ON THE DETERMINANTS OF LEVERAGED BUYOUT ACTIVITY: A COMPARISON BETWEEN DEVELOPED AND DEVELOPING ECONOMIES

by

Nischala Reddy

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Approved by:

_____
Dr. Lloyd Blenman

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Dr. TaoHsien Dolly King

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Dr. Steven Clark

_____
Dr. Ram Kumar

ABSTRACT

NISCHALA REDDY. On the determinants of Leveraged Buyouts: A comparison between developed and developing economies. (Under the direction of Dr. LLOYD BLENMAN)

I study Leveraged buyouts (LBOs) internationally over the period 1980-2012. Returns on LBOs are on average higher for developed markets. However, returns of LBOs during high economic growth periods are high for developing nations relative to developed economies. On the other hand returns in developing nations are lower when compared to the returns in developed nations in periods of negative economic growth. During periods of negative economic growth, the returns in developing nations do not compensate for the high risk associated with them.

Developing countries are more unstable relative to developed countries during conditions of boom as well as collapse. Exit times for LBO transactions in developing economies are therefore shorter relative to developed economies in periods of high economic growth rate. This is because PE investment firms would like to exit soon and lock in their profits. During periods of negative economic growth rate, the LBOs in developing nations exit sooner. When things go badly in the developing economies, they are magnified multiple times. Hence the PE firms would like to avoid further losses and hence exit sooner. In periods of low or medium economic growth, LBOs in developing economies take longer times to exit.

Reputed firms and small firms have higher returns and exit sooner. Club deals have higher returns and exit sooner when compared with single PE firm deals, until the year there was higher government on the motive of club deals. After 2006 there was

higher government scrutiny which make club deals take longer time to exit. Club deals in developing economies are on average not profitable and exit sooner.

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INTRODUCTION

"Leveraged buyout" or "going private" is the process of taking the firm private. It is one of the many ways of taking a firm private, but I focus on LBOs as they are more prevalent in this era of relatively cheap debt[1]. Private equity can be broadly defined to include leveraged buyout, growth capital, mezzanine capital[2] and venture capital. It is common for private equity to be the principal descriptor of LBOs. Investment firms that engage in leveraged buyout activity are known as private equity firms (PE firms), buyout firms or financial sponsors.

In a leveraged buyout transaction, the PE firms buy a majority stake in the publicly trading target firm by using a large amount of debt to fund the transaction. After making a significant unrealized return or upon financial distress, the PE firms exit their stake in the leveraged buyout investment. In some cases joint venture firms may also want to exit what are apparently successful investments if there are public interest issues that can become problematic.[3]

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1 A number of kinds of transactions can result in a company going private in the USA, including: a. Another company or individual makes a tender offer to buy all or most of the company's publicly held shares; b. The company merges with or sells all or substantially all of the company's assets to another company; or The company declares a reverse stock split that reduces the number of shareholders of record. In a reverse stock split, the company typically gives shareholders a single new share in exchange for a block—10, 100, or even 1,000 shares—of the old shares. If a shareholder does not have a sufficient number of old shares to exchange for new shares, the company will usually pay the shareholder cash instead of issuing a new share, thus eliminating some smaller shareholders of record and reducing the total number of shareholders. Once the number of outstanding shareholders falls below 500 the company is considered a private company also. Source: SEC Rule 13e-3 and Section 12(g) of the Securities Exchange Act of 1934.

2 In LBOs, mezzanine capital is used in conjunction with other securities to fund the purchase of target firm. Mezzanine capital will be used to fill a financing gap between less expensive forms of financing and equity. Financial sponsors will seek to use mezzanine capital in a LBO in order to reduce the amount of the capital invested by the PE firm; because mezzanine lenders typically have a lower target cost of capital than the PE investor, using mezzanine capital can potentially enhance the PE firm's investment returns.

3 Example: A world leader in Uranium enrichment, Urenco is a nuclear fuel company that was set up in 1971.The firm is owned in three equal parts by Ultra-Centrifuge Nederland NV (owned by the Government of the Netherlands), Uranit GmbH (owned equally by German energy companies E.ON and RWE) and Enrichment Holdings Ltd (owned by the Government of the United Kingdom and managed by the Shareholder Executive) and profitable. The firm was initially set up with a treaty that restricts sale of stakes. The firm is up for sale now. The Dutch government said it wanted to sell shares provided "public interest in terms of nonproliferation, nuclear safety, and supply security" could be safeguarded.

In the case of a successful investment, this is called harvesting. The PE firms typically want a return of several multiples on their initial investment and are therefore not quick to exit a successful investment. They on the other hand are quicker to exit a failed investment or one that has little chance for success.

When the PE firms make an investment, they do not intend to control the target firm's daily operations. Arzac (1992) mentions that PE firms are considered to be outside investors. They require a qualified management team to manage daily operations. The management team is also required to oversee the PE firms exit and effectively market the target firm to potential buyers or investors during exit. Hence the management team should work in line with the PE firms' interests. Liebeskind, Wiersema and Hansen (1992) mentioned that LBOs increase the proportion held by managers increasing the correlation of their rewards with the value of the firm and aligning their interests more closely with those of non-managerial stock-holders.

I assume that the PE firms exit through either one of the four methods i.e., public offering, strategic sale, secondary LBO and bankruptcy. This classification is based on Kaplan and Stromberg (2009).

In this dissertation, I explain and compare the returns on leveraged buyouts (LBOs) in developed economies with those of developing economies (including newly industrialized economies). The data consists of leveraged buyout transactions from 1980 – April 2012. This covers both periods of recession and economic boom. This data set covers the period analyzed by Kaplan and Stromberg (2009) and Stromberg (2008). My research verifies some of their findings and provide new results in this area.

They primarily find that smaller firms exit sooner and so do reputed firms and syndicated firms.

In general most studies have looked at leveraged buyouts in developed economies. Very few studies have looked at LBOs in developing markets. My study is one of the few to do so. Stromberg (2008) covers leveraged buyout activity around the globe. He compares LBOs exit methods and holding periods from 1970 – 2007. He finds that LBOs take longer times to exit than what has been documented in previous studies. He also found that when there is an experienced PE firm involved in the transactions, the LBOs take shorter time to exit, more likely to go public and less likely to end up in a bankruptcy. Leeds and Sunderland (2003) find that on average returns of leveraged buyout activity in developing economies are lower when compared with developed economies, and they do not compensate for the high risk involved in these transactions.

In my study, I look at leveraged buyout transactions in different growth phases of the economy and compare developed and developing economies. I find that returns to leveraged buyouts are higher for the developed economies on average, across all phases of the business cycle, as compared to those in developing economies. However in periods of high economic growth, returns of leveraged buyouts in developing economies are higher than those in developed economies.

A developed country has a highly developed economy and advanced technological infrastructure relative to less developed nations. Most commonly, the criteria for evaluating the degree of economic development are gross domestic product (GDP), the per capita income, level of industrialization, amount of widespread

infrastructure and general standard of living. Most of the LBO or M&A activity takes place in these countries with the USA being the highest rated country in the level of LBO activity. Some of the countries that can be considered as developed are: USA, Canada, UK, Netherlands, Japan, Australia, Norway, Denmark, Germany and others.

Developing countries are also called less-developed countries (LDC), and they are nations with low living standard, undeveloped industrial base, and low Human Development Index (HDI) relative to other countries. LBOs in developing countries may be attractive mainly due to a low hurdle for the set of rules that need to be complied with, and also due the presence of growth opportunities for in particular, foreign investments.

Newly industrialized countries (NICs) are countries with economies that are more advanced than developing economies but not yet considered developed: Brazil, China, India, Malaysia, Mexico, Philippines, South Africa, Sri Lanka, Thailand and Turkey are examples of such countries. These countries are of particular interest since they have tremendous growth opportunities which attract lots of LBO or M&A activity.

Returns to leveraged buyouts (LBOs) are, on average found to be higher for targets that are from developed nations. Previous research in this area shows that LBO transactions in developing markets do not compensate for the risk inherent in the deals. Lopez-de-Silanes, Phalippou and Gottschalg (2010), find that investments in developing countries exhibit poorer performance when compared to returns to investments in developed countries. This may be a result of costly learning, lower leverage, poorer legal environments and limited exit routes in developing countries.

Leeds and Sunderland (2003), find that the returns to investments in developing markets do not compensate for the high risk involved in the transactions. This is mainly due to low standards of corporate governance in terms of quality of information required for investment decisions, weaknesses in legal systems to enforce legal contracts and protecting all classes of investors; and the inability of domestic equity markets to offer reasonable exit prospects through public offering. Their study just addresses the average behavior of returns, without making any allowance for the states of the economies in those developing markets.

However, in this dissertation, I specifically address the states of the economies, I divide economic growth into four different categories using GDP growth rate as the benchmark. Negative economic growth phases are periods when the GDP growth rate was less than 0%; Low economic growth is when GDP growth rate was greater than 0% but less than 2%; Moderate economic growth is when the GDP growth rate was greater than 2% and less than 5%; and high GDP growth is when the GDP growth rate of country was greater than 5% during the time of the LBO transaction or exit. I then compare how the returns and the number of days to exit of the LBO vary in these four categories of GDP benchmarks for both developed and developing countries.

I expect to find that the returns to LBOs in developing nations are higher during the periods when the growth of the economy is above a given benchmark level when compared to returns of LBOs in the developed nations. This is because in periods of high economic growth, developing economies have a higher growth rate in general when compared to developed economies. This is evident from the high GDP growth rates among some of the developing economies. Whereas when the growth of the

economy is moderate or slow, then the returns of LBOs in the developing nations do not compensate for the risk inherent in the investments in developed nations. Hence during low or moderate economic growth periods, the returns of LBOs in the developed nations will be higher relative to those in developing countries.

I also look at how the number of days to exit the LBO is affected by the economic conditions and other factors. I find that PE firms invested in developing economies exit sooner when the economic growth rate is negative and also when the growth rate is high. This is because when the economic growth is negative, in developing economies, PE investors would like to exit sooner to avoid major losses. In phases of negative growth, the fear of being trapped in a market and not being able to exit, is paramount and overriding for PE investors. In periods of high growth in the economy, in developing economies, the PE firms would like to take the profits sooner and exit. This is a precautionary measure by the firms to exit sooner before the market conditions change.

Koren and Tenreyro (2007) explain why GDP growth rate is so much more volatile in developing economies. They identify three possible reasons (1) developing countries specialize in fewer and more volatile industries (2) developing countries experience more frequent and more severe aggregate shocks from macro economic policies and (3) developing economies macro economic fluctuations are highly correlated with stocks affecting the sectors in which they specialize.

Graph (APPENDIX G) from an article by Gavyn Davies, March 2011, Financial Times Blog compares average economic growth rate of developed and

emerging economies. This graph also shows how volatile the GDP growth rates in developing economies are.

I look at the returns to leveraged buyouts from the time of the initial leverage buyout transaction to the period of exit; that is after the buyout firms exit through one of the following ways: public offering, bankruptcy, management buyout (MBO), strategic buyout and secondary leveraged buyout (SLBO).

In reality, there are many other methods of exiting an LBO investment but I do not have access in the Capital IQ data set to finely analyze other types of exits. Some other types of exits as mentioned in "La Lande, Gibson, Dunn & Crutcher LLP (2011)" are partial exits through dividends issue and recapitalization, tag along rights and redemption rights.

In the dividend issue and recapitalization methods of exit, the PE firm can partially exit the target firm through a special dividend issued by the target firm. The type of dividend is defined by the source of funds used to finance it. Non-leveraged dividend recapitalization is financed by using company's cash in hand and leveraged dividend recapitalization is financed using additional debt.

In redemption rights, PE firms may achieve partial or complete liquidity by forcing the target company to redeem their stocks for cash. This type of exit is typically used as a last resort in case of unsuccessful investments.

Tag along rights is useful in club deals, where several sponsors own equity in the same target firm. Tag along rights gives the holder the right to force another stockholder that is selling the shares to include the holder's shares in the sale, on a pro rata basis. The shares are sold for the same price and terms, this is meant to protect the

investment and maximize return. In the data, I do not include the above three methods of exits, mainly because of their unavailability. Also my data set is similar to the one used in Stromberg (2008), in which they use only the four main classifications mentioned above.

The average time to exit the LBOs is 5.25 years. The most common route of exit is Strategic sale. Strategic sale was 36% of the total transactions; Secondary LBO 28% and Public Offering 24% of the total exits. There was also a significant amount of bankruptcy (9%). These results are comparable with Stromberg (2008), who finds that the most common exit route, for PE and MBO deals alike, are trade sales to another corporation, accounting for 38% of all exits. The second most common exit route is secondary buyouts (24%), public offering only account for 13% of exits. Since high amounts of debts are involved in the transactions, about 6% of the transactions end up in financial distress.

Among the four methods of exits that I consider in my study, the PE firm has both advantages and disadvantages from exiting through any of the four methods. The advantages and disadvantages of each method as mentioned in "La Lande, Gibson, Dunn & Crutcher LLP (2011)" are as follows:

In strategic sale and secondary LBO exit methods, the primary advantage is that the PE firm can exit completely, as opposed to partial exits in IPOs. Other advantages of these exit methods are (1) that the PE can have more control unlike in the public offering method where securities law, exchange rules or underwriters control most of the terms of the exit and (2) speed of exit. Disadvantages of these methods are that, there could be resistance from the management in the sale process and also there could

be risks from competitor firms gaining access to information in the bidding process. Some competitors may bid just to gain access to the information of the firm. Hence the PE firm must be careful and determine if the bidders are in fact genuine.

In case of a public offering method of exit, the advantages are that: (1) there is higher exit valuation, (2) increased liquidity which helps future complete exit and (3) management support (the management views public offering as a heightened prestige and publicity for the target firm). Disadvantages of public offering method of exit are: (1) there is lack of complete exit (shares the company sells in public offering are typically too large to be sold once hence there is partial exit), (2) it is a time consuming and lengthy process to take the firm public again, (3) it is also very expensive to take the firm public again due to various registration costs, fees and other expenses; (4) it distracts management's attentions from target firms regular business; ongoing disclosure and reporting obligations, (5) there is often the fear of insider trading concerns since PE firm has inside information, (6) loss of control for the PE firm, and (7) execution risk the possibility that market factors may prevent the company from getting the predicted IPO pricing). In case of an exit through bankruptcy, the advantage is to further cut losses and disadvantage is loss on initial investment, and end of business operations.

I also look at if reputation of the Private Equity firm influences the returns of the LBO. Reputed PE firms have better bargaining power in terms of negotiating the price of the initial LBO. Reputed PE firms can also get better loan terms. Since LBOs are highly leveraged, this advantage to raise funds at a lower cost can result in higher results. LBOs that are associated with reputable PE firms exit sooner due to the

experience of the reputed PE firm. The results are in line with other studies found: Stromberg (2008) finds that LBO transactions that are sponsored by more experienced PE partnerships tend to stay in LBO ownership for a shorter period of time, are more likely to go public, and are less likely to end in bankruptcy or financial restructuring. According to Cogut (2011), The Carlyle Group and Platinum Equity were the most active in consummating exits in 2010, which was right after the recession in 2008/9.

Ivashina and Kovner (2011) find that bank relationships formed through repeated interactions reduce inefficiencies from information asymmetry and result in favorable loan terms for the PE firms in leveraged buyouts transactions. Demiroglu and James (2010) found that reputable Private equity groups pay lower loan spreads and have longer loan maturities. They also find that reputation is positively related to buyout leverage.; Lopez-de-Silanes, Phalippou and Gottschalg (2010), found that small investments perform better than the larger ones. They also find that leverage (Debt/EBITDA) is directly related to reputation, which shows that reputed firms have the ability to raise more debt at favorable terms. I test the number of exits through different routes based on reputation of the issuer. The data shows that there are just 6 bankruptcies when the PE firm is reputed. Strategic Sale and Secondary LBO are the most common exit routes if the PE firm was a reputed firm.

I next look at the effect of number of days to exit on the returns of the LBO. Lopez-de-Silanes, Phalippou and Gottschalg (2010), find that Quick flips (investments held for less than 2 years have high IRR (85%) and investments held for more than 6 years have IRR of 8%. My results reinforce these findings. I find that a smaller number of days to exit cause the LBO to generate higher returns (table 8). The regression

results in the study finds that quick flips result in higher returns of about 7% on average.

I also extend the study of Officer, Ozbas and Sensoy (2010) to look at the effect of club deals on the returns of the LBOs. They find that club deals reduce the prices paid to the target firm during the initial leveraged buyout transaction since they reduce the competitiveness during the initial process of the leveraged buyout deals. I analyze their study by looking at the returns of the LBO upon exit and found that club deals result in higher returns upon exit and exit sooner.

A club deal, in finance, refers to a leveraged buyout or other private equity investment that involves several different private equity investment firms. A club deal can also be referred to as a syndicated investment. In a club deal, the investor group of private equity firms pools its assets together and makes the acquisition collectively. The practice has historically allowed private equity to purchase larger and more expensive companies than each constituent firm could potentially acquire through its own private equity funds. Additionally, by syndicating the equity ownership across a group of investment firms, each firm reduces its risk of investing since it is shared by many firms.

A club deal also reduces competitiveness of the deal since many large PE firms combine to acquire a firm. This might be due to the reduction in the number of firms competing for the bidding process of a target takeover and hence less lively bidding or the effects of active collusion.

This criticism that club deals reduce LBO prices has strong grounding in the auction literature, in which it is well-recognized that bidder collusion may depress sale

prices (Graham and Marshall (1989); Marquez and Singh (2009)), and in the regulatory economics literature (Cramton and Schwartz (2000); Hendricks and Porter (1992)). Existing literature stress that collusion can reduce prices even in the absence of repeat play and even if collusion does not involve all potential bidders for a target.

In a club deal, the consortium of PE firms can negotiate better terms with the target firm, either due to reputation of one or more firms in the consortium, or due to availability of large funds due to combining of multiple PE firms. The smaller PE firms may not have the reputation or the funds to acquire in such cases. LBOs are highly levered, and it may be easier to acquire debt financing in sufficient quantity and on favorable terms if multiple private equity firms attach their names and reputations to a deal.

In my study, I look at the effect of the number of PE firms (club deals) on the LBO returns and also the number of days to exit. From the regression results, I find that for every one additional PE firm, the returns of the target firm are higher by 4% on average. This is because in a club deal the price of the initial LBO is reduced. This results in higher returns at the time of the exit. I additionally find that the value of the firm is higher by 397 Million USD if the LBO transaction is a club deal. This shows that club deals are common when the target firm is large. I also find that club deals take 45 days lesser to exit for each additional number of PE firm (See table 20 and table 21). Thus I see that since club deals initially depress the LBO prices, the returns of these club deals at exit are higher.

