Majure Finance

Research Paper

Academic Year 2018 – 2019

What is the impact of "Buy-and-Build" Private Equity strategies on LBO Value Creation?

Case Study on the Buyout of Berlin Packaging by Investcorp

Ali Haider Minhas

Under the Supervision of:

Professor Patrick Legland

June 2019

Acknowledgments

I want to express my sincere gratitude to Professor Patrick Legland for his guidance, motivation, and patient supervision without which I could not have written this research paper. Professor Legland was always available to provide advice, and he provided me with significant autonomy when it came to the approach I adopted in writing this paper.

In addition to this, I want to mention the support I received from my late grandmother throughout my academic endeavours and this research paper in particular. Without her profound belief in me and her emotional support, achieving these academic credentials would have been an unfathomable task.

- Ali Haider Minhas-

Abstract

This paper aims to examine value creation in the context of “Buy-and-Build” strategies in Private Equity led Leveraged Buyouts and identify whether any particular levers of value creation are of greater importance in the case of “Buy-and-Build” LBOs. The paper starts by providing an overview of the Private Equity industry before moving on to a review of the current literature on the topic of value creation in traditional Private Equity led LBOs and in the case of “Buy-and-Build” transactions. The theoretical part of this paper culminates by combining the conventional levers of value creation with empirical research on “Buy-and-Build” strategies and developing a framework to analyze value creation in the case of “Buy-and- Build” transactions. Moreover, this research paper posits a hypothesis which states that the success of Buy-and-Build LBO transactions highly depends on the independent ability and experience of the platform company’s management team to carry out and integrate add on acquisitions. Finally, the validity of this hypothesis is explored and substantiated in a case study about the Buyout of Berlin Packaging by Investcorp.

Table of Contents

Introduction…………………………………………………………………….. 6

I. Overview of Private Equity……………………………………………………... 9

a. Definition of Private Equity……………………………………………………......9

b. Structure of Private Equity Funds………………………………………………...9

c. Different types of Private Equity Strategies……………………………………..11

d. Historical Development of the Private Equity Industry……………………………12

e. Current Trends in Private Equity…………………………………………………...13

II. Overview of Leveraged Buyouts…………………………………………………16

a. Description of LBOs…………………………………………………………………16

b. Main Players in an LBO Transaction………………………………………………17

III. Literature Review of Value Creation in Traditional Leveraged Buyouts…………..19

a. Michael Jensen (1989): Eclipse of the Public Corporation…………………………...19

b. Gottschalg & Berg (2005): Dimensions of Value Generation in Buyouts……………..22

b. Gottschalg & Berg (2005): Levers of Value Generation in Buyouts…………………...26

IV. Measuring Value Creation…………………………………………………………34

V. Literature Review of Value Creation in Buy & Build Private Equity strategies……41

a. Overview of "Buy-and-Build" strategies……………………………………………41

b. Empirical Research: BCG & HHL Leipzig (2016)……………………………………45

c. Borell & Hegger: Value Creation Through PE-backed M&A (2013)…………………..47

VI. A Combined Framework for Value Creation in "Buy-and-Build" Transactions…..50

VII. Choice of Case Study……………………………………………………………………56

VIII. Case Study: Investcorp's "Buy-and-Build" of Berlin Packaging………………….58

a. Overview of Platform Company: Berlin Packaging……………………………………58

b. Acquisition by Private Equity Firm: Investcorp………………………………………..60

c. Executing the "Buy-and-Build" Strategy……………………………………………...61

d. Exit and Returns………………………………………………………………………..68

e. What made the LBO successful? – Analysis of Value Drivers……………………….....70

Conclusion...………………………………………………………………………………84

Bibliography..……………………………………………………………………………..86

Appendix……..……………………………………………………………………………93

Introduction

A few Private Equity funds in the US started conducting Leveraged Buyout transactions (historically known as "bootstrapping") back in the 1970s, and now the Private Equity industry has reached a global scale with record amounts of fundraising in 2019. According to Preqin, this year commenced with 3,749 Private Equity funds across the world entering the fundraising process, which is up 63% from the start of last year. As a result of this surge in fundraising, Private Equity funds have built up a significant amount of dry powder (un-invested capital) and are under a lot of pressure to do deals.

Due to these developments, returns in the Private Equity asset class, although still quite robust, have started to revert towards public market average returns. However, it is essential to note that "Top Quartile Funds" in Private Equity still consistently outperform other asset classes by a significant margin. Therefore, more so than before, it is vital for investors in Private Equity funds to understand the ability of these funds to create value as the private markets space gets more and more crowded.

The ability of Private Equity firms to create value and the mechanisms used to achieve this goal are deeply contested issues amongst academics. The 2008 Global Financial Crisis significantly damaged the popular view of the overall Finance industry, and the Private Equity industry also bore the brunt of this negative attitude. The most prevalent criticism of Private Equity firms is that they tend to transfer value to themselves by initiating drastic cost-cutting measures in their portfolio companies which render them uncompetitive in the long-run and adversely affect other stakeholders such as employees, customers, suppliers, and the broader society in which the business operates.

However, others argue that while this may have been true in the past, in contemporary times, Private Equity firms must create value in their portfolio companies through operational improvements and by kick-starting growth. The reliance on financial leverage as a critical driver of returns has significantly reduced due to the

commoditization of debt financing, low interest rates and increased competition to buy quality assets.

One value creation strategy employed by Private Equity firms is called a "Buy-and-Build" strategy whereby the Private Equity firm acquires a base company and makes several smaller acquisitions through that company resulting in a combined entity that generates higher value than the distinct assets. According to Bain & Company's Global Private Equity Report for 2019, the "Buy-and-Build" strategy is gaining prevalence amongst Private Equity players and is employed to mitigate the effect of higher purchase multiples and reduce the dependence on leverage to generate returns.

In this research paper, we examine how Private Equity firms use "Buy-and-Build" strategies to create value in the context of LBO transactions. We begin by giving an overview of Private Equity, including definitions of key terms, how Private Equity funds are structured, the history of Private Equity, and the state of Private Equity in contemporary times. Then, we briefly explain the concept of Leveraged Buyouts, paying keen attention to the major players involved in each LBO transaction. Having understood the idea behind Private Equity and the mechanism underlying Leveraged Buyouts, we examine the currently available literature on the topic of value creation in traditional Leveraged Buyouts. In this section, we primarily focus on the work of Michel Jensen (1989) and Gottschalg & Berg (2005), while referencing other authors to clarify the topic at hand further. After this, we go over the methods used to measure value creation for different participants in an LBO. We explore both traditional ways proposed by academics of corporate finance and the practical measures used by Private Equity professionals. In each case, we discuss the advantages and drawbacks of each method. After this, we look at empirical research conducted by BCG & HHL (2016) and Borell & Hegger (2013) in the context of "Buy-and-Build" Leveraged Buyouts. We then combine their findings with the traditional framework of value creation proposed by Gottschalg & Berg to come up with a comprehensive framework for looking at value creation in the context of "Buy-and-Build" LBOs. In addition to this, we come up with our hypothesis

proposing that the pre-LBO experience and skill set of management teams of platform companies is the most crucial factor enabling value creation in the context of "Buy-and-Build" LBOs.

Finally, we apply our comprehensive value creation framework and test our hypothesis in the context of Berlin Packaging's "Buy-and-Build" LBO by Investcorp in 2007. As a result of our analysis our theory regarding management teams was validated as the management team of Berlin Packaging had engaged in three "Buy-and-Build" operations prior to the LBO led by Investcorp, and the skill set developed by the management team due to their prior experience had enabled the swift integration of additional add on acquisitions during the LBO.

I. Overview of Private Equity

a. Definition

Private Equity investing can be defined as a form of investing where: "Private Equity funds invest long-term capital in private (or, at times, public) companies in return for an equity stake that is not freely tradable on a public market" (Claudia Zeisberger, Michael Prahl and Bowen White, 2017).[1]

This definition represents a comprehensive assessment of Private Equity as it accounts for instances of "take-private" transactions (delisting of public companies) and it is broad enough to include various types of investment strategies such as Venture Capital, Growth Equity and Traditional Leveraged Buyouts.

b. Structure of Private Equity Funds

"A Private Equity fund is a stand-alone investment vehicle managed by a PE firm on behalf of a group of investors" (Claudia Zeisberger, Michael Prahl and Bowen White, 2017).[2]

The majority of Private Equity Funds are set up as closed-end Limited Partnerships, and fund managers manage these investment vehicles as "blind-pools". Academics and practitioners use the term "blind-pool" because although investors in Private Equity Funds have an agreement over the broad mandate of the Fund, the Private Equity firm has overall discretion to choose specific investments.

Moreover, these closed-end funds have a limited life-span (typically ten years), and investors are required to commit capital for the entire life-span of the fund.

---

[1] Mastering Private Equity pg.5 (Claudia Zeisberger, Michael Prahl and Bowen White, 2017)
[2] Mastering Private Equity pg.6 (Claudia Zeisberger, Michael Prahl and Bowen White, 2017)

Key participants in a Private Equity fund include the following:

- **Private Equity Firm:** This is a firm that has expertise in executing a Private Equity investment strategy. Private Equity firms raise and manage independent investment vehicles called Private Equity investment funds through a separate but legally affiliated entity: the GP. Members of the Private Equity firm hold key decision-making positions in the GP for all funds raised by the firm. The logic behind having the GP as a separate legal entity is to isolate the Private Equity firm from any liabilities on the fund. Examples of Private Equity firms include Blackstone, Ardian and Apax Partners.

- **Limited Partners (LPs):** LPs are passive investors in a Private Equity fund and typically contribute the largest share of capital in the fund. LPs are purely financial investors and do not get involved in the day-to-day operations of the fund or its investment decisions. LPs commit to a certain amount of capital which is "drawn down" by the Private Equity fund over the life-span of the fund. Typical LPs in Private Equity funds include private and public pension funds, endowments, insurance companies, banks, corporations, family offices, and fund of funds.

- **General Partner (GP):** The GP is responsible for the management of all aspects of the Private Equity fund and has a fiduciary duty towards the investors in the fund. The GP has the discretion to make investment decisions in line with the fund's broad mandate, as illustrated in the LPA (Limited Partnership Agreement). The GP – which contains the PE firm's partners and senior managers – will typically commit their capital in the fund to align the GP's interest with the LP's of the Private Equity Fund. To ensure that the GP has "skin in the game", the GP invests around 1% - 5 % of the total capital raised for the fund. Moreover, the GP is usually paid a management fee by the Private Equity fund for taking responsibility for managing the fund. This fee usually amounts to around 1.5% - 2.0% of the committed capital of the fund during the investment period (often the rate is lower following the investment period/it is calculated based on invested capital).

Private Equity firms base their business model on raising capital from investors (LPs), investing this capital in target companies, selling these investments (often many years later), and returning the proceeds from these investments to the LPs while keeping a certain percentage, called "carried interest" (usually 20%) of the total profits for the GP.

c. Different Types of Private Equity Strategies

The various types of investment strategies can be categorized according to the life-cycle stage of the target company and/or whether the stake being acquired by the investor is a majority/minority stake.

The three major types of Private Equity are defined below:

- "Venture Capital funds are minority investors betting on the future growth of early-stage companies— defined as pre-profit, often pre-revenue and at times even pre-product start-ups" (Claudia Zeisberger, Michael Prahl and Bowen White, 2017). [3]

- "Growth Equity funds invest in fast-growing businesses (which have moved beyond the start-up stage) in exchange for a minority equity stake" (Claudia Zeisberger, Michael Prahl and Bowen White, 2017). [4]

- Traditional Private Equity has usually referred to instances where "Buyout funds acquire controlling equity stakes in companies that allow them to restructure the targets' financial, governance, and operational characteristics" (Claudia Zeisberger, Michael Prahl and Bowen White, 2017). [5]

This focus of this paper will be on the classical form of Private Equity, which is Buyout Funds that engage in Leveraged Buyouts (LBOs).

"A Leveraged Buyout (LBO) is the acquisition of a company, division, business, or collection of assets ("target") using debt to finance a large portion of the purchase price",

[3] Mastering Private Equity pg.19 (Claudia Zeisberger, Michael Prahl and Bowen White, 2017)
[4] Mastering Private Equity pg.33 (Claudia Zeisberger, Michael Prahl and Bowen White, 2017)
[5] Mastering Private Equity pg.43 (Claudia Zeisberger, Michael Prahl and Bowen White, 2017)

while the remaining portion is in the form of Equity by the Private Equity fund (Rosenbaum & Pearl, 2009).[6]

d. Historical Development of the Private Equity Industry

Although Private Equity has gained widespread prominence in recent decades, we can trace the invest investment strategies associated with Private Equity to the beginning of the 21st century with JP Morgan's $ 480m leveraged buyout of Carnegie Steel Corporation in 1901.

While Private Equity remained in the shadows of the overall financial ecosystem for most of the 21st century, it started gaining traction in the 1970s through the development of the Venture Capital industry in the United States. Furthermore, due to the weak stock market and overall recession in the 1970s, the IPO and M&A market collapsed, and these Venture Capital firms developed alternative investment strategies (Kaiser & Westarp, 2010). These new investment strategies focused on carving out poorly diversified conglomerates by carrying out leveraged buyouts (formerly known as "bootstrapping") of the divisions within these large companies. By the end of the 1970s, Private Equity firms which were dedicated to leveraged buyouts were founded. One famous example is the founding of KKR, one of the most successful buyout firms, in 1976.

The 1980s saw a rapid growth in the development and globalization of the Private Equity industry. A significant impetus for this growth was the removal of specific regulations that restricted pension funds from investing in Private Equity vehicles. Moreover, the capital gains tax in the US was lowered from 20% in 1981 from 49.5% in 1978. As a result of these catalysts, capital commitments to Private Equity funds reached $3.5bn between 1980 and 1982. This increase was two-and-a-half times higher than capital commitments over the 1970s (Kaiser & Westarp, 2010). In addition to this, the development of the high-yield "junk bond" debt market in the 1980s increased the capability of buyout funds to lever up their investments, thereby facilitating the increase in Private Equity activity.

[6] Investment Banking pg.161 (Rosenbaum & Pearl, 2009)

Finally, Private Equity became internationalized as GPs raised funds in the UK, Canada, Australia and Continental Europe.

After the boom period of the 1980s, the Private Equity industry encountered its first slump during the recessionary period of the 1990s. This recession resulted in a significant retraction in the "junk bond" market, which further hurt the Private Equity industry.

The late 1990s saw improved growth in the economy and Private Equity, especially the subset of the Venture Capital industry, began to grow again with the advent of the internet boom. This re-birth was followed by another retraction in 2001 as the internet bubble burst, resulting in a significant correction in the Venture Capital industry, with rippling effects in the overall Private Equity industry. However, the Private Equity industry quickly recovered from this due to the presence of low interest rates and the innovation of structured finance products such as Collateralized Debt Obligations (CLOs) that increased the availability of debt financing (Kaiser & Westarp, 2010).[7]

Finally, the period of the 2000s saw an institutionalization of Private Equity with the development of large Private Equity firms such as Blackstone and Carlyle. Also, although the Private Equity industry experienced a slump during the Financial Crisis in 2008, it started recovering quickly by 2010 due to the low-interest-rate environment created by Central Banks across the globe through their quantitative easing policy.

As we can see from the history of the Private Equity industry, it is a cyclical industry, and factors such as the availability of debt financing, the global interest rate environment and the regulatory environment influence the evolution of its cycle.

e. Current Trends in Private Equity [8]

With the persisting low-interest rate-environment, investors have been seeking higher returns in alternative investment strategies, particularly Private Equity. The low returns

[7] Kaiser & Westarp pg.8 (INSEAD Research Paper, 2010)
[8] Bain & Co (Global Private Equity Report, 2019)

from traditional asset classes have led to Private Equity funds to attract a significant amount of capital from investors. In 2018, GPs raised $714bn from investors, increasing the total Private Equity capital raised since 2014 to $3.7tn[9]. The chart[10] below shows the evolution of fundraising in different investment strategies within the overall Private Equity universe.

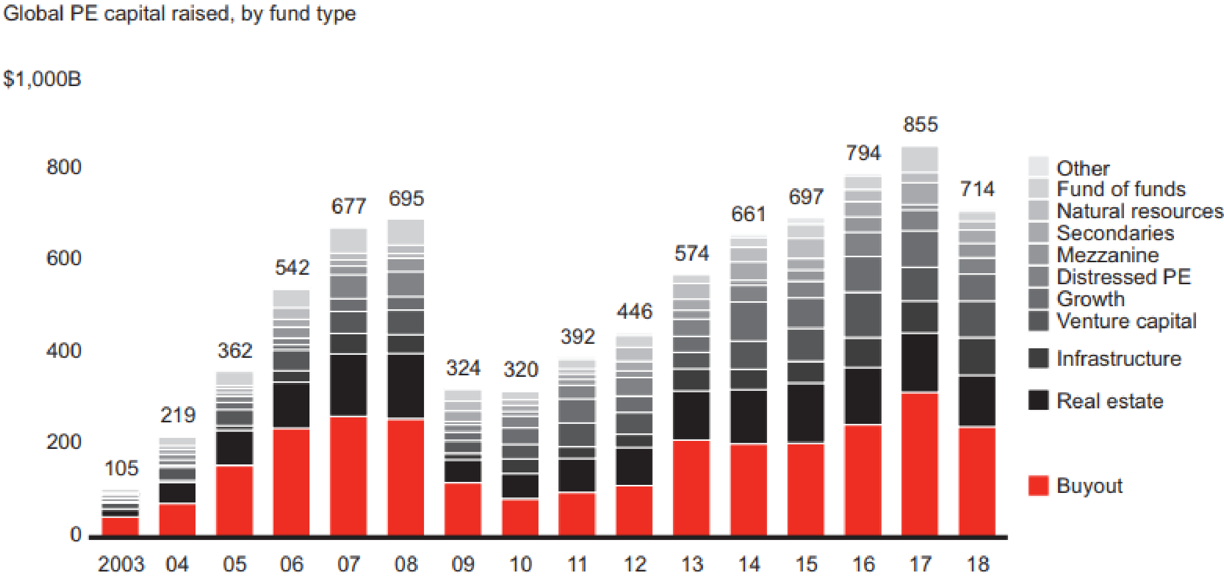

Figure 1: Global PE Capital Raised (according to type of Fund)

One effect of this massive capital surge into Private Equity has been the significant rise of "dry powder" held by Private Equity funds. According to Bain & Co (2019), global Private Equity dry powder has been increasing since 2012 and reached a record high of $2tn at the end of 2018 ($695bn for Buyout funds). However, it is essential to note that around 67% of the dry powder of Private Equity funds has been raised over the last two years[11]. The chart[12] below shows the evolution of dry powder held by Private Equity funds over time.

---

[9] Bain & Co (Global Private Equity Report pg.36, 2019)
[10] Preqin
[11] Bain & Co (Global Private Equity Report pg.36, 2019)
[12] Preqin

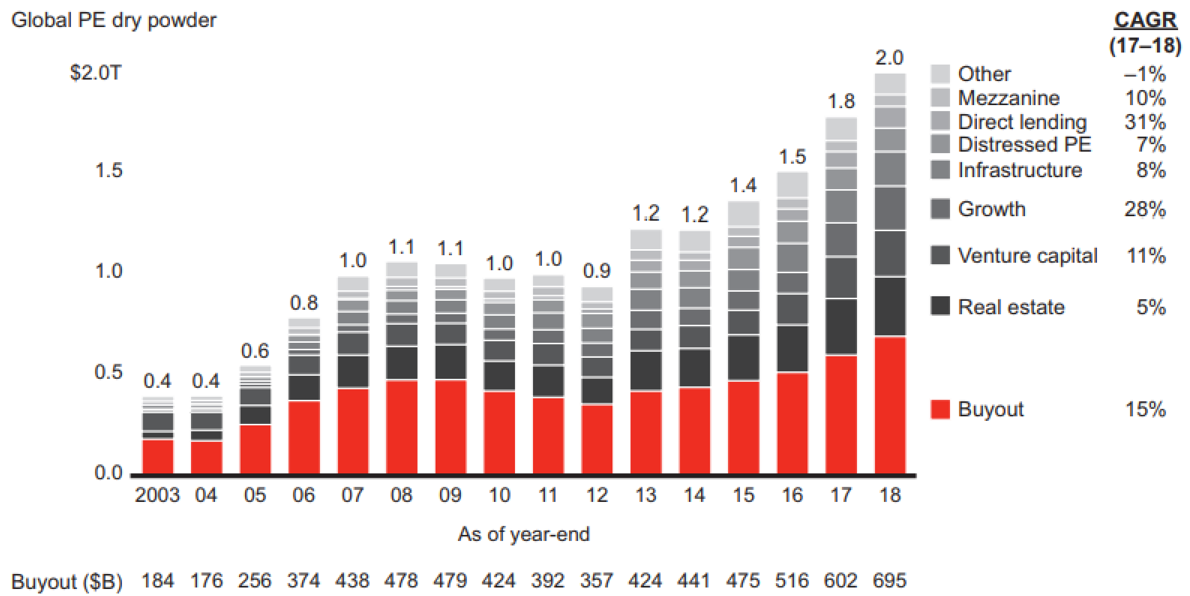

Figure 2: Global PE Dry Powder (according to type of Fund)

Finally, due to this increase in dry powder, Private Equity firms are facing significant pressure to source and execute deals. This pressure to do deals has led to stiff competition amongst Private Equity firms, which has increased the valuation multiples of Private Equity led transactions. As can be observed in the chart below[13], Private Equity firms cite "High transaction multiples" as the most significant challenge they are facing right now.

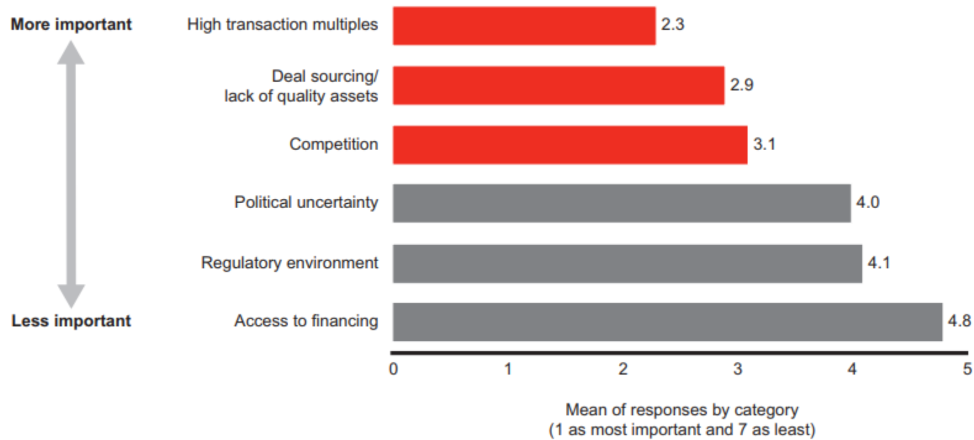

Figure 3: Private Equity firms key concerns survey

[13] Crystal Ball Report 2018 (Pitch Book Data Inc.)

II. Overview of Leveraged Buyouts

a. Description of LBOs

The basic idea behind a Leveraged Buyout (LBO) is that a financial sponsor (usually Private Equity firm) acquires a target company (OpCo) with a significant proportion of the purchase price financed with Debt, and uses the future cash flows of the target company to service this Debt.

The LBO transaction is structured in such a way that a holding company (HoldCo) is created, capital is injected into this HoldCo, and then the HoldCo purchases the shares of the target company. This method is known as the "KKR method" after the Private Equity firm that initiated such a transaction. On the other hand, in some cases, the HoldCo will only acquire the assets of the target company. This is known as the "Oppenheimer method" based on the Investment Bank that introduced this structure. The reasoning behind this type of structure where a HoldCo is used is that from an accounting perspective, it is liable to benefit from the effect of high financial gearing through "tax-consolidation" between the HoldCo and OpCo.

At the end of the holding period (exit), the remaining Net Debt is subtracted from the Enterprise Value of the OpCo, and the result of this is the Equity Value available to all Equity investors. Then, the Private Equity fund takes its share of the Equity Value and analyzes its return based on the initial amount of Equity it injected in the LBO transaction.

According to Vernimmen (2017), the three main exit strategies for an LBO transaction include a sale to a trade buyer, sale to another financial sponsor and/or stock market floatation.

Sale to trade buyer: In most cases, this is an "ideal" situation as these strategic buyers are usually expecting synergies from the acquisition of the target company and therefore, can afford to pay a higher price. Moreover, this sends a signal that the target company now has "strategic value" and that this was a result of the improvements led by the Private

Equity firm in aspects such as operational changes, market share expansion, corporate governance initiatives etc.

Sale to another financial sponsor: These secondary LBOs are becoming more common (especially in France) and are commonly referred to as “secondary LBOs”.

Stock market floatation: If there are no trade buyers or financial sponsors willing to acquire the target company, the Private Equity firm resorts to taking the company public and gradually exiting its stake through selling its shares on the stock market. This scenario is common when the target company is huge and/or is already a market leader in this industry. The fact that the Private Equity firm cannot sell its entire stake immediately hurts the IRR of the investment. Moreover, the IPO valuation of a company does not include a control premium, resulting in a lower Exit Valuation. Finally, this type of exit might be more valuable to the target company’s senior management as their stock options get more liquidity, and they can sell at the optimum time.

b. Main players in an LBO transaction

Private Equity Fund (PE Fund):

Given that LBO transactions are complicated and require specific expertise, a Private Equity firm initiates and leads an LBO transaction intending to achieve a certain level of return on its investment. Moreover, during the holding period of an investment, the Private Equity firm aims to improve the target company by taking initiatives that enhance its operating profile. Given the high level of risk involved in an LBO transaction, the required IRR is usually in the range of 20%-25%.

The Private Equity Fund mainly invests in the Equity of the holding company and becomes the controlling shareholder. Moreover, to reduce its risk exposure, the Private Equity Fund can invest alongside other funds and minority investors (co-investors such as LPs in the Private Equity Fund).

Target Company (OpCo):

The target company is the central focus of an LBO transaction. The foundation of a successful LBO transaction depends on the ability of the target company to generate sufficient cash-flows to service the Debt of the holding company used to acquire the OpCo. Moreover, the operating model of the ideal target company should have a clear emphasis on effective cash-conversion and minimum investment needs.

As a result of this emphasis on cash-flows in LBO transactions, companies that operate in industries that are relatively shielded from changes in the business cycle, have high barriers to entry and minimal substitution risk are preferred LBO candidates. Some examples of such industries include food, retail, building materials, real estate, cinema theatres etc.

While traditionally targets for Private Equity funds have been "cash-cows" from stable industries, there has been an increase in targeting companies that exhibit higher growth or are operating in sectors that could benefit from a consolidation focused investment strategy.

Debt Providers:

Debt financing is central to an LBO transaction and is mainly provided by a consortium of Banks, Hedge funds and Mezzanine funds. Given the complexity and riskiness of an LBO transaction, different tranches of debt are used to finance the purchase. These mainly include senior tranches such as traditional Bank Loans and more subordinated types of debt such as High-Yield Bonds and Mezzanine Financing. The different types of Debt financing tools appeal to the various risk appetites of Debt investors. Moreover, since different types of debt have different varieties of "covenants" attached to them, the Private Equity fund can optimize Debt financing in a way most suitable to the OpCo.

In the majority of cases, most of the debt sits at the HoldCo level and is serviced through dividends paid by the OpCo to the HoldCo. Moreover, some types of Senior Debt can later be allocated to the OpCo level – this allocation is called "Debt pushdown.

As opposed to Equity holders, Debt providers are aiming for a fixed return on their investment and so they care more about the OpCo being able to service the debt even in a downside scenario, rather than focusing on what upside could result from an increase in the value of the OpCo.

Sellers at Entry:

According to Vernimmen (2017), around 50% of LBOs are carried out on family-owned companies. A significant reason for this is that by selling to Private Equity funds, families that own businesses can avoid dealing with complicated succession issues. Apart from this, in around 40% of LBO transactions, a large strategic buyer usually sells off a division that it deems non-core to its operations. Most of the large transactions fall under this category.

Finally, in some cases, there are "Public-to-Private" LBO transactions in which a listed company, which is generally undervalued (often to due limited liquidity), opts to become private and delist from the stock exchange.

III. Literature Review of Value Creation in Traditional Leveraged Buyouts:

a. Michael Jensen (1989): Eclipse of the Public Corporation

In 1989, Michael Jensen wrote a paper titled "Eclipse of the Public Corporation" in which Jensen argued that the publicly held corporation had "outlived its usefulness" (Jensen, 1989) in a significant number of industries within the overall economy and that this organizational structure was being replaced by "the private corporation" through Leveraged Buyouts and "take-private" transactions. Jensen (1989) argued that this shift towards the privately-held corporate structure was a result of a source of value destruction in public corporations arising from "the conflict between owners and managers over free cash flow".

Jensen (1989) attributed the rise of Private Equity and Leveraged Buyout transactions (particularly "Public-to-Private" transactions) in the 1970s and 1980s to the value destruction caused by the inappropriate allocation and use of capital by managers of public corporations.

Jensen (1989) argued that particularly in mature industries such as steel, tobacco and wood & paper products, the public corporation was not an effective method of organization. These mature industries are characterized by low long-term growth, "cash-cow" companies and minimal opportunities to invest cash in investments that generate a return at least equal to the cost of capital for the firm. As a result of these characteristics, managers in these industries are easily seduced to "waste cash flow through organizational slack or investments in unsound projects" (Jensen 1989) [14].

These value destructive decisions by management can be attributed to the age-old "principal-agent" problem, which is a result of the separation of ownership and management of a company. In theory, this problem should be mitigated by three major forces that are faced by public corporations: "Product Markets, Internal Control systems represented by the Board of Directors and the Capital Markets"[15]. However, according to Jensen (1989), these forces have mostly failed to stop managers from taking value destructive decisions. First, with regards to the discipline enforced by-product markets, large and vibrant national markets such as those in major economies such as the US tend to create significant competitive advantages which competitors find hard to reverse. Second, the concept of a Supervisory Board of Directors has proved inefficient as these directors are usually "outsiders" and do not have an Equity stake in the company. This reduces their ability and willingness to monitor and discipline management properly. Finally, capital markets are the force that has maintained most of the discipline of public corporations. However, given the high purchase premiums paid in "Public-to-Private"

[14] Pg.5 (Jensen, 1989)
[15] Pg.6 (Jensen, 1989)

transactions, it can be argued that the management of public corporations can destroy a significant amount of value before a capital market correction occurs.

Jensen (1989) introduces the "LBO Association" (Buyout Private Equity Fund) as an organizational structure which can highly mitigate or even eliminate the classical "Principal-Agent" problem which is salient in the public corporation. Jensen (1989) illustrates that there are a variety of reasons due to which ownership by a Private Equity fund results in the resolution of the "Principal-Agent" conflict.

To start with, when the majority ownership of the company is in the hands of one owner (in this case the Private Equity fund), it is easier to monitor and discipline the management team, and therefore, there are fewer information asymmetries between investors and managers. Second, in the case of LBO focused Private Equity funds, a significant amount of Debt financing is used to fund the transaction. As a result of this, management has less cash available as it needs to meet interest and debt repayment schedules. According to Jensen (1989), the interest and debt repayment cash outflows act as "dividends" that management is forced to pay, and this result in management developing a cash-flow centric approach to business operations. Moreover, as management has less excess cash, the probability that this cash would be spent on projects that yield less than the company's cost of capital (negative NPV projects) is reduced. Lastly, the Private Equity fund endeavours to better align the goals of investors with managers through incentives such as a significant Equity share, stock-options, warrants and carried interest.

According to Jensen (1989) due to these differences between Private Equity and Public ownership, the management teams of PE-backed companies make better use of free cash flow and overall better managerial decisions. Moreover, the businesses under Private Equity ownership have better growth rates, improved margins and better free cash flow generation through active working capital and capital expenditure management.

Although Jensen's prediction in his 1989 paper has not entirely come about, i.e., the public corporation has not wholly been eclipsed, the relentless rise of Private Equity adds weight to Jensen's argument (Jensen, 2007).

b. Gottschalg & Berg (2005): Dimensions of Value Generation in Buyouts

In 2005, Gottschalg & Berg wrote a paper focusing on a conceptual framework for analyzing value creation in Leveraged Buyouts. The introduced the idea of different value generation "levers" and specified how these levers were related to three dimensions of LBOs[16]:

1) The different phases of LBO transactions

2) How these levers cause value generation

3) Whether they originate intrinsically from the target company or are a result of the interaction between the target company and the Private Equity firm

We begin by explaining these three dimensions.

Phases of Buyout Value Generation

Gottschalg & Berg (2005) breakdown Leveraged Buyouts into three phases: Acquisition Phase, Holding Phase, and Divestment Phase. The importance of these distinctions is to be able to identify "when value generation decisions are taken and during which phase value generation ultimately takes place" [17].

The first phase is the acquisition phase, which involves due diligence, business plan forecasts and negotiation with regards to the purchase price and other particularities. If the Buyout transaction is being initiated by the target company's management (MBO), it is crucial at this stage to put forth the principles that would govern the interaction between the management and the financial sponsor. Moreover, the valuation of the

[16] Pg.11 (Gottschalg & Berg, 2005)
[17] Pg.11 (Gottschalg & Berg, 2005)

company is a fundamental value determinant at this stage. The Purchase price at which the Private Equity firm conducts the transaction would set a hurdle or “floor” on all subsequent valuations of the target company and would also represent a break-even point for the Private Equity firm. Also, during the final part of the acquisition stage, the Private Equity firm undertakes decisions the structure of the transaction, such as the degree of leverage used and the incentives given to management. Finally, it has been argued by Baker and Montgomery (1994) that a significant portion of value generation in LBO transactions is “front-loaded” and is a direct result of choices made during the acquisition phase of the deal.

After the target company has been acquired, the holding period begins. It is during this time that decisions about strategic direction, corporate governance and operational improvements are made. According to Gottschalg & Berg (2005), this is a very “iterative” phase during which the initial business plan is implemented through the planned operational improvements, and the business plan is continuously modified to evolving circumstances.

Finally, once the holding period ends, the divestment phase represents the final aspect of a Leveraged Buyout. In this phase, the Private Equity firm will determine the best route to exit the investment. Common exit routes include a sale to a strategic buyer, secondary LBO to another financial sponsor, and an IPO). In addition to this, the exit valuation will be negotiated with any buyer that shows an interest in acquiring the target company.

Causes of Buyout Value Generation

Gottschalg & Berg (2005) start with the proposition that value generation in Leveraged Buyouts is mainly analyzed from the viewpoint of the Equity holders of the target company. This means that the value generation would be seen as an appreciation of the Equity value of the target company over the holding period of the LBO. As such, Gottschalg & Berg (2005) break down Equity value into four components: [18]

[18] Pg.12 (Gottschalg & Berg, 2005)

Equity Value = Valuation Multiple * Revenues * Margin – Net Debt

Any change in Equity value has to stem from a change in at least one of these four components of Equity value. Following this proposition, Gottschalg & Berg (2005) introduce an important classification and breakdown value generation in two types: "value capturing" and "value creation".

Value capturing is linked to the increase in Equity value solely due to changes in the target company's valuation. In the equation above, this is represented by the "Valuation Multiple". The company's valuation multiple can change due to financial reasons (increased growth, improved EBITDA margin etc.) and additional factors such as the market optimism/pessimism prevalent in investors during a particular period (market timing). Also, valuations during the acquisition and divestment of a target company can be influenced during the negotiation process. Primarily, Value capturing refers to the type of value generation that occurs regardless of a change in the underlying financial performance of a business. Industry players often refer to such situations as instances of "Multiple Expansion/Contraction", and these can be understood as a type of "arbitrage" situation where some party is willing to pay more/less for the same risk-adjusted cash flows.

As opposed to this, the second category of value generation, namely "value creation" is a result of a "fundamental change in the financial performance of the target organization". Value creation is a result of a significant change in any of the other three components of Equity value and is linked to improvements in revenues, margins and/or working capital and capital expenditure requirements. Private Equity firms endeavour to generate value creation by focusing on operational efficiencies (improved margins), increasing market share (revenue growth) and reducing the fixed and current assets required to operate the business at the same capacity.

Starting with this distinction between "value capturing" and "value creation", Porter (1985) and Stabell & Fjeldstad (1998) further sub-categorize these into "primary levers"

and "secondary levers". The primary levers have a direct effect on value generation through improved financial performance and increased cash-flow production. On the other hand, secondary levers which do not have a direct impact on value creation, but these levers add weight to primary levers. There are two secondary levers, namely: reduction of agency costs and mentoring provided by new Equity investors (in the case of Buyouts – the Private Equity firm).

The figure below shows a breakdown of value generation and the different types of primary and secondary levers:[19]

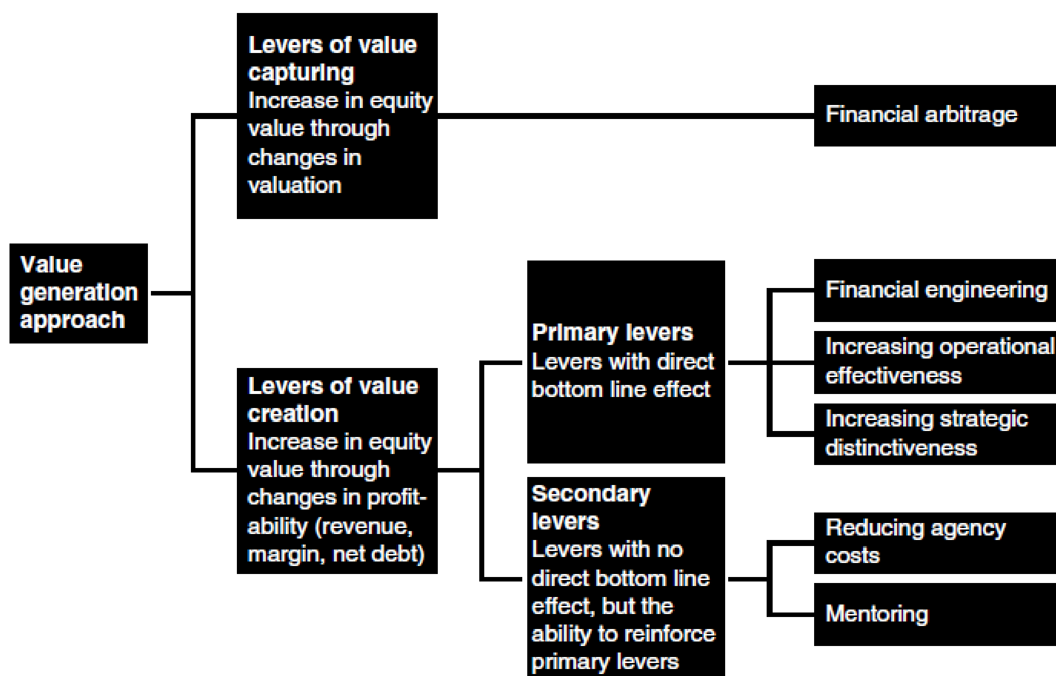

Figure 4: Value Creation Framework (Gottschalg & Berg 2005)

Sources of Buyout Value Generation

According to Gottschalg & Berg (2005), the third dimension of different types of value generation can be "distinguished according to the degree to which they depend on specific characteristics of the Equity investors involved in the buyout."[20] This dimension can be represented by two opposing ends. On the one hand, would be cases of value

[19] Pg.13 (Gottschalg & Berg, 2005)
[20] Pg.13 (Gottschalg & Berg, 2005)

generation that cannot in the slightest be attributed to the actions or initiatives taken by the Equity investors in an LBO context. This type of value generation is termed "intrinsic value generation" by Gottschalg & Berg (2005), implying that this form of improvement in the portfolio company comes with no influence from the Private Equity firm. As opposed to this, we have what Gottschalg & Berg (2005) call "extrinsic value generation". This refers to situations where value generation is a result of "specific expertise of the equity investors" which leads to "improvements in the financial performance of the portfolio company that would not have been possible with the skills previously available at the portfolio company itself". [21]

c. Gottschalg & Berg (2005): Levers of Value Generation in Buyouts

After illustrating the various dimensions of value generation in LBOs, Gottschalg & Berg (2005) move on to describing the multiple levers of value generation and allocate these to the specific dimensions highlighted earlier.

Lever of "value capturing": Financial Arbitrage

As discussed in the previous section, value capturing is a result of financial arbitrage where "the ability to generate returns from differences in the valuation applied to a company between acquisition and divestment independent of changes in the underlying financial performance of the business" ("buy low – sell high" strategy). [22] Financial arbitrage stems from four factors:

- Market valuation multiples for comparable companies:

The valuation multiples can be affected by the exogenous effect of change in public markets valuation multiples. This would depend on how correlated the valuation of the portfolio company is to changes in overall public market sentiment. Practitioners often refer to this type of financial arbitrage as "multiple riding". This value capturing lever

[21] Pg.13 (Gottschalg & Berg, 2005)
[22] Pg.14 (Gottschalg & Berg, 2005)

does not affect the performance of the underlying business, is extrinsic to the company as it depends on the ability of the Private Equity firm to "time the market", and it is determined during the acquisition and/or divestment phase of the investment process.

- Private Information

It has been argued by DeAngelo (1986) and Jensen (1989a) that the management team of a buyout target company can take advantage of insider information in MBO situations, i.e. where the management team also invests an equity stake in the LBO transaction. According to DeAngelo (1986), Hite & Vetsuypens (1989) and Lowenstein (1985), in certain situations, the incumbent management team could manipulate forecasted earnings of the company to invest in the equity of the company at a lower purchase price. In such a scenario, the management team uses the inside information it has about the underlying company to its benefit and to the detriment of other shareholders of the company who do not have access to this information, are not participating in the LBO, and therefore, end up receiving a lower price for their Equity stake. According to Lee (1992), insider information is a crucial reason for the initiation of MBO (LBOs led by management teams in partnerships with Buyout funds).

- Varying expectations of future business and/or industry performance

According to Andres (1992), given the exposure Private Equity firms have with a wide variety of companies and management teams, they can build strong industry expertise. Fox & Marcus (1992) build on this and argue that this industry expertise allows Private Equity firms access to in-depth market information and increases their ability to interpret this information effectively. This can be a source of competitive advantage compared to other participants in the market when it comes to acquiring and/or divesting portfolio companies.

- Negotiation process during acquisition and divestment

According to Baker & Smith (1998) and Wright & Robbie (1996), financial arbitrage can be a result of the Private Equity firm have superior "deal-making" abilities which mainly

manifest during the acquisition and divestment phase of the LBO transaction. One source of such distinguished deal-making ability can be what practitioners call "proprietary deal-flow". This is when a Private Equity firm bids on target companies with very little competition due to its differentiated sourcing efforts. Anders (1992) states that well-established Private Equity firms conduct regular market reviews and keep on top of any market developments. This, in turn, allows them to develop significant relationships with a critical network of potential target companies, which can result in privileged access to future transaction opportunities. This privileged access means that the acquisition price would be lower than if the Private Equity firm had to compete with other financial sponsors in a competitive bidding process. In addition to this, Private Equity firms can leverage this network to increase the divestment value of portfolio companies by identifying the most suitable strategic buyer. Finally, according to Butler (2001), the negotiation skills of buyout firms have a significant impact on the acquisition and divestment price of portfolio companies.

Levers of "value creation"

After having evaluated financial arbitrage as the driver behind "value capturing", we move on to discussing the various levers that effect "value creation". As a reminder, unlike financial arbitrage, levers of value creation are related to the improved business performance of the underlying portfolio companies. We will divide these levers into primary and secondary levers and start our discussion with the former.

Primary Levers

Financial Engineering:

Financial engineering involves optimizing the capital structure of the underlying portfolio company and minimizing the post-tax cost of capital for the company. According to Anders (1992), the buyout firm's financial engineering skills assist in optimizing the capital structure of the underlying portfolio company. In addition to financial engineering skills, buyouts firms typically have close relations with debt and

equity financing providers, and they enable the portfolio company to get access to financing at favourable terms. In addition to this, the increased leverage in buyout transactions results in a significant reduction in corporate tax and a drop in the post-tax cost of debt for the portfolio company. This is because the increase in debt results in a higher tax-deductible interest expense and provides a "tax shield", increasing overall cash flows (Kaplan 1989a and Singh 1990).

However, it is essential to note that many researchers point out that the cost of capital is independent of the fact that a significant amount of debt is used to fund an LBO transaction. This is because in most situations, the tax shield offered by debt is offset by the higher cost of debt due to the higher risk of default as leverage increases. Rappaport (1992: 102) argues: "borrowing per se creates no value other than tax benefits. Value comes from the operational efficiencies debt inspires." Finally, according to Baker and Smith (1998), as the buyout industry becomes crowded and the overall market matures, buyout firms are forced to increase the value of their portfolio companies with means other than financial engineering.

Increasing Operational Effectiveness:

Initiatives are taken by Private Equity firms to improve operational effectiveness. Such efforts typically aim at increasing the earnings margin and/or increasing the cash flow generated by the underlying portfolio company. These initiatives do not aim at altering the strategic positioning of the company; rather the focus in these steps is to recalibrate the existing resources and processes within the portfolio company. The two broad ways in which operational effectiveness is increased include reduction of costs and improving margins, and reducing the capital expenditure and working capital while removing managerial inefficiencies.

With regards to cost cutting and margin improvements, buyout firms immediately tighten corporate expense and try to find areas where cost improvements are feasible (Anders, 1992 & Kaplan 1989a). Typical cost-cutting initiatives include outsourcing

production overseas and take advantage of cheaper labour in developing countries and endeavouring to reduce corporate overheads by making the organizational structure less bureaucratic (Butler, 2001).

Apart from cost cutting measures, buyout firms try to reduce the amount of capital expenditure and working capital that is required to run the portfolio company. Typically working capital is the first area that is aggressively rationalized and more professional management of inventories and accounts receivables is brought to the table by the Private equity firm. During their research, Holthausen & Larcker (1996) discovered that portfolio companies of buyout firms typically have a lower amount of working capital requirements compared with their industry peers. From a capital expenditure standpoint, buyout firms usually disallow any investment programs that do not return a positive NPV and sell underused or unnecessary assets resulting in additional cash flow available to pay down debt. The buyout firm makes these cuts in capital expenditure while keeping in mind that such cuts should not affect the portfolio company's ability to compete in the industry.

Finally, Anders (1992) illustrates that a critical role of buyouts in improving operational efficiencies in a company involves changing inefficient management teams. Jensen & Ruback (1983) propose that buyout firms are a vital vehicle in identifying companies that are underperforming due to an incompetent management team, and changing these management teams to "remove the cause of underperformance".

Increasing Strategic Distinctiveness:

In addition to improving the portfolio company's operations, the buyout firm can reconfigure the strategic direction of the company. This often involves decisions about entering new markets, launching new products, altering distribution channels and changing the marketing mix. As opposed to operational changes, which reallocate the company's existing resources, a strategic change would result in "a substantial change in

the resource base of the company". [23] According to Seth & Easterwood (1993), buyout funds focus on reducing the overall complexity of their portfolio companies by removing activities that do not add to the core competitive advantage of the company. Moreover, further resources are only injected into initiatives that aim at improving or reinforcing the company's main strategic position.

However, the changes in strategic direction that buyout funds encourage are not exclusively focused on downsizing peripheral activities. There is an increased focus on improving the growth of portfolio companies. As Butler (2001) argues, successful exits of LBOs that include a sale to a strategic buyer or an IPO requires that there be a significant potential for growth in the underlying company. Buyout firms improve the growth potential of their portfolio companies through internal growth initiatives such as launching new products, expanding to new geographies, and targeting unexplored customer niches. In addition to this, buyout firms pursue inorganic growth strategies for their portfolio companies where a "Buy & Build" approach seeks external growth through acquisitions of other smaller companies that provide access to new markets, improve resource efficiency and offer distinct competitive advantages such as access to unique distribution channels.

Secondary Levers

Secondary levers have an indirect effect on value creation and they influence financial performance through the primary levers. The two broad categories of secondary levers are: "reduction of agency costs" and "mentoring".

Reducing agency costs

The reduction of agency costs in buyout scenarios has an indirect effect on the financial performance of the company as it facilitates the primary levers of value creation. According to research by Opler & Titman (1993), agency costs are an essential factor in leveraged buyout transactions. According to Gottschalg & Berg (2005), reduction of

[23] Pg.19 (Gottschalg & Berg, 2005)

agency costs has three major dimensions: reduction of agency costs of free cash flow, improving incentive alignment, and improving monitoring and controlling.

Leveraged buyouts can reduce agency costs of free cash flow by the use of significant amounts of debt to fund the transaction and thereby to limit the degree of discretion that management has with regards to the use of free cash flow. According to Jensen (1986), the "discipline of debt" forces managers to generate enough free cash flow to service interest and repayment schedules and discourages them from investing cash in value-destructive projects. In addition to this, managers are incentivized to ensure high free cash flow generation because if the debt is not serviced, the probability of bankruptcy increases, which can have significant reputational costs for management. Another effect of high leverage is that it involves financial lenders who have a substantial stake in monitoring the decisions made by management, and also, the maintenance covenants enforced by lenders keep a check on management. According to Thompson et al. (1992), debt providers have an advantage in monitoring companies due to the expertise lenders build up throughout their lending history.

Moving on, according to Cotter & Peck (2001) and Jensen (1986), buyout transactions improve the alignment of incentives between management and the Private Equity firm through a "carrot and stick" approach. Private Equity firms incentivize managers by offering them to significantly increase management's stake in the company's equity (the "carrot"), thereby increasing the "personal cost of inefficiency" [24] for the management team. Also, according to Jensen and Meckling (1976), by participating the equity of the company, management is incentivized to take value-increasing decisions regarding operations and investments as an increase in the Equity value of the firm results in a direct gain for the management team. Apart from these "positive" incentives for the management teams of portfolio companies, the fact that management has a significant equity stake in the company means that they have a large amount of "un-diversifiable" risk that acts as "the stick" and incentivizes managers to work towards increasing the

[24] Pg.22 (Gottschalg & Berg, 2005)

Equity value of the company. In addition to increasing management's equity ownership, Private equity firms also incentivize management through favourable pay-packages that are linked tightly to performance. Wright et al. (1994b) conducted empirical research which illustrated that management incentives were negatively correlated with failed MBOs.

In the end, LBO transactions by Private equity firms alter the governance dynamics of portfolio companies in a manner that makes it easier to monitor and control the company's management, thereby, reducing the agency conflict. The governance structure improves because a large proportion of the company's equity is concentrated in the hands of the Private Equity firm, which is an active investor and ensures a significant representation on the Board of the portfolio company. Also, professionals working in Private Equity funds are likely to have an advantage over passive equity investors in controlling and monitoring the decisions made by the management teams of portfolio companies. Since these Private Equity professionals are likely to have experienced numerous LBO investments in the past, their ability to monitor management teams is highly developed.

To sum up, the reduction of the agency conflict through the effects mentioned above is instrumental in enabling the success of the primary levers of value generation in LBO transactions. The determinants mentioned above reduce the inefficiencies caused by agency problems and incentivize management to take steps that improve the operational and strategic direction of the business and maximize its value. The various factors that reduce agency costs can be deemed secondary levers of value generation. These levers are primarily put in place during the initial acquisition phase.

Mentoring

Gottschalg & Berg (2005) define mentoring as "a particular form of parenting advantage". Moreover, Goold et al. (1994) deem mentoring to be comparable to the effect that being a constituent division of a large conglomerate has. Gottschalg & Berg (2005) breakdown

mentoring into two components: “restoring an entrepreneurial spirit” and “advising and enabling portfolio companies”.

To start with, LBO transactions often involve the acquisition of “non-core” divisions of large conglomerate companies that have been the victim of significant inattention by the parent company. As a result, these companies have abandoned the pursuit of innovative strategies and develop risk-averse cultures in which entrepreneurial drive is stifled. Private Equity firms undertake a variety of initiatives to restore the entrepreneurial drive in the management teams of portfolio companies. Buyout funds closely liaise with management teams and encourage them to come up with innovative ideas that improve operational efficiencies. Moreover, the leaner governance structure and improved communication with investors in post LBO scenarios allow management teams to escape the highly bureaucratic structure of large corporations, and this makes it easy for them to implement their initiatives. Researchers such as Beaver (2001), Houlden (1990) and Samdani et al. (2001) describe this changed mindset of management teams as “LBO fever” or “adrenalin” which makes management highly willing to take any steps required to making the LBO a success.

IV. Measuring Value Creation

In this section, we shall define the various ways in which we can measure the amount of value creation in an LBO context. Moreover, we shall categorize different measures of value creation based on which stakeholders are being referred to. In terms of structure, we will begin by defining the traditional measures of value creation for the entire firm, after which we will look at value creation from the equity holders’ point of view (mainly the Private Equity firm). Finally, we will analyze value creation from the debt holders’ perspective.

Value Creation for the entire Firm

We will start off by elaborating on the traditional methods of measuring value creation for the entire firm.

ROCE - WACC

The spread between a firm's "Return on Capital Employed" (ROCE) and the cost of capital for the firm is the traditional method of analyzing value creation form the point of view of all investors (Equity and Debt) for the firm. Moreover, this method of looking at value creation is academically sound.

The cost of capital is typically defined as the "Weighted Average Cost of Capital" (WACC). The principle foundation of corporate finance states that a project or firm can only create value if its return on invested capital is greater than its cost of capital. In cases where this return is lower than the cost of capital (ROCE < WACC), value is actually destroyed. The breakdown of ROCE and WACC is illustrated in the formulae below:

$$ROCE = \frac{NOPAT}{Capital\ Employed}$$

$$NOPAT\ = EBIT \times (1 - Effective\ Tax\ Rate)$$

$$Capital\ Employed = Fixed\ Assets + Working\ Capital\ Requirements\ (WCR)$$

$$WACC = COE \times \frac{E}{D+E} + COD \times (1 - Effective\ Tax\ Rate) \times \frac{D}{D+E}$$

We now move on to defining some of the key variables mentioned in the breakdown above:

- COE: This refers to the firm's "Cost of Equity", which represents the required return for Equity holders given the riskiness of the firm's cash flows. Practitioners calculate the Cost of Equity by using the CAPM model: $Cost\ of\ Equity = r_f + \beta \times (r_m - r_f)$. In this equation, the r_f refers to the risk-free rate in the wider economy the business operates in. Typically analysts use the yield on 10-y government bonds as a proxy for this metric. Moreover, β ("Beta") is a measure of the volatility of a stock and is used as a proxy to measure the inherent riskiness of a firm compared to the riskiness of the overall market.

Finally, $(r_m - r_f)$ refers to the "market risk premium" which is defined as the excess return investors can achieve by investing in equities vs risk-free bonds.

- COD: This refers to the firm's "Cost of Debt", which represents the required rate of return that Debt holders expect when lending funds to the business. This is usually determined by looking at comparable debt issuances (in terms of credit rating) and using their yield as a proxy for the firm's cost of debt.

- E and D: These respectively refer to the "economic values" of Equity and Debt of the firm.

Limitations of ROCE – WACC

There are a number of limitations and things to keep in mind when looking at these measures of value creation for the firm. To start with, since ROCE is an accounting figure, management teams of firms can artificially increase this metric. There are numerous ways in which this can be done:

- Decreasing Capital Employed through off-balance sheet financing which would automatically boost ROCE.

- Temporarily reducing tax expense and D&A through "creative accounting" would also increase the NOPAT and thereby increase ROCE.

In order to account for the probability of "managed earnings" figures, it is important to look at the evolution of ROCE over time and be diligent about the firm's accounting practices and if these have significantly changed at some point.

Breaking down the ROCE

Assuming that WACC is held constant, value creation becomes a function of increases in the ROCE. We now attempt to illustrate a breakdown of the various drivers that can potentially increase ROCE.

To start with, we can break down the Capital Employed portion of the ROCE formula into Fixed Assets and WCR. To analyze Fixed Assets, one can examine the evolution of a firm's CAPEX spending (as a % of Revenue). Moreover, CAPEX can be further broken down into "Maintenance CAPEX" and "Growth CAPEX". As discussed earlier, Private Equity firms reduce the capital requirements of their portfolio companies, divest fixed assets which are not considered to be essential to maintaining or improving the core competitive advantage of the firm, and only engage in CAPEX spending for positive NPV projects. As a result of these initiatives, Fixed Assets are reduced and/or earnings are increased with the same proportion of Fixed Assets, thereby boosting ROCE. In addition to this, Working Capital Requirements are driven by "Days of Turnover", "Days of Payables", and "Days of Receivables". Private Equity firms liaise with the management teams of their portfolio companies in order to renegotiate customer and supplier contracts, and improve production and inventory efficiency in order to reduce the amount of capital required for the firm's working capital cycle. This also increases ROCE as the Capital Employed decreases while the earnings are maintained.

After having analyzed the Capital Employed part of the ROCE formula, we can now breakdown the profitability numerator. In this case, we can separate the effects of revenue growth and cost reduction. From the revenue perspective, we can further categorize revenue growth into organic and inorganic (through M&A) growth. This allows us to identify the extent to which a "Buy-and-Build" strategy was effectively used by the Private Equity firm to grow the revenues of its portfolio company. From a cost perspective, we can split costs into fixed and variable costs and analyze how the operational improvements initiated by the Private Equity firm reduce the cost structure of the firm.

Value Creation for the Equity holders of the firm

ROE - COE

From the point of view of the Equity holders of a firm, value is created when the Return on Equity is higher than the Cost of Equity (the return that shareholders require given the riskiness of the firm's cash flows). Therefore, value creation for Equity holders can be measured by computing the spread between the Cost of Equity (calculated using CAPM) and the Return on Equity. The breakdown of Return on Equity (ROE) is given below:

$$ROE = \frac{Net\ Profit}{Total\ Equity}$$

Moreover, the equation below illustrates the relationship between ROCE and ROE. As can be observed from this equation, the leverage effect boosts ROE for the same level of ROCE given that ROCE is higher than After-Tax Cost of Debt.

$$ROE = ROCE + \frac{D}{E} \times (ROCE - Post - Tax\ COD)$$

Methods used by Practitioners: IRR and Cash-on-Cash Multiple

Most Private Equity professionals use the IRR and Cash-on-Cash metrics to analyze the viability of a future LBO transaction (ex-ante), as well as judging the actual performance of the investment post-exit. These metrics differ from the ROE, which is an accounting metric, and are focused on the cash flows relating to the investment.

In terms of definition, the IRR is the rate of return that makes the NPV of the investment equal to zero. On the other hand, the Cash-on-Cash multiple is simply the ratio of total cash inflows/outflows (from the standpoint of the Private Equity fund). It is important to note that, unlike the IRR, the Cash-on-Cash multiple does not take into account the effect of the "time value of money". As a result of this, the Cash-on-Cash multiple will not be used as an evaluation tool for value creation.

In addition to this, the IRR metric is unsuitable for measuring value creation due to the following reasons:

- IRR ignores the Cost of Capital

- It is not possible to use the IRR as a metric to compare projects that have different durations

- IRR can give conflicting results when compared with the NPV analysis

- The IRR has a built-in assumption regarding the discount rate for the transaction being evaluated. However, in LBO scenarios, it is more accurate to calculate the spread between ROE and COE to determine a time-varying discount rate.

Despite the shortfalls of the IRR and Cash-on-Cash multiple, practitioners still use these metrics to evaluate investments because:

- These metrics are used throughout the industry and are used by Private Equity firms when they attempt to raise capital from investors for new funds. Also, the hurdle rate agreed with fund LPs is based on the IRR.

- The IRR is a useful tool to evaluate cash-flow generation in the context of a particular LBO investment. Moreover, the IRR can be decomposed and it can reveal the specific sources of cash-flow generation, allowing for a more detailed analysis of an LBO transaction.

Breaking down the IRR

The "Traditional Method" was posited by Engel (2011) and involves breaking down the IRR into three distinct effects: leverage effect operational improvement effect (further decomposed into FCF and EBITDA Enhancement Effect), and EBITDA multiple effect.

- Leverage Effect: Acharya & Kehoe (2009) propose the following equation to distinguish between levered and unlevered IRR and isolate the effect that leverage has on the IRR of an LBO transaction.

$$Levered\ IRR = Unlevered\ IRR + (Unlevered\ IRR - Cost\ of\ Debt) \times \frac{D}{E}$$

- Operational Improvement: The operational improvement effect can be further decomposed into two parts: FCF and EBITDA enhancement effects. The FCF Effect takes into account the cash generated by the OpCo for dividends or debt repayment. The EBITDA enhancement effect refers to the portion of the IRR that can be attributable to the increase in earnings of the portfolio company. The EBITDA enhancement effect can be driven by increased revenues or cost-cutting measures that purely improve the EBITDA margin. The calculation method of the EBITDA enhancement effect is given below:

$$EBITDA\ Enhancement\ Effect = Change\ in\ EBITDA \times Entry\ EBITDA\ Multiple$$

- EBITDA Multiple Effect: This measures the contribution of the change in the EBITDA valuation multiple towards the IRR. It is calculated using the formula below:

$$EBITDA\ Multiple\ Effect = Change\ in\ EBITDA\ Multiple \times Entry\ EBITDA$$

In the context of our own case study, we will use the traditional method proposed by Engel (2001) and further breakdown the EBITDA enhancement effect into the effects of Sales Growth, EBITDA margin improvement, and a Combination of both these effects. The formulas below exhibit the approach we will use to calculate these measures of value creation:

$$Sales\ Growth\ Effect = (Exit\ Revenue - Entry\ Revenue) \times Entry\ EBITDA\ Margin \times Entry\ EBITDA\ Multiple$$

$$Margin\ Improvement\ Effect = Entry\ Revenue\ \times (Exit\ Margin - Entry\ Margin) \times Entry\ EBITDA\ Margin$$

$$Combination\ Effect = (Exit\ Revenue - Entry\ Revenue)\ \times (Exit\ Marign - Entry\ Margin) \times Entry\ EBITDA\ Margin$$

Value Creation for the Debt providers of the firm

Like in the case for value creation for equity holders, to analyze value creation for lenders, we can evaluate the spread between the Cost of Debt and the Return on Debt. In most situations, the Return on Debt is equal to the Cost of Debt. Also, to calculate the Cost of Debt, practitioners usually take the sum of the risk-free rate and the Credit Default Spread (CDS) of similar debt issuances (i.e: Debt issuances of companies operating in the same industry and comparable in other aspects as well).

Literature Review: Value Creation in "Buy-and-Build" Private Equity strategies

a. Overview of "Buy-and-Build" strategies

Having given an overview of the current literature on value creation in the case of Leveraged Buyouts, we now move on to analyzing value creation in the context of a "Buy-and-Build" ("Buy-and-Build") strategy employed by Private Equity firms. A "Buy-and-Build" approach involves transactions where a Private Equity firm acquires a target company which plays the role of a "platform" used to make further acquisitions. These new acquisitions are called "add-ons", and according to Nikoskelainen and Wright (2007), these generally result in higher enterprise value for the platform company. In the subsequent discussion in this section, we will review the current literature on sources of value creation in this Private Equity strategy.

Defining the "Buy-and-Build" strategy

According to Fabozzi (2002), "a "Buy-and-Build" strategy comprises an initial purchase of a company by a PE investor who then uses it as a platform for subsequent acquisitions of companies or divisions strategically aligned with the platform company".[25] "Buy-and-Build" transactions are also referred to as "leveraged build-ups".

[25] Pg.3 (Borell and Heger, 2013)

With regards to platform companies, Smit (2001) argues that in most "Buy-and-Build" scenarios, these firms possess a unique characteristic such as a perception of high quality by customers. Moreover, according to a report by Monitor (Buy & Build – 2010), "add-on companies are typically smaller than the platforms and have specific tangible or intangible assets (e.g., new technology, additional markets) which offer value-adding potential to the new group of companies".[26] In the majority of "Buy-and-Build" strategies, the platform company and the subsequent add-on companies operate in the same industry. Also, according to Smit (2001), a "Buy-and-Build" procedure is usually performed by Private Equity firms that target fragmented sectors. This idea is reiterated by Brown et al. (2005), who illustrate that "Buy-and-Build" strategies are "a vehicle to consolidate fragmented industries of considerable size, similar to roll-up transactions".[27] Some of the typical value-adding factors associated with a "Buy-and-Build" strategy include the synergies resulting from the M&A activity, improved market positioning of the platform company, knowledge and technology sharing amongst platform and add-on companies, access to new market opportunities, and improved operational processes through knowledge pooling.

Finally, O' Donnel M. (2001) categorizes the overall "Buy-and-Build" strategy into four generic applications:

- Build-up: This is when the platform company makes several small acquisitions while operating in a significantly fragmented industry. This "Buy-and-Build" sub-strategy is uniquely characterized by small size (relative to the platform company) "tuck-in" acquisitions which transform the add ons as well as the platform company.

- Consolidation Play: A consolidation play is when a Private Equity firm acquires a platform company and uses it to conduct horizontal/vertical mergers within a mature

[26] Pg.3 (Borell and Heger, 2013)
[27] Pg.3 (Borell and Heger, 2013)

and fragmented industry to reap the competitive advantages of being a market leader within a consolidating industry.

- Missing Link Provision: In this scenario, a Private Equity company might feel that the platform company lacks specific capabilities such as weakness in its product range or lack of adequate geographical coverage. In such cases, the add on acquisitions are motivated by a desire by the Private Equity firm to improve the platform company by providing it with access to the critical resources that it currently lacks.

- Roll-up scenario: A roll-up is when the strategy of the platform company is implemented throughout a significant proportion of the broader industry by applying this strategy to the add on acquisitions made throughout the holding phase of the buyout.

While we have elaborated on these various sub-strands of the "Buy-and-Build" strategy, it is essential to note that finding a transaction which can be neatly classified as a particular type of "Buy-and-Build" situation is highly unlikely. In our case study relating to Investcorp's buyout of Berlin Packaging, we can see that multiple strategies are at play.

"Buy-and-Build" contemporary importance: Mitigating rising deal multiples

Although "Buy-and-Build" strategies are not a new concept, according to Bain & Co's Global Private Equity Report (2019), such approaches have become especially salient in contemporary times. The increased popularity of "Buy-and-Build" strategies is reflected in the fact that in 2003, merely 21% of add-on deals were the fourth acquisition by a platform company. This metric is closer to 30% in the current times, and more importantly, in 10% of the transactions, the add-on represented the 10th significant acquisition. To get a clearer idea of this increase in "Buy-and-Build" strategies, please refer to the chart illustrating the rise in add-on deals below: [28]

[28] Bain & Company Global Private Equity report 2019 (pg. 38)

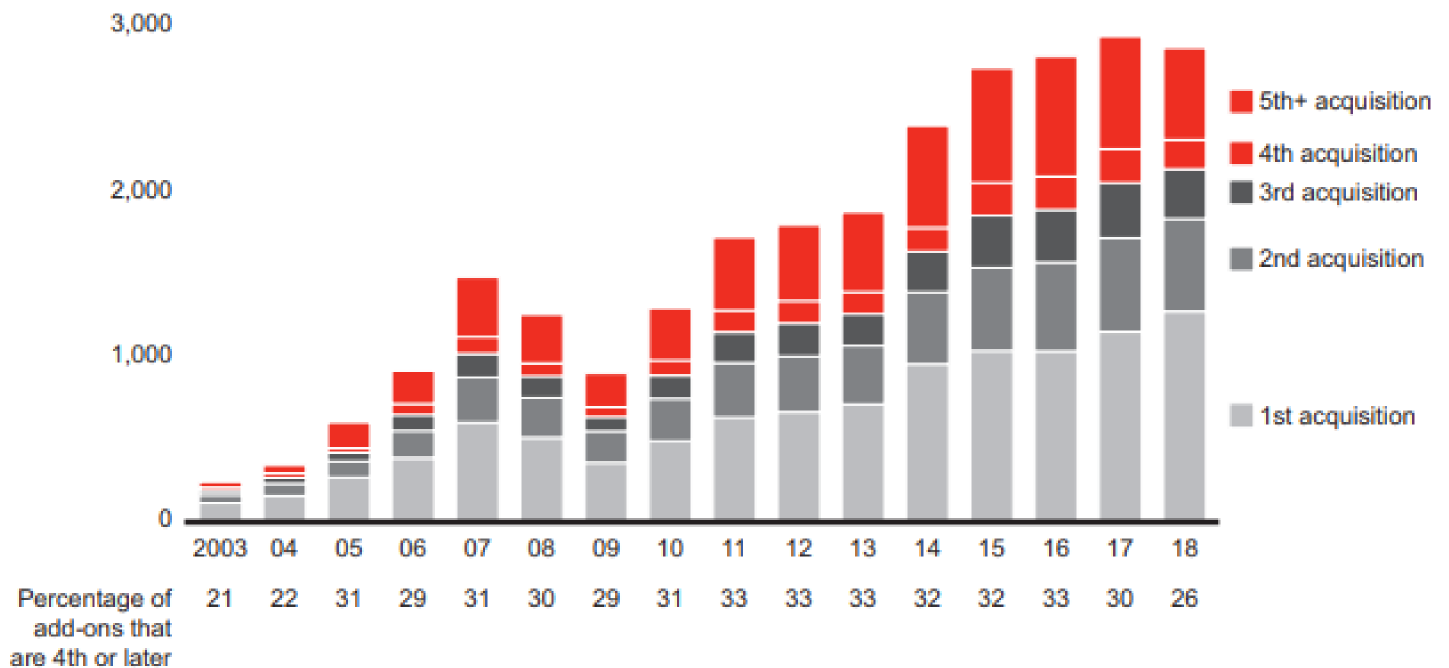

Figure 5: Global Private Equity led add on deals per year

Bain & Co argues in their Global Private Equity Report (2019) that the main reason for a sustained increase in "Buy-and-Build" Private Equity strategies is that such procedures "build can offer a clear path to value at a time when deal multiples are at record levels, and GPs are under heavy pressure to find strategies that don't rely on traditional tailwinds like falling interest rates and stable GDP growth". [29] A "Buy-and-Build" strategy mitigates the effects of higher valuations as it enables Private Equity funds "to justify the initial acquisition of a relatively expensive platform company by offering the opportunity to tuck in smaller add-ons that can be acquired for lower multiples later on". [30] This essentially allows a "multiple arbitrage" situation where the average cost of the

[29] Bain & Co (Global Private Equity Report pg.37, 2019)
[30] Bain & Co (Global Private Equity Report pg.38, 2019)

acquisition is reduced while improving the combined enterprise through cost and/or revenue synergies.

b. Empirical Research: BCG & HHL Leipzig (2016)

In 2016, BCG liaised with HHL Leipzig to analyze 9,548 Private Equity deals (narrowed down to 121). BCG compared the returns and value driver attribution of the transactions in this sample, which focused on a "Buy-and-Build" strategy with regular buyout deals. As a result of this study, they discovered the following key points:

- Buy & Build deals tended to outperform standalone buyout deals. Buy & Build deals exhibited an average IRR of 31.6% compared with an average IRR of 23.1% for vanilla LBO transactions.

- The principal value driver, especially in the case of Buy & Build deals, was related to multiple expansion. Although improvements in margins, revenue growth and debt pay down played an essential role in driving value, this role was secondary compared to that of multiple expansion. The effect of multiple increase on the IRR of Buy & Build deals was 15.3% compared with 7.5% for standalone buyout deals. This fact is highlighted in the graph on the following page:

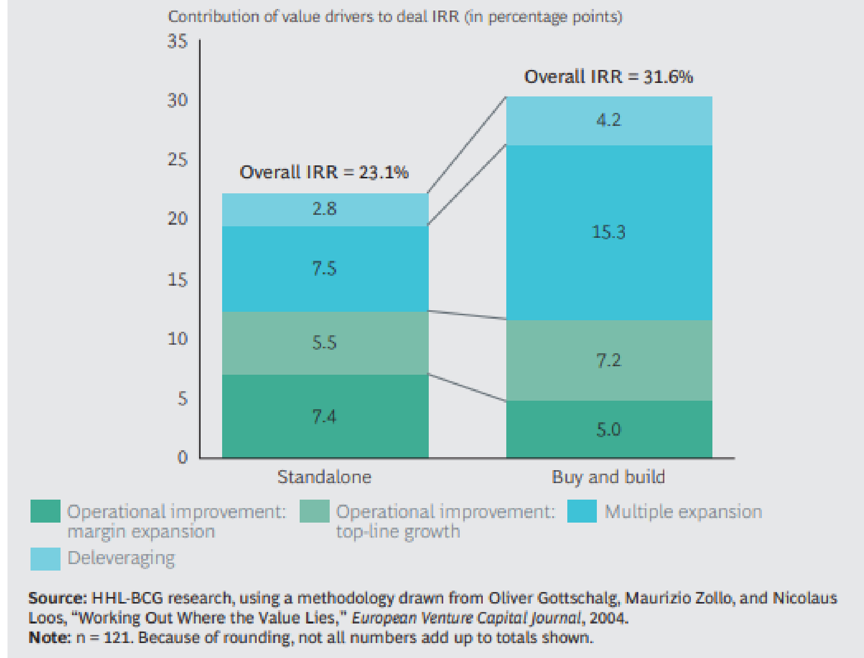

Figure 6: Multiple Expansion as a key value driver in Buy & Build deals

- Buy & Build deals that focus on internationalization of the platform company through cross-border acquisitions ten to outperform both standalone buyout deals and Buy & Build deals that focus on domestic add-ons. The cross border Buy & Build transactions generated an average IRR of 38.2% compared with 23.1% for standalone deals and 27.3% for Buy & Build deals that focus on domestic add ons.

- Buy & Build deals that focus on increasing the depth of the platform company into its existing industry through add on acquisitions tend to outperform Buy & Build deals where the add on purchases aim at diversifying from the underlying business of the portfolio company. The former had an average IRR of 43.5% compared with an IRR of 16.4% (lower than standalone deals – 23.1%) for the former.

- Private Equity firms which have prior experience in executing Buy & Build strategies tend to outperform those firms with no/less experience in such transactions. In the sample selected by BCG and HHL Leipzig, Private Equity firms which had executed more than 10 Buy & Build deals in the past had an average IRR of 36.6% on their deals. In

comparison, transactions that involved Private Equity firms that had conducted less than two Buy & Build deals had an average IRR of 27.3%.

- Industries that display characteristics such as low margins slowed growth, and high fragmentation tend to be an excellent target to carry out a Buy & Build strategy. In this study, Buy & Build deals in highly fragmented industries generated an average IRR of 42.2%; whereas, similar deals in highly concentrated sectors provided an average IRR of 25.3%.

c. Borell & Hegger: Value Creation Through PE-backed M&A (2013)

In 2013, Borell & Hegger conducted an empirical analysis of 844 Private Equity backed "Buy-and-Build" transactions under the Center for European Economic Research in Mannheim, Germany. They aimed to uncover the critical sources of value creation in "Buy-and-Build" Leveraged Buyouts.

The framework used to analyze these deals focused on two aspects of "Buy-and-Build" transactions: Pre-transaction screening of both platform and add on companies; and the value creation elements during the holding phase of the operation. We will discuss the framework and the empirical results found by Borell & Hegger (2013) below:

Buy & Build Company Selection Effect:

Borell & Hegger (2013) discovered that Private Equity firms look to the following acquisition criteria in the context of "Buy-and-Build" Leveraged Buyouts:

1) Private Equity firms hand-pick platform companies and add on companies that are highly profitable.

2) Platform companies need to display sufficient revenue growth to be selected. This is in line with the empirical research conducted by Andrade & Stafford (2004), which states that rapidly growing companies tend to use M&A as a way to further build on their expansion potential.

3) Add on companies tend to be slow growing firms. This confirms the proposition of Barnes (2000), which argues that low-growth and resource-rich firms are natural targets for acquisitions.

Keeping the past two points in mind, Borell & Hegger (2013) found that “Buy-and-Build” transaction focus on acquiring add on companies that are displaying slow growth through much faster-growing add on companies. These platform companies can make much more efficient use of the asset base of these add on companies.

4) Private Equity firms prefer to acquire companies that have a high “capacity utilization” (Asset Turnover: Total Revenue / Total Assets).

5) Platform companies in the context of “Buy-and-Build” transactions display lower leverage ratios compared to traditional Private Equity LBO targets. One explanation of this is the fact that this free debt capacity is a requirement for platform companies so that they may absorb the debt of their LBO and the additional debt of acquiring add on companies.

6) Large size is positively correlated with being a platform company in a “Buy-and-Build” context. This can be explained by the fact that size is an essential advantage when it comes to having enough resources to execute and integrate acquisitions and realize synergies. This finding is in line with the growth-maximization theory of Mueller (1972), which argues that Private Equity firms aim to increase market share and realize economies of scale through acquisitions.

Buy & Build Value Creation Effect:

The most critical value creation lever in “Buy-and-Build” strategies identified by Borell & Heger (2013) was the increase in what they call “capacity utilization” for portfolio companies of Private Equity funds. Before moving on to explaining this effect, we will understand the concept of capacity utilization and the literature surrounding it.

Capacity utilization is also referred to as the "asset turnover" and is computed by using the formula below:

$$Capacity\ Utilization\ (Asset\ Turnover) = \frac{Total\ Revenue}{Total\ Assets}$$

Improvements in the capacity utilization are of particular importance in motivating companies to acquire other companies and has been widely discussed in the literature on the reasons for M&A activity. To start with, Healy et al. (1992) exhibit that companies that the operating performance improvement that can be directly tied to the M&A activity of companies can be attributable to a growth in capacity utilization post-transaction. Moreover, according to a study conducted by Devos et al. (2008), the majority of value creation in M&A scenarios is a result of "improved resource allocation" and not because of lower tax expense or enhanced market share of the combined entity. In addition to this, Masksimovic & Phillips (2001) argue: "when firms purchase assets of higher productivity, the assets of the target decline and the assets of the acquirer increase in productivity".[31] However, Masksimovic & Phillips (2001) concluded that the gain in the productivity of assets overweighs the reduction in productivity for the target. This finding illustrates the fact that more skilled companies can significantly improve the assets that they acquire and build a combined entity with higher productivity.

Having defined and evaluated the concept of capacity utilization, we will now move on to illustrating the findings of Borell & Hegger (2013) regarding the role of capacity utilization as a value creation lever in "Buy-and-Build" transactions. Borell & Hegger made the following observations:

1) In "Buy-and-Build" operations, platform companies undergo an increase in capacity utilization; whereas, add on companies experience a decrease in capacity utilization following their acquisition and integration into the platform company.

[31] Pg.7 (Borell and Heger, 2013)

2) Private Equity firm employs a "Buy-and-Build" strategy to skillfully allocate resources between platform companies with lower capacity utilization and add on companies with higher capacity utilization.

3) This exercise of reallocating capacity utilization between the platform and add on companies yields an improvement in corporate performance only in cases of increasing industry-adjusted capacity utilization. This suggests that it is not merely the removal of excess capacity in an industry that improves firm performance; instead, it is the increased asset turnover for the specific combined entity.

In conclusion, according to Borell & Hegger (2013), a "more efficient deployment of assets for the generation of sales drives the improved performance after buy-and-builds". [32]

VI. A Combined Framework for Value Creation in "Buy-and-Build" Transactions

Having discussed the conventional understanding of value creation in Private Equity led LBO transactions and the novel literature on value creation in "Buy-and-Build" focused operations, we will now attempt to combine both approaches and draw parallels between the various value creation levers identified earlier and the empirical research conducted by BCG &HHL (2016), and Borell & Hegger (2013) in the context of "Buy-and-Build" transactions.

The approach we will employ is first to create a combined framework which analyzes value creation from a "Buy-and-Build" Private Equity perspective. This will involve making linkages between Jensen's (1989) work on the Principal-Agent problem, Gottschalg & Berg's (2005) LBO value creation levers and the empirical research conducted by BCG & HHL (2016), and Borell & Hegger (2013).

[32] Abstract (Borell and Heger, 2013)

"Buy-and-Build" Private Equity Value Creation Framework:

To start with, we will briefly recall the Primary Levers of value creation proposed by Gottschalg & Berg (2005) and evaluate the relevance of each lever in the context of "Buy-and-Build" transactions.

Gottschalg & Berg (2005) proposed three Primary Levers of value creation in LBOs, namely: Financial Engineering, Operational Effectiveness, and Strategic Distinctiveness. While the focus of Private Equity firms on the value creation levers of Financial Engineering and improving Operational Effectiveness of portfolio companies would be in line with traditional buyout transactions, it is vital to highlight the uniqueness of increasing Strategic Distinctiveness as an essential value creation driver in the context of "Buy-and-Build" operations.

To recall, increasing strategic distinctiveness refers to the situation where the Private Equity firm endeavours to realign the focus of a portfolio company's strategy. This applies to go over and beyond operational improvements and instead, the focus is on areas such as market expansion, changing distribution methods, selecting customer niches etc. Hence, the effort behind improving a company's strategic distinctiveness is related to reassigning a company's resources, which results in a substantial "change in the resource base of the company. [33] In addition to removing activities or past initiatives that differ with the company's core strategy, Private Equity firms aim to ignite the growth potential of the company as Butler (2001) proposes that improved growth is vital when contemplating an exit sale to a strategic buyer or through an IPO.

In the context of "Buy-and-Build" transactions, Private Equity firms improve the strategic distinctiveness of their portfolio companies by reallocating the asset base of the platform company and subsequent add on companies in such a way as to improve the capacity utilization (asset turnover) of the combined entity. If we recall, the two levers of capacity

[33] Pg.19 (Gottschalg & Berg, 2005)

utilization are the total revenues and the asset base of a company. To improve capacity utilization, the company can increase its revenues with while maintaining its asset base at the same level, generate an ability to maintain its revenues while reducing its asset base, or a combination of both these factors. While isolating the effect of higher revenues with an existing asset base, we can look at Borell and Hegger's (2013) finding that in "Buy-and-Build" transactions, Private Equity firms focus on using a large and fast-growing platform company to acquire smaller add on companies that exhibit slower growth. This amounts to an act of market consolidation in fragmented industries which results in the platform company increasing its revenues with little additions in its core assets by capturing the customer base of the add on company and removing the excess capacity of most of its assets. Apart from this, if we analyze the asset base reduction aspect of increased capacity utilization, we can see that to acquire add on companies in a "Buy-and-Build" strategy, the platform company needs to be able to service the increased debt load of these acquisitions. Therefore, Private Equity firms engaged in a "Buy-and-Build" strategy liaise with their platform companies to identify assets which are not conducive to the core strategy of the firm, as agreed between the management and investors of the firm, and divest these assets to improve the company's ability to generate higher Free Cash Flow to service further acquisition debt and provide immediate financing for add on acquisitions which would further enhance the focus of the platform company on its core strategy.

Having discussed the importance of Primary Levers of value creation in the context of "Buy-and-Build" Private Equity strategies, we now move on to evaluating the two Secondary Levers, namely: Reduction of agency costs and Mentoring. Moreover, with regards to Mentoring, we will look at both of its sub-levers, namely "restoring an entrepreneurial spirit" and "advising and enabling portfolio companies", in the light of "Buy-and-Build" transactions.

To start, we will analyze the value creation lever related to the reduction of agency costs. As a reminder, Jensen (1989) argues that LBO transactions provide an alternative

structure to the public corporation and, when employed in the case of mature companies operating in stable industries, results in enhanced value creation because of its ability to resolve the "Principal-Agent" conflict. One of the main ways in which an LBO structure resolves the Principal-Agent conflict and reduces overall agency costs is that the imposition of high levels of debt force the management team of the target company to run the enterprise in a way as to maximize the firm's ability to generate Free Cash Flow. A failure by management to generate enough Free Cash Flow to service the debt related to an LBO can result in bankruptcy and harm the economic and reputational health of the management team.

In the context of "Buy-and-Build" Private Equity strategies, this value creation lever of debt reducing agency costs is especially pronounced as the acquisition of further add on companies results in a significantly higher debt load for the platform company as compared to traditional buyouts. This is because, in the case of "Buy-and-Build" transactions, the platform company is responsible for servicing the debt of its buyout as well as the additional debt incurred to acquire add on companies. As a result of this, in scenarios of "Buy-and-Build" transactions, the management teams of target companies are forced by the "discipline of debt" to avoid investing in projects that do not result in additional Free Cash Flow in the future (have a negative NPV and are therefore value destructive). Moreover, the management team endeavours to cut projects that are value destructive and are not in line with the company's core strategy to fund the acquisitions of add on companies. Moreover, in "Buy-and-Build" transactions, the focus on Free Cash Flow generation is even more pronounced as it is essential that the platform company increases Free Cash Flow generation to pay down its debt, resulting in more debt capacity which would enable it to continue making acquisitions of more add on companies. Finally, the fact that any purchase of add on companies must be financed with debt and not with the shares of the platform company (i.e. with Equity), the management teams of platform companies are discouraged from engaging in M&A activity which is value

destructive and does not generate additional Free Cash Flow to help service the additional acquisition debt.

Moving on, we will now clarify the importance of the secondary lever of Mentoring in the case of “Buy-and-Build” Private Equity strategies. We start with the aspect of Mentoring related to the ability of the Private Equity firm to “advise and enable its portfolio companies. This is especially important in the case of “Buy-and-Build” transactions as Private Equity firms can provide valuable input when it comes to the M&A process, selection of target add on companies based on industry expertise, and negotiating lower purchase prices for add on acquisitions. Most Private Equity professionals have prior experience in advising on M&A transactions whereas, in the case of the management teams of portfolio companies of Private Equity firms, such experience can be a rarity (especially if the portfolio company is a mid-market firm and has never been involved in the acquisition of another company). In these situations, the specific project management skills of Private Equity professionals when it comes to M&A transactions can be of essential importance to the management teams of portfolio companies.

Moreover, the industry expertise that professionals at Private Equity firms possess enables them to assist platform companies in sourcing and filtering potential add on companies. As Fox & Marcus (1992) propose, industry expertise allows Private Equity firms to gain access to in-depth market information. This is especially helpful when the platform company is large and does not have potential small add on companies on its radar as it has not been directly competing with such companies in the past. Finally, the negotiation and “deal-making” skills of Private Equity professionals can be immensely helpful in “Buy-and-Build” scenarios. As argued by Butler (2001), the negotiation skills Private Equity professionals possess can have a substantial impact on the acquisition and divestment price of companies.

In the end, we will look at the second aspect of mentoring, namely, the impact of buyout transactions on “restoring an entrepreneurial spirit” in portfolio companies. As

mentioned earlier, Beaver (2001), Houlden (1990) and Samdani et al. (2001) describe this changed mindset of management teams as "LBO fever" which enhances the motivation of management teams to increase the value of the company throughout the LBO period. In the specific case of "Buy-and-Build" transactions, this entrepreneurial spirit of management teams is pronounced as the management teams of platform companies are highly involved in endeavouring to integrate the add on companies and the platform company in a way to improve the capacity utilization of the combined entity.

In the graph below, we can see the combination of the value creation framework proposed by Gottschalg & Berg (2005) and its adaptation for "Buy-and-Build" Private Equity strategies.

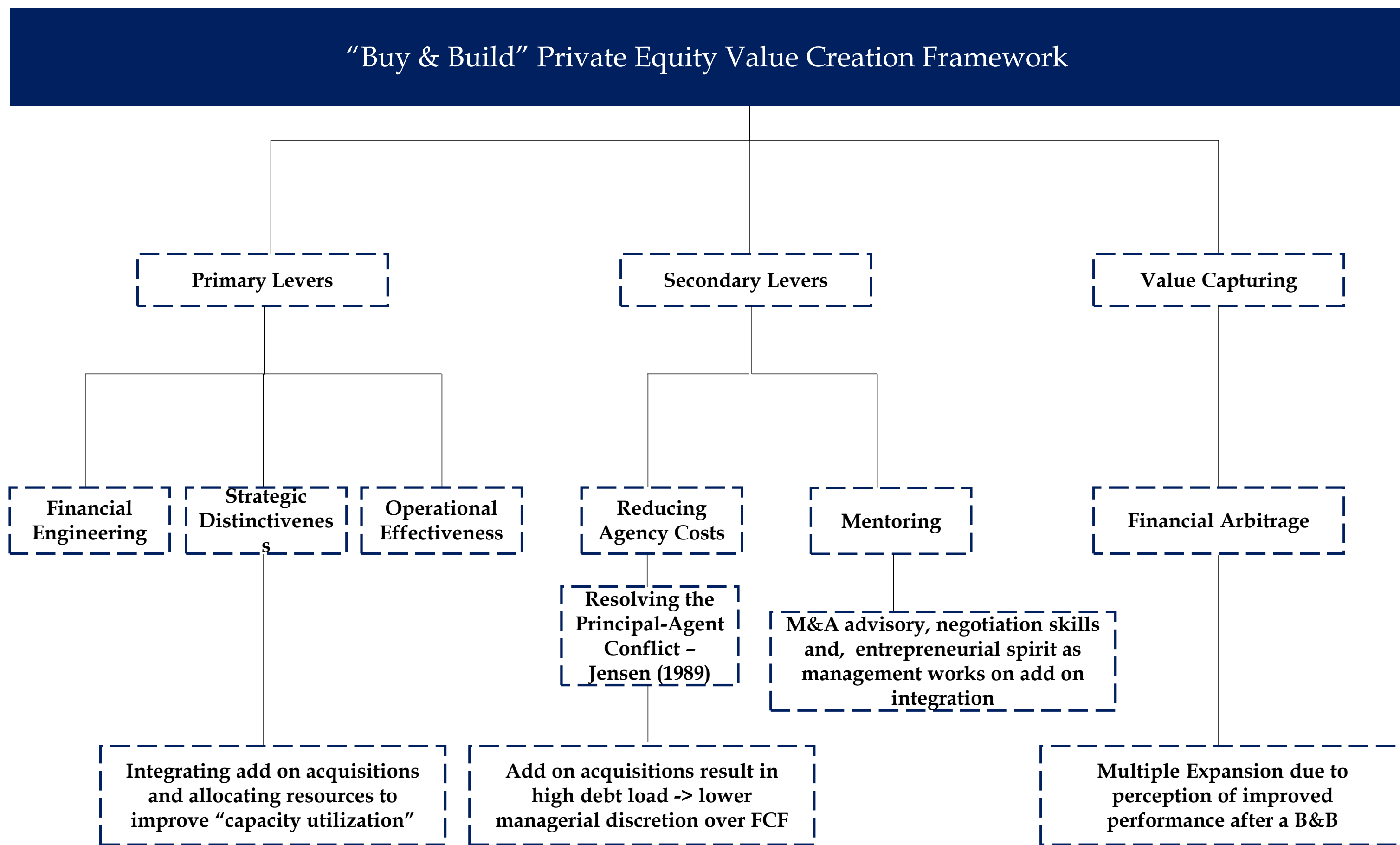

Figure 7: Comprehensive Value Creation Framework for "Buy-and-Build" LBOs

Hypothesis: Importance of Management Teams in "Buy-and-Build" LBOs:

In the framework above, we have identified improvements in Strategic Distinctiveness through M&A activity that increases capacity utilization as the key primary value driver in the instance of "Buy-and-Build" LBOs. Increasing capacity utilization involves the management team of the platform company reallocating resources amongst the platform company and the add on companies. Therefore, the process of increasing capacity utilization has a high degree of management involvement. At this point, we would like to put forth a hypothesis which this paper will evaluate in the upcoming case study. We would argue that since management is heavily involved in improving capacity utilization, and a higher capacity utilization is the most crucial primary driver for creating value in "Buy-and-Build" LBOs, the success of Buy-and-Build LBO transactions is highly dependent on the independent ability and experience of the platform company's management team to carry out and integrate add on acquisitions.

VII. Choice of Case Study

There are a variety of methods that can be employed to study the aspect of Value Creation in the context of Leveraged Buyouts. The way we choose is to apply a comprehensive framework for value creation specific to "Buy-and-Build" based buyouts to a particular transaction, namely the buyout of Berlin Packaging by Investcorp in 2007. The significant advantages of using a case study method to evaluate value creation are that this method offers the opportunity to study value creation in much more detail and allows one to pinpoint specific initiatives taken during the life of an LBO that increase in value. In addition to this, a case study will enable one to test the empirical findings contained in the past literature on this particular subject on a real-life example. In this research paper, the decision regarding which type of transaction to take was pre-defined by the specific topic of this paper. Since we are focused on analyzing value creation in the context of "Buy-and-Build" transactions, we only looked at such cases of buyouts and defined

"Buy-and-Build" as cases where at least four add on acquisitions were made following the purchase of the platform company by the Private Equity firm.

For this research paper, the buyout of Berlin Packaging by Investcorp was selected due to the following reasons:

- Bain & Company mentioned the buyout of Berlin Packaging in its Global Private Equity report 2019 as one of the representative transactions of a "Buy-and-Build" Private Equity strategy.

- The buyout of Berlin Packaging by Investcorp was mentioned as a successful case of implementing a "Buy-and-Build" strategy in at two books: Scaling your Startup by Peter S. Cohan and The Human Equation by Jeffrey Pfeffer.

- There was significant press coverage of this deal and its evolution to provide sufficient financial and qualitative information surrounding the transaction which was used to analyze value creation in the context of the deal.

- Finally, the deal commenced in 2007, which was the period just before the onset of the Global Financial Crisis in 2008. Moreover, the period in which Investcorp first acquired Berlin Packaging was marked by high valuation in both public and private markets. By choosing such a case, I wanted to test Bain & Company's assertion (within its 2019 Global Private Equity report) that "Buy-and-Build" strategies can mitigate the effects of high entry valuations. I thought such a case would be especially relevant in today's time as the high amounts of dry powder available to Private Equity funds and record fundraising in this asset class has pushed company valuation upwards, and Private Equity funds might have a difficult time generating outsized returns.

VIII. Case Study: Investcorp's Buy & Build of Berlin Packaging

a. Overview of Platform Company: Berlin Packaging

Berlin Packaging is a supplier of packaging products and services and is based in Chicago, USA. Berlin packaging focuses on supplying plastic, glass and metal containers and other packaging products to businesses operating in a wide range of industries such as food & beverage, automotive, consumer products, alcoholic drinks and industrial materials. Berlin Packaging has a presence across four continents with around 100 sales points and warehouse locations and 1,000 employees.

Berlin Packaging was founded in 1988 when the Berlin family (Andrew Berlin is CEO of Berlin Packaging) acquired a company called Alco Packaging, which was involved in the containers business in Chicago, USA. At the time of the acquisition, Alco Packaging had around $69 million in Revenues which, under the leadership of Andrew Berlin, grew to more than $250 million by 2005. Following its acquisition, Alco Packaging was immediately renamed as Berlin Packaging by the Berlin family. Even before receiving any interests from Private Equity firms, Berlin Packaging used M&A as a strategy to grow its business. For example, in 2000, Berlin Packaging acquired Knap-Pac Containers which manufactured packaging products for industrial companies and personal care products. Also, in 2003, Berlin Packaging acquired Freund Container & Supply a packaging products distribution company (this was later designated as the operating division at Berlin Packaging).

Berlin Packaging is unique in the sense that it combines its manufacturing, distribution and servicing activities under a single platform to effectively provide a valuable service to its customers by simplifying their supply chain. As a result of this integration, Berlin Packaging has been able to maintain a 99%+ on-time delivery execution accuracy every month for more than 14 years. Instead of seeing itself as a business providing packaging products, Berlin Packaging focuses on being a one-stop packaging solutions provider to its customers with a pronounced emphasis on improving the bottom-line of their

customers and using packaging solutions as the tool to achieve this end. To illustrate the success of Berlin Packaging's work, the company has liaised with its customers to develop packaging solutions that have resulted in a $200 million aggregate improvement in their customers' net income over the past three years.

Berlin Packaging has an extensive product offering and is currently manufacturing 40,000+ SKUs. Moreover, a prominent business line of Berlin Packaging is its "Studio One Eleven" design branch which focuses on providing custom made packaging for Berlin Packaging's clients while focusing on graphic design and the overall branding strategy for the customers' product offering. In addition to this, Berlin Packaging manufactures speciality packaging solutions that are required for "Dangerous Goods" such as specific chemical products and a business line called "Qorpak" which focuses on packaging products for scientific lab materials. Finally, in addition to packaging products, Berlin Packaging offers management consulting and financing services to its customers. In the case of the former, Berlin Packaging's E3 Consulting division works with customers to improve their current operations, sales and marketing efforts, and end-customer experience. It is important to note that unlike other management consulting firms, Berlin Packaging does not charge its clients for these services; instead these services are provided free of cost as long as packaging products are purchased from Berlin Packaging. In the case of financial services, Berlin Packaging provides its customers with debt financing to undertake CAPEX expenditures at a 0% interest rate and no financing fees in return for delivering packaging business to Berlin Packaging.

In August 2014, Oak Hill Capital Partners acquired a majority stake in Berlin Packaging for $1.43 billion including debt (i.e. Enterprise Value) from an earlier Private Equity investor: Investcorp. The consideration paid by Oak Hill represents a 14.0x EBITDA multiple (EBITDA value of around $100 million according to the Wall Street Journal). Moreover, Oak Hill invested around $ 650 million in Equity of the company while the CEO, Mr Andrew Berlin, rolled over his Equity. This left Berlin Packaging with around $765 million in debt following the acquisition. According to the Wall Street Journal, (24th

August 2014 Article: Buyout Firm Oak Hill Reaches Deal to Acquire Berlin Packaging) the bidding process for the acquisition of Berlin Packaging was highly competitive, and there were numerous other Private Equity firms involved in the bidding process. According to a recent press article by PRNewswire, Berlin Packaging was valued at $2.6 billion in April 2019.

b. Acquisition by Private Equity Firm: Investcorp

According to the Wall Street Journal (24th August 2014 Article: Buyout Firm Oak Hill Reaches Deal to Acquire Berlin Packaging), Investcorp acquired a majority stake in Berlin Packaging for around $410 million in 2007 (figure sourced from Capital IQ). According to a press release by Berlin Packaging on 12th July 2007, at the time of the acquisition, the company generated more than $300 million in annual Revenues.

Investcorp state that the process that led to the acquisition of Berlin Packaging was initiated three years before the actual transaction. This is when Investcorp conducted a significant amount of research across the North American packaging sector and identified Berlin Packaging as a market leader within the industry. With regards to market conviction, Investcorp states that "The diverse end-markets served offered the stability of demand through economic cycles while fragmentation in both the customer and supplier base offered companies like Berlin Packaging the unique opportunity to be a high value-add partner to both constituents".[34] In the fragmentation of the packaging industry, Investcorp state that they found "an opportunity to further accelerate growth through acquisitions" [35].

According to Investcorp, industry knowledge was instrumental in both the acquisition phase of the transaction and in the execution of the subsequent growth plan for Berlin Packaging. Investcorp states that it had studied the overall packaging industry for over two years before engaging with Andrew Berlin (CEO of Berlin Packaging). They

[34] https://www.investcorp.com/site/article/berlin-packaging
[35] https://www.investcorp.com/site/article/berlin-packaging

emphasize the fact that Mr Berlin “was intrigued by Investcorp’s knowledge of the packaging sector and realized that while Berlin Packaging continued to achieve impressive results, it required additional resources to progress to its next stage of growth”. [36] Also, it is essential to note that this transaction closed just before the start of the 2008 Global Financial Crisis and therefore, the majority of the holding period was the challenging and volatile period following the crisis. Investcorp argues that due to their conviction regarding the viability of the packaging sector, they had the confidence to continue to make investments, mainly growing Berlin Packaging through inorganic initiatives. As a result of this, Berlin Packaging was able to capture a significant proportion of market share from its competitors who were scaling back their investments due to the volatility of the global markets.

As a testimony to the strong relationship that the management team at Berlin Packaging enjoyed with Investcorp, Andrew Berlin (CEO of Berlin Packaging) stated the following:

"*Investcorp is a true partner that was committed and eager to support our company's short and long term objectives. Although market conditions suggested scaling back during the downturn, we viewed it as an opportune time to invest meaningful resources into our sales operations - positioning us to better serve our customers and drive growth for our business. I will always remember Investcorp’s contributions and thank the team there for their partnership and friendship over the last seven years.*" [37]

c. Executing the “Buy-and-Build” Strategy

All-Pak (2010)

In March 2010, Berlin Packaging announced the completion of its acquisition of All-Pak, a packaging supplies provider based in Pittsburg, USA. All-Pak had an operating history stretching back to 1958 and was one of the national leaders in the US when it came to supplying rigid packaging supplies and follow-on services related to packaging.

[36] https://www.investcorp.com/site/article/berlin-packaging
[37] https://www.investcorp.com/site/article/berlin-packaging

This transaction combined two ISO-Certified packaging products suppliers and according to press reports, would result in a combined annual Revenue figure of $500 million. Moreover, according to Investcorp's 2010 Annual Report, the combined entity would have a market share of 40% and that the acquisition required Investcorp to inject additional Equity of $48 million in Berlin Packaging. The rationale behind this transaction was to expand the Berlin Packaging's geographical footprint, especially in the Eastern part of the United States, where All-Pak had a significant customer base. According to the press release by Berlin Packaging (28th February 2010), the combined businesses of All-Pak and Berlin Packaging would have 40 sales points and warehouses across the US and Puerto Rico. Moreover, according to an interview by Thor Valdmanis, a spokesperson for Berlin Packaging, "the proportion of combined revenues that come from cosmetics and personal care packaging is 20%".[38]

In addition to this, the rationale behind this add on acquisition was further highlighted by David Tayeth, an MD at Investcorp, who stressed the importance of the resilience that both All-Pak and Berlin Packaging had shown during the Global Economic Meltdown and how both companies were amongst the few packaging providers in the US which had displayed decent growth despite the harsh economic conditions.

David Tayeth said: *"This is a highly compelling combination of two companies that on their own have shown a remarkable ability to achieve consistent growth despite challenging market conditions. Together, Berlin Packaging and All-Pak are perfectly aligned to expand in a highly fragmented industry".*[39]

Moreover, according to Andrew Berlin (CEO of Berlin Packaging): *"This exciting transaction unites two highly complementary businesses and will enable us to continue to unlock value for our customers, suppliers, and employees… We believe the transaction will significantly enhance our ability to realize faster growth, lower system costs, and improved productivity for our partners."*

[38] https://www.cosmeticsdesign.com/Article/2010/02/09/Berlin-Packaging-enters-agreement-to-acquire-All-Pak
[39] https://www.cosmeticsdesign.com/Article/2010/02/09/Berlin-Packaging-enters-agreement-to-acquire-All-Pak

The rationale for the deal was also explicated by Denny Crawford (CEO of All-Pak): *"We are excited about joining forces with Berlin Packaging and see many terrific opportunities for the combined company going forward… With similar cultures and complementary geographies, the combination will allow both Berlin Packaging and All-Pak employees to continue delivering world class customer service, while providing them with opportunities for further career development in a dynamic and growing company."*

Continental Packaging Solutions (2010)

In December 2010, Berlin Packaging acquired Continental Packaging Solutions, a packaging solutions provider focused on rigid packaging materials and based in Chicago, US. At the time of the transaction, press reports mentioned that the Revenues of the combined entity would be expected to be around $600 million for the upcoming year of 2011.[40]

In terms of Continental Packaging Solutions history, it was founded in 1936 and was initially called Continental Glass Company. The company started by providing glass packaging solutions to companies such as 7-Up, Pepsi, and Jim Bean. During the time of its acquisition, Continental Packaging had expanded its offering to include plastic containers and served a much more extensive array of industries. In addition to this, Continental Packaging had a presence throughout the US and was also carrying out some of its operations (mainly supplier sourcing) in China. Moreover, the company's product offering had expanded beyond packaging materials and also included value-added services such as logistics, decoration and assembly.

According to a press release by Berlin Packaging (15th December 2010), the rationale behind the acquisition of Continental Packaging Solutions was as follows:

[40] https://www.cosmeticsdesign-asia.com/Article/2011/01/10/Berlin-Packaging-expands-in-the-US-with-acquisitions

- The integration of Continental Packaging puts the number of sales points and warehouses of Berlin Packaging at 70, which means that a more extensive customer base can be targeted and the level of service can be improved.

- Continental Packaging's customers can now have access to Berlin Packaging's value added services such as financing, management consulting, custom made packaging products and graphics designing.

- Berlin Packaging can take advantage of the sourcing capacity of Continental Packaging in China. The company did not have a footprint in Asia, and this acquisition allows it to benefit from the relationships that already exist between Continental Packaging and Chinese vendors.

- The integration of Berlin Packaging and Continental Packaging Solutions improves the access of the combined entity to a vast supplier network and allows the two companies access to each other's customer base.

The reasoning behind the acquisition of Continental Packaging Solutions was highlighted by Andrew Berlin (CEO Berlin Packaging) in the following statement: *"This is a strategic acquisition that extends our geographic reach, expands our network of packaging experts, and advances our mission of helping customers increase their net income by optimizing their packaging costs, operations efficiency, and shelf impact."* [41]

Lerman Container (2012)

In May 2012, Berlin Packaging issued a press release stating that it had acquired Lerman Container, a Connecticut based manufacturer and distributor of plastic, glass and metal-based packaging products. According to a statement by Berlin Packaging, the two entities when fully integrate will generate Revenues of around $700 million and will have more than 80 sales locations and warehouse facilities across North America. Lerman Container

[41]https://www.berlinpackaging.com/news/berlin-packaging-acquires-continental-packaging-solutions-marking-second-acquisition-in-ten-months/

was founded in 1979 and served customers across various market verticals while having a strong presence in the North-East half of the United States.

According to the press release issued by Berlin Packaging (14th May 2012), [42] the significant advantages that both company's received due to the transaction are as follows:

- Given the strong presence of Lerman Container in the North Eastern half of the United States, Berlin Packaging could expand its geographical reach in critical areas such as Connecticut and New Jersey. Moreover, Berlin Packaging's existing customers who have a presence in this geographic area would be able to benefit from the company's value-added services in these locations.

- Berlin Packaging gained access to the traditional expertise of Lerman Container in the Personal Care and Pharma packaging sectors which it could combine with its own experience in these market verticals.

- Lerman Container's customers would now have access to the speciality offerings provided by Berlin Packaging such as its Qorpak Lab packaging products and its container products for "dangerous materials". Moreover, Lerman Container's customer base would be able to benefit from the value-added services provided by Berlin Packaging such as consulting, customized packaging design, and capital lending.

Andrew Berlin, the CEO of Berlin Packaging, expressed the reasoning behind the transaction in the following statement he made to the press[43]: *"The closer we can get to customers geographically, the faster we can serve them and the more attention we can give them. This acquisition makes that possible by adding local presence in important markets as well as top packaging talent and deep vertical industry expertise."*

Moreover, the CEO of Lerman Container, Barry Lerman, stressed the importance of gaining access of Berlin Packaging's value added services when speaking about the

[42]https://www.berlinpackaging.com/news/berlin-packaging-acquires-lerman-container/
[43]https://www.berlinpackaging.com/news/berlin-packaging-acquires-lerman-container/

transaction[44]: *"One of the challenges in scaling a business like ours is in maintaining a high level of customer service. Berlin Packaging has been able to do that on a nationwide scale because they share our commitment to helping customers build their bottom line…. We will now be doing business as Berlin Packaging, but our customers will receive the same attention, gain access to more products and services, and have a much broader and deeper network of expertise to meet both their custom- and stock-packaging needs."*

United States Container Corporation (2012)

In October 2012, Berlin Packaging announced the acquisition of United States Container Corporation (USCC), a supplier of industrial and rigid packaging products based out of California, USA. USCC was founded in 1956 and focused on developing containers for the use of industrial businesses in the western part of the United States. With regards to end markets, USCC served a broad array of market verticals including pharma, paints & coatings, consumer goods, and agricultural businesses.

According to press reports[45], the reasoning behind this transaction is related to the enhancement of Berlin Packaging's geographical presence within the United States due to the access USCC provides to the Californian and Arizona markets. In addition to this, following the combination of the two companies, the resulting entity had over 90 sales points and warehouses across North America and annual Revenues of around $800 million. The full spectrum of advantages to Berlin Packaging following this transaction are discussed below:

- Berlin Packaging expanded its national footprint in key markets such as Los Angeles, San Francisco and Phoenix.

- The acquisition provided Berlin Packaging with four additional warehouses which increased the optionality for the company's customers who were interested in value-

[44]https://www.berlinpackaging.com/news/berlin-packaging-acquires-lerman-container/
[45]https://www.cnbc.com/id/100040520

added services such as “just-in-time” delivery and working capital improvements (mainly related to inventory management).

- Through its combination with USCC, Berlin Packaging enhanced its product portfolio, especially in the industrial packaging market vertical, which includes drums, pails, and bulk containers (which were historical strengths of USCC).

- Berlin Packaging improved the operations of its distribution division (Freund Container & Supply division) by integrating it with Sunburst Bottle, a division a USSC which enabled Berlin Packaging's customers to have convenient online access to the company's stock packaging products.

- Combined the procurement and sales force efforts of both entities to facilitate relationships with suppliers, streamline the sourcing process and gain access to a broader customer audience for the company's new product lines.

- After the integration of both entities, the client base of USCC had access to Berlin Packaging's country-wide coverage, its specialized product lines related to lab supplies etc., and its value added services such as management consulting and CAPEX financing.

The CEO of Berlin Packaging expressed the rationale of this transaction in the following statement he made to the press[46]: "*Every acquisition we have made has had the same objectives: to make Berlin Packaging into a stronger supplier and to increase our geographic footprint so that even more customers have access to our solutions and services….. The acquisition of USCC fits perfectly into our strategy and will yield great returns for customers, suppliers, and employees alike. We're better positioned than ever to help customers accelerate business growth by optimizing their packaging strategies.”*

The President and CEO of USSC, Jeffrey L. Levine made the following statement to the press regarding the transaction[47]: “*Joining forces with Berlin Packaging significantly expands the services available to our customers. I'm proud of the ways USCC will enhance Berlin, and*

[46]https://www.cnbc.com/id/100040520
[47]https://www.cnbc.com/id/100040520

Berlin will bring significant benefits to USCC customers….. Customers can still do business with the USCC team, now operating under the Berlin Packaging name, but with a wider array of new options for getting the most out of their packaging initiatives."

d. Exit and Returns

In August 2014, Investcorp exited its investment in Berlin Packaging via a sale to another Private Equity firm called Oak Hill Capital Partners. Unfortunately, while we do have information regarding the Equity proceeds received by Investcorp following the divestment of Berlin Packaging, we do not have information about the amount of Equity used in the initial investment. Therefore, for our analysis, we will assume that Investcorp used the same amount proportion of leverage that Oak Hill Capital Partners used in its purchase of Berlin Packaging. This assumption is based on the notion that the debt capacity of Berlin Packaging remained the same throughout the holding period of Investcorp. Based on these assumptions, we will use the following data for our analysis:

Transaction Figures (in $ millions)	
Entry EV	410
Entry Leverage Used	50%
Entry Equity Value	205
Additional Equity Injection	48
Total Equity Proceeds	963
Additional Debt for Dividend Recap	324
Debt used to calculate Equity Proceeds	467

Figure 8: Transaction Figures used in Returns Calculation for Berlin Packaging's LBO

We used the following sources and calculations to arrive at these figures:

- For the Entry Enterprise Value, we used an article from the Wall Street Journal titled: Buyout Firm Oak Hill Reaches Deal to Acquire Berlin Packaging (24th August 2014).[48]

[48]https://www.wsj.com/articles/buyout-firm-oak-hill-reaches-deal-to-acquire-berlin-packaging-1408910868

For the Entry Leverage used, please see the explanation above. The proportion of leverage used by Oak Hill Capital Partners ($765 million out of an EV of $1.43 billion) was mentioned in a report by BDO titled PCPI Q1 (2015).[49]

- The additional Equity injection of $48 million was injected into Berlin Packaging by Investcorp in 2010 to acquire All-Pak (Source: Investcorp Annual Report 2010).

- The Total Equity proceeds of $963 million include $639 million of the final sale value and $324 million of the proceeds from the dividend recapitalization to Investcorp. These figures are mentioned in Investcorp's Business Review Document (2015 – pg. 47). [50]

- The Debt used to calculate Equity Proceeds is a backward calculation to arrive at Equity proceeds of $963 million. The calculation is as follows: Exit Enterprise Value – Equity Proceeds = 1,430 – 963 = 467.

Investcorp held its investment in Berlin Packaging for seven years and generated a 3.8x return (Cash-on-Cash Multiple). This translates into an approximate IRR of 24%. The IRR is boosted due to the $324 million dividend recapitalization carried out in 2013. The 3.8x multiple is calculated by dividing the Equity proceeds of $963 million (proceeds from sale + dividend recap) by $253 million which is the sum of the initial Equity purchase value paid by Investcorp ($205 million) and the additional Equity injection used to acquire All-Pak in 2010 ($48 million).

[49]https://www.bdo.co.uk/getmedia/932ec984-b1cc-40df-9d4a-87b737421058/PCPI-Q1-2015.pdf.aspx
[50]https://www.investcorp.com/docs/uploads/credit-ratings/FINAL_FULL_HY15_BUSINESS_REVIEW.pdf

The tables below illustrate the approach used to calculate the IRR and Cash-on-Cash Multiple (please note that the values are in $ millions):

Exit Calculations:		
Exit Enterprise Value:	$	1,430
Less: Debt:		467
Plus: Cash:		-
Equity Proceeds:	**$**	**963**
Cash-on-Cash (CoC) Multiple:		**3.8 x**
Internal Rate of Return (IRR):		**24.1%**

Figure 9: Returns Calculation for Berlin Packaging's LBO

The schedule below exhibits a more detailed calculation of the IRR:

Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Equity Injections	(205)			(48)				
Cash Flow to Investcorp							324	639
Net Cash Inflow / (Outflow)	(205)	0	0	(48)	0	0	324	639
IRR (%)	**24.1%**							

Figure 10: Detailed IRR Calculation for Berlin Packaging's LBO (based on Cash Flows)

Given that Private Equity funds typically target a 20% - 25% IRR, the result is in line with the return objectives of most funds. However, it is essential to note that Investcorp invested in Berlin Packaging just before the 2008 Global Financial Crisis and built the company throughout the tumultuous financial meltdown. Given these conditions, it is clear that Investcorp was taking a higher amount of risk, and the result obtained is much more superior to a similar result obtained in a period of financial stability.

e. What made the LBO successful? – Analysis of Value Drivers

Having described the entire life of Investcorp's investment in Berlin Packaging, we will now move on to applying the pre-selection criteria identified by BCG & HHL (2016) and Borell & Hegger (2013), as well as our framework for analyzing value creation in Buy-and-Build LBOs. We will start by conducting a returns attribution analysis for the deal

and aim to isolate the various sources of returns in this deal. Next, we will apply our comprehensive framework and illustrate how each value driver played a role in creating value during the entire life of Berlin Packaging's buyout. Finally, we will analyze this deal in the context of our hypothesis which stated that the success of Buy-and-Build LBO transactions highly depends on the independent ability and experience of the platform company's management team to carry out and integrate add on acquisitions.

Analysis of Selection Criteria:

To start with, Berlin Packaging was operating in a highly fragmented industry as mentioned by Investcorp in its investment case review[51]. A highly fragmented industry was one of the critical selection criteria identified by BCG & HHL (2016), when analyzing the pre-transaction conditions of successful "Buy-and-Build" transactions. This high fragmentation allowed Berlin Packaging to make four add on acquisitions in a period of two years (2010 – 2012).

Next, Borell & Hegger (2013) highlighted the importance of the platform company displaying strong pre-transaction growth and displaying a high level of profitability. According to Bain & Company's Private Equity Report 2019, under the leadership of Andrew Berlin, Berlin Packaging had experienced growth of "double the market rate" and had a "history of strong margins and free cash flow".[52] Moreover, according to the book: Scaling your Startup (Peter S. Cohan, pg. 24), Berlin Packaging grew at an approximate annual rate of 22.6% during the decade leading to 2014; whereas, the overall packaging industry grew at a 1.5% - 2.0% yearly rate. This shows that even before the investment by Investcorp, Berlin Packaging was an industry leader and displayed strong growth dynamics.

Finally, Borell & Hegger (2013) mention the platform company having a large debt capacity as an essential pre-selection criterion in the context of "Buy-and-Build"

[51]https://www.investcorp.com/site/article/berlin-packaging
[52]Bain& Company Private Equity Report pg. 43 (2019)

transactions. When we look at Berlin Packaging, we can see that the only time an additional Equity injection was required to carry out an add on acquisition, it was during the first acquisition of All-Pak. This seems reasonable as, during the initial years of the holding period, it can be assumed that the Berlin Packaging had a high leverage ratio due to the debt used to fund its acquisition. However, the ability of Berlin Packaging to generate Free Cash Flow and accommodate higher leverage is made evident by the fact that any of the subsequent add on acquisitions made by the company did not require a further Equity injection by investors (i.e. it was funded either through additional Debt or the Free Cash Flow being accumulated by Berlin Packaging).

Returns Attribution Analysis:

We will now move on to isolating the different sources of returns to Equity investors in the Buyout of Berlin Packaging by Investcorp. We will split the proceeds received by Equity investors into four effects: Revenue Effect, EBITDA Margin Effect, Multiple Effect, and Leverage & Debt Paydown Effect. The formulas used to calculate each impact were mentioned earlier in the section titled "Measuring Value Creation".

The table below illustrates the financial aggregates which were used to conduct the returns attribution analysis:

Financial Data (in $ millions):	
Entry Revenue	300
Entry EBITDA	25
Entry EBITDA Margin (%)	8.3%
Exit Revenue	800
Exit EBITDA	100
Entry EBITDA Margin (%)	12.5%
Entry EBITDA Multiple	**16.4x**
Exit EBITDA Multiple	**14.0x**

Figure 11: Financial Aggregates used in Returns Attribution Analysis

The following sources were used to arrive at these figures:

- The Entry Revenue figure was sourced from a press release issued by Berlin Packaging on 12th July 2007.[53]

- In Investcorp's Business Review document for 2015 (pg. 47), the firm mentions that during the holding period of Investcorp, Berlin Packaging was able to quadruple its EBITDA figure. Therefore, to arrive at a $ 25 million Entry EBITDA, we divided the Exit EBITDA of $100 million by four.

- The Exit Revenue figure was sourced from an article in the Chicago Tribune titled: Berlin Packaging to be acquired in $1.4 billion deal (25th August 2014).[54]

- The Exit EBITDA and Exit EBITDA multiple come from an article in the Wall Street Journal titled: Buyout Firm Oak Hill Reaches Deal to Acquire Berlin Packaging (24th August 2014).[55]

- To calculate the Entry EBITDA multiple, we divided the Entry EBITDA figure we calculated with the Entry Purchase EV of $410 million paid by Investcorp.

The table below highlights the contribution of each effect to the final returns received by Equity investors in the Buyout of Berlin Packaging (please note that the values are in $ millions):

Returns Attribution Analysis (in $ millions):		
Sales Growth:		683
EBITDA Margin Improvement:		205
Combination of Growth and Margin:		342
Total Earnings Growth:		**1,230**
Multiple Expansion:		**(240)**
Debt Paydown and Cash Generation:		**(280)**
Total Return to Equity Investors:	**$**	**710**

Figure 12: Returns Attribution Analysis for Berlin Packaging's LBO

[53] https://www.berlinpackaging.com/news/investcorp-to-invest-in-berlin-packaging/
[54] https://www.chicagotribune.com/business/chi-berlin-packaging-to-be-acquired-in-14-billion-deal-20140825-story.html
[55] https://www.wsj.com/articles/buyout-firm-oak-hill-reaches-deal-to-acquire-berlin-packaging-1408910868

The precise formulas used to calculate the effect of each value driver were discussed in a previous section of this paper titled: "Measuring Value Creation". The Total Earnings Growth driver is calculated by summing up the Sales Growth, EBITDA Margin Improvement and Combination of Growth and Margin.

As we can see from the table above, the returns in this deal are primarily driven by the growth in Berlin Packaging's Earnings (more specifically its EBITDA) during the holding period of Investcorp. Overall, Earnings growth contributed $1,230 million towards returns to Equity investors, representing 173% of the total value creation. Moreover, Earnings Growth itself is primarily led by growth in Berlin Packaging's Sales, representing around 55% of overall Earnings growth and 96% of global value creation. Next, Multiple Expansion harmed overall value creation of $240 million, signifying negative 33% of total value creation. This is because there was a Multiple Contraction as the Entry Multiple fell from 16.4x to 14.0x during the Exit period. Finally, Debt Paydown and Cash Generation had a negative effect of $280 million in terms of value creation for Equity investors. This represented around negative 40% of Total Value Creation. We would not focus too much on this aspect as this is a result of an increase in Debt in the penultimate year of Investcorp's holding period which was in turn caused by the dividend recapitalization carried out in 2013. Moreover, since we do not know the exact amount of leverage used in the acquisition of Berlin Packaging by Investcorp (we had to make reasonable assumptions), we will not dwell on leverage being a key returns driver in this specific scenario. To sum up, the returns in this deal, and in turn the value created, is primarily due to an increase in Earnings (caused mainly by an increase in Revenue) for Berlin Packaging during the holding period of Investcorp.

The figure below provides a graphical representation of the various drivers that increased the Enterprise Value of Berlin Packaging during its "Buy-and-Build" Leveraged Buyout (rounded numbers):

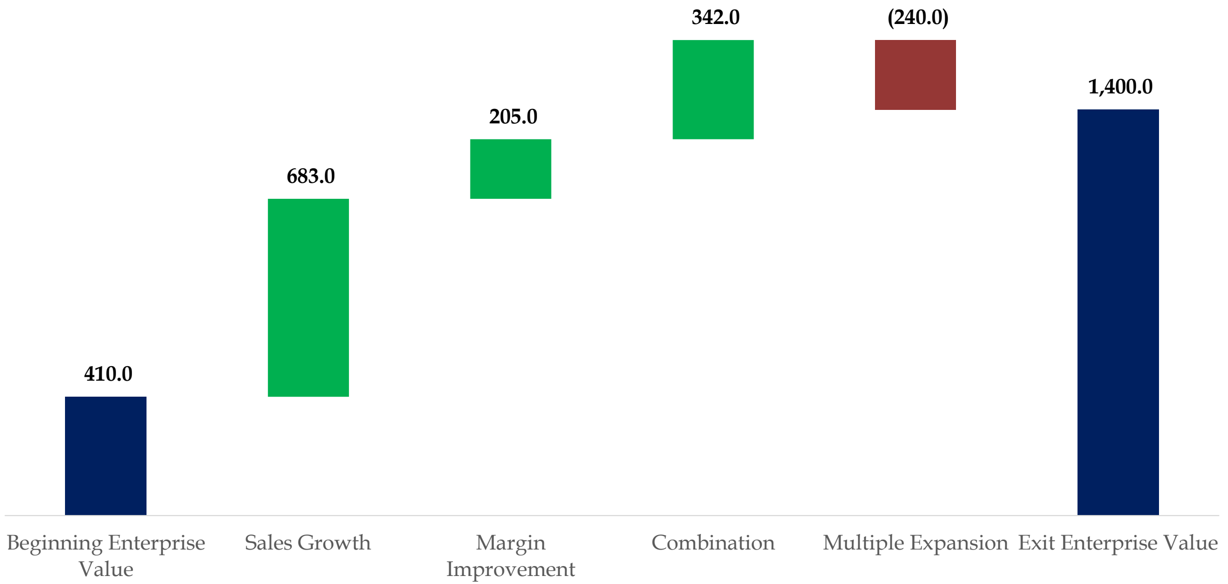

Figure 13: Graphical Representation of Value Creation during Berlin Packaging's LBO

Analysis of value drivers

In this section, we will apply the combined "Buy-and-Build" value creation framework we discussed earlier and elaborate on each value creation driver in the context of Berlin Packaging's Buyout by Investcorp. We will begin by analyzing the 3 Primary drivers of value creation: strategic distinctiveness, operational improvement, and financial engineering.

To start with, we will look at the improvements in strategic distinctiveness that occurred during the holding period as a direct result of an enhancement of capacity utilization due to the integration of add on acquisitions. The graph below illustrates the increase in Total Revenues experienced by Berlin Packaging during Investcorp's holding period:

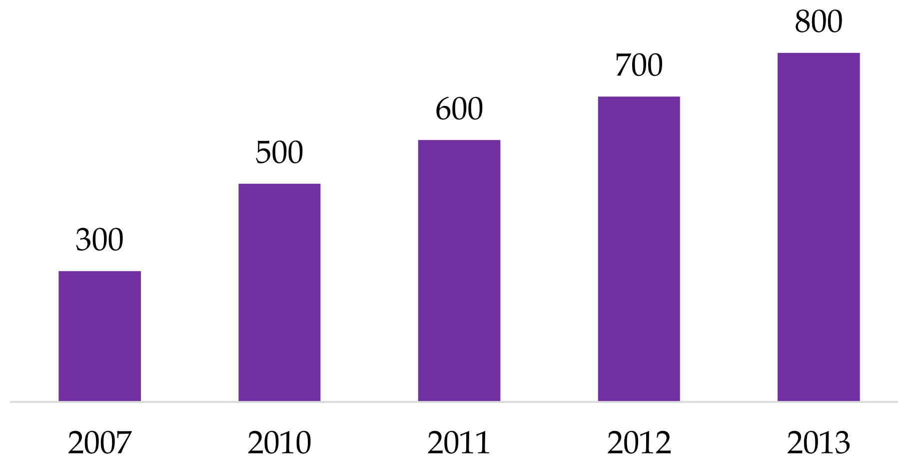

Figure 14: Berlin Packaging's Annual Revenue (2007 – 2013)

As is evident from the graph above, during the holding period, Berlin Packaging's Revenues grew from around $300 million to $800 million, representing an approximate total increase of 167%. If we recall from the Returns Attribution Analysis, Revenue Growth was the primary driver of returns for investors in Berlin Packaging's buyout. We do not have numerical values for the Total Assets of Berlin Packaging throughout the holding period, and therefore, we cannot accurately calculate the precise evolution of the company's capacity utilization. However, we can move forward with a qualitative explication. Looking at the transaction in this sense, we can see that the resource allocation carried out by Berlin Packaging's management team primarily revolved around integrating the add on companies with keeping the following points in mind:

- Provide Berlin Packaging with access to the additional customers and markets which were supplied by the add on companies through the new sales networks and warehouse facilities provided by these companies. This accelerated the growth of Berlin Packaging as poaching these additional customers through sales and marketing efforts would have been difficult as, given the fragmentation of the packaging industry and statements made by Andrew Berlin (CEO of Berlin Packaging) about the importance of having local teams,

we can infer that a critical value driver in this industry is related to companies having a local presence in the sub-geographies they cater to.

- The add on companies and their customers benefited from the broad platform of value-added services provided by Berlin Packaging. As we discussed in the introduction to the company, the focus of Berlin Packaging was not just to provide customers with packaging products, but to liaise with customers to discover ways in which these customers can increase their earnings through packaging solutions. Therefore, Berlin Packaging provided services such as management consulting, custom packaging, and financial support (capital lending) to its clients.

The figure below summarizes the critical resource allocation carried out by the management team of Berlin Packaging:

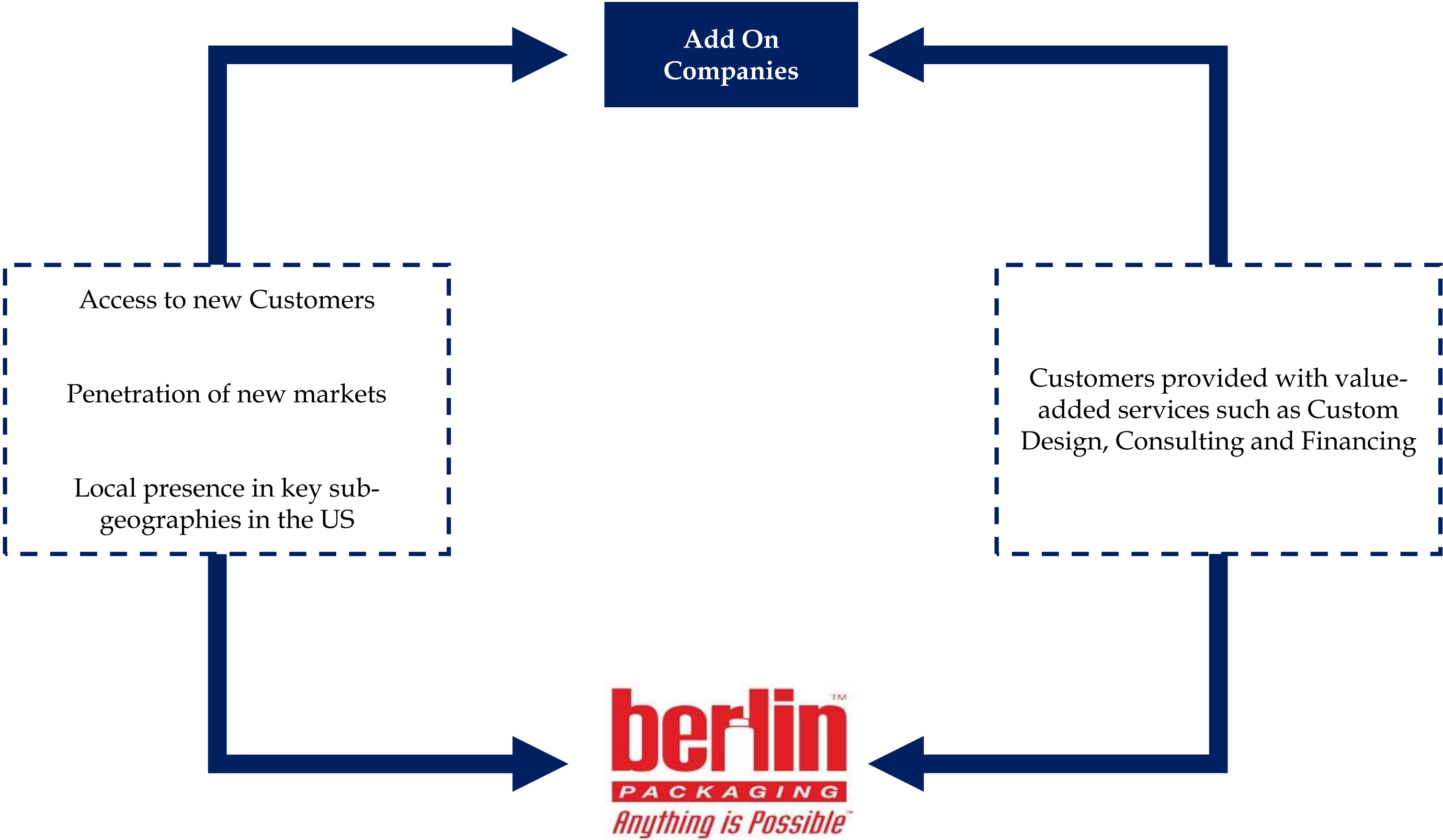

Figure 15: Reallocation of Resources during Berlin Packaging's LBO

Second, we will look at how value was created through operational efficiencies realized at Berlin Packaging during the holding period of Investcorp. As evident in the figure below, during the holding phase of its buyout, Berlin Packaging quadrupled its EBITDA from $25 million to $100 million. Moreover, its EBITDA margin improved from 8.3% to 12.5%

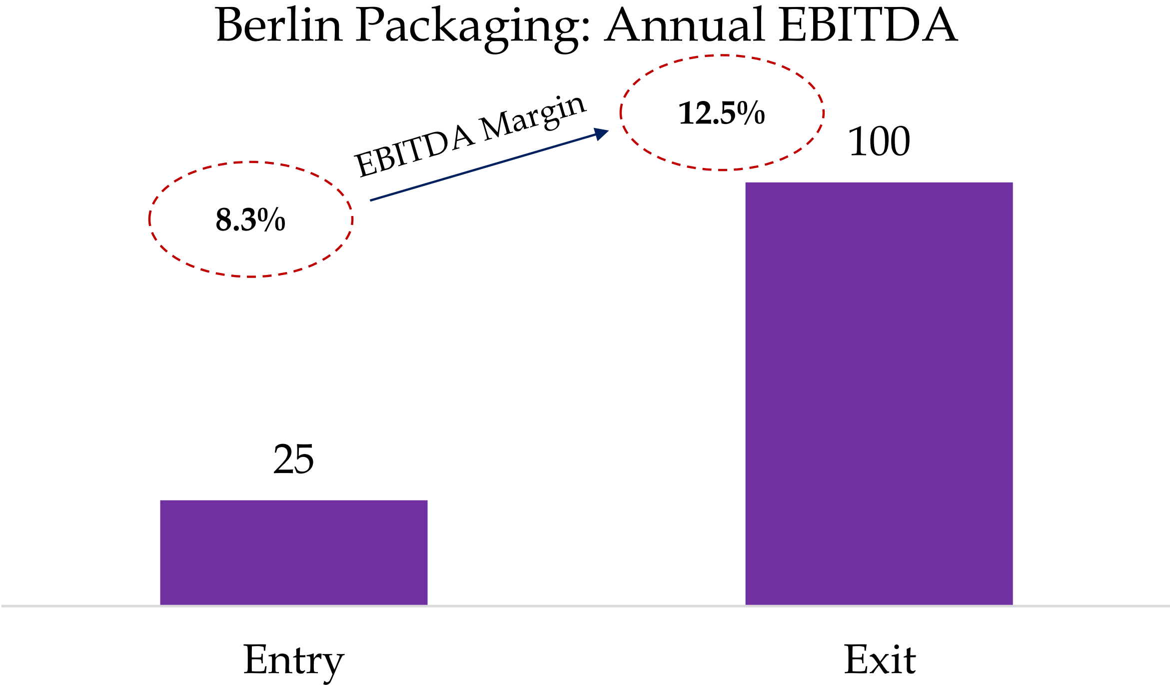

Figure 16: Entry and Exit EBITDA for Berlin Packaging's LBO

According to Peter S. Cohan's book: Scaling your Startup[56], there are a variety of ways through which Berlin Packaging was able to boost its EBITDA margin during the holding phase of its buyout. To begin with, Berlin Packaging was able to lower its purchasing costs as it improved its position with its suppliers. Berlin Packaging systematically enhanced its bargaining power with its suppliers due to the economics of scale it achieved through its acquisitions and the resulting increase in its market share. After the add on companies were fully integrated, the suppliers of these companies had to negotiate prices solely with Berlin Packaging. Next, Berlin Packaging developed improved its outbound

[56]Scaling your startup (Peter S. Cohen – Pg. 25 – 26)

logistics system to maintain high shipping reliability and reducing costs related to misplaced, faulty or late shipments to its customers. According to Berlin Packaging, its long-term shipping reliability rate now stands at 99% for all its orders. Finally, by focusing on increasing customers that provide long-term contracts, Berlin Packaging was able to reduce its sales and marketing efforts that targeted the same customers in each purchasing cycle. To do this, Berlin Packaging transformed itself into an "EBITDA selling company" as opposed to a packaging supplies provider. This means that Berlin Packaging focused on providing value-added services to its customers such as consulting, productivity enhancement evaluations, zero-interest financing and training with regards to lean management techniques. These services were provided in exchange for long-term commitments by the customers of Berlin Packaging regarding their purchase of packaging materials from the company.

Third, we will discuss the final primary lever, which relates to value creation due to financial engineering. Since we do not have financial figures for the initial leverage employed by Investcorp in its LBO of Berlin Packaging, it is difficult to elaborate on whether the cost of capital was lowered via Investcorp securing cheaper financing terms for Berlin Packaging. However, it is essential to note that Investcorp was able to carry out a dividend recapitalization during the penultimate year (2013) of its holding period of Berlin Packaging. As a result of this dividend recapitalization, a payout of $324 million was distributed to the Equity holders of Berlin Packaging a year earlier than the actual exit. Due to this earlier payout, the IRR of the Equity participants in Berlin Packaging's Buyout was boosted. The way Investcorp was able to distribute this value to the Equity holders of Berlin Packaging is through arranging debt financing for the dividend recapitalization by using its relationships with debt providers and by convincing these investors that Berlin Packaging would be able to service these loans through the future cash flow it generates.

Having discussed the 3 Primary Levers of value creation involved in Berlin Packaging's buyout, we will now look at the 2 Secondary Levers of value creation: Reduction of Agency Costs and Mentoring.

First, looking at reduction in Agency Costs, in our framework for value creation in "Buy-and-Build" transactions, we mentioned that in the particular case of "Buy-and-Build" strategies the disciplining effect of increased debt on management teams is heightened as more debt is needed to fund the additional add on acquisitions as compared with similar traditional buyouts. In the case of Berlin Packaging, we saw that apart from the first add on purchase of All-Pak, no further Equity was injected to fund any add on acquisition. This means that each add-on acquisition resulted in an increase in Net Debt for Berlin Packaging and this, in turn, pressurized the management team to focus on conserving cash flow, justifying each additional acquisition based on value creation, and adopting a free cash flow generation mindset towards managing Berlin Packaging's operations. In addition to the discipline of debt, we saw that Andrew Berlin (CEO of Berlin Packaging) participated significantly in the initial buyout of Berlin Packaging by Investcorp [57] and in the later Equity injection used to acquire All-Pak. [58] By rolling over his Equity stake, Andrew Berlin had "skin in the game" and this showed Investcorp that the senior management team of Berlin Packaging believed in the "Buy-and-Build" strategy which was to be carried out and that the CEO of Berlin Packaging and Investcorp had perfect alignment with regards to the objective to create value.

Moving on, we will now look at whether and how Investcorp was able to "Mentor" Berlin Packaging during the holding period of the buyout. Given the limited amount of information we have, it is difficult to pinpoint and specific steps taken by Investcorp or aspects directly resulting from being involved in an LBO transaction which further improved the motivation or ability of Berlin Packaging's management team. In our combined value creation framework for "Buy-and-Build" Leveraged Buyouts, we

[57]https://www.wsj.com/articles/buyout-firm-oak-hill-reaches-deal-to-acquire-berlin-packaging-1408910868
[58]Investcorp Annual Report (2010)

mentioned how, in the context of “Buy-and-Build” scenarios, Private Equity firms can provide M&A expertise to platform companies which might lack such skills due to inexperience and which are necessary to carry out multiple add on acquisitions. However, in the case of Berlin Packaging, we saw that, under the leadership of Andrew Berlin (CEO of Berlin Packaging), Berlin Packaging had already undergone three undergone acquisitions before the investment by Investcorp. Therefore, the management team at Berlin Packaging was not inexperienced per se in the realm of M&A. This is not to say that Investcorp did not provide any added expertise during the LBO, but we do not have any information to ascertain this proposition. On the other hand, according to Peter S. Cohan’s book: Scaling your Startup[59], during the holding phase of its buyout, Berlin Packaging focused on hiring and retaining employees who could directly contribute to boosting Berlin Packaging’s EBITDA. Following its buyout by Investcorp, Berlin Packaging underwent a paradigm shift in its HR approach where the company engaged in a psychological contract with its employees to provide them with higher compensation when compared to the broader industry in return for a commitment by employees to work towards EBITDA improvement at the company. This initiative can be viewed as a direct impact of Private Equity ownership on the HR policy of its portfolio company where the focus is on growing EBITDA through aligning the interests of both the senior and junior employee pool at the company.

Finally, we will briefly discuss the impact of any Value Capturing in the context of our Berlin Packaging’s buyout. Referring back to our framework, when we talk about value capturing, we are referring to any instances of financial arbitrage whereby Investcorp was able to capture value by selling its stake in Berlin Packaging at a higher multiple than at which it was acquired. However, in the case of this specific transaction, we see that Berlin Packaging experienced a Multiple Contraction during Investcorp’s exit as the Exit EV/EBITDA Multiple fell to 14.0x from an Entry EV/EBITDA Multiple of 16.4x. As mentioned in the Returns Attribution Analysis section, this reduction in the exit multiple

[59]Scaling your startup (Peter S. Cohen – Pg. 25 – 26)

resulted in a negative $240 million effect on the returns experienced by investors in Berlin Packaging's Leveraged Buyout. We believe this is because Investcorp acquired Berlin Packaging at a time of peak valuations just before the Global Financial Crisis hit in 2008. An important point to note is that the case of Investcorp's buyout of Berlin Packaging we can see an example of Bain & Company's emphasis on "Buy-and-Build" as a strategy to mitigate the effect of higher multiples. As a reminder, according to Bain & Company, this strategy enables Private Equity funds "to justify the initial acquisition of a relatively expensive platform company by offering the opportunity to tuck in smaller add-ons that can be acquired for lower multiples later on". [60]

Management Team Hypothesis:

Having discussed the various levers of value creation in the context of our case study, we will now look at this transaction in the light of our hypothesis which states that the success of Buy-and-Build LBO transactions highly depends on the independent ability and experience of the platform company's management team to carry out and integrate add on acquisitions. This aspect is highly relevant in the case of Berlin Packaging as we know that Andrew Berlin (CEO of Berlin Packaging since its inception) had heavily relied on add on acquisitions to grow the company at double the rate of the overall packaging sector in North America. Before the investment by Investcorp, Berlin Packaging, under the leadership of Andrew Berlin and his team, had carried out three add on acquisitions:[61]

- Alco Packaging in 1988

- Knap-Pac in 2000

- Freund Container & Supply in 2003

This demonstrates that Investcorp displayed a unique capacity to identify the success of the strategy that the management team at Berlin Packaging had previously carried out and Investcorp liaised with the management team to provide its support in continuing

[60] Bain & Co (Global Private Equity Report pg.38, 2019)
[61] https://www.berlinpackaging.com/why-berlin/our-story/

the existing Buy-and-Build strategy. The ability of Andrew Berlin to quickly and successfully integrate add on acquisitions was evident to Investcorp before the transaction and Andrew Berlin's decision to roll-over a significant portion of his Equity for the LBO transaction provided further evidence of his belief in the strategy. An analysis of this transaction demonstrates that our initial hypothesis of the importance of management teams in "Buy-and-Build" operations.

Conclusion

The primary purpose of this research paper is to develop an understanding of the unique value drivers in the context of "Buy-and-Build" Private Equity strategies, create a systematic framework which outlines these value drivers and then apply this framework to a real-life case to identify how these drivers work to generate value.

To achieve these objectives, we started by describing what Private Equity entails and how traditional Leveraged Buyouts work. After this, we explored the current literature on value creation in the context of conventional Leveraged Buyouts and briefly discussed various measures of value creation. We then reviewed empirical research on value creation in the context of "Buy-and-Build" LBOs by BCG & HHL (2016) and Borell & Hegger (2013) and developed a unique framework which combined the traditional value drivers proposed by Gottschalg & Berg (2005) with these empirical findings. According to this framework, the primary value driver of strategic distinctiveness plays a significant role in the context of "Buy-and-Build" transactions as Private Equity firms focus on improving the "Capacity Utilization" (Asset Turnover) of the platform company by integrating it with add on companies and re-allocating resources according to their best use. Moreover, "Buy-and-Build" transactions boost the "discipline of debt" effect as more debt financing is required as compared to traditional buyouts. In addition to this framework, we proposed a hypothesis stating that the success of Buy-and-Build transactions highly depends on the independent ability and experience of the platform company's management team to carry out and integrate add on acquisitions.

Having developed a framework and a hypothesis, we applied these to a real-life case study relating to the buyout of Berlin Packaging by Investcorp. From our analysis of this deal, we found that the growth in Revenues experienced by Berlin Packaging as a result of the successful integration of its add on acquisitions was the primary source of value creation. This can be attributed to the ability of Berlin Packaging's management team to increase Berlin Packaging's capacity utilization by providing Berlin Packaging with

increased customers and geographical markets while giving the customers of the add on companies with the pre-existing value-added services structure developed by Berlin Packaging.

We also saw that a critical enabler of value creation in the case of Berlin Packaging's buyout by Investcorp was the fact that before the investment by Investcorp, the management team at Berlin Packaging had already led and successfully integrated three add on acquisitions. The management team at Berlin Packaging had a history of using add on acquisitions which led to the company growing ten times faster than the overall packaging market even before the LBO of Berlin Packaging.

While there is an abundance of literature available on the subject of value creation in the context of Private Equity led LBOs, it is essential to note that the literature specific to value creation in "Buy-and-Build" LBO scenarios is quite scarce. The main contribution of this research paper is to combine the traditional theoretical framework of value creation in LBOs with the little empirical research on "Buy-and-Build" LBOs that is available. This combination has resulted in a comprehensive framework to analyze cases of "Buy-and-Build" LBOs, and the structure allows one to isolate how each value driver contributed to the transaction's success. Moreover, this framework, alongside the hypothesis about the ability and experience of the platform company's management team was applied to a real-life case which substantiated the usefulness of this framework and hinted at the importance of the hypothesis.

Moving forward, this research paper opens the door to additional questions regarding value creation in the context of "Buy-and-Build" LBOs. One that is the most salient relates to the "management team hypothesis" proposed in this paper. Given the importance of management teams in the unique case of "Buy-and-Build" LBOs, perhaps we would be able to better understand value creation in this context if we can identify what are the key traits and / or experiences that render management teams of platform companies as enablers of the various levers of value creation in the context of "Buy-and-Build" LBOs.

Bibliography

1. References

Acharya V. V., Hahn, M. & Kehoe, C. (2009) "Corporate Governance and Value Creation: Evidence from Private Equity"

Anders, G (1992): "The barbarians in the boardroom", *Harvard Business Review, 70(4), 79–87*

Baker, G. P. & C. A. Montgomery (1994): "Conglomerates and LBO associations: A comparison of organizational forms", *Harvard Business School Working Paper (November 4): 1 – 34*

Berg A. & Gottschalg O. F. (2005): "Understanding Value Generation in Buyouts", *Journal of Restructuring Finance, Vol. 2, No. 1, 9 – 37*

Beaver, G (2001): "Management buy-outs: who dares wins?" *Strategic Change, 10(6), 307–310*

Butler, PA (2001): "The alchemy of LBOs", *The McKinsey Quarterly, 2, 140–151*

Boston Consulting Group and HHL Leipzig Graduate School of Management (2016): "The Power of Buy and Build: How Private Equity Firms Fuel Next-Level Value Creation". Electronic copy available at:

https://www.bvkap.de/sites/default/files/study/bcg_power-of-buy-and-build-feb-2016.pdf

Borell M. and D. Heger (2013): "Sources of Value Creation Through Private Equity-backed Mergers and Acquisitions: The Case of Buy-and-Build Strategies", *Centre for European Economic Research (ZEW) Discussion Paper, No. 13-094, Mannheim*

Cotter, JF and SW Peck (2001): "The structure of debt and active equity investors: the case of the buyout specialist", *Journal of Financial Economics, 59(1), 101–147*

D. C. Mueller (1972): “A life cycle theory of the firm”, *Journal of Industrial Economics, 20(3):199–219*

DeAngelo, LE (1986): “Accounting numbers as market valuation substitutes: a study of management buyouts of public shareholders”, *Accounting Review, 61(3), 400–420*

E. Devos, P.-R. Kadapakkam, and S. Krishnamurthy (2008): “How do mergers create value? A comparison of taxes, market power, and efficiency improvements as explanations for synergies”, *Review of Financial Studies, 22:1179–1211*

Engel, N. (2011): "Essays on Value Creation and Risk Assessment in Private Equity Sponsored Buyouts", *TECHNISCHE UNIVERSITÄT MÜNCHEN*

E. Nikoskelainen and M. Wright (2007): “The impact of corporate governance mechanisms on value increase in leveraged buyouts”, *Journal of Corporate Finance, 13(4):511–537*

Fox, I and A Marcus (1992): “The causes and consequences of leveraged management buyouts”, *Academy of Management Review, 17(1), 62–85*

G. Andrade and E. Stafford (2004): “Investigating the economic role of mergers”, *Journal of Corporate Finance, 10(1):1–36*

Hite, GL and MR Vetsuypens (1989): “Management buy-outs of divisions and shareholder wealth”, *Journal of Finance, 44(4), 953–970*

Holthausen, RW and DF Larcker (1996): “The financial performance of reverse leveraged buyouts”, *Journal of Financial Economics”, 42(3), 293–332*

Houlden, B (1990): “Buyouts and beyond: motivations, strategies and ownership changes”, *Long Range Planning, 23, 73–77*

H. T. J. Smit (2001): “Acquisition strategies as option games”, *Journal of Applied Corporate Finance, 14(2):79–89*

Jensen, MC and W Meckling (1976): "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics, 3(4), 305–360*

Jensen, MC and RS Ruback (1983): "The market for corporate control", *Journal of Financial Economics, 11, (1–4), 5–50*

Jensen, MC (1989): "Eclipse of the Public Corporation", *Harvard Business Review*

Jensen, MC (2007): "The Economic Case for Private Equity (and Some Concerns)", *Harvard Business Review*

Kaplan, SN (1989a): "The effects of management buy-outs on operating performance and value", *Journal of Financial Economics, 24(2), 217–254*

K. C. Brown, A. Dittmar, and H. Servaes, "Corporate governance, incentives, and industry consolidations", *Review of Financial Studies, 18(1):241–270*

Kevin Kaiser & Christian Westarp (2010): "Value Creation in the Private Equity and Venture Capital Industry", Working paper in: *The INSEAD Working Paper Series*

Lee, DS (1992): "Management buyout proposals and inside information", *Journal of Finance, 47(3), 1061–1079*

Lowenstein, L (1985): "Management buyouts", *Columbia Law Review, 85(4), 730–784*

O'Donnell, M (2001), "Four Ways to Skin a Cat, Real Deals"

Opler, TC and S Titman (1993): "The determinants of leveraged buyout activity: free cash flow vs. financial distress costs", *Journal of Finance, 48(5), 1985–*

P. Barnes (2000): "The identification of U.K. takeover targets using published historical cost accounting data", *International Review of Financial Analysis, 9(2):147–162*

P. M. Healy, K. G. Palepu, and R. S. Ruback (1992): "Does corporate performance improve after mergers?", *Journal of Financial Economics, 31(2):135–175*

Rappaport, A (1990): "The staying power of the public corporation", *Harvard Business Review, 68(1), 96–104*

Seth, A and JC Easterwood (1993): "Strategic redirection in large management buyouts: the evidence from post-buyout restructuring activity", *Strategic Management Journal, 14(4), 251–273*

Singh, H (1990): "Management buyouts: distinguishing characteristics and operating changes prior to public offering", *Strategic Management Journal, 11(4), 111–129*

1999

Stabell, CB and OD Fjeldstad (1998): "Configuring for competitive advantage: on chains, shops, and networks", *Strategic Management Journal, 19(5), 413–437*

Thompson, S, M Wright and K Robbie (1992), "Buy-outs, divestment, and leverage: restructuring transactions and corporate governance", *Oxford Review of Economic Policy, 8(3), 58–69*

V. Maksimovic and G. Phillips (2001): "The market for corporate assets: Who engages in mergers and asset sales and are there efficiency gains?", *Journal of Finance, 56:2019–2065*

Wright, M, N Wilson, K Robbie and CT Ennew (1994b): "Restructuring and failure in buy-outs and buy-ins", *Business Strategy Review, 5(2), 21–40*

2. Reports

Bain & Company (2019): "Global Private Equity Report 2019", Bain Report, electronic copy available at:

https://www.bain.com/contentassets/875a49e26e9c4775942ec5b86084df0a/bain_report_private_equity_report_2019.pdf

BDO Private Company Price Index Q1 (2015): "Spotlight on Packaging". Available online at: https://www.bdo.co.uk/getmedia/932ec984-b1cc-40df-9d4a-87b737421058/PCPI-Q1-2015.pdf.aspx

C. P. Silverfleet (2010): "Buy and Build Monitor", *Technical report, Silverfleet Capital Partners LLP*. Electronic copy available at:

https://www.silverfleetcapital.com/assets/filemanager/content/buy-and-build-monitor/2009_buy_and_build_monitor.pdf

Investcorp Annual Report (2010). Available online at:

https://www.investcorp.com/docs/uploads/investor-presentations/Complete_annual_report.pdf

Investcorp Business Review (2015). Available online at:

https://www.investcorp.com/docs/uploads/credit-ratings/FINAL_FULL_HY15_BUSINESS_REVIEW.pdf

3. Books

Baker, GP and GD Smith (1998): "The New Financial Capitalists: Kohlberg Kravis Roberts and the Creation of Corporate Value", *Cambridge, UK: Cambridge University Press*

Claudia Zeisberger, Michael Prahl and Bowen White (2017): "Mastering Private Equity", 1st Edition, *John Wiley & Sons Ltd*

F. J. Fabozzi (2002): "The Handbook of Financial Instruments", *John Wiley & Sons*

Goold, M, A Campbell and M Alexander (1994): "Corporate-Level Strategy: Creating Value in the Multibusiness Company", *New York, NY: John Wiley & Sons*

Peter S. Cohan (2019): "Scaling Your Startup: Mastering the Four Stages from Idea to $10 Billion", *1st Edition, Apress*

Pierre Vernimmen, Pascal Quiry, Yann Le Fur, Maurizio Dallocchio, Antonio Salvi (2017): "Corporate Finance: Theory and Practice" 5th Edition, *John Wiley & Sons Ltd*

Porter, ME (1985): "Competitive Advantage: Creating and Sustaining Superior Performance", *New York, NY: Free Press.*

Rosenbaum & Pearl (2009): "Investment Banking: Valuation, Leveraged Buyouts and Mergers & Acquisitions", *John Wiley & Sons, Inc.*

Samdani, GS, P Butler and R McNish (2001): "The alchemy of leveraged buyouts", *In Budde, F, GA Farha, H Frankem¨olle, DF Hoffmeister and K Kr¨amer (eds.), Value Creation: Strategies for the Chemical Industry, pp. 93–107*

4. Press Articles

Berlin Packaging Press Release (28th Feb 2010). Available online at: https://www.berlinpackaging.com/news/berlin-packaging-leading-supplier-of-packaging-announces-agreement-for-the-acquisition-of-all-pak-inc/

Berlin Packaging Press Release (15th Dec 2010). Available online at: https://www.berlinpackaging.com/news/berlin-packaging-acquires-continental-packaging-solutions-marking-second-acquisition-in-ten-months/

Berlin Packaging Press Release (14th May 2012). Available online at: https://www.berlinpackaging.com/news/berlin-packaging-acquires-lerman-container/

Berlin Packaging Press Release (12th Jul 2007). Available online at: https://www.berlinpackaging.com/news/investcorp-to-invest-in-berlin-packaging/

Chicago Tribune (25th Aug 2015): "Berlin Packaging to be acquired in $1.4 billion deal". Available online at: https://www.chicagotribune.com/business/chi-berlin-packaging-to-be-acquired-in-14-billion-deal-20140825-story.html

CNBC (24th Oct 2012): "Berlin Packaging Acquires United States Container Corporation". Available online at: https://www.cnbc.com/id/100040520

Costmeticsdesign.com (9th Feb 2010): "Berlin Packaging enters agreement to acquire All-Pak". Available online at:

https://www.cosmeticsdesign.com/Article/2010/02/09/Berlin-Packaging-enters-agreement-to-acquire-All-Pak

Cosmeticsdesign-asia.com (10th Jan 2011): "Berlin Packaging expands in the US with acquisitions". Available online at:

https://www.cosmeticsdesign-asia.com/Article/2011/01/10/Berlin-Packaging-expands-in-the-US-with-acquisitions

Investcorp's Case Study Article on Berlin Packaging. Available online at: https://www.investcorp.com/site/article/berlin-packaging

PRNewswire (16th April 2019):" Berlin Packaging Dominates NACD Awards with Record-Breaking 15 Award Victories". Available online at: https://www.prnewswire.com/news-releases/berlin-packaging-dominates-nacd-awards-with-record-breaking-15-award-victories-300833363.html

Wall Street Journal (24th August 2014): "Buyout Firm Oak Hill Reaches Deal to Acquire Berlin Packaging". Available online at: https://www.wsj.com/articles/buyout-firm-oak-hill-reaches-deal-to-acquire-berlin-packaging-1408910868

Appendix

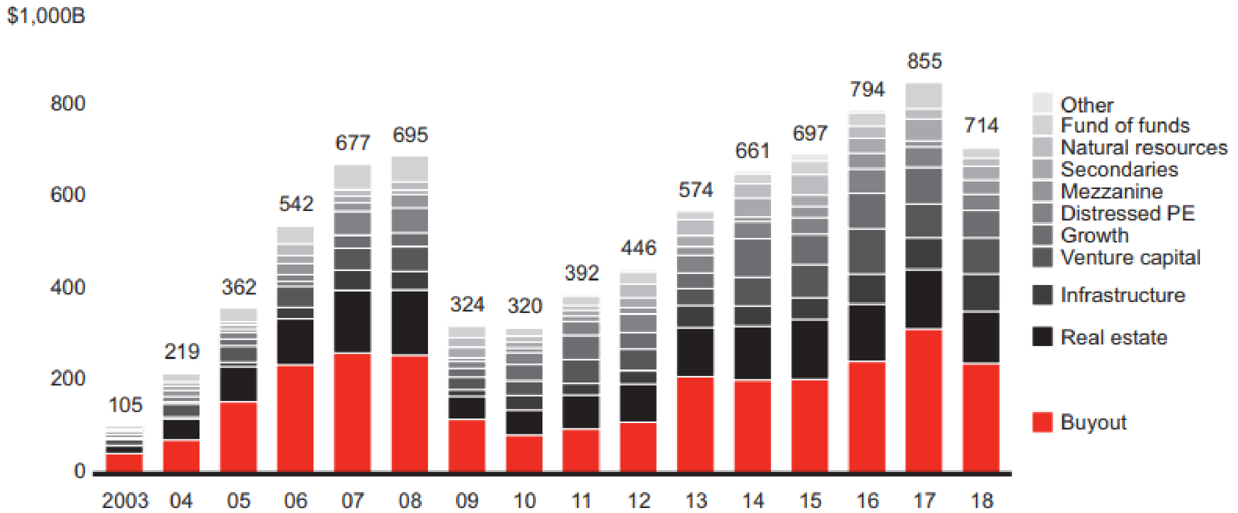

Figure 1: Global PE Capital Raised (according to type of Fund)

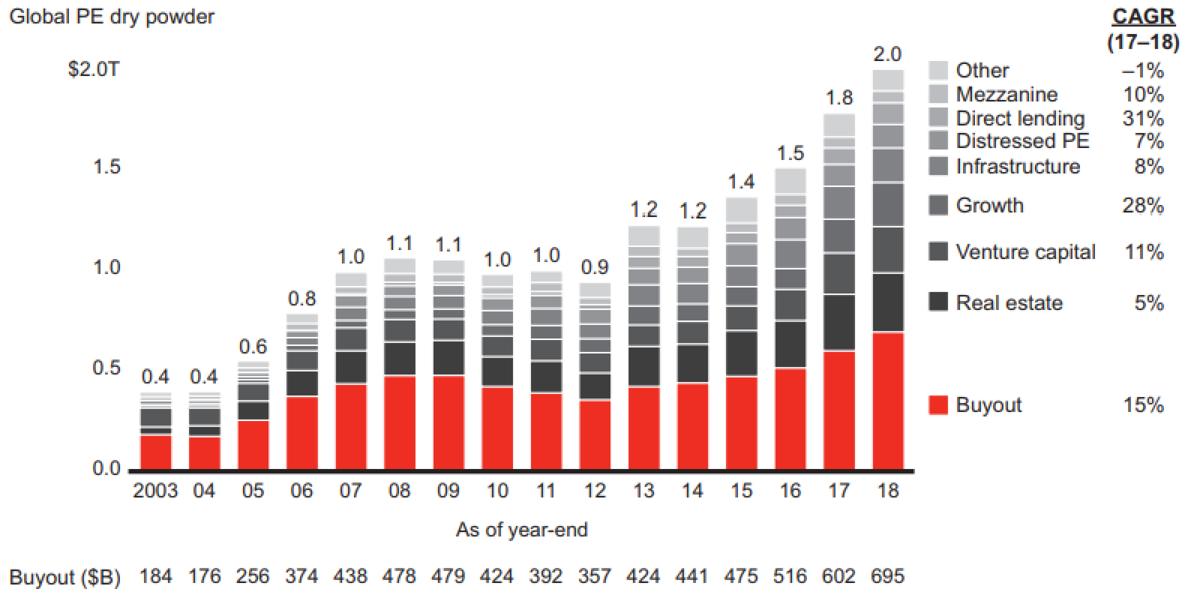

Figure 2: Global PE Dry Powder (according to type of Fund)

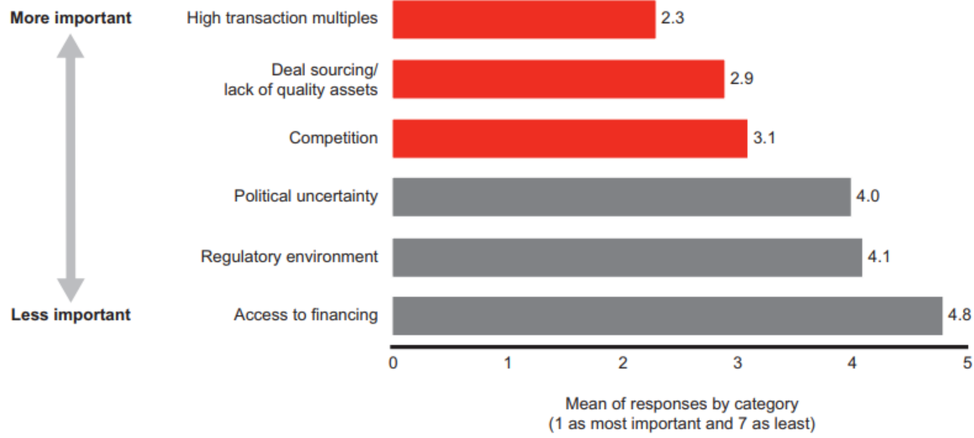

Figure 3: Private Equity firms key concerns survey

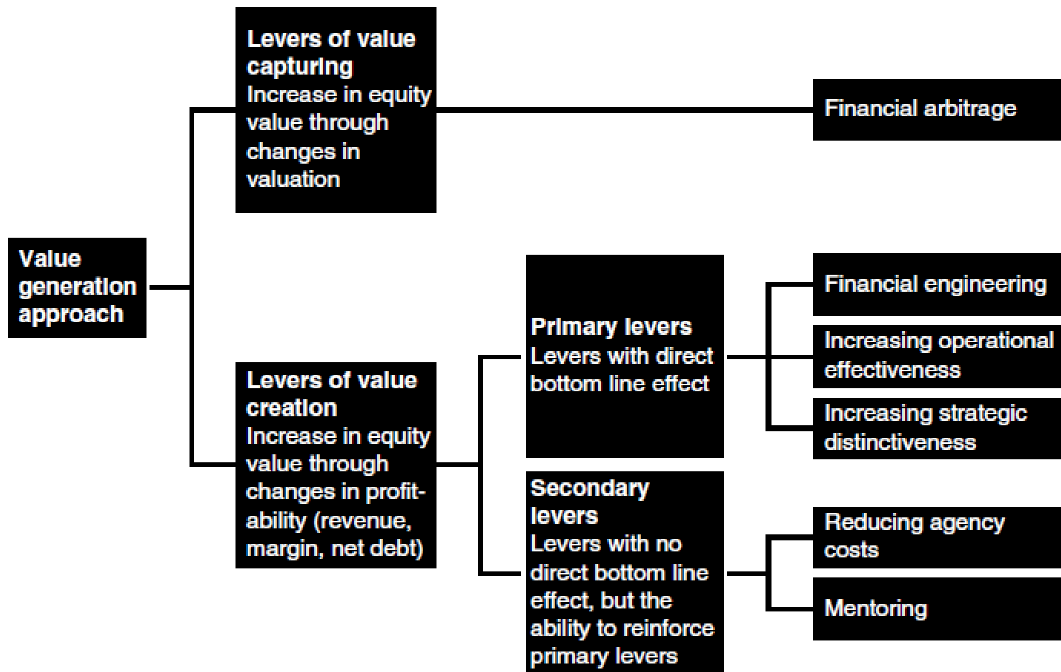

Figure 4: Value Creation Framework (Gottschalg & Berg 2005)

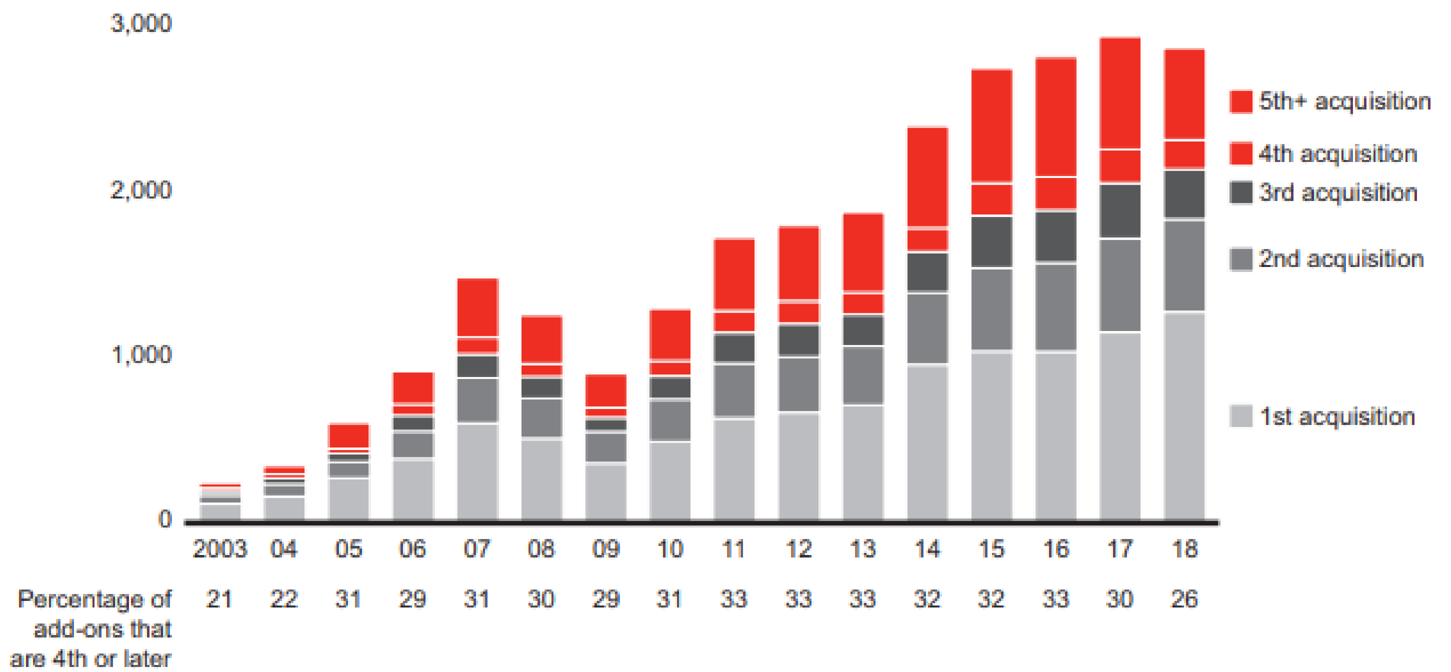

Figure 5: Global Private Equity led add on deals per year

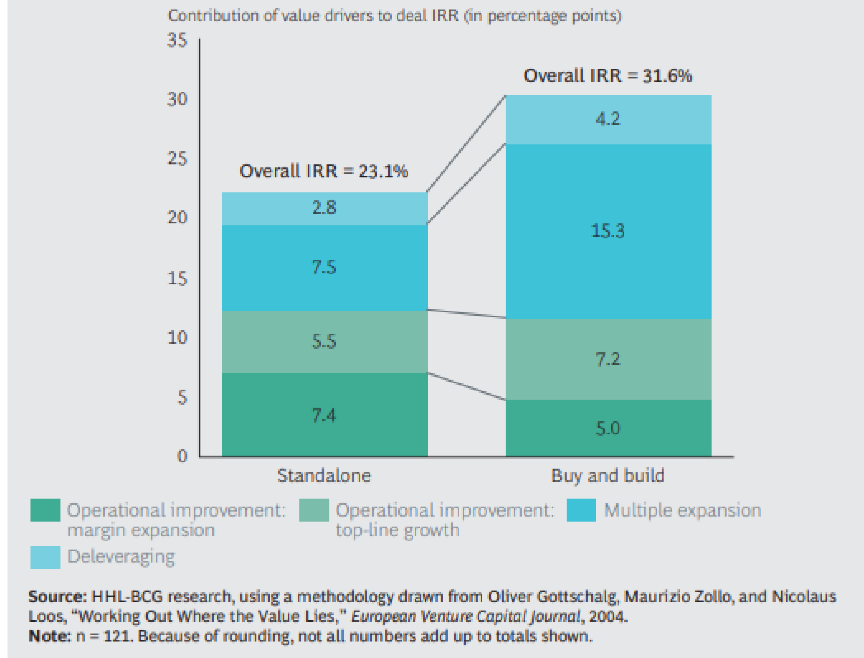

Figure 6: Multiple Expansion as a key value driver in Buy & Build deals

"Buy & Build" Private Equity Value Creation Framework

- **Primary Levers**
  - **Financial Engineering**
  - **Strategic Distinctivenes s**
    - **Integrating add on acquisitions and allocating resources to improve "capacity utilization"**
  - **Operational Effectiveness**
- **Secondary Levers**
  - **Reducing Agency Costs**
    - **Resolving the Principal-Agent Conflict – Jensen (1989)**
      - **Add on acquisitions result in high debt load -> lower managerial discretion over FCF**
  - **Mentoring**
    - **M&A advisory, negotiation skills and, entrepreneurial spirit as management works on add on integration**
- **Value Capturing**
  - **Financial Arbitrage**
    - **Multiple Expansion due to perception of improved performance after a B&B**

Figure 7: Comprehensive Value Creation Framework for "Buy-and-Build" LBOs

Transaction Figures (in $ millions)	
Entry EV	410
Entry Leverage Used	50%
Entry Equity Value	205
Additional Equity Injection	48
Total Equity Proceeds	963
Additional Debt for Dividend Recap	324
Debt used to calculate Equity Proceeds	467

Figure 8: Transaction Figures used in Returns Calculation for Berlin Packaging's LBO

Exit Calculations:		
Exit Enterprise Value:	$	1,430
Less: Debt:		467
Plus: Cash:		-
Equity Proceeds:	**$**	**963**
Cash-on-Cash (CoC) Multiple:		**3.8 x**
Internal Rate of Return (IRR):		**24.1%**

Figure 9: Returns Calculation for Berlin Packaging's LBO

Year	2007	2008	2009	2010	2011	2012	2013	2014
Equity Injections	(205)			(48)				
Cash Flow to Investcorp							324	639
Net Cash Inflow / (Outflow)	(205)	0	0	(48)	0	0	324	639
IRR (%)	**24.1%**							

Figure 10: Detailed IRR Calculation for Berlin Packaging's LBO (based on Cash Flows)

Financial Data (in $ millions):	
Entry Revenue	300
Entry EBITDA	25
Entry EBITDA Margin (%)	8.3%
Exit Revenue	800
Exit EBITDA	100
Entry EBITDA Margin (%)	12.5%
Entry EBITDA Multiple	**16.4x**
Exit EBITDA Multiple	**14.0x**

Figure 11: Financial Aggregates used in Returns Attribution Analysis

Returns Attribution Analysis (in $ millions):	
Sales Growth:	683
EBITDA Margin Improvement:	205
Combination of Growth and Margin:	342
Total Earnings Growth:	**1,230**
Multiple Expansion:	**(240)**
Debt Paydown and Cash Generation:	**(280)**
Total Return to Equity Investors:	**$ 710**

Figure 12: Returns Attribution Analysis for Berlin Packaging's LBO

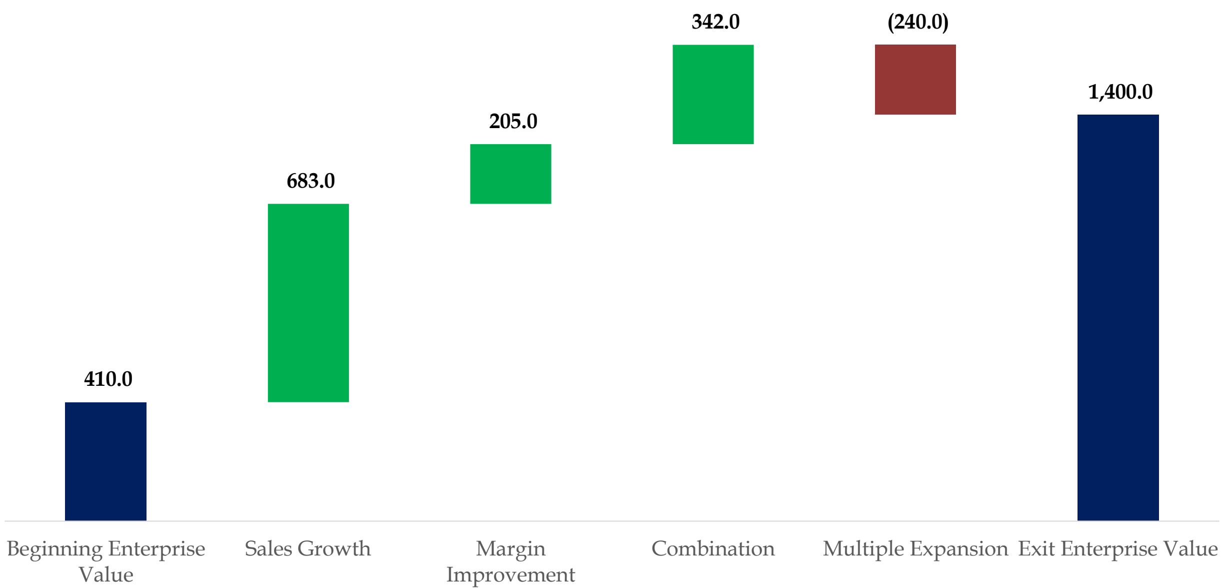

Figure 13: Graphical Representation of Value Creation during Berlin Packaging's LBO

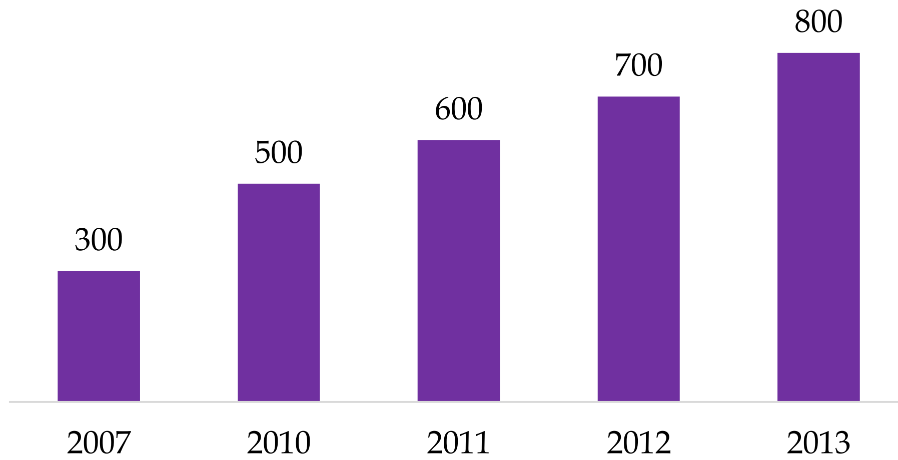

Figure 14: Berlin Packaging's Annual Revenue (2007 – 2013)

Add On Companies

Access to new Customers

Penetration of new markets

Local presence in key sub-geographies in the US

Customers provided with value-added services such as Custom Design, Consulting and Financing

berlin PACKAGING Anything is Possible

Figure 15: Reallocation of Resources during Berlin Packaging's LBO

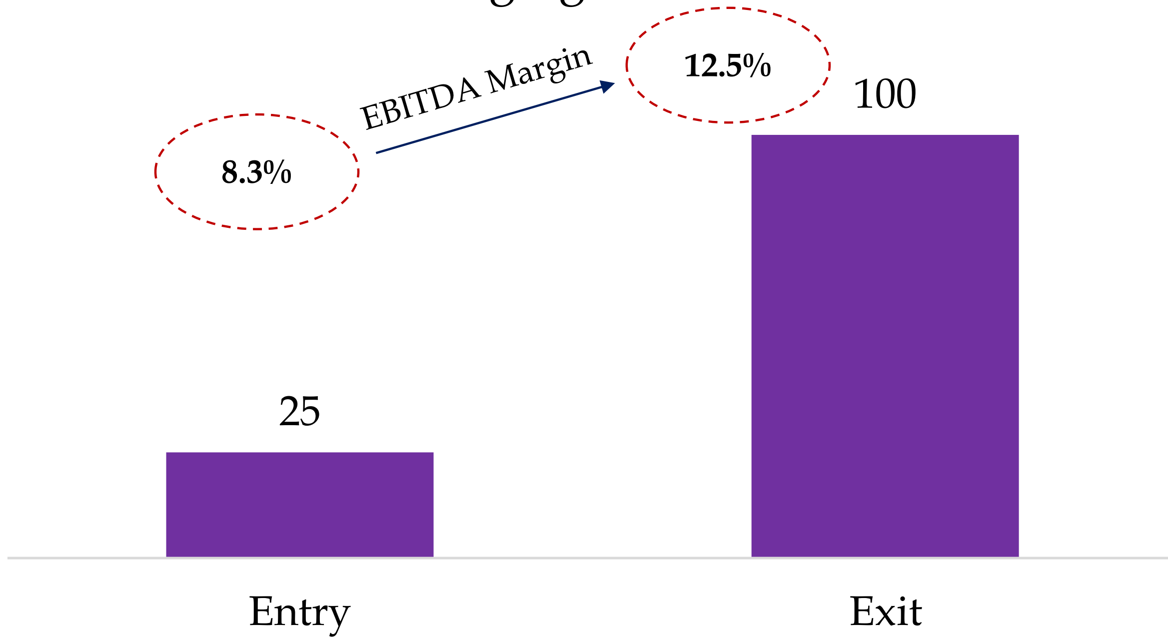

Figure 16: Entry and Exit EBITDA for Berlin Packaging's LBO