not the least of which is time until expiration. In this way, equity prices are a foundation of derivatives prices and the transfer from equity to derivative price is efficient.

A more interesting question is the degree to which derivative transactions affect equity prices. In many but not all cases, the party writing an option contract hedges using shares of the underlying equity. The purchase of the derivative therefore translates into a purchase of equity by the writer

and the equity and options markets correspond. However, this mechanism is not perfect. For example, if the writer of a contract already owns a sizeable equity stake before creating the derivative contract, there is no equity market transaction. The net impact in the equity market is that the writer now cannot sell shares without leaving their position uncovered. Since they were already willing to commit equity to cover the derivatives, this translates into very little equity market impact. Some intermediaries might also be willing to take a limited uncovered position that would not impact equity prices. This leads accumulation of a small or moderate derivative position to be unlikely to fully impact equity prices. Takeover-sized accumulation, on the other hand, is likely to involve extensive hedging on the part of writers and must therefore inform equity prices as if the fund had directly used the equity market. During Porsche's massive accumulation, hedge funds sold short shares of VW based on the seemingly inexplicable appreciation in VW's share price driven by the hedging purchases of the derivatives writers.

Because derivatives inform equity prices and require an additional premium lost upon their exercise, they are not theoretically more efficient than direct purchase of equity. Equity's advantage breaks down in light of the risks of disclosure, mandated or inadvertent, that can lead to a partially completed takeover becoming prohibitively expensive to complete or exit. Because all that is risked in the accumulation of a derivative stake is the premium, options reduce the risk of obtaining the rights to shares.

Using derivatives to accumulate the option to buy a target is in many respects similar to a tender offer. In a tender offer the fund secures the option to purchase shares at a set price for a limited time if the requisite number of shares are tendered. Once a fund accumulates the required stake using derivatives, it would be in much the same position of having made a successful tender offer. The benefit of derivatives over the tender offer is that the former is accumulated across a range of reservation prices whereas the tender offer is made at the highest reservation price.

Derivatives can also be used to reduce the regulatory burden if a fund merely desires a controlling stake in its target. Suppose, for example, a fund interested in a 40% control stake first acquires a 15% beachhead through options. When the fund then acquires the 40% equity stake it is

insured against 25% of remaining stakeholders accepting the mandatory bid it has no interest in making. Now suppose for simplicity that 25% of the remaining shareholders decide to tender following the bid. The fund must still buy 15% more of the company than it needs at the offer price mandated by the rule, but it may also exercise its options following the offer and recover the difference. From here the fund can sell the shares it was forced to purchase following the bid and achieve the desired control stake. Though clearly at some cost, a derivatives based beachhead could help alleviate the pain of mandatory bids.

From the fund's perspective derivatives are superior to an equity-based beachhead because the risk of holding equity is passed on to the counterparty, which will likely hedge, and the options requires less committed capital from the fund. The counterparty could, of course, compel the fund to purchase its hedging stake during the mandatory bid, but this leaves them uncovered against further share price appreciation following the sale. If the takeover is value-creating and the underlying share price goes up, the fund will avoid paying all shareholders a control premium, the writers will sell their hedged shares following exercise and keep the options premium, and other shareholders will accumulate the fund's extra stake at efficient market prices. If the takeover would destroy value, the fund has no reason to use this strategy, as it gains nothing by paying a premium to hedge at a share price higher than that anticipated under its control.

### **5.3 Derivatives Overview and Recommendation:**

Derivatives are an effective tool for funds to trade indirectly without disclosure, helping reduce the burden of takeover regulations as well as the risk of establishing control without a public offer. Since they are considerably less expensive per share than equity, derivatives allow funds to leverage a small investment to secure control without risking substantial capital. Their indirect nature of the contracts further helps avoid informing markets, thereby reducing the risk of market response during accumulation.

The loophole allowing cash-settled derivatives to avoid disclosure requirements in parts of the European Union has already been recommended for closure, but it is worth arguing briefly why

it should remain. Funds wishing to pursue more efficient takeover transactions need time in which to trade without disclosure in order to avoid free-riding behavior by other shareholders. In the long run shareholders are entitled to know who holds voting rights, but by requiring that reporting be immediate, many economically beneficial deals are not feasible. Creating a more substantial lag period for reporting or only requiring disclosure several weeks before exercising voting rights would help substantially, but so long as derivatives remain available such a regulatory battle may be superfluous. Because derivative contracts are of fixed duration, accumulation via an options stake offers funds a chance to accomplish their investment objectives efficiently in much the same way as lagged reporting without requiring substantial changes in equity disclosure laws. Options already offer several previously cited advantages over equity for accumulation, and the contracts' limited duration ensures that undisclosed beneficial ownership last no longer than is necessary.

## **6. Conclusions**

The objective of this paper has been to evaluate methods for making takeovers more profitable and economically efficient. Explosive growth in the private equity buyout industry has increased the risk of over-saturation and money-chasing deals that lower industry returns and further risk the industry's reputation. Buyouts strategies that have historically driven private equity returns, such as the popular management buyout, place excessive reliance on limited sources of origination and an inefficient transaction model in order to avoid conflicts with managers and regulators. By improving the deal origination process and the economic efficiency of transactions, a wider variety of higher quality companies can be pursued with greater returns and positive economic impact. However, if funds are to use more efficient transaction methods, they must first challenge an increasingly restrictive body of takeover-specific regulation explicitly geared to favor incumbent management over shareholders and bidders.

Deal origination, whereby companies are identified for their suitability as targets, is a constant challenge for funds whose partners are very aware that the quality of origination

significantly impacts their fund's relative performance. By focusing less on in-house origination and more on specialists with extensive networks and the ability to give proprietary recommendations, funds improve the quality and efficiency of their origination. Senior Advisor Networks and Executive Recruitment are recommended based on these criteria. Non-executive employees offer an unexploited means for determining the competence of target management and firm outlook through both direct engagement and aggregated information from social media.

Buyout premiums result from the inability to trade at shareholders' differing reservation prices when making a single offer for all shares. When making a buyout offer, funds are unable to trade at efficient prices and shareholders lose out on economically beneficial takeovers that are cost prohibitive due to the offer premium. Trading at each shareholder's reservation price seems a simple solution for reducing buyout premiums and improving efficiency, but regulations specific to takeovers in both the European Union and United States prohibit funds from trading with private information. These regulations are geared not towards protecting shareholders who lose out on forgone offers, but incumbent management who are protected from replacement by new active owners. Senator Williams first proposed the Williams Act of 1968 mandating disclosure by bidders for expressly this purpose. When judged in terms of economic efficiency and under the stringent standards of EU regulation on insider dealing and market manipulation, regulations on takeovers by private equity funds do not serve the market's best interest or prevent abuse.

Economic models of the tender offer in a regulated market by Grossman and Hart show that the single offer for all shares reduces funds' ability to profit from improving the share price of their acquisitions because shareholders can correctly anticipate the improvement and free-ride on a bid's success. The model's assumption that takeovers are only feasible if bidders profit by misappropriating assets belonging to all shareholders misinforms much of the current EU Takeover Directive, especially the mandatory bid rule. Smarter regulation acknowledges the many reasons for bidders to pay a control premium and the importance of company law in preventing abuse of minority shareholders. Removing disclosure requirements provides an abrupt end to the model's free-rider problem.

Derivatives are an excellent instrument for accumulating share rights efficiently during takeovers. Due to a loophole in the EU Transparency Directive allowing cash-settled derivatives to evade reporting requirements, it is still possible in some EU markets to use derivatives as a substitute for the buyout offer. By using these contracts, funds can accumulate a control stake anonymously and with limited capital before committing to a takeover. These properties make derivative contracts superior to open market equity purchases as a method for securing control, and because the contracts exist only for a limited timeframe their allowance offers an efficient alternative to changing reporting requirements on equity.

That private equity fund partners have more interest in arranging deals than in managing public relations is understandable, but the negative public perception of takeovers, no matter how unfounded, will not change so long as the most vocal stakeholders are those whose interest lies in preventing them. The body of regulation governing takeovers is becoming increasingly restrictive at exactly the same time the private equity industry is experiencing unprecedented growth. If more efficient takeovers are to become a reality, funds must challenge the misconceptions surrounding them and the regulations based on those assumptions. Recent attempts to regulate private equity on the same basis as hedge funds point to the fundamental ignorance of regulators and the general public about what private equity is and does. No one fund can solve this problem, but if the industry is to improve it must learn to speak up and become just a little less private.

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