Club deals exit sooner until the year 2006. The consortium of PE firms in a club deals helps easy exit through one of the methods of exit. After 2006, there is higher

government scrutiny on the motive of club deals and hence it led to longer exit times. This finding is consistent with the findings in Officer (2010) where they find that club deals reduced after 2006 since there was higher government scrutiny about the motive behind the formation of a club. Jackson (2008) mention that The Department of Justice (DOJ) Antitrust Division and the Federal Trade Commission (FTC) both are examining the possibility of collusion among private equity firms and are trying to discover attempts by clubs to reduce purchase prices. Both the DOJ and the FTC have public authority to enforce antitrust laws against club deals with benign motives. Caruso (2006) article discusses a lawsuit filed against thirteen companies that engaged in private equity club deals. GAO (2008) develop a model and find results that find that the motive for club deals are illegal, such as collusion.

I also test the returns of the LBOs when the country of the PE firm and the target firm are same. The results show that the returns are lower when the PE firm and the target firm are from the same country. In reality we might expect that if both the firms are from the same country they have more experience and knowledge about the local procedures and rules and hence might have higher returns. However in case of LBOs in developing economies and also in some LBOs in developed economies, reputed PE firms are generally not from the same country hence if the target firm and the PE firm are from the same country, the returns tend to be lower. This is tested in Hypothesis 3**:** Reputed PE firms result in higher returns of the target firm and takes fewer days to exit.

I test if the size of the target firm influences the return of the leveraged buyout transaction or the amount of time taken by the firm to exit. I classify the targets as

small, medium and large firms to test if the size of the target has an impact of the returns or exit patterns of the buyout. I divide the firms based on value of the LBO. (Small: < $10 Million, medium: $10 – $100 million, large: > $100 million). Demiroglu and James (2010) and Lopez-De-Silanes, Phalippou and Gottschalg (2010), find that small investments outperform larger ones. Kaplan and Stromberg (2009) find that small firms, reputed firms and syndicated firms exit sooner. My results also show that smaller firms have higher returns than the larger firms. My regression results show that smaller firms exit sooner. If the size of the firm is smaller, then it is easier to exit due to more available exit options. It is easier to find buyers in case of secondary LBO or strategic sale. These results contradict the finding in Stromberg (2008), who found that smaller LBOs remain owned by the buyout firm for a longer period. The finding in Stromberg (2008) contradicts results found in Kaplan and Stromberg (2009).

I also test if the Debt/capital ratio of the target firm has an impact on the returns to the investment or to the exit time of the transactions. In my results, I find that higher Debt/Capital ratio results in lower returns and longer time to exit. Higher leverage means higher risk, and especially during periods when the economy is slow or doing badly, this results in lower returns and losses for the LBOs.

It is also possible, that, the industry of the PE firms (buyer firms) and that of their targets may influence the returns or the exit patterns of the LBO or PE returns. In my analysis, I find that buyer firms in the same industry as the target have higher returns in most cases. This is because if the Target firm and the buyer firm are from the same industry, they will have more knowledge about operating procedures. This might also be due to economies of scale from operating in the combined firm.

Section II is the hypotheses section. Section III provides a comprehensive literature review of all related studies of up to 2014. Section IV describes the data utilized in the dissertation, its limitations and the screens that I employed. Section V gives a detailed overview of the methodology used in the study. Section VI shows the results of the various types of regression and the interpretation of the results uncovered. Section VII shows the conclusion and points the way for future work.

HYPOTHESES

Hypothesis 1: Returns of Leveraged buyouts are on average higher for LBOs in developed economies. However during periods of high economic growth, LBOs in developing economies have better returns when compared with developed economies. In slow or low growth rate periods, LBO transactions in developed economies produce higher returns than the LBOs in developing economies.

This is true because developed economies have high growth rates in terms of GDP and other economic indicators. Historical GDP (last 10 years) in US is on average about 2%-2.5% and highest being about 6.6% in Q3 2003. *Source: US Bureau of Economic Analysis.* In UK and Scotland, GDP growth rate in the last 10 years has been around 2% with the highest GDP being a little over 4% in Q3 2003 (UK GDP). *Source: Scottish Government Website.*

In China (Newly industrialized economy), GDP growth rate in the last 10 years has been around 9% with the highest GDP being about 12.8% in 2007. South Africa has a highest GDP growth rate of up to 6.5%. Similar in other developing or newly industrialized economies, GDP growth rate is much higher compared to the developed economies.

Hence investments in developing or newly industrialized economies have higher returns when compared to investments in developed economies. However, in periods of slow economic growth, like periods of recession, the developing markets are highly risky. Hence I want to test if Hypothesis 1 holds true.

Hypothesis 2: Leveraged buyouts in developing economies exit sooner on average. During periods of very high economic growth, LBOs in developing economies exit sooner when compared with developed economies. But the results also show that in periods of negative economic growth, the LBOs in developing economies exit the soonest in order to minimize losses in recession.

Hypothesis 2 makes sense due to the same reasoning behind Hypothesis 1. In periods of fast economies growth, the developing market's LBOs have high returns and hence exit sooner. And in periods of recession, the LBOs in developing markets exit soon in order to avoid major losses in the investment. In periods of moderate economic growth, LBOs in developing economies take longer time periods to exit.

I also try to find how differently the returns of the LBO are influenced by various other variables that are listed and described below in the model. I test how these factors influence the amount, returns and number of days to exit the LBOs.

Hypothesis 3: Reputed PE firms result in higher returns of the target firm and takes fewer days to exit.

This hypothesis is to test and verify the results found in previous research that reputed PE firms result in higher returns. Stromberg (2008) finds that LBO transactions that are sponsored by more experienced PE partnerships tend to stay in LBO ownership for a shorter period of time, are more likely to go public, and are less likely to end in bankruptcy or financial restructuring. Ivashina and Kovner (2011) find that bank relationships formed through repeated interactions reduce inefficiencies from information asymmetry and result in favorable loan terms for the PE firms in leveraged buyouts transactions. Demiroglu and James (2010) found that reputable Private equity

groups pay lower loan spreads and have longer loan maturities. They also find that reputation is positively related to buyout leverage; Lopez-de-Silanes, Phalippou and Gottschalg (2010), find that leverage (Debt/EBITDA) is directly related to reputation.

Hypothesis 4: Smaller firms have higher returns when compared to large firms Small firms also take shorter time periods to exit when compared with larger firms.

This hypothesis is to retest the results found in previous research. The hypothesis holds true because if the size of the firm is smaller, then it is easier to exit due to more available options of exit. It is easier to find buyers in case of secondary LBO or strategic sale. Demiroglu and James (2010) and Lopez-de-Silanes, Phalippou and Gottschalg (2010), find that small investments outperform large ones.

Hypothesis 5: Club deals (LBO transactions that have more than one PE firm) on average result in higher returns and exit sooner until there was government scrutiny in 2006 and onwards, which make them take longer time to exit. Club deals in developing economies are not profitable but exit sooner when compared with club deals in developed economies.

Hypothesis 5 makes sense because the initial LBO prices of club deals are depressed due to higher bargaining power of the consortium of buyers. Hence it is an advantage to the PE firms, which results in higher returns at the time of exit of the LBO.

In developing economies, club deals lead to more problems than there are benefits. There could be discrepancies among the consortium of PE firms involved in the PE firms in the way they run the business and hence leads to lower returns.

Masulis and Thomas (2009) find that club deals are not all that profitable due to agency cost that arises out of multiple PE firms sponsoring an LBO deal. In a club deal, there are additional conflicts of interest between LBO sponsors. These conflicts could result in more agency costs in terms of free riding by some sponsoring private-equity firms and disagreements among others over a target company's major policies or proposed policy changes, especially when a firm is performing poorly. Since club deals in developing economies are found to perform poorly when compared to those in developed economies, there are more agency problems which create further losses[4].

[4] These conflicts could result in more agency costs in terms of free riding by some sponsoring private-equity firms and disagreements among others over a target company's major policies or proposed policy changes, especially when a firm is performing poorly. Since target firms in developing economies perform poorly when compared with target firms in developed markets, the agency costs are higher. However, this potentially cost can be minimized by limiting the size of club deals to two or three investors, which is the norm. Another possible disadvantage of these syndicated LBO deals is that the future portfolio company's stock appears to experience more insider trading activity prior to the announcement of the transaction.

LITERATURE REVIEW

There have been studies that have looked at international LBOs and analyzed various factors that influence LBO activity. Leeds and Sunderland (2003), find that the returns in developing markets do not compensate for the high risk involved in the transactions. This is mainly due to low standards of corporate governance in terms of quality of information required for investment decisions, weakness in legal systems to enforce legal contracts and protecting all classes of investors; and the inability of domestic equity markets to offer reasonable exit prospects through public offering. They also mention that private equity investors differentiate investments between countries based on protection to shareholder rights, tax treatment of capital gains, and securities market development.

Kaplan and Stromberg (2009) look at PE investments around the world. They broadly classify the LBO exits into strategic sale, secondary buyout, public offering and bankruptcy. They also find that small firms, reputed firms and syndicated firms exit sooner. Stromberg (2008) does a comprehensive study of LBOs across the world. They also look at the characteristics of LBO exits based on size, industry and other effects such as syndication of the PE firms.

Lopez-de-Silanes, Phalippou and Gottschalg (2010), find that Quick flips (investments held for less than 2 years have high IRR (85%)) and investments held for more than 6 years have IRR of 8%. They also find that small investments outperform large ones. They look at the size of the PE firm in influencing the returns of the PE investment. In their paper, they also find that investments in developing countries exhibit poorer performance when compared to developed countries. This may be a

result of costly learning, lower leverage, poorer legal environments and limited exit routes. Lerner and Schoar (2004) also find that returns from private equity in these nations also appear to have been far lower than in the United States and Europe. Lerner and Schoar (2005) find that transactions vary with nations' legal enforcement. They find that in low enforcement and civil law nations, PE groups tend to use common stock and debt, and rely on equity and board control. LBO transactions in high enforcement countries use convertible preferred stock with covenants, and they tend to have higher valuations and returns.

In the paper by Axelson, Jenkinson, Strömberg and Weisbach (2012) they find that the economy-wide cost of borrowing is the main driver of both the quantity and the composition of debt in these buyouts. Credit conditions also have a strong effect on prices paid in buyouts, even after controlling for prices of equivalent public market companies. In the developing markets, the acquirers are mixed. Some are international PE firms, some are Domestic PE or other investment firms, and there are also a few other firms acquiring the target companies. Kaplan and Stromberg (2009) found that LBO activity was very active in the period of 2005 – mid-2007 due to overly favorable terms for debt investors during this period. The LBO activity decreased in late 2007 due to credit-market turmoil. Demiroglu and James (2010) found that reputable private equity groups are more active in the LBO market when the credit risk spreads are low and when lending standards in the credit market are lax.

Masulis and Thomas (2009), club deals are not all that profitable due to agency cost that arises out of multiple PE firms sponsoring an LBO deal. In a club deal, there are additional conflicts of interest between LBO sponsors. These conflicts could result

in more agency costs in terms of free riding by some sponsoring private-equity firms and disagreements among others over a target company's major policies or proposed policy changes, especially when a firm is performing poorly. However, this potential cost can be minimized by limiting the size of club deals to two or three investors, which is the norm. They also mention another possible disadvantage of these syndicated LBO deal, that the future portfolio company's stock appears to experience more insider trading activity prior to the announcement of the transaction.

Demiroglu and James (2010) also found that small investments perform better than the larger ones. They also find that leverage (Debt/EBITDA) is directly related to reputation. Moeller, Schlingemann and Stulz (2004) also find that find smaller firms perform better than larger firms in acquisitions.

Crucini, Kose and Otrok (2008) find that international business cycles are mainly determined by productivity, measures of fiscal and financial policy, terms of trade and oil prices. Calderón and Fuentes (2010) find that output losses during peak - to - trough phases are larger among emerging market countries than among industrial ones. Output gains during trough−to−peak phases are larger among emerging market economies.

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) find that Good law enforcement has effect on valuation and breadth of debt and equity markets. La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002) show that poor shareholder protection is penalized with lower valuations, and that higher cash-flow ownership by the controlling shareholder improves valuation, especially in countries with poor investor protection. Djankov, McLiesh and Shleifer (2007) found that public credit registries, which are

primarily a feature of French civil law countries, benefit private credit markets in developing countries.

Few of the studies have looked at the returns on the leveraged buyouts in both the developed and developing economies. My paper looks at returns of LBOs and exit pattern of the LBOs in the recession and the boom periods which none of the other papers have looked at so far.

DATA

The LBO transaction data is collected from Capital IQ. The exit information was collected from Capital IQ separately and is matched with the initial LBO transaction based on Target company name. If exit information was not present, then a manual search was done to find exit information from the individual LBO company websites or from a general web search.

Initially for the preliminary regression test, to test how the value of the LBO depends on various other factors, I include 40,886 LBO and MBO transactions that took place from 1980 – April 2012. Some of the LBO transactions did not have exit information. This could be due to various reasons such as: LBO transaction did not exit yet or the terms of the deal were not disclosed during the deal, or exit information not recorded in CapitalIQ. A huge number of transactions happened in the recent years (2010 onwards) and hence have not yet exited. From the available information, 15,912 transactions or 38.91% of the transactions exited the initial LBO transactions.

For the transactions that had an exit date; and had either the exit transaction value or the initial LBO transaction value, various imputation techniques were used and the results were roughly the same. Kofman and Sharpe (2003) explain the various popular imputation techniques and imputation techniques by filling in the average values in the missing places if one of their methods. For the regression results mentioned in Tables 19, 20 and 21, the missing values were imputed by using the average values. For transactions that had exit dates and exit transaction value (either originally or through imputation) regression tests was done to find the dependency of

the returns of the LBOs on various factors and also to find the dependence of number of days to exit on various factors.

For those transactions that did not have both the initial LBO transaction value and the exit transaction value recorded in CapitalIQ, I eliminated them for the regression analysis phase. If the transactions did not have an exit transaction value and an exit date, such transactions were eliminated too.

In the paper Kaplan and Strömberg (2008), they use similar data from CapitalIQ and found that 54% of the transactions had not yet exited. My data shows that about 62.5% of the firms do not have exit information. My results are different since I consider data from 1980 to April 2012. The time frame of study in Kaplan and Stromberg (2008) is from 1970 to 2007.

The exit method is either through public offering, secondary LBO (which includes Management buyout), Bankruptcy sale, Strategic Sale (Trade sale) or Terms not disclosed. Since I treated LBOs and MBOs to have similar characteristics in the initial LBO screening process, they are combined to find the exit patterns. Kaplan and Stromberg (2009) also combine MBOs and LBOs to test the results.

Public offering is a process of listing the firm in the stock market again so as to make the firm public again. Secondary LBO is a process of selling the LBO to another private equity firm. Strategic sale is the process of selling the LBO firm to another strategic buyer who is not a private equity firm. Since high amounts of debt are involved, some of the firms may end up in bankruptcy or reorganization.

In my data, I find that most common routes of exit are strategic sale, secondary LBO and public offering. Strategic sale was 36% and Secondary LBO 28%, public

offering 24% of the total exits, and the number of firms that went into bankruptcy was 9%. Stromberg (2008) find that the most common exit route, for PE and MBO deals alike, are trade sales to another corporation, accounting for 38% of all exits. The second most common exit route is secondary buyouts (24%), public offering only accounts for 13% of exits. Since high amounts of debts involved in the transactions, about 6% of the transactions end up in financial distress.

The average exit time of all the LBOs is 5.25 years. Strömberg (2008) found that LBOs in the 1980s take 6-7 years to exit and LBOs in the 1990s take 9 years to exit. Kaplan (1991) found the median leveraged-buyout target remained in private ownership for 6.82 years.

For the regression process, I create various dummy variables to analyze how these various variables affect my dependent variables: Return and Number of days to exit. Detailed explanation of how these variables are created is provided in the methodology section. Dummy variables created: developing nations, Target firm and Buyer firm from the same country to see how the results vary, if target and buyer are from the same industry, reputed PE firm (top 50 reputed buyer firms from PEI 300), Small target firm, GDP above or between the benchmark levels, Exit GDP above or between the benchmark levels; interaction variable of developing country firm and Exit GDP above or between the benchmark levels. The initial GDP and exit GDP benchmark levels chosen are GDP< 0%, GDP between 0 to 2%, GDP between 2 to 5% and GDP above 5%, club deal in developing economies, club deals in developing economies from reputed PE firms, club deals of small firms, club deals of large firms,

club deals of small firms in developing economies, club deals of large firms in developing economies, club deals in different decades (1980 to 2012).

Other variables: Value of the LBO deal in USD million, number of PE firms (club deals), percentage returns of the LBO from start to exit, number of days to exit, target firm market capitalization, target firm Debt/Capital ratio, GDP level during the LBO transaction, GDP level at the time of exit of the LBO, Law enforcement in target country, government effectiveness in target country, number of procedures to start a business in target country.

Table 1: Table shows number of LBO and MBO transactions in each decade (from the data initially collected from CapitalIQ).

Time period	Number of LBO/MBO transactions	Percentage of LBO and MBO transactions
1980 – 1989	554	1.3554%
1990 – 1999	3,713	9.081%
2000 – 2009	28,351	69.3416%
2010 – 2012	8,268	20.222%
Total	40,886	

Table 1 shows that, most of the LBO transactions happened in the 2000s. From the above capital IQ data, I find that 1.4% of the transactions were in the 1980s, 9% of the LBOs are in the 1990s, 69% of the transactions were from 2000s and 20% of the transactions were 2010-2012.

In table 2, panel A, using the available LBO transactions that had transaction value recorded in CapitalIQ, I sort the transactions according to the decade in which the transactions happened. In 1980s the total value of the transactions was 131 million

USD; in 1990s the total value of the LBO transactions was 463 million USD. From the year 2000-2009 the transaction value was 3.94 Billion USD, from 2010 – 2012, the transaction value was 473 million. This shows that a huge number of transactions and large deals happened from 2000 onwards.

Table 2: Table shows values of LBO and MBO transactions with transaction value information available in CapitalIQ

Panel A

Time period	Number of LBO/MBO transactions	Percentage of LBO and MBO transactions	Total Transaction value (Millions of $)
1980 – 1989	275	1.73%	131,007.79
1990 – 1999	1,870	11.75%	462,616.39
2000 – 2009	11,138	70%	3,936,758.49
2010 – 2012	2,629	16.52%	472,706.35
Total	15,912		5,003,089.02

Panel B

Year	Transaction value, MM USD
2009	52,641.10
2008	39,769.49
2007	129,750.91
2006	183,417.64
2005	111,969.07
2004	74,692.88
2003	61,318.27
2002	76,518.44
2001	35,260.17
2000	26,618.42

Panel B of table 2 shows the number of transactions from the year 2000 to 2009. The same values are used in figure 1 to show a chart of the number of transactions in 2000 to 2009 time period. From the time period 2000 to 2007 the number of LBOs and total transaction value of LBOs increased steadily and dropped suddenly in 2008 and 2009 due to the recession. The number of transactions increased in the year 2010 after the economy showed signs of improvement (Figure 1).

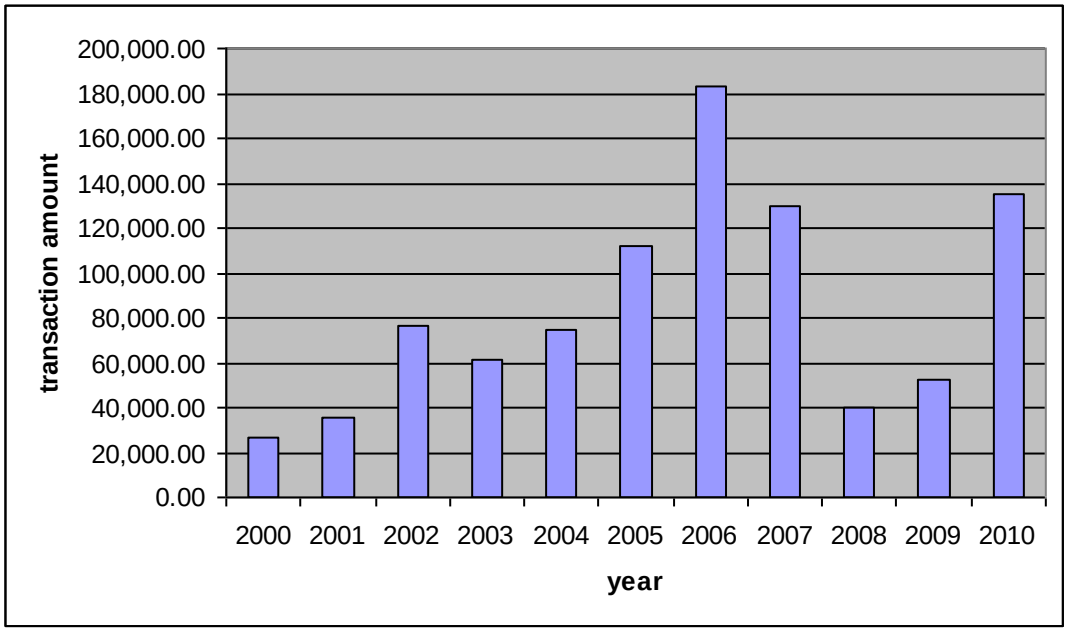

Figure 1: Figure shows transaction amounts of LBOs from 2000 - 2010

Table 3 shows the number and value of transactions of developed economies sorted according to the decade in which the LBO transaction took place. Number of LBO transactions and total transaction value of LBO transactions are higher from year 2000. 10,009 transactions took place between 2000 and 2009 with a total transaction value of 3.86 Million. CapitalIQ had 265 transactions recorded in the time period 1980 to 1989.

Table 3: Number of LBO/MBO transactions and total value of transactions in developed economies

Time period	Number of LBO/ MBO transactions	Percentage of total number of LBO/ MBO transactions	Total Transaction value, MM USD
1980 – 1989	265	1.87%	130,061.49
1990 – 1999	1,818	12.84%	457,767.79
2000 – 2009	10,009	70.67%	3,860,883.79
2010 – 2012	2071	14.62%	445,419.65
Total	14,163		4,894,132.72

Table 4: Number of LBO and MBO transactions and total value of transactions in developing economies

Time period	Number of LBO/ MBO transactions	Percentage of total number of LBO/ MBO transactions	Total Transaction value, MM USD
1980 – 1989	0	0.00%	0.00
1990 – 1999	52	2.97%	4,848.60
2000 – 2009	1,129	64.55%	75,874.70
2010 – 2012	558	31.91%	27,286.70
Total	1,739		108,010.00

Among the firms that had transaction amount information (15,912 variables), about 1,749 (11%) of target firms involved in the LBO or MBO were from developing nations and newly industrialized nations. Table 4 shows the number and value of transactions in developing economies sorted according to the decade in which the LBO transaction took place. Number of transactions in developing economy during the 1980

to 1989 time period is zero, but however, Kaplan and Stromberg (2009) found the same in their data (table 1). This is probably due to missing transactions in CapitalIQ. Number of LBO transactions and total transaction value of LBO transactions are higher from year 2000. I also notice that there is a big increase in the number of LBOs from 2010 – 2012. This shows that after the recession in 2008 there were more investors in the developing markets since they expected a huge increase in returns from those investments. Total transaction value of all the LBO and MBO transactions in developing countries are 108,010 million USD. Where as total transaction value of developed economies: 4,894,133 Million USD (table 3).

Sorting the transactions based on how many target firms in developed (and developing) countries have buyers from developed countries and how many of the buyers are from developing markets, I find that among the 14,163 LBO and MBO transactions in developed countries, only 101 transactions were from a buyer in developing country. Whereas among the 1,739 LBO and MBO transactions in developing countries, 318 transactions were dome by a PE firm from a developing country. A large number of the LBO/MBO transactions in developing countries were carried out by PE firms from developed countries. 56 LBO/MBO transactions in developing countries were from reputed PE firms in developed countries.

This data consists of observations from 48 different countries, both developed and developing. The countries in which the LBOs are recorded are: United States of America, United Kingdom, Canada, France, Ireland, Spain, Poland, Mexico, Australia, Sweden, Finland, South Africa, Argentina, Italy, Norway, Israel, Hong Kong, Switzerland, Netherlands, Barbados, Germany, Brazil, New Zealand, Georgia,

Belgium, China, Malaysia, India, Turkey, Ukraine, United Arab Emirates, Bulgaria, Lithuania, Austria, Japan, Bermuda, Jordan, Russia, Estonia, Channel Island, Indonesia, Ghana, South Korea, Latvia, Luxembourg, Denmark, Thailand and Sri Lanka.

In table 5, I look at the number and percentage of LBO transactions according to type of exit. This table also shows the percentage of exits and number of transactions in developing economies too. The average exit time period of all the transactions is 5.25 years. The most common route of exit is Strategic Sale. Strategic sale was 36% of the total transactions; Secondary buyout 28% (Secondary LBO + Management buyout) and public offering 24% of the total exits. There was also a significant amount of bankruptcy (9%). When I look at the exit patterns in developing economies, I see that the most common exit route is again strategic sale being 44%, public offering accounts for 15%, Secondary buyout and management buyout account for about 7.34% of the total exits in developing economies and bankruptcy accounts for 4.44%.

Table 5: Sorting the LBO transactions according to the type of exit.

Type of Exit	Developed and Developing	Percentage	Developing	Percentage of Total Exits
Public Offering	1,432	24.50%	50	14.79%
Secondary LBO	1,371	23.45%	14	4.14%
Management buyout	264	4.51%	11	3.25%
Strategic Sale	2,096	35.85%	148	43.79%
Bankruptcy Sale	521	8.91%	15	4.44%
Total	5,846		338	

Table 6: Sorting the LBO transactions according to the time period of exit.

Time of Exit	Number of LBOs exited	Percentage
1980-1989	12	0.20%
1990-1999	412	7.05%
2000-2009	3,784	64.73%
2010-2012	1,638	28.02%
Total	5,846	

Comparing table 1 and table 6, I observe that the percentage of LBOs in table 1 and the percentage of exits in each decade are nearly same. About 1.35% of the LBOs took place in the 1980-1989 time period (table 1) and about 0.2% of the LBOs exited during this period (table 6). In 1990 – 1999 time period, 9.08% of total LBOs took place; And the number of exits during the 1990 – 1999 time period were 7.05%. In 2000 – 2009 time period, 69.3% LBOs took place and 64.73% of the total exited LBOs, exited during this period. In the time period 2010 – 2012, 20.22% of LBO transactions took place and 28.02% of total exits were during this period. Hence as mentioned in Greene (2011), if the data is unavailable and it does not affect efficiency, I can ignore the missing data on exits. The data available on exits is almost the same percentage as the percentage of LBOs in each period and hence the exit data seems to be a true representation of the entire sample.

In order to measure returns on “club deals” (LBOs with two or more PE firms) a dummy variable is created for club deals. The transactions that have more than one PE firms are given a value of “one” and if the LBO transaction has only one PE firm involved in the transaction, then a value of “zero” is given to the transaction.

From the data I see that 24.2% of the LBO transactions are club deals and the rest are non-club deals (There are a total of 1,417 club deals out of the total 5,846 LBO transactions that we use for regression). Among the 1,417 transactions that are club deals, 438 of the club deals have at-least one reputed PE firm which is about 30% of the club deals. Among the 1,417 club deals, 1,392 transactions were from developed countries and only the remaining 25 transactions are from developing countries. This shows that club deals are not so common in developing countries.

The average transactions size of club deals in developed market is 633.44 Million USD (average size of all firms in developed countries is 392.08 Million USD) , where as in the developing markets, the average size of club deals is 227.68 Million USD (average size of all firms in developing countries is 82.72 Million USD). This shows that club deals are very large compared to all other deals.

Table 7: Number of club deals sorted by each decade (both developing and developed economies)

Initial LBO time period	Number of Club deals	Percentage of club deals	Number of club deals in developing countries	Number of club deals in developed countries
1980-1989	60	4.23%	0	60
1990-1999	574	40.51%	3	571
2000-2009	780	55.05%	22	758
2010-2012	3	0.21%	0	3
Total	1,417		25	1,392

The average number of PE firms in a club deal is 2.49. Most of the club deals have 2 or 3 PE firms. Average number of PE firms in a club deal in developed country is 2.49 and the average number of PE firms in developing countries is 2.48. The number of PE firms in an LBO transaction range from at least one firm to a maximum

of eight PE firms. When there are two or more PE firms the transaction qualifies as a club deal. An average of 2.49 shows that majority of deals had either 2 or 3 PE firms.

Table 7 looks at LBO transactions according to the time period in which they initially took place. From table 7, I see that club deals were more prominent from 1990 onwards and are highest in 2000- 2009. There were a total of 60 club deal transactions in 1980 – 1989 time period. 574 club deal transactions took place in 1990 – 1999 time period and 780 transactions took place in 2000 – 2009 time period. After 2009, there have been just 3 club deals. This finding is consistent with the findings in Officer (2010) where they find that club deals reduced after 2006 since there was higher government scrutiny about the motive behind the formation of a club.

Table 8: Number of transactions, transaction size and "time to exit" for non-club deals (one PE firm) and club deals (two to eight PE firms).

Number of PE firms	Number of LBO transactions	Average Transaction value, MM USD	Time to exit, days
1	4,314	283.00	1,859
2	969	341.00	2,062
3	313	941.00	2,193
4	65	1,112.00	2,377
5	38	1,997.00	2,044
6	23	2,140.00	1,976
7	8	1,354.00	1,938
8	1	11,536.00	2,336
Total	5,846		1,915

In table 8 when the number of PE firms = 1, then this transaction is a non-club deal which involves a single PE firm that is involved in the LBO transaction. When the number of PE firms is "2" that means there are two PE firms involved in the LBO transaction hence it is a club deal. Similarly when number of PE firms is 3 to 8

these are club deals involving the respective number of PE firms involved in the LBO transaction process.

From Table 8, it is evident that single private equity firm LBO transactions (non-club deals) is the most common type of transaction. 4,314 transactions out of the total sample of 5,846 transactions are non-club deals. Only 1,417 transactions (24% of the total transactions) are club deals, which involve two or more PE firms. Club deals are uncommon as compared to the single PE firm deals. Among the club deal transactions, transactions with two PE firms are the most common. 969 transactions had just 2 PE firms involved in the transaction. The number of LBO transactions reduces as the number of PE firms increases. 313 transactions had 3 PE firms involved in the deal. 65 transactions had 4 PE firms and 38 firms had 5 PE firms. 23 transactions had 6 PE firms, 8 transactions had 7 PE firms and only one transaction had 8 PE firms. This shows that generally club deals involve two or three PE firms involved in the transaction. Hence the average number of club deals is around 2.49.

Figure 2 shows graphical representation of the number of transactions involved in non-club deals (one PE firm) and club deals (two or more PE firms). Figure 3 and table 8 show average transaction size of club deals and non-club deals. On average, the transaction size increases as the number of PE firms involved in the transaction increases. When there is one PE firm involved in the transaction, the average transaction size is $283 Million USD. The average transaction size of the 969 transactions, when there are two PE firms involved in the transaction is $341 Million USD. When there are three PE firms involved in the transaction, then the average transaction size is 941 Million USD. And when there are four PE firms involves in the

LBO transaction, the average transaction size is 1,112 Million USD. When the number of PE firms are 5,6,7 and 8, the average transaction sizes are 1,997 Million USD, 2,140 Million USD, 1,354 Million USD and 11,536 Million USD. However the number of transactions when there 5 or higher number of PE firms is significantly low.

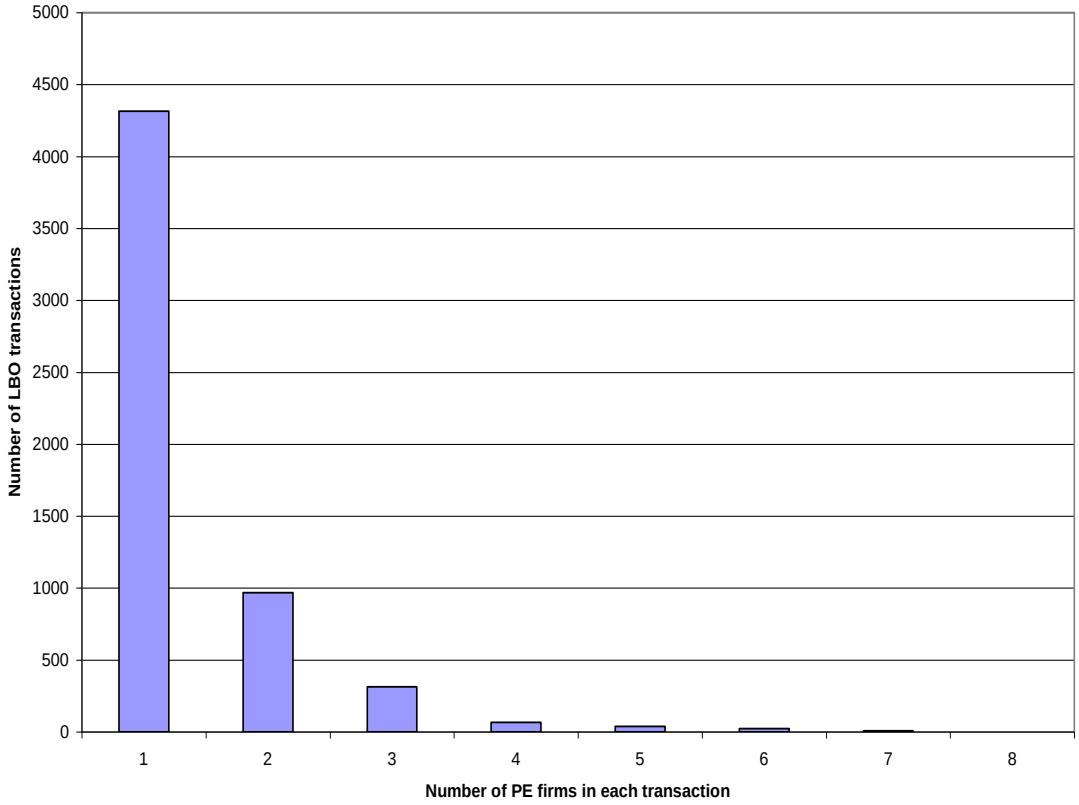

Figure 2: Number of LBO transactions in non-club deals (one PE firm) and club deals (two or more PE firms)

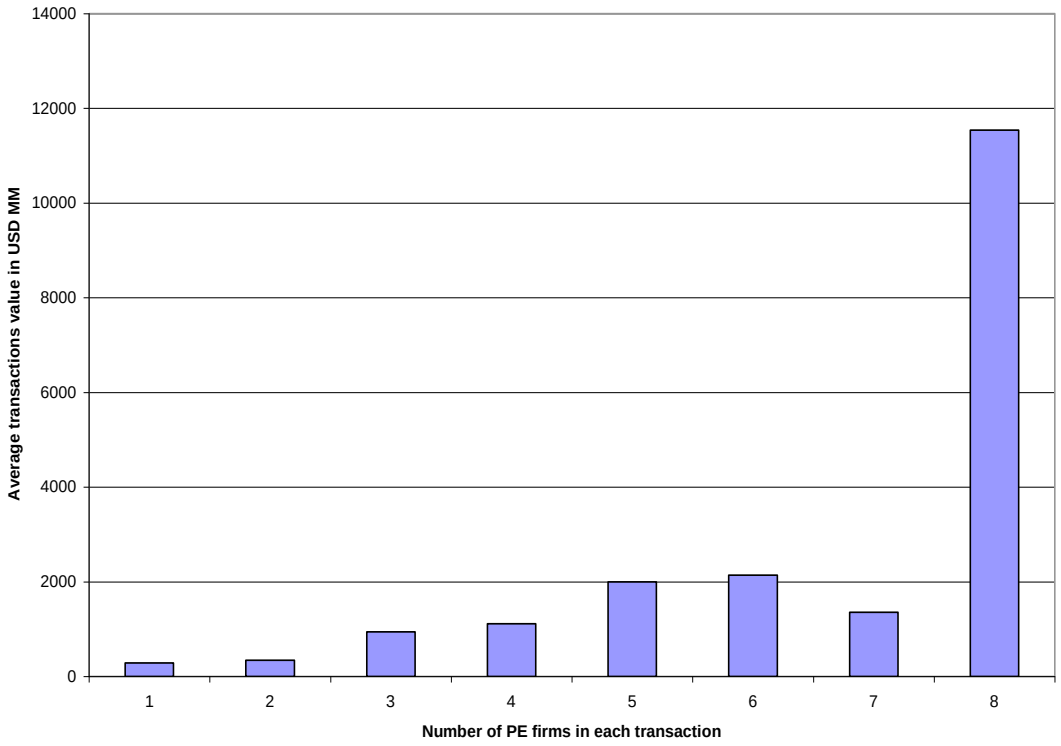

Figure 3: Average transaction size in Million USD for non-club deals (one PE firm) and club deals (two or more PE firms).

In figure 3, it can be seen that the average transaction size is large when there are more PE firms involved in the transactions. This shows that large targets are generally involved in a club deal and as the size of the club deal increases, more number of PE firms are required to join together to bid for the target firm. This in-turn reduces competition and hence results in lower returns at the time of exit.

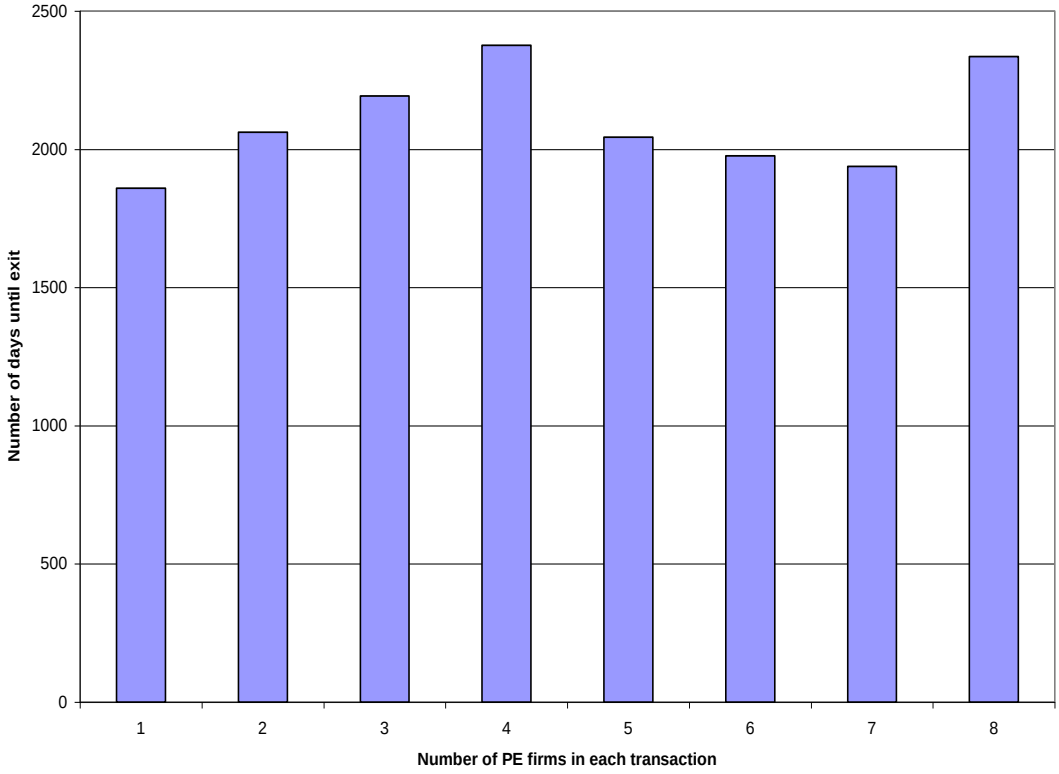

Figure 4: Number of days to exit for non-club deals (one PE firm) and club deals (two or more PE firms)

Figure 4 and table 8 show that club deals take longer time to exit. Figure 4 plots the number of days it takes for the LBOs to exit when there are one to eight PE firms. And it is evident that when there is one PE firm involved in the transaction, the LBO exits sooner and as the number of PE firms increases, the number of days it takes to exit the LBO increases in general. However if there are higher than 4 PE firms, the number of such LBO transactions are less in number and hence they do not significantly impact the data. These results are however skewed since from tables 12 and 15, it is evident that club deals exit sooner in most of the time periods. In the last few years, 2008 and later, there have been very few club deals. Where as there were many non-club deals which exited soon.

Table 9: Average time to exit the transactions based on their initial transaction time period (both developed and developing economies).

Years	Number of transactions	Average time to exit	Number of transactions in developed	Average time to exit in days (developed)	Number of transactions in developing	Average time to exit in days (developing)
1980-1989	198	4880 days	198	4880 days	0	
1990-1999	1,805	2740 days	1,767	3739 days	38	2,781 days
2000-2009	3,742	1406 days	3,486	1421 days	256	1,195 days
2010-2012	101	257 days	57	288 days	44	217 days
Total	5,846	1915 days	5,508	1957 days	338	1,241 days

Table 9 shows average time the LBO firms take to exit. The table also sorts the number of transactions and average time to exit the LBO based on if the target firm is from developed economy or from developing economy. The LBO exits are sorted according the time period in which the LBOs exit. From the average time to exit in table 9, it is evident that LBO transactions in 1980s took longer time to exit when compared to LBOs in 1990s and the 2000s. In the 1980s LBO transactions took 4880 days or about 13.3 years to exit. Whereas in the 1990s time period, LBO transactions took 2740 days or 7.5 years to exit. The reason for shorter exit time periods in 2000s (1406 days in 2000 - 2009 and 257 days in 2010 - 2012) is because the data sample includes transactions only until 2012. Some of the transactions that took place after the year 2000 may still not have exited until our data collection date.

In table 9, when the average time to exit is sorter based on if the target firm belonged to the developed or developing economies, it is evident that the LBOs in developing economies exit sooner when compared to LBOs in developed economies. In

the time period 1990-1999 LBOs in developed economies took about 3739 days (10.24 years) to exit on average and LBOs in developing economies took 2781 days (7.62 years) to exit. Similar pattern is noticed even after the year 2000 and later, LBOs in developing economies exit sooner that LBOs in developed economies in each time period. This is because, LBO transactions in developing economies during high economic growth periods have high returns when compared to developed economies and hence the PE firms may want to exit sooner and lock in the profits or due to the fact that LBOs transactions in developing economies involve smaller firms and hence exit sooner.

Figure 5 is a graphical representation of values in table 9. The figure shows average time to exit (days) for transactions in various decades starting from 1980 to 2012. From figure 5, it can be seen that the average number of days to exit is decreasing drastically in recent time periods. This could be either because of increasing experience of the PE firms in the field which makes them easily exit the transaction; or it could be the case that some of the LBOs did not exit before 2012 and hence we do not have the data yet.

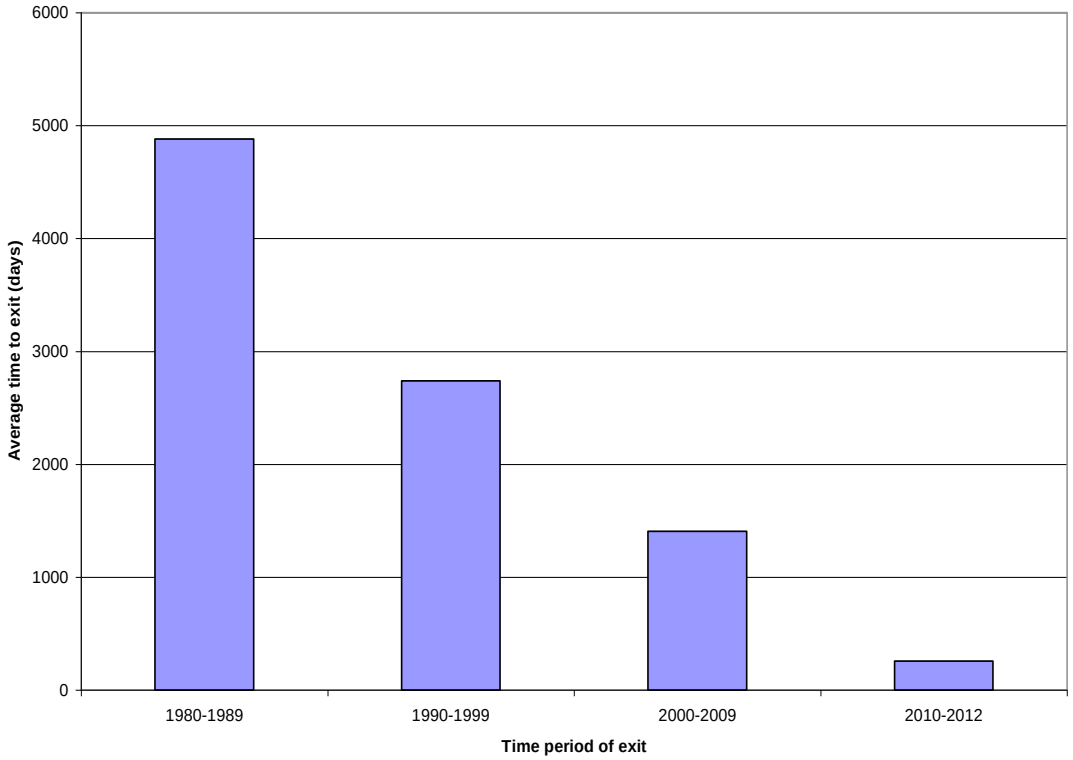

Figure 5: A comparison of average time to exit in days for LBO transactions in each decade from 1980 to 2012.

Table 10: Average exit time of club deals

Years	# of transactions	Average time to exit in days	Number of transactions in developed	Average time to exit in days (developed)	Number of transactions in developing	Average time to exit in days (developing)
1980-1989	60	4,638 days	60	4,638 days	0	
1990-1999	574	2,668 days	571	2,665 days	3	3,169 days
2000-2009	780	1,499 days	758	1,493 days	22	1,714 days
2010-2012	3	3,69 days	3	369 days	0	
Total	1,417	2,103 days	1392	2,107 days	25	1,889 days

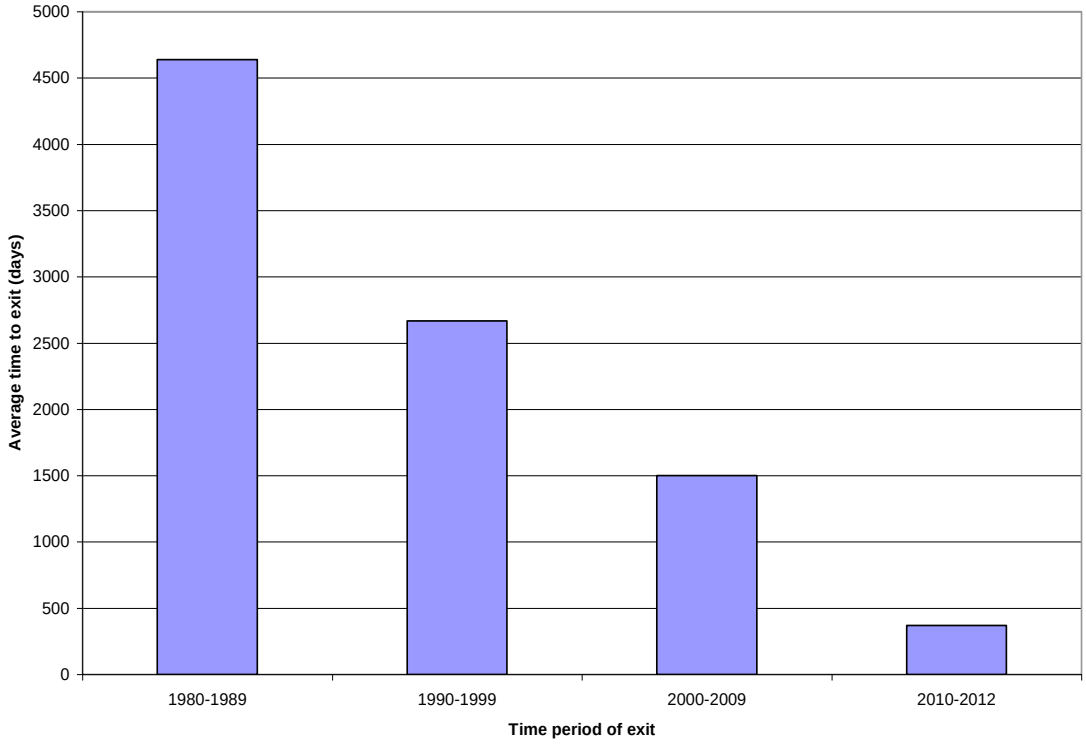

Figure 6: A comparison of average time to exit in days of club deals in each decade from 1980 to 2012.

Table 10 shows average number of days to exit for club deals only (where there are two or more PE firms involved in the LBO transactions). Even in case of club deals, it can be seen from table 10 that the transactions in 1980s take longer time to exit. Between 1980 to 1989 the club deals take 4,638 days (12.7 years to exit). Between the time period 1990 to 1999, club deals take 2,668 days to exit (7.3 years). And after the year 2000 and later, club deals take much lesser time to exit compared to previous time periods.

Club deals in developing economies took shorter time periods to exit when compared to club deals in developed economies. In the developed economies, club deals took 2,107 days on average and in developing economies, club deals took 1,889

days on average. However there are just 25 club deals transactions in developing economies.

Figure 6 shows graphical comparison of average time to exit of club deals by each decade from 1980 to 2012. It can be seen that club deals take longer time to exit in 1980s and the average time to exit decreases in more recent years.

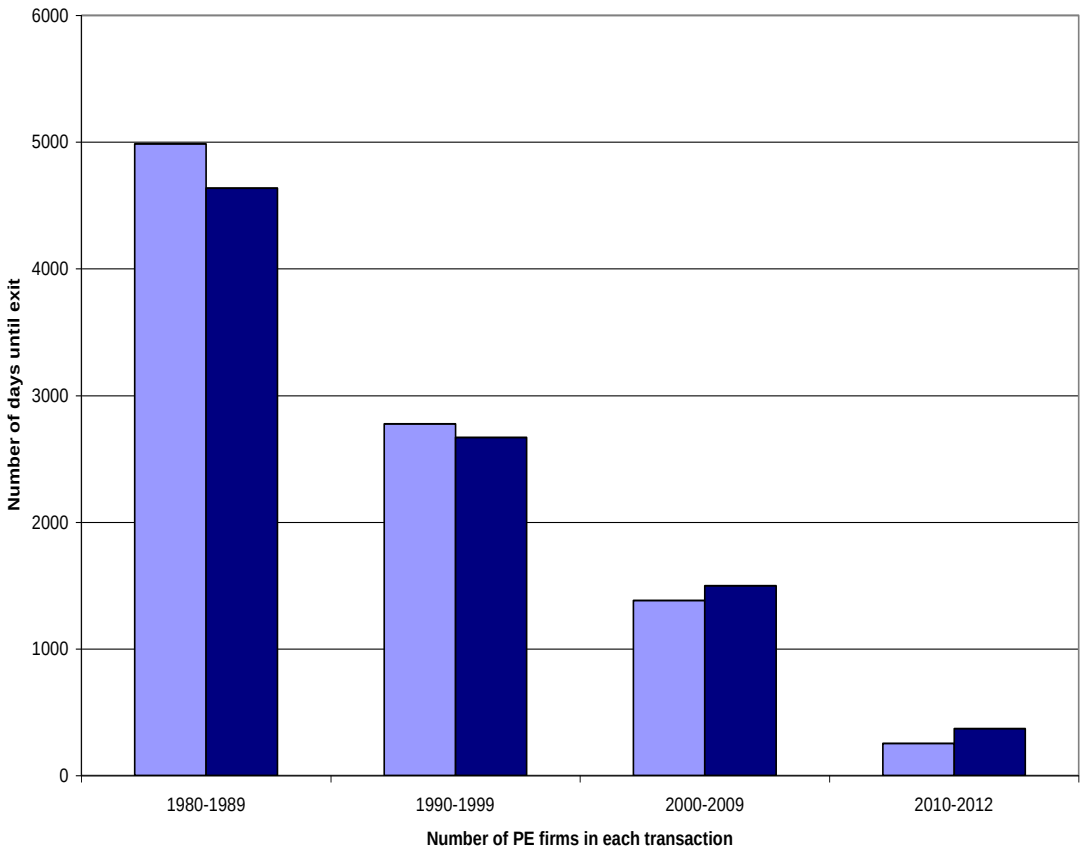

Figure 7: A comparison of average time to exit in days between non-club deals and club deals in each decade from 1980 to 2012. (light blue bar chart represents non-club deal and dark blue bar chart represents club deals)

Table 11 compares average exit time of non-club deals and club deals. The transactions are sorted according to the time period in which the initial LBO transactions took place.

Table 11: Comparison of Average exit time of non-club deals and club deals

Years	# of transactions (non-club deals)	Average time to exit (non-club deals)	# of transactions (Club deals)	Average time to exit in days (club deals)
1980-1989	138	4,985 days	60	4,638 days
1990-1999	1,231	2,774 days	574	2,668 days
2000-2009	2,962	1,381 days	780	1,499 days
2010-2012	98	254 days	3	369 days
Total	4,429	1,855 days	1,417	2,103 days

Figure 7 compares the average time to exit between non-club deals and club deals. From table 11 and figure 7, it can be seen that in the time period between 1980 to 1989 and also between 1990 to 1999, club deals exit sooner when compared with non-club deals.

In the later time periods, i.e, year 2000 and later, non-club deals exit sooner than club deals. This is probably due to recession in 2008 which made the difference in patterns of exit from previous time periods or it could be because of higher level monitoring from the government about the motive behind club deals after the year 2005 as mentioned in Officer (2010). Higher government monitoring reduced the number of club deals (in 2010 and later years, there are just three club deals) and also makes it difficult for the club deals to exit the transactions.

Table 12: Average exit time based on type of exit and time period of the transaction

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	89	5,638 days
	Secondary LBO	30	5,550 days
	Management buyout	13	4,429 days
	Strategic Sale	53	3,540 days
	Bankruptcy Sale	3	5,820 days
1990-1999	Public Offering	856	2,672 days
	Secondary LBO	252	3,206 days
	Management buyout	133	2,161 days
	Strategic Sale	456	2,684 days
	Bankruptcy Sale	68	3,415 days
2000-2009	Public Offering	483	1,507 days
	Secondary LBO	1,087	1,508 days
	Management buyout	117	1,149 days
	Strategic Sale	1,515	1,340 days
	Bankruptcy Sale	438	1,351 days
2010-2013	Public Offering	4	386 days
	Secondary LBO	2	100 days
	Management buyout	1	146 days
	Strategic Sale	72	249 days
	Bankruptcy Sale	12	323 days
Total	Public Offering	1,432	2,457 days
	Secondary LBO	1,371	1,906 days
	Management buyout	264	1,817 days
	Strategic Sale	2,096	1,658 days
	Bankruptcy Sale	521	1,622 days

Table 12 gives a break down of LBO transactions based on their type of exit and the time period in which the initial LBO transaction took place. The different types of exits are public offering, secondary LBO and management buyout, strategic sale and bankruptcy sale.

It can be seen that on average public offering takes longer times to exit through public offering (2,457 days or 6.73 years) due to lengthy procedures and compliances with the exchanges to do so. Strategic sale and bankruptcy take relatively shorter time periods to exit. Strategic sale takes 1,658 days or 4.54 years to exit; and bankruptcy sale takes 1622 days or 4.44 years to exit. Secondary LBO and management buyout takes 1,906 and 1,817 days respectively which is 5.022 years and 4.98 years respectively. This shows that it is quicker to exit through strategic sale and Secondary LBO (including MBO).

When the exit methods are sorted based on the time period of the initial transactions, it can be seen that in the time period 1980 – 1989, strategic sale takes the shortest time to exit (3,540 days or 9.70 years to exit) since it is easier to buy trade partners when compared to other types of exits. Public offerings take longer time to exit (5,638 days or 15.45 years to exit) due to the requirement to comply to exchange rules and long procedures to take the firm public. Secondary LBO and management buyouts also take long time periods to exit (5,550 and 4,429 days respectively) since it might be difficult to buy a new PE firm to buy the target firm in a secondary LBO transaction. Bankruptcy sale takes the longest time to exit (5,820 days) indicating that not many firms went into quick bankruptcy during that periods since the markets were quite stable compared to the recession in 2008/2009 time period.

In the time period 1990 to 1999, in general most of the types of exits take shorter time periods to exit compared to the previous decade (1980 to 1989). In the 1980s the boom of LBOs was by using junk bonds and hence there was a bust in LBO during the recession in early 1990s. Beginning in 1992, the LBO market started to

boom once again until the 2000s. This tremendous growth and greater experience of large PE firms lead to quick exit of LBOs

After the year 2000, LBOs have had tremendous growth once again until the recession in the years 2008/2009. The table shows that LBOs from the year 2000 exited very quickly on average. But this data can be skewed since some of the LBOs in this period may not yet have exited. The data set for this study includes LBOs until 2012 and hence there is a possibility that a large number of LBOs did not exit yet. The LBOs that exited so far in the 2000s exited soon and the LBOs that take a long time to exit in future are not yet considered in the sample.

Table 13 looks at the average exit time in developed economies based on if the exit method was through public offering, secondary LBO, management buyout, strategic sale or bankruptcy. The exit information is also sorted based on the time period in which the initial LBO transaction took place. From the table it can be seen that strategic sale is the most common exit method (1,948 transactions) on average. Secondary LBO and management buyout combined is the second most common type of exit method, where there are 1,357 transactions that exited through secondary LBO and 253 transactions that exited through management buyout. Public offering is also quite common in the developed economies where there are 1,382 transactions in the sample that is considered for the study.

Table 13: Average exit time based on type of exit and time period of the transactions in developed economies

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	89	5,638 days
	Secondary LBO	30	5,550 days
	Management buyout	13	4,429 days
	Strategic Sale	54	3,540 days
	Bankruptcy Sale	3	5,820 days
1990-1999	Public Offering	845	2,667 days
	Secondary LBO	251	3,202 days
	Management buyout	130	2,175 days
	Strategic Sale	440	2,681 days
	Bankruptcy Sale	68	3,415 days
2000-2009	Public Offering	445	1,527 days
	Secondary LBO	1,074	1,501 days
	Management buyout	109	1,158 days
	Strategic Sale	1,423	1,366 days
	Bankruptcy Sale	425	1,363 days
2010-2013	Public Offering	3	501 days
	Secondary LBO	2	100 days
	Management buyout	1	46 days
	Strategic Sale	31	284 days
	Bankruptcy Sale	10	310 days
Total	Public Offering	1,382	2,486 days
	Secondary LBO	1,357	1,903 days
	Management buyout	253	1,844 days
	Strategic Sale	1,948	1,722 days
	Bankruptcy Sale	506	1,644 days

Strategic sale on average took 1,722 days (4.72 years) to exit. Bankruptcies on average also took place quite soon after the initial LBO transactions. This is mainly due to the high number of bankruptcies in the 2000-2009 time period. The firms went into bankruptcy soon during the recession period. Public offering on average took a long

time to exit (2,486 days or 6.81 years on average) due to the long procedures involved in taking the firm public. Strategic sale and management buyouts took 1,903 days and 1,844 days to exit respectively (5.21 years and 5.05 years respectively).

When the LBO transactions are sorted based on the time period, from table 13, it can be seen that the transactions that occurred in 1990 to 1999 and 2000 to 2009 time periods had greater numbers of exit information. In the time period 1980 to 1989 and also between 1990 and 1999, public offering was the most common exit route. The number of public offerings reduced during the period 2000 to 2009 and later. This is probably because of the recession in 2008. Strategic sale exit method was more common after the year 2000. Also the number of bankruptcies increased significantly (425 bankruptcies) between the time 2000 to 2009 due to the recession in that time period. Bankruptcies during other time periods were relatively low.

In the 1980s all exit methods took longer time periods to exit. Where as in the 1990s they took relatively shorter time to exit when compared to the previous decade. This is because of the boom of LBOs after 1992 and also the PE firms that were prominent then survived the recession in early 1990s and were more experienced in LBO area. After the year 2000, the exit periods reduced even more, this could be again experience of the PE firms to exit the LBO transactions quickly. It could also be the fact that lot of these transactions are relatively new and may not yet have exit information.

Table 14 shows number of transactions and average exit time period in days for all LBOs that occurred in developing countries. On average the number of LBO transactions are less in developing economies. The CapitalIQ database does not have

any information of LBO transaction's exits during the 1980s time period. However this result is consistent with Kaplan and Stromberg (2009) who also recorded zero transactions during the 1980s.

From table 14, in the time period between 1990 to 1999, there are few transactions that had exit information. Among the transactions there is only one secondary LBO exit which results in average exit time of 4,329 days. Since there is only one transaction, we cannot generalize the results on secondary LBO exit. 17 firms exited through strategic sale and the average exit time period is 2,744 days (7.52 years). Exits through public offering resulted in average exit time of 3,045 days (8.34 years on average).

Most of the transactions in the developing economies that exited were the LBO transactions that occurred in the 2000 to 2009 time period. Most of the transactions that took place in this time period exited through strategic sale method (96 transactions exited through strategic sale method with an average exit time of 1,139 days in 2000-2009). Also during this time period, there are 13 bankruptcies. These are a result of recession during the 2008 time period.

In the time period 2010 to 2012, there are mostly strategic sale exits (35 of the transactions exited through strategic sale). There are two bankruptcies and one public offering exits. The number of days these transactions took to exit is lower. This is because the LBO transactions are really new and most of the transactions during this period have not yet exited.

Table 14: Average exit time based on type of exit and time period of the transactions in developing economies.

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	0	
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	0	
	Bankruptcy Sale	0	
1990-1999	Public Offering	11	3,045 days
	Secondary LBO	1	4,329 days
	Management buyout	3	1,569 days
	Strategic Sale	17	2,744 days
	Bankruptcy Sale	0	
2000-2009	Public Offering	38	1,275 days
	Secondary LBO	13	2,071 days
	Management buyout	8	1,018 days
	Strategic Sale	96	1,139 days
	Bankruptcy Sale	13	975 days
2010-2013	Public Offering	1	40 days
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	35	213 days
	Bankruptcy Sale	2	386 days
Total	Public Offering	50	1,640 days
	Secondary LBO	14	2,232 days
	Management buyout	11	1,168 days
	Strategic Sale	148	1,129 days
	Bankruptcy Sale	15	896 days

Table 15 shows average number of days to exit the LBO transactions and number of transactions of club deals sorted based on the time period in which the transactions took place initially. Among the club deal transactions, most of the club deals exited in the 1990s which is different from information that was shown in tables 13, 14 and 15. There there were fewer transactions in 1990 as compared to the 2000s.

Club deals on the other hand were more prominent in 1990s. In the time period 2000, there are fewer club deal exits since there was higher government intervention on the motive of club deals during this period (Officer, Ozbas and Sensoy (2010)). Higher government intervention lead to lesser number of club deals that and hence fewer exits during the time period 2000 and later.

In table 15, among the club deal exits, there were more bankruptcies (46 transactions) in the 2000 to 2009 time period. Also in the 1990s time period there are 22 bankruptcies. This is probably because of the recession in the early 1990s as well as the recession in 2008 time period.

The number of transactions that exited through public offering were more common in the LBOs that took place in the 1990s and strategic sale and secondary LBOs are more common in 2000s. The public offering method of exit was more common in club deals in 1990s due to the joint experience and reputation of the PE firms involved in the club deal which make public offering a little more easier when compared to when where is just one PE firm in the LBO transaction.

There are a total of 3 exit transactions in the time period 2010 to 2012 (two strategic sales and one public offering exit).

On average club deals take shorter time periods to exit when compared to all other transactions. Public offering takes 2,341 days on average (6.41 years). Secondary LBO and management buyouts take 2,032 and 1,924 days to exit. Strategic sale method takes relatively shorter time to exit (1,878 days or 5.14 years) to exit. Also the number and total percentage of bankruptcies are lesser when it is a club deal. There are a total of 69 bankruptcies which is low compared to single PE firm involved transactions.

Table 15: Average exit time of club deals based on type of exit and time period of the transaction.

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	43	4,643 days
	Secondary LBO	7	6,341 days
	Management buyout	1	4,680 days
	Strategic Sale	8	3,289 days
	Bankruptcy Sale	0	
1990-1999	Public Offering	287	2,540 days
	Secondary LBO	89	3,093 days
	Management buyout	40	2,310 days
	Strategic Sale	122	2,588 days
	Bankruptcy Sale	22	3,760 days
2000-2009	Public Offering	172	1,446 days
	Secondary LBO	271	1,571 days
	Management buyout	26	1,224 days
	Strategic Sale	240	1,475 days
	Bankruptcy Sale	46	1,562 days
2010-2012	Public Offering	1	278 days
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	2	414 days
	Bankruptcy Sale	0	
Total	Public Offering	503	2,341 days
	Secondary LBO	367	2,032 days
	Management buyout	67	1,924 days
	Strategic Sale	372	1,878 days
	Bankruptcy Sale	69	2,274 days

Table 16: average exit time of club deals based on type of exit and time period of the transactions in developed economies.

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	43	4,643 days
	Secondary LBO	7	5,649 days
	Management buyout	1	4,680 days
	Strategic Sale	8	3,289 days
	Bankruptcy Sale	0	
1990-1999	Public Offering	286	2,538 days
	Secondary LBO	89	3,093 days
	Management buyout	40	2,310 days
	Strategic Sale	121	2,581 days
	Bankruptcy Sale	22	3,760 days
2000-2009	Public Offering	169	1,452 days
	Secondary LBO	265	1,542 days
	Management buyout	25	1,226 days
	Strategic Sale	232	1,483 days
	Bankruptcy Sale	46	1,562 days
2010-2013	Public Offering	1	278 days
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	0	
	Bankruptcy Sale	0	
Total	Public Offering	499	2,347 days
	Secondary LBO	361	2,017 days
	Management buyout	66	1,935 days
	Strategic Sale	361	1,888 days
	Bankruptcy Sale	68	2,274 days

Table 16 looks at club deal exit information based on type of exit, and sorted according to the time period in which the initial LBO transaction took place. However these transactions belong only to the developed economies. Most of the exits of the club deal transactions in developed economies took place in the 1990s and early 2000s time

period. There is just one transaction that took place after 2010 and had exit information (public offering method of exit).

Table 17: average exit time of club deals based on type of exit and time period of the transactions in developing economies.

Years	Type of exit	# of transactions	Average time to exit in days
1980-1989	Public Offering	0	
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	0	
	Bankruptcy Sale	0	
1990-1999	Public Offering	1	3,327 days
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	1	4,440 days
	Bankruptcy Sale	0	
2000-2009	Public Offering	3	1,127 days
	Secondary LBO	6	2,869 days
	Management buyout	1	1,180 days
	Strategic Sale	10	1,328 days
	Bankruptcy Sale	0	
2010-2013	Public Offering	0	
	Secondary LBO	0	
	Management buyout	0	
	Strategic Sale	0	
	Bankruptcy Sale	0	
Total	Public Offering	4	1,677 days
	Secondary LBO	6	2,869 days
	Management buyout	1	1,180 days
	Strategic Sale	11	1,580 days
	Bankruptcy Sale	0	

From table 17, it can be seen that there are very few club deal transactions in the developing economies. Most of the club deals transactions were from developed

economies. There are a total of 25 transactions in developing economies. 4 of the club deals transaction exited through public offering, 6 transactions exited through secondary buyout, one transaction through management buyout and one transaction through strategic sale. Four of the exits did not disclose terms. Most of the club deal transactions in developing economies exited through strategic sale method.

METHODOLOGY

In order to prove the following five Hypotheses, I conduct a simple OLS regression using returns or Number of days to exit as the dependent variables.

Hypothesis 1: Returns of leveraged buyouts are on average higher for LBOs in developed economies; however during periods of high economic growth, LBOs in developing economies have better returns when compared with developed economies. However in slow or low economies growth periods, the LBO transactions in developed economies produce higher returns than the LBOs in developing economies.

Hypothesis 2: Leveraged buyouts in developing economies exit sooner on average. During periods of very high economic growth, LBOs in developing economies exit sooner when compared with developed economies. The results also show that in periods of negative economic growth, the LBOs in developing economies exit the soonest in order to minimize losses in recession.

Hypothesis 3: Reputed PE firms result in higher returns of the target firm and take fewer days to exit.

Hypothesis 4: Smaller firms have higher returns when compared to large firms Small firms also take shorter time periods to exit when compared with larger firms.

Hypothesis 5: Club deals (LBO transactions that have more than one PE firm) result in higher returns and exit sooner until there was government scrutiny after 2006. Club deals in developing economies exit sooner but are not profitable.

Model

For the regression analysis, I use simple OLS regression models: Equation (1) is the initial regression equation which considered all the observations (with or without exit information). For Equations (2) and (3) I consider only the observations that have exited the initial LBO transaction. Equation (1) uses Value of the LBO as the dependent variables and analyzes how the value of the LBO is influenced by various factors. In Equation (2), the dependent variable is Annualized return of the LBO. I look at how the various parameters influence returns of the LBOs. Equation (3) looks at how various factors influence the time period to exit the LBO.

Regression equations:

1) Value of transaction (USD MM) = Developing + Reputed + Same Country + Same Industry + Number of PE firms + GDP + GDP benchmark levels at the time of initial LBO + Target Debt/Capital ratio

2) Return = Days to exit + Quick flips + Reputed + Developing + Same Country + Same Industry + Number of PE firms + Small firm + Type of exit + GDP + GDP at exit + GDP at the time of initial LBO between 2% to 5% + GDP benchmarks at the time of initial LBO + GDP benchmarks at the time of exit between + Developing * GDP benchmarks at the time of initial LBO + Developing * GDP benchmarks at the time of exit + Govt. effectiveness + Rule Law + # of procedures + Target Debt/Capital Ratio

3) Days to exit = Return + Quick flips + Reputed + Developing + Same Country + Same Industry + Number of PE firms + Small firm + Type of exit + GDP + GDP at exit + GDP at the time of initial LBO between 2% to 5% + GDP benchmarks at the time of initial LBO + GDP benchmarks at the time of exit between + Developing * GDP benchmarks at the time of initial LBO + Developing * GDP benchmarks at the time of exit + Govt. effectiveness + Rule Law + # of procedures + Target Debt/Capital Ratio

List of Variables and Definitions

Variables	Definition of Variables
Return	Percentage annualized return of the LBO from the initial LBO to the exit. This is calculated by taking the difference between LBO exit value and LBO initial transaction value. This difference is then divided by the number of days to exit and multiplied by 365 to get annualized return.
Days to exit	Time period from initial LBO to the time of exit through any of the exit methods mentioned.
Quick flips	Dummy variable to show if the exit transaction is a quick flip. In other words, quick flips take less than 2 years to exit
Developing	Dummy variable of target belongs to developing country or developed country (a value of 1 is assigned to developing economies and 0 is assigned to developed economies).
Reputed	Dummy variable to indicate good reputation of the buyer firms.
Same country	Dummy variable to indicate if the buyer and target firm belong to the same country.
Target Industry	Dummy variables for various industries of the target firms
Same Industry	Dummy variable to indicate if the target and the buyer belong to the same industry
Number of PE Firms	Total number of buyers (PE firms) involved in the LBO transactions (Club deals).
Small	Dummy variable to indicate if the firm is a small firm with a value of less than 10 Million USD.
GDP	GDP growth rate at the time of initial LBO transaction
GDP at exit	GDP growth rate at the time of exit of the LBO.

GDP at the time of initial LBO below 0	Dummy variable to indicate if GDP growth rate is below 0 when the initial LBO transaction occurred.
GDP at the time of initial LBO between 0-2%	Dummy variable to indicate if GDP growth rate is above 0 when the initial LBO transaction occurred.
GDP at the time of initial LBO between 2-5%	Dummy variable to indicate if GDP growth rate is above 2% but below 5% when the initial LBO transaction occurred.
GDP at the time of initial LBO above 5%	Dummy variable to indicate if GDP growth rate is above 5% when the initial LBO transaction occurred.
GDP at the time of exit below 0	Dummy variable to indicate if GDP growth rate at the time of exit of the LBO was below 0.
GDP at the time of exit between 0 and 2%	Dummy variable to indicate if GDP growth rate at the time of exit of the LBO was between 0 and 2%.
GDP at the time of exit between 2% and 5%	Dummy variable to indicate if GDP growth rate at the time of exit of the LBO was between 2% and 5%.
GDP at the time of exit above 5%	Dummy variable to indicate if GDP growth rate at the time of exit of the LBO was above 5%
Developing * GDP below 0%	Interaction variable between the dummy variable Developing and if GDP Growth rate during initial LBO is below 0%.
Developing * GDP between 0 and 2%	Interaction variable between the dummy variable Developing and if GDP Growth rate during initial LBO is between 0 and 2%.
Developing * GDP between 2 and 5%	Interaction variable between the dummy variable Developing and if GDP Growth rate during initial LBO is between 2 and 5%.
Developing * GDP above 5%	Interaction variable between the dummy variable Developing and if GDP Growth rate during initial LBO is above 5%.
Developing * GDP at exit below 0%	Interaction variable between the dummy variable Developing and if GDP at exit is below 0%
Developing * GDP between 0 and 2%	Interaction variable between the dummy variable Developing and if GDP at exit is between 0 and 2%
Developing * GDP at exit between 2 and 5%	Interaction variable between the dummy variable Developing and if GDP at exit is between 2 and 5%
Developing * GDP at exit above 5%	Interaction variable between the dummy variable Developing and if GDP at exit is above 5%
Debt/Capital ratio	Debt/Capital ratio of the target firm
Type of exit	Dummy variable to indicate each individual type of exit. Public offering, Secondary LBO, MBO, Strategic sale or Bankruptcy
Govt	Government effectiveness.
Law	Rule of law

Numb of proced	Number of procedures required to set up a new business in the country
Club deals * developing	Club deal in developing economies
Club deals * developing * reputed	Club deals in developing economies which involves reputed PE firms
Club deals * Small	Club deals of small firms
Club deals * Large	Club deals of large firms
Club deals * Small * Dev	Club deals of small firms in developing economies
Club deals * Large * Dev	club deals of large firms in developing economies,
Club deals * time period	Club deals in different decades (1980 to 2012).

I divide the LBO activity into two categories based on the country of origin of the target. I classify and compare leveraged buyout activity as LBOs in developed countries and LBOs in developing countries. The classification of whether the country belonged to a developed country or a developing country (Variable: Developing) was done based on International Monetary Fund's World economic outlook report, April 2012. There were 1900 transactions were from developing countries. The remaining 15,000 transactions were from developed countries. This clearly shows that the LBO's are mainly in developed economies. Variable "Developing" is a dummy variable which takes a value one if the target firm is from a developing country and takes a value zero if the target firm is from a developed economy.

To measure reputation, I use top 50 PE firms from "Private Equity International 300 (PEI 300, May 2012)". The PE firms are ranked based on their past 5 year (2006 – 2011) fund raising in Million USD. They also provide the PE firms ranking change from previous year. Among the top 50 PE rankings, only one PE firm was a new entry in the top 50 ranking spot. All the other PE firms have moved just one or two spots (either up or down) from the previous ranking. Even though, some of the transactions took place long before 2011, I consider this report to be close enough since most of the

transactions that were collected from CapitalIQ were after the year 2000 and exited in the recent years. Hence the firms in this report will give a close measure of the reputation of the Private Equity (PE) firms in the sample. To measure reputation, a dummy variable called “Reputed” is created that takes a value “one” if one or more of the PE firm/s involved in the LBO transaction belongs to the top 50 PE firms and is given a value “zero” otherwise. (Hypothesis 3: Reputed PE firms result in higher returns of the target firm and takes fewer days to exit).

I look at the effect of number of days to exit on the returns of the LBO (equation 2). The dummy variable “Quick flips” refers to investments held for less than 2 years. It is a Dummy variable which takes a value “one” if the firm exits within 2 years (730 days) of initial LBO and takes a value “zero” if the LBO takes longer than 2 years to exit. I also look at the effect of returns on the “Number of days to exit” (regression equation 3).

I test the returns of the LBOs when the country of the PE firm and the target firm are same. Since returns of reputed firms are expected to be higher, the returns of LBOs transactions that have both target and buyer from the same country will have lower returns. This is because the target firm and reputed PE firm are not necessarily from the same country. (Hypothesis 3: Reputed PE firms result in higher returns of the target firm and take fewer days to exit).

The variable Target industry is the “Industry classification benchmark” launched by DOW Jones and FTSE in 2005. It is used to segregate markets into sectors within the macro-economy. Dummy variable is created if the target firm and the PE firm are from the same industry. A value of “one” is assigned if the target firm and the

PE firm are from the same industry. This is to determine if there is any increase/decrease in returns when the target and the buyer firms operate in the same industry. For this dummy variable even if one of the multiple buyers (PE firms) are in the same industry as the target firm, then a value of "one" is assigned to the variable; and if none of the buyers belong to the industry as that of the target firm, then a value "zero" is assigned to the variable.

Next, as in the paper, Officer, Ozbas and Sensoy (2010), I include a variable to indicate if the buyer is a syndicate of PE firms (club deals). This is to test if higher number of PE firms, have an influence in increasing the returns. I even test the influence of number of PE firms on the number of days to exit for the LBO. The variable "# of PE firms" shows how many PE firms are involved in the LBO transaction. Club deals generally depress the initial LBO prices and hence result in higher returns. They also tend to exit sooner due to the experience of all the buyers involved. (Hypothesis 5: Club deals (LBO transactions that have more than one PE firm) result in higher returns and exit sooner).

I also include variables to test if the size of the target firm influences the return of the leveraged buyout transaction or the amount of time taken by the firm to exit. I create three dummy variables "small", "medium" and "large". The firms are divided based on the value of the LBO. Small: < $10 Million, medium: $10 – $100 million, large: > $100 million. (Hypothesis 4: Smaller firms have higher returns when compared to large firms Small firms also take shorter time periods to exit when compared with larger firms).

To test other effects related to club deals, I use- various interaction variables with club deals variable. To test of club deals involving at-least one reputed PE firm has a positive effect on the returns or how long it takes to exit, I use the interaction variable club deals with reputation. Effect of club deals on size of the target firm is tested by using the interaction variables club deals * size, where size is small or large target firm. Also club deals in various time periods are tested using club deals * time period. Here each time period is 1980 – 1989, 1990 – 1999, 2000 – 2009 or 2010 – 2012. Results of club deals in developing economies can be tested by using the interaction variable club deals * developing.

The variables GDP and GDP at exit can help us test if GDP growth rate at the time of initial LBO and GDP growth rate at the time of exit has an influence on the returns or the days taken to exit the LBO. I choose different levels of GDP as benchmarks of economic growth and look at how returns vary in the different benchmark levels chosen. I sort transactions (both initial LBO transaction and exit of the LBO) that took place during a period when the GDP was lesser than 0%; when GDP was between 0 and 2%; when the GDP is between 2 and 5%; and when the GDP is greater than 5%.

I compare how the dependent variables “returns” and also “days to exit” depend on these three categories and analyze how these two dependent variables vary for developed and developing countries. This benchmark permits us to compare the transactions that took place in times when the market was performing badly (GDP lesser than 0). I can also examine slow/moderate growth periods (GDP between 0 and

2) and also when the economy is growing fast (GDP greater than 2% and GDP greater than 5%).

Since the benchmark is different for different countries, for example, a developing country may have much higher GDP growth rates than the 6 percent level that I have chosen for high growth phase, and a developed economy may have an average GDP rate of 2% (most of the transactions are in the US and UK and 2% level, however some of the developing countries have an average GDP rate of 5-9%). Assaad, Celaya, Cruikshank, and Foran (2011) show that investing in emerging markets yield high growth since the GDP growth rate in emerging markets is greater than the world average. Jain and Manna (2009) look at venture capital and private equity investments in India. They look at the merits and demerits of investing in India which is expecting a growth rate of 9%.

Hence the four GDP benchmark classifications are more appropriate and lets me compare the effects of all the different levels of GDP rates of a country.

Also, since one of my hypotheses is mainly based on if the returns in developing markets are higher or lower compared the returns in developed markets, I include interaction variables between the variable "Developing" with each of the four variables "GDP below 0%", "GDP at exit below 0%", "GDP between 2% and 5%" and "GDP at exit between 2% and 5%". This creates four different variables that permits us to test if returns are lower or higher for developing markets during periods of economic boom (GDP growth rate between 2-5% and GDP growth rate above 5%) or recession (GDP growth rate below 0%). I can also test if time period to exit is higher or lower in the

different benchmark levels of economic growth in developing markets. These variables help us to verify Hypothesis 1 and Hypothesis 2.

I also include interaction variables of “Developing” with each of the variables “GDP <0%”, “GDP 0-2%”, “GDP 2-5%” and GDP >5%”. This permits us to test how LBOs in developing countries in different levels of GDP growth rate that was prevalent at the time of initial LBO. The variable Type of exit includes the different types of exit routes of the LBO transaction. I use as the exit routes, Secondary LBO, strategic sale, public offering and bankruptcy. I exclude the observations that had “terms not disclosed” for the exit method from the regression since these observations do not have transaction value for the interpretation of results.

When I compare the Target debt/capital ratio in developed and developing economies, I find that: average Debt/Capital ratio in developed economies is 69.21%. In developing economies, the average Debt/Capital ratio is 37.88%. The reason for a higher Debt/Capital ratio in case of developed economies is that the interest rates in developed economies are low as compared to that of the developing economies; hence they have a higher ability to pay off high debt. Also the credit rating is high hence developed economies can obtain higher debt easily. Debt/Capital ratio results in lower returns and takes longer periods to exit due to the high risk involved in such transactions.

Finally I include three variables to test the effect of regulation, law enforcement and ease of setting up a business on the returns on days to exit the LBO. Better law enforcement and corporate governance in target country results in higher returns. La Porta, Lopez-de-Silanes, Shleifer, Vishny (2002) and Leeds and Sunderland (2003) find

developing countries do not have very effective corporate governance, legal systems to enforce legal contracts or government effectiveness and hence result in low returns on the transactions.

Government effectiveness, range from -2.5 to 2.5. (Source: Kaufman, Kraay and Mastruzzi (2003)). They combine into a single grouping responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies. The main focus of this index is on "inputs" required for the government to be able to produce and implement good policies and deliver public goods.

Law = rule of law, range from -2.5 to 2.5. (Source: Kaufman, Kraay and Mastruzzi (2003)). They include several indicators which measure the extent to which agents have confidence in and abide by the rules of society. These include perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. Together, these indicators measure the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions, and importantly, the extent to which property rights are protected.

Numb of procedures is defined as the number of procedures required to start up a firm. Range from 2 – 21. Where 2 means, it is easiest to start a firm and 21 is where it requires 21 procedures to start a business and hence it is most difficult to start a business in these target firms. This helps us test if it is easy to exit the LBO and start over as a new firm. (Source: Djankov, La Portla, Lopez-De-Silanes, Shleifer (2002)).

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) find that Good law enforcement has an effect on valuation and breadth of debt and equity markets. La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002) show that poor shareholder protection is penalized with lower valuations, and that higher cash-flow ownership by the controlling shareholder improves valuation, especially in countries with poor investor protection. Djankov, La Portla, Lopez-De-Silanes, Shleifer (2003) show that in civil law countries, procedure by litigants and courts is systematically greater than in common law countries.

Leeds and Sunderland (2003) find that the returns in developed markets do not compensate for the high risk involved in the transactions. This is mainly due to low standards of corporate governance in terms of quality of information required for investment decisions, weakness in legal systems to enforce legal contracts and protecting all classes of investors; and the inability of domestic equity markets to offer reasonable exit prospects through public offering. They also mention that private equity investors differentiate investments between countries based on protection to shareholder rights, tax treatment of capital gains, and securities market development.

RESULTS

The initial regression results (regression of equation 1) shows how the value of the firm depends on various other variables are provided in the Table 18 below. For this regression I use all the observations that have initial LBO transaction value.

Table 18: Initial regression: Dependent Variable: Value of the LBO (in USD Million)

	(a)		(b)		c)	
Variables	Coeff	p-val	Coeff	p-val	Coeff	p-val
constant	-1720.77	0.0000	-1327.135	0.0000		
Reputed	445.35	0.0000	445.35	0.0000	400.86	0.0000
Developing	-204.06	0.0749	-204.06	0.0749	-246.39	0.0328
Same Country	-14.32	0.7941	-14.32	0.7941	-263.96	0.0000
Same Industry	72.66	0.3171	72.66	0.3171	-31.06	0.6694
# of PE firms	397.52	0.0000	397.52	0.0000	305.12	0.0000
GDP	78.8	0.0001	78.8	0.0001	143.45	0.0000
GDP less 0			-393.63	0.0006	-913.65	0.0000
GDP 0 to 2%	393.64	0.0006				
GDP 2 – 5%	601.52	0.0000	601.52	0.0000	102.19	0.1266
GDP above 5%	898.36	0.0001	898.36	0.0001	567.68	0.0003
Target Debt/ Capital Ratio	17.12	0.0000	17.12	0.0000	7.86	0.0000
R-squared	0.07088		0.07088		0.05602	

Regression (a) includes the variable GDP 0 – 2% but excludes the variable GDP less than 0%. Regressions (b) and (c) include the variable GDP less than 0%. Regression (c) is different from (b) in that (c) does not use the constant term for regression.

Table 18 shows regression results of dependency of Value of LBO (in Million USD) on various other factors. There are three parts of the table, regression a), b) and c). Regressions (a) and (b) include a constant to regression. In Regression c), I exclude the constant of regression. In Regression (a), I exclude the dummy variable when GDP is less than 0% and in regression (b), I exclude the dummy variable when GDP is between 0 and 2%.

The regression results above show that the variable reputed has a positive coefficient, which means that if the PE firm is reputed, then the value of the deal is higher by 400 - 445 million USD in all the three regression results in table 18. This shows that reputed PE firms take up larger LBOs. From the coefficient of variable "developing", I observe that if the target firm is from a developing country, then the value of the LBO is smaller by 204 million USD in regressions a) and b) and is smaller by 246 million USD in regression c). This means developing firms LBO value is smaller in general. If the target firm and the PE firm are from the same country, I find that the value of the deal is lower. This could be due to the fact that reputed PE firms are generally from different country as compared to the target firm country and hence the lower value of deals.

If the PE firm and the target firm are from the same industry, then the value of the LBO deals are higher. This because, the LBOs between firms in the same industry tend to perform better due to more knowledge in the field and economies of scale in the combined business. If the number of PE firms is higher, then the value of the deal is higher by 398 million USD as shown by coefficient "# of PE firms" in regressions a) and b). In regression c), the coefficient "# of PE firms" is higher by 305 million USD. This is in line with the finding that club deals (syndicate of PE firms) are involved in larger LBOs' since they can get better terms on the loan due to reputation and capacity to borrow more funds due to their sheer size and number.

Table 19: Dependent variable: Annual Return of the LBO
Annual return is calculated by dividing the total return of the LBO/MBO by the number of days to exit, times 365days [Annual return = (Return of LBO / # of days to exit) * 365]

	(a)	(b)	(c)	(d)	(e)
Variables	Coefficients				
Constant	27.38***	34.74***	22.3	22.246	15.818
Days to exit	-0.0036*	-0.0036*	-0.0035*	-0.004*	-0.004*
Quick flips	7.181***	7.269***	7.26***	5.735	5.666
Reputed	5.432***	5.459***	5.45***	5.44***	5.42***
Developing	-3.431	-8.453	-8.45	-10.127	-5.708
Same Country	-4.656	-4.794	-4.79	-5.446	-5.326
Same Industry	0.59	0.552	0.55	-0.364	-0.323
# of PE firms	4.099*	4.093*	4.09*	3.976*	3.98*
Small	5.409***	5.327***	5.32***	8.716*	8.788*
GDP	-1.212	-1.212	-1.21	-1.422	-1.421
GDP at exit	2.244	2.235	2.23	1.614	1.623
GDP less 0	-10.741	-11.034	-11.03	-12.575	-12.308
GDP 2 – 5%	-1.573	-1.723	-1.72	-0.852	-0.717
GDP above 5%	1.797	1.17	1.17	4.892	5.443
Exit GDP less 0	3.336	5.381	5.38	2.662	0.884
Exit GDP 2 – 5%	8.464***	8.992***	8.99***	8.344***	7.90***
Exit GDP > 5%	7.818	6.195	6.19	3.866***	5.342
Dev * GDP less 0	12.078	12.883	12.88	19.662	18.931
Dev * GDP 2 - 5%	-13.172	-13.902	-13.9	-10.152	-9.518
Dev * GDP > 5%	-12.797	-13.343	-13.34	-9.456	-8.991
Dev * Exit GDP < 0	-12.1***	-12.4***		-13.05**	-12.8**
Dev *Exit GDP 0 - 2%			12.43***		
Dev *Exit GDP 2– 5%	7.028***	6.970***	19.40**	6.986***	7.04***
Dev*Exit GDP > 5%	20.33***	19.52***	31.95**	21.13***	21.8***
Public offering	-9.201**	-9.185**	-9.18**		
SLBO	3.01	3.091	3.09		
Strategic Sale	-7.616	-7.599	-7.59		
Exits not Bankrupt				4.928	4.855
Bankruptcy	-8.423	-8.475	-8.47		
Govt effective	3.966	8.967	8.96	9.918	5.486
Rule Law		-8.097	-8.09	-7.156	
# of procedures	0.169	-0.033	-0.033	0.234	0.411
Debt/Cap Ratio	-0.0269	-0.027	-0.027	-0.011	-0.011
R-squared	0.040924	0.041105	0.041105	0.035725	0.03558

*significant at 1% confidence level. **significant at 5% confidence level. ***significant at 10% confidence level.

From the coefficients GDP, GDP between 0 and 2%, GDP between 2 and 5% and GDP above 5%, I observe that if the target GDP growth rate is less than 0%, then the value of the LBO is lower and as the GDP growth rate increases, the value of the LBO is higher. This shows that in periods when the economy is not doing well, the large firms do not tend to involve in a LBO activity; and during periods of recession, the LBOs that take place are from smaller target firms. From the coefficient target debt/capital ratio, I find that if the debt/capital ratio of the target firm is high, then the value of the LBO is higher. This shows that high debt levels are used to finance the larger LBO deals.

Tables 19 and 20 include only those transactions that have exit transaction value information. Table 19 shows results of OLS regression where "Annualized return" of the LBO is the dependent variable. Annualized return is calculated as the total return on the LBO averaged per year. This provides a leveled field for comparison of various transactions that took different time periods to exit the LBO transactions.

Table 19 has five different OLS regression results. In table 19 regression (b), I include the variable "Rule Law". In Regression (c), I use the variable "dev * exit GDP 0-2%". This variable is to test if the firms in developing markets during the time of moderate economic growth have higher or lower returns. In Regressions (d) and (e), I use a general variable for type of exit. I use the variable "Exits not bankrupt" to test the returns of firms that exit successfully either through either, public offering, strategic sale or secondary LBO.

From table 19, the interpretation of the dependency of various coefficients on the annual return of the LBO is as follows: Variable "Days to exit" has a negative

coefficient, which implies that if the firm takes longer time to exit, then the Annualized returns are lower. This is in line with the previous finding that quick flips (LBOs that exit within 2 years) have higher returns. This is also evident from the variable "quick flips", which has a positive coefficient; and hence I can interpret that on average quick flips result in about 7% higher returns.

Coefficient of variable reputed has a positive coefficient implying that reputed firms have higher returns of about 2.6 – 4.6% the same as results found in other previous studies such as: Stromberg (2008) found that LBO transactions that are sponsored by more experienced PE partnerships tend to stay in LBO ownership for a shorter period of time, are more likely to go public, and are less likely to end in bankruptcy or financial restructuring. Demiroglu and James (2010) found that reputation is positively related to buyout leverage. My results on variable reputed proves a part of Hypothesis 3: Reputed PE firms result in higher returns of the target firm and takes fewer days to exit.

Variable "developing" has negative coefficient, showing that target firms from developing economy have a negative coefficient, implying that if a LBO is from developing country, then the returns are lower in general (in all the regressions in table 19).

The variable "same country" has a negative coefficient, which means that if the target firm and the PE firm are from the same country, then the returns are lower. This is because reputed PE firms result in higher returns. Reputed PE firms are generally not from the same country hence if the target firm and the PE firm are from the same country, the returns tend to be lower.

The variable, same industry is positive, implying that if the target firm and the PE firm are from the same industry, then the returns are positive. If the target firm and the buyer firm are from the same industry, they will have more knowledge about operating procedures. This might also be due to economies of scale from operating in the combined firm.

"# of PE firms" shows that if the number of PE firms is higher, then the returns are higher. This proves a part of my hypothesis 5: Club deals (LBO transactions that have more than one PE firm) result in higher returns and exit sooner. This is because; in a club deal the initial price of the LBO is depressed and hence PE firms can make a higher profit upon exit. This is because club deal buyers have better negotiating power with the target firm; they can also get better loan terms due to their higher reputation. Since the PE firms have the advantage of buying the LBO initially at a lower price, this results in higher returns at the time of the exit. Also since more number of buyers are involved in the club deal, reputation of this consortium of the buyers is higher and they can invest huge amount which a single PE firm may not be able to invest. Officer, Ozbas and Sensoy (2010) find that club deals reduce the returns of the leveraged buyout since they reduce the competitiveness during the initial process of the leveraged buyout deals.

The variable, "small" has a positive coefficient, which shows that smaller firms have higher returns. This result confirms the results found by Demiroglu and James (2010) and Lopez-de-Silanes, Phalippou and Gottschalg (2010), who found that small investments outperform large ones. This proves a part of my hypothesis 4.

GDP at the time of initial LBO has a negative coefficient; however, GDP at the time of initial LBO should not have an influence on the returns. From the regression results, I also see that if GDP at exit is high, then the returns are higher. If GDP is less than 0%, then the returns of the LBO are negative. If the GDP is between 2% and 5%, then the returns of the LBO are less in absolute terms; however it is still negative. If the GDP is greater than 5%, it results in higher returns.

If Exit GDP is lower than 0%, then the returns are positive but lesser in magnitude. Also the variables "Exit GDP is higher than 2%" and "exit GDP >5%" are positive and higher in magnitude, implying that if the GDP at the time of exit is higher, then the returns are higher for the LBO.

As a unique contribution to literature, I look at the interaction between the variable Developing and Various benchmark levels of Exit GDP. The interaction of variables "Developing" and "Exit GDP below 0%" is negative and high in magnitude. This shows that if the firm is from a developing country and if the economy is bad, then the LBOs perform very badly. However, as the GDP increases, the returns in developing countries increase. This is evident from interaction of variable "developing" with "Exit GDP between 0-2%", "Exit GDP 2-5%" or "Exit GDP above 5%". If the exit GDP is between 2% and 5%, and the target firm is from a developing country, then the returns are higher by about 7% in regressions (a), (b), (d) and (e) of table 19. If the exit GDP is above 5%, and the target is from a developing country, the results are much higher in magnitude. The returns are higher by 20% - 21% as shown in regressions (a), (b), (d) and (e). These results prove my hypothesis 1: that if the economy is booming

then returns in developing countries are higher and in periods of low economic growth, returns in developed nations are higher.

When I look at how the different exit routes influence the returns of the LBO, I find that secondary LBOs result in highest returns and public offering and bankruptcy result in negative returns. Public offering data entered in CapitalIQ is probably entered in different phases that the firm went public. I also run regressions using only successful exits (i.e., public offering, strategic sale and secondary LBO), the results are shown in regressions (d) and (e) of table 19. This variable shows that returns for successful exits which exclude bankruptcy are positive. This shows that on average LBOs have positive returns when we do not take bankruptcies into account.

The variable "Government effectiveness" is positive; hence I interpret that if government effectiveness is higher in a country, then the returns will be higher. Also if the Target firm's Debt/capital ratio is high, then returns are lower since higher debt levels are perceived to be more risky for the PE firm.

Table 20 and 21 show OLS regression results where "days to exit" is the dependent variable. "days to exit" is defined as the number of days from the initial LBO to the date when the LBO exits through either Secondary LBO, strategic sale, bankruptcy or public offering.

Table 20 shows results of five OLS regressions. All the regressions have the same dependent variable "days to exit". Here I am comparing how various factors affect the time taken to exit the LBO. The regressions a-e in table 20 eliminate the variable "quick flips" as an explanatory variable.

Table 20: Dependent variable: Number of days to exit the LBO.
Number of days to exit is the total number of days from the initial LBO/MBO to the date that the LBO/MBO exited through one of the exit routes.

	(a)	(b)	(c)	(d)	(e)
Variables	Coefficients				
Constant	976.51*	746.8***	746.8***	778.0***	1003***
Returns	-2.35*	-2.34*	-2.34*	-2.56*	-2.57*
Reputed	-178.16**	-179.1**	-179.1**	-163.2**	-162.2**
Developing	2696.41*	2851.22*	2851.22*	3065.54*	2913.87*
Same Country	264.65*	268.67*	268.67*	312.70*	308.82*
Same Industry	230.63	232.06	232.06	252.8***	251.2***
# of PE firms	4.63	4.87	4.87	11.55	11.32
Small	-89.57	-86.96	-86.96	-248.66*	-251.29*
GDP	106.39*	106.64*	106.64*	135.30*	135.04*
GDP at exit	-66.81*	-66.81*	-66.81*	-59.49**	-59.50**
GDP less 0	683.02*	691.66*	691.66*	754.03*	745.33*
GDP 2 – 5%	174.13	178.77	178.77	139.03	134.41
GDP above 5%	-102.16	-82.91	-82.91	-257.33	-276.23
Exit GDP less 0	31.76	41.51	41.51	69.57	59.91
Exit GDP 2 – 5%	-324.07*	-322.06*	-322.06*	-328.89*	-330.88*
Exit GDP > 5%	-337.07	-311.92	-311.92	-384.53	-409.23
Dev * GDP less 0	-758.94	-783.93	-783.93	-1020.6	-995.57
Dev * GDP 2 - 5%	-699.94	-677.02	-677.02	-801.77	-823.95
Dev * GDP > 5%	-773.04	-756.34	-756.34	-863.3	-879.34
Dev *ExitGDP < 0	-2974.10*	-2923.0*		-3038.9*	-3090.4*
Dev*ExitGDP 0-2%			2923.02*		
Dev*ExitGDP 2-5%	-831.82	-847.72	2075.30*	-956.15	-941.3
Dev*ExitGDP > 5%	-1457***	-1520***	1402.7**	-1554***	-1493**
Public offering	518.01*	517.36*	517.36*		
SLBO	157.4***	155.3***	155.3***		
Strategic Sale	365.27*	364.79*	364.79*		
Exits not bankrupt				352.99*	353.92**
Bankruptcy	-53.59	-53.53	-53.53		
Govt effective	358.24*	203.76	203.76	181.21	333.48**
Rule Law		250.4	250.4	246.29	
# of procedures	-4.82	1.46	1.46	-7.12	-13.27
Debt/Cap Ratio	1.44	1.44	1.44	0.86	0.859
R-squared	0.105429	0.10572	0.10572	0.09219	0.09191

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

Table 21: Regression using "Days to Exit" as the dependent variable.
Table 21 includes the explanatory variable quick flips as an explanatory variable; the results are similar to regressions a-f. Hence regressions f-j serve as robustness tests

	(f)	(g)	(h)	(i)	(j)
Variables					
Constant	1456.47*	1134.92*	1134.92*	1493.6*	1792.4*
Returns	-1.55*	-1.54*	-1.54*	-1.81*	-1.81*
Quick flips	-1976.6*	-1978.9*	-1978.8*	-1950.2*	-1948*
Reputed	-79.93	-81.06	-81.06	-51.96	-50.85
Developing	2121.18*	2338.09*	2338.09*	2479.34*	2276.5*
Same Country	255.21*	261.02*	261.02*	308.80*	303.43*
Same Industry	231.5***	232.9***	232.9***	277.57**	275.9**
# of PE firms	-45.67	-45.41	-45.41	-38.61	-38.84
Small	-104***	-100.3	-100.3	-261.94*	-265.4*
GDP	60.61**	60.92**	60.92**	94.55*	94.23*
GDP at exit	-42.9***	-42.85***	-42.9***	-34.27	-34.34
GDP less 0	679.14*	691.41*	691.41*	787.38*	775.51*
GDP 2 – 5%	274.31*	280.66*	280.66*	244.66**	238.6**
GDP above 5%	130.83	158.03	158.03	-23.48	-49.01
Exit GDP less 0	151.83	165.56	165.56	192.4	179.43
Exit GDP 2 – 5%	-271.52*	-268.86*	-268.86*	-274.49*	-277.0*
Exit GDP > 5%	-378.99	-343.91	-343.91	-430.6**	-463**
Dev * GDP less 0	-469.37	-504.13	-504.13	-731.47	-698.03
Dev * GDP 2 - 5%	-794.24	-761.67	-761.67	-872.35	-902.35
Dev * GDP > 5%	-416.80*	-392.6**	-392.59	-532.23	-554.21
Dev * Exit GDP < 0	-2234.16	-2161.73		-2229.6*	-2299*
Dev * Exit GDP 0- 2%			2161.7**		
Dev * Exit GDP 2– 5%	-655.45	-677.96	1483.7**	-772.83	-752.89
Dev*Exit GDP > 5%	-1090.84	-1179***	982.74	-1178.64	-1097.1
Public offering	494.46*	493.45*	493.45*		
SLBO	-6.05	-9.63	-9.63		
Strategic Sale	187.74**	186.9***	186.9***		
Exits not Bankrupt				52.61	56.04
Bankruptcy	152.08	154.32	154.32		
Govt. effective	271.88**	53.89	53.89	0.68	206***
Rule Law		352.49	352.49	331.04	
# of procedures	1.3	10.1	10.1	-3.69	-11.91
Debt/Cap Ratio	0.93	0.94	0.94	0.189	0.18
R-squared	0.29080	0.29138	0.29138	0.27456	0.27405

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

Regressions f-j in table 21 include the explanatory variable “quick flips” in the regressions. The results in the regressions a-e and f-j are similar in terms of sign of the coefficients. Only the magnitude of the coefficients varies slightly. Hence regressions f-j serve as robustness tests. I now analyze regressions a-e in table 20.

From the results of regressions a-e of table 20, the coefficient of the variable “returns” is negative; this means that if the returns of the LBO are high, then the LBO exits sooner. From the variable “Reputed” I see that if the PE firm is a reputed firm, then the LBO exits sooner by 180 days on average. From the coefficient of variable “Developing” I interpret this to mean that if the target firm is from a developing country, then the LBO takes longer time to exit. Co-efficient of variable “developing” positive, but from the data, it was evident that LBOs in developing economies exit sooner. However when separate regression was performed, variable “developing” had a negative co-efficient implying that LBOs in developing economies exit sooner.

If the “# of PE firms” is higher, then it takes more number of days to exit the LBO in all the regressions a – e, but however in regressions f through j, the value is negative and higher in absolute magnitude. This shows that on average Club deals take shorter time periods to exit mainly due to the reputation of the syndicate of buyer firms. This proves the remaining part of my Hypothesis 5.

The results in tables 20 and 21 also show that small firms exit sooner when compared with larger firms. This could be because of the ease if finding buyers for a firm that is smaller in market capitalization. This proves the remaining part of Hypothesis 4.

Higher the GDP at the time of initial LBO, longer it takes to exit (variable GDP). Higher GDP at the time of exit of the LBO results in sooner exits (Variable "GDP at exit"). If the GDP at the time of initial LBO was lesser than 0%, then the LBO takes 680 – 750 days more to exit (variable "GDP less 0"). If GDP at the time of initial LBO is higher than 2% but lesser than 5%, then the LBO takes about 175 days more to exit (Variable "GDP 2-5%"). If exit GDP is above 5%, then the LBOs exit sooner by 83 - 276 days (variable "GDP > 5 %").

For proving my main Hypothesis 2, I use interaction variables between "Developing" and the different exit GDP benchmarks. The interaction variable between Developing and Exit GDP below 0% shows that if the exit GDP is below 0% and if the target firm is from a developing country, then the exit takes shorter time to exit when compared with developed markets (Variable "Dev * Exit GDP < 0"). This is because if the PE firm invests in a target firm in the developing market and the GDP growth rate declines to less than 0%, then the PE firm would like to exit sooner in order to avoid greater losses. In periods of moderate economic growth rate (Exit GDP between 0 – 2%) the LBOs in developing economies take longer periods to exit.

If the target firm is from a developing country, and if the GDP is between 2-5%, then the LBO takes about 832 – 956 days lesser to exit (variable "Dev * Exit GDP 2 - 5%"). If the GDP is above 5% and the target firm is from a developing country, then the LBO takes about 1400 days lesser to exit (variable "Dev * Exit GDP >5%"). This proves my Hypothesis 2.

When I look at the effect of different methods to exit on the time period taken to exit the LBO, I find that public offering method of exit takes the longest time to exit

mainly due to higher complexity and regulations required for this type of exit. Strategic sale and bankruptcy methods also takes long time periods to exit. LBOs that exit through Secondary LBO method take the shortest time periods to exit.

From table 20 I also find that if government effectiveness or rule law in a target country is high, then it takes longer time to exit. If the number of procedures required to start a business are high, then it takes longer time to exit due to the difficulty of starting as a new entity after exit. And finally, if the Debt/Capital ratio of the target firm is high, it takes longer time to exit the LBO. The high amounts of debt in the firm may take longer time to be paid off.

For the results in table 21, I also performed negative binomial regression and found results similar to that in table 21. The results are in Appendix D at the end of the paper. The results are similar to the OLS regression in table 21. The results show that if the PE firm is reputed then it takes fewer days to exit the LBO. If the target firm is from a developing economy, it takes longer time to exit. Small firms exit sooner when compared to larger firms. If the GDP at the time of exit is high, then it leads to fewer days of exit. public offering takes longest time to exit and strategic sale method takes the shortest time to exit when compared with other methods of exit.

Table 22 shows regression results of dependent variable annualized returns with the dependent variables used in table 19. Also in table 22, an additional variable club deals in developing economies (variable: club deal * developing) is added to test if club deals in developing economies have higher or lower returns as compared to club deals in developed economies.

Table 22: Regression using Annualized return as the dependent variable and new interaction variable club deals in developing economies is added.

	(a)	(b)	(c)	(d)
Variables	Coefficients			
Constant	26.89***	34.171***	15.44318	21.82902
Days to exit	-0.00355*	-0.00354*	-0.0041*	-0.00406*
Quick flips	7.1805***	7.267***	5.660496	5.729678
Reputed	5.389***	5.419***	5.3824***	5.4095***
Developing	0.1493	-5.0762	-3.119757	-7.741038
Same Country	-4.6286	-4.766	-5.306546	-5.42698
Same Industry	0.5701	0.5346	-0.341088	-0.379135
# of PE firms	4.1468*	4.137*	4.015530*	4.007219*
Club deal * develping	-8.111	-7.479	-5.83696	-5.258955
Small	5.3792***	5.3007***	8.767344*	8.698445*
GDP	2.229	2.2216	1.611658	1.60415
GDP at exit	-1.239	-1.2371	-1.440688	-1.439431
GDP less 0	-10.768	-11.055	-12.33385	-12.59467
GDP 2 – 5%	-1.54	-1.6912	-0.694557	-0.82944
GDP above 5%	1.897	1.2711	5.518317	4.965735
Exit GDP less 0	4.0784	2.7707	2.638924	1.449081
Exit GDP 2 – 5%	4.4127	5.2482	4.982463	5.707646
Exit GDP > 5%	0.1121	2.3773	-1.444426	0.542712
Dev * GDP less 0	13.703	14.369	20.10213	20.70789
Dev * GDP 2 - 5%	-10.068	-11.029	-7.285949	-8.132638
Dev * GDP > 5%	-12.451	-13.0157	-8.736699	-9.221353
Dev * Exit GDP < 0	-12.24***	12.546**	-12.865**	-13.133**
Dev * Exit GDP 2– 5%	7.065**	7.057***	7.0644***	7.0110***
Dev*Exit GDP > 5%	20.492***	19.688***	21.955***	21.245***
Public offering	-9.1999**	-9.184**		
SLBO	3.051	3.1286		
Strategic Sale	-7.58	-7.5657		
Exits not Bankrupt			4.873169	4.94317
Bankruptcy	-8.431	-8.4825		
Govt effective	4.204	9.112	5.664603	10.02508
Rule Law		-7.976		-7.068135
# of procedures	0.1733	-0.02617	0.414848	0.239128
Debt/Cap Ratio	-0.0267	0.026855	-0.01113	-0.01118
R-squared	0.04096	0.041137	0.035603	0.035741

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

From the above regression results in table 22, I see that the returns for club deals in developing markets are negative showing that club deals are profitable in developed nations alone.

In table 23, I look at the number of days it takes for the LBO to exit. From the coefficient of interaction variable Club deals with developing markets, I see that club deals in developing markets in general take shorter time to exit. This may be a result of the negative returns of club deals in developing markets and also as a result of discrepancies between the consortium PE firms. Hence the PE firms would like to end the club deal sooner in developing markets as compared to club deals in developed markets.

Table 24 shows regression results of dependent variable returns with most of the explanatory variables used in table 19. This table also includes additional variables, such as: Interaction of club deal with size of the target firm ("club deal * small" and "club deal* large"); and interaction of reputation with the size of the target firm ("club deal * small * reputed" and "club deal * large * reputed"). These interaction variables show if club deals of smaller firms perform better or if club deals in larger firms perform better. Table 24 shows that Variable "club deal* large" has a coefficient of 8.36%. This means that returns of club deal transactions are high if the target firm is large. This is expected since club deals are in general meant to take advantage of the consortium of the partners in the deal, who depress initial LBO prices. Hence this results in higher returns. The returns of the club deals are lesser when the target firm is small (coefficient of Variable "club deal* small" = -6.796%).

Table 23: Regression using "# of days to exit" as the dependent variable and new interaction variable club deals in developing economies is added.

	(a)	(b)	(c)	(d)
Variables	Coefficients			
Constant	1456.926*	1133.383*	1786.181*	1483.846*
Return	-1.554886*	-1.545503*	-1.814695*	-1.806645*
Quick flips	-1976.581*	-1978.861*	-1948.364*	-1950.268*
Reputed	-79.88703	-81.16991	-51.39986	-52.68096
Developing	2117.914**	2347.332*	2319.290*	2535.444*
Same Country	255.1887*	261.0963*	303.7490*	309.2434*
Same Industry	231.5447***	232.9220***	275.6022**	277.2005**
# of PE firms	-45.71471	-45.29104	-38.27603	-37.88409
Club deal * develping	7.40596	-20.46555	-96.62375	-123.7555
Small	-103.889***	-100.3742	-265.7274*	-262.3494*
GDP	60.62993**	60.89136**	94.03529*	94.31098*
GDP at exit	-42.8806***	-42.9196***	-34.67139	-34.69611
GDP less 0	679.1685*	691.3584*	775.0765*	786.8975*
GDP 2 – 5%	274.2893*	280.7513*	238.9919**	245.1824**
GDP above 5%	130.7411	158.3146	-47.77857	-21.73953
Exit GDP less 0	151.9554	165.2519	177.879	190.4942
Exit GDP 2 – 5%	-271.5631*	-268.7655*	-276.5744*	-273.9069*
Exit GDP > 5%	-379.1403	-343.4605	-461.492***	-427.83**
Dev * GDP less 0	-470.8624	-500.0659	-678.6343	-706.8331
Dev * GDP 2 - 5%	-797.0713	-753.8193	-865.3971	-824.826
Dev * GDP > 5%	-417.1217	-391.6951	-549.9978	-526.7046
Dev * Exit GDP < 0	-2230.748**	-2171.106**	-2344.193*	-2286.459*
Dev * Exit GDP 2– 5%	-651.7491	-688.2087	-801.2137	-834.8507
Dev*Exit GDP > 5%	-1087.895	-1187.208	-1135.659	-1228.487
Public offering	494.4644*	493.4596*		
SLBO	-6.087216	-9.52811		
Strategic Sale	187.7082***	186.9866***		
Bankruptcy	152.093	154.3037		
Govt effective	271.668**	54.29106	208.8852***	3.196335
Rule Law		352.8241		333.1079
# of procedures	1.296821	10.1169	-11.85401	-3.566986
Debt/Cap Ratio	0.935578	0.939973	0.190322	0.192729
R-squared	0.290801	0.291383	0.274055	0.274575

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

Table 24: Regression using "Return" as the dependent variable and new interaction variable club deals in developing economies is added.

	(a)	(b)	(c)	(d)
Variables	Coefficients			
Constant	25.69819***	28.31555***	27.32028***	27.21142***
Number Days to exit	-0.003511*	-0.003435*	-0.003556*	-0.003557*
Quick flips	7.234639***	7.521797***	7.180534***	7.175859***
Reputed	5.361620***	4.384432	5.425396***	5.443838***
Developing	-4.079711	-3.041237	-3.027356	-3.296405
Same Country	-4.488594	-4.649945	-4.652967	-4.668235
Same Industry	0.277483	-0.03238	0.588187	0.587269
# of PE firms	4.913793*	2.867283***	4.106715*	4.100281*
Club deal * Small	-6.795741			
Club deal * Large		8.363097***		
Club deal * Small * Dev			-2.626041	
Club deal * Large * Dev				-9.82705
Small	7.414294*	6.217922**	5.419651***	5.393185***
GDP	2.270975	2.267523	2.243868	2.247215
GDP at exit	-1.232551	-1.182451	-1.215851	-1.21362
GDP less 0	-9.960664	-10.27027	-10.73757	-10.73843
GDP 2 – 5%	-1.176276	-1.657483	-1.571819	-1.580858
GDP above 5%	2.044851	1.192655	1.801633	1.777545
Exit GDP less 0	6.770282	-11.8478***	-12.1338***	-12.1285***
Exit GDP 2 – 5%	8.230821	7.078359**	7.033245***	7.027727***
Exit GDP > 5%	3.891421	20.24896***	20.34608***	20.34765***
Dev * GDP less 0	11.65386	12.04263	12.18968	11.99591
Dev * GDP 2 - 5%	-13.07067	-12.58454	-12.74142	-12.82266
Dev * GDP > 5%	-13.04574	-12.37699	-12.82889	-12.89816
Dev * Exit GDP < 0	-12.2013***	6.128885	7.450114	7.960351
Dev * Exit GDP – 5%	7.052874**	7.221531	7.963018	8.431917
Dev*Exit GDP > 5%	20.13349***	2.297083	3.087187	3.539012
Public offering	-9.165915**	-9.648994**	-9.194395**	-9.227703**
SLBO	3.256531	2.847386	3.014629	2.986385
Strategic Sale	-7.526824	-7.87490***	-7.595895	-7.643028
Bankruptcy	-8.865605	-8.690638	-8.419697	-8.449295
Govt effective	3.807224	3.736734	3.989378	4.074409
# of procedures	0.18205	0.204069	0.169411	0.172762
Debt/Cap Ratio	-0.027278	-0.025615	-0.026898	-0.027095
R-squared	0.041522	0.042055	0.040926	0.040932

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

Also I can test if the club deals in smaller firms or larger firms perform worse in developing markets as compared to club deals in developed markets. From the coefficients, "Club deals * Small * Developing" and "Club deals * Large * Developing", I can test if small target firms or large target firms involved in club deals in developing markets perform better. From the regression results, I see that in developing markets, both small and large target firms involved in club deals result in negative returns. The negative returns may be due to discrepancies between the PE firms in the consortium of club deals. To sum up the results, I find that club deals are profitable only in developed markets and in larger target firms.

In table 25, I look at the number of days it takes for the LBO to exit from the initial LBO transaction. The regression results show that club deals of smaller firms take longer time to exit (take 205 days more to exit in general) and club deals of large firms exit sooner by almost a year (360 days). Club deals in developing economies exit sooner irrespective of if the target firms are smaller or larger. Coefficient of variables "Club deal * small * developing" and "Club deal * large * developing" are -83 and -563 respectively. It means that small club deals in developing economies exit about 83 days sooner and larger club deals in developing economies exit 563 days sooner. This is again due to the same reason mentioned above: that club deals in developing economies might end up in discrepancies between the consortium of PE firms and hence may result in sooner exit or end of consortium of the deal.

Table 25: Regression using "# of days to exit" as the dependent variable and new interaction variable club deals in developing economies is added.

	(a)	(b)	(c)	(d)
Variables	Coefficients			
Constant	1504.836*	1407.596*	1454.512*	1446.628*
Return	-1.534109*	-1.496376*	-1.554996*	-1.555322*
Quick flips	-1975.779*	-1981.716*	-1976.574*	-1976.724*
Reputed	-77.80257	-34.70938	-80.13501	-79.23989
Developing	2138.052*	2093.939*	2134.003*	2128.758*
Same Country	249.9180*	253.9021*	255.3138*	254.5037*
Same Industry	240.6252***	257.1080***	231.4810***	231.3791***
# of PE firms	-70.25183**	7.370599	-45.42707	-45.59601
Club deal * Small	204.8821***			
Club deal * Large		-359.9805*		
Clubdeal *Small * Dev			-83.47253	
Club deal *Large* Dev				-563.0085
Small	-164.3501**	-138.5034**	-103.566***	-104.793***
GDP	59.67990**	59.18250**	60.61470**	60.80253**
GDP at exit	-42.2066***	-43.8996***	-43.0284***	-42.9973***
GDP less 0	654.9367*	656.0185*	679.2477*	679.2423*
GDP 2 – 5%	262.0414*	276.6730*	274.3445*	273.8317*
GDP above 5%	123.1706	156.1184	130.9641	129.6832
Exit GDP less 0	154.4312	140.1381	151.2777	151.1209
Exit GDP 2 – 5%	-272.0675*	-272.7041*	-271.3501*	-271.5056*
Exit GDP > 5%	-373.0468	-374.7624	-378.3776	-377.7693
Dev * GDP less 0	-456.2127	-466.1199	-465.8206	-474.0377
Dev * GDP 2 - 5%	-796.0169	-814.8754	-780.5459	-774.1749
Dev * GDP > 5%	-408.5346	-432.1578	-417.809	-422.5636
Dev * Exit GDP < 0	-2199.821*	-2150.644**	-2245.845*	-2225.862*
Dev * Exit GDP 2– 5%	-647.7214	-599.1017	-671.3738	-657.2496
Dev*Exit GDP > 5%	-1106.22	-1040.802	-1098.753	-1079.157
Public offering	492.9452*	511.7445*	494.6653*	492.8871*
SLBO	-13.54296	0.810056	-5.888181	-7.37591
Strategic Sale	184.9502***	198.3275**	188.3800***	186.1796***
Bankruptcy	165.3986	163.2823	152.1789	150.5474
Govt effective	276.2386**	280.1797**	272.6346**	278.0936**
# of procedures	0.915741	-0.204707	1.298887	1.489724
Debt/Cap Ratio	0.945335	0.875511	0.936993	0.92659
R-squared	0.29172	0.294357	0.290805	0.290847

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

Table 26: Regression using "Return" as the dependent variable and new interaction variable is added to check the effect of club deals among reputed PE firms.

	(a)	(b)	(c)	(d)	(e)
Variables	Coefficients				
Constant	27.79***	27.21***	28.61**	26.82***	27.2***
Number Days to exit	-0.0035*	-0.0035*	-0.0033*	-0.0035*	-0.003*
Quick flips	7.243***	7.176***	7.718***	7.177***	7.18***
Reputed	4.642	5.444***	1.8955	5.976***	5.44***
Developing	-3.2467	-3.2964	-2.54630	-3.72745	-3.2964
Same Country	-4.6824	-4.6682	-4.597	-4.5684	-4.6682
Same Industry	0.5411	0.5873	-0.03889	0.550793	0.5872
# of PE firms	3.8561**	4.1003*	2.800***	4.2141*	4.1002*
Club deal * Reputed	1.8591				
Club deal * Reputed * Developing		-9.827			
Club deal * Reputed * Large			15.9969*		
Club deal * Reputed * Small				-6.6924	
Club*Reputed*Large * Developing					-9.827
Small	5.402***	5.393***	5.92***	5.85***	5.39***
GDP	2.2417	2.2472	2.1984	2.2467	2.2472
GDP at exit	-1.2139	-1.2136	-1.1998	-1.2172	-1.2136
GDP less 0	-10.742	-10.738	-10.321	-10.628	-10.738
GDP 2 – 5%	-1.6023	-1.5808	-1.3225	-1.48368	-1.5808
GDP above 5%	1.8564	1.7775	2.1852	1.855382	1.7775
Exit GDP less 0	7.4762	7.9603	6.2851	7.863342	7.9603
Exit GDP 2 – 5%	8.0737	8.4319	6.7198	8.738181	8.4319
Exit GDP > 5%	3.1589	3.539	2.8009	3.549763	3.539
Dev * GDP less 0	12.018	11.995	11.34	12.10673	11.9959
Dev * GDP 2 - 5%	-13.013	-12.822	-12.946	-13.3435	-12.822
Dev * GDP > 5%	-12.948	-12.898	-13.359	-12.7060	-12.89
Dev * Exit GDP < 0	-12.13***	-12.1***	-12.2***	-12.1***	-12***
Dev*Exit GDP 2-5%	7.0602**	7.028***	7.2870**	7.0544**	7.03***
Dev*Exit GDP > 5%	20.30***	20.34***	19.96***	20.35***	20.3***
Public offering	-9.2246**	-9.227**	-9.9147*	-9.284**	-9.22**
SLBO	2.9763	2.9863	2.898	3.1095	2.9863
Strategic Sale	-7.6627	-7.643	-8.26***	-7.6199	-7.643
Bankruptcy	-8.498	-8.4492	-8.7767	-8.5796	-8.4492
Govt effective	3.8976	4.0744	3.7482	3.9771	4.0744

Table 26: Continued

# of procedures	0.1714	0.1727	0.204	0.1698	0.1727
Debt/Cap Ratio	-0.0258	-0.027	-0.02447	-0.0273	-0.027
R-squared	0.040964	0.040932	0.043501	0.041084	0.04093

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

In tables 26 and 27, I add an interaction variable reputed with club deals to test if reputation of the PE firm has any effect if they are involved in club deals. From the regression results in table 26, the variable "club deals * reputation" has a positive coefficient showing that if the PE firm is a reputed firm and if the deal is a club deal, then the return of the LBO is positive (1.86%). If the reputed firm is involved in a club deal and the target firm is from a developing country (variable Club deal * Reputed * Developing), then the return of the LBO is negative.

From variables "Club deal * Reputed * Large" and "Club deal * Reputed * Small", I see that when there is a reputed PE firm involved in the transaction, club deals are positive if it involves a large target firm (coefficient of "Club deal * Reputed * Large" = 15.99%) and club deals are negative when there is a small target firm involved in the club deal (coefficient of ""Club deal * Reputed * small" = -6.69%). And finally from the variable "Club deal * Reputed * Large * Developing" (coefficient = -9.83%), I see that in developing countries, even in large target firms I do not see positive returns. To summarize, club deals are positive in case of larger target firms in developed countries only.

Table 27: Regression using "# of days to exit" as the dependent variable and new interaction variable is added to check the effect of club deals among reputed PE firms.

	(a)	(b)	(c)	(d)	(e)
Variables	Coefficients				
Constant	1393.72*	1446.63*	1398.8*	1508.37*	1446.6*
Return	-1.54586*	-1.5553*	-1.447*	-1.531*	-1.555*
Quick flips	-1981.7*	-1976.7*	-1980.9*	-1968.0*	-1976*
Reputed	33.95035	-79.23989	45.79768	-136.6**	-79.24
Developing	2090.46*	2128.758*	2073.55*	2143.36*	2128.7*
Same Country	258.52*	254.5037*	251.578*	245.02*	254.5*
Same Industry	238.05***	231.38***	251.9***	234.6***	231***
# of PE firms	-10.62961	-45.59601	0.436667	-57.6***	-45.596
Club deal * Reputed	-267.7**				
Club deal * Reputed * Developing		-563.1			
Club deal * Reputed * Large			-568.2*		
Club deal * Reputed * Small				701.40*	
Club*Reputed*Large * Developing					-563.01
Small	-102.8***	-104.7***	-121.8**	-149.9**	-104***
GDP	60.794**	60.802**	61.54**	60.02**	60.8**
GDP at exit	-42.5***	-42.99***	-42.9***	-42.1***	-43***
GDP less 0	677.99*	679.24*	659.95*	664.65*	679.24*
GDP 2 – 5%	278.0957*	273.8317*	263.44*	263.86*	273.83*
GDP above 5%	122.0763	129.68	115.86	124.1797	129.683
Exit GDP less 0	-2180.57*	-2225.86*	-2163*	-2229.6*	-2225*
Exit GDP 2 – 5%	-597.988	-657.249	-589.18	-681.54	-657.24
Exit GDP > 5%	-1063.148	-1079.15	-1063.63	-1108.66	-1079.1
Dev * GDP less 0	-460.0261	-474.0377	-440.66	-470.63	-474.03
Dev * GDP 2 - 5%	-815.363	-774.174	-794.80	-772.6	-774.17
Dev * GDP > 5%	-394.1396	-422.5636	-392.36	-424.38	-422.56
Dev * Exit GDP < 0	153.8464	151.1209	155.7541	153.194	151.12
Dev*Exit GDP 2-5%	-275.72*	-271.50*	-279.29*	-273.3*	-271.5*
Dev*Exit GDP > 5%	-374.7314	-377.769	-364.95	-380.83	-377.76
Public offering	496.9703*	492.8871*	516.850*	501.32*	492.8*
SLBO	-1.269268	-7.37591	-2.32585	-16.558	-7.3759
Strategic Sale	194.13***	186.17***	209.8**	187.4***	186***
Bankruptcy	162.6808	150.5474	164.2795	168.0383	150.54

Table 27: Continued

Govt effective	281.134**	278.093**	277.1**	269.4**	278.0**
# of procedures	1.01619	1.489724	0.047287	1.246965	1.4897
Debt/Cap Ratio	0.783506	0.92659	0.843562	0.9779	0.92659
R-squared	0.292202	0.290847	0.296327	0.293789	0.29084

*significant at 1% confidence level. **significant at 5% confidence level. *** significant at 10% confidence level.

In case of club deals in developing countries and also club deals in smaller target firms in developed nations, club deals are not profitable. This is because of the agency costs involved due to conflicts between the PE firms involved in club deals. As mentioned in Masulis and Thomas (2009), club deals are not all that profitable due to agency cost that arises out of multiple PE firms sponsoring an LBO deal. In a club deal, there are additional conflicts of interest between LBO sponsors. These conflicts could result in more agency costs in terms of free riding by some sponsoring private-equity firms and disagreements among others over a target company's major policies or proposed policy changes, especially when a firm is performing poorly. However, this potential cost can be minimized by limiting the size of club deals to two or three investors, which is the norm. They also mention another possible disadvantage of these syndicated LBO deal, that the future portfolio company's stock appears to experience more insider trading activity prior to the announcement of the transaction.

From the regression results in table 27, the variable "club deals * reputation" has a negative coefficient showing that if the PE firm is a reputed firm and if the deal is a club deal, then the LBO exits sooner by 268 days. If the reputed firm is involved in a club deal and the target firm is from a developing country (variable Club deal * Reputed * Developing), then the return of the LBO is negative. In this case, club deals exit sooner by 563 days. From variables "Club deal * Reputed * Large" and "Club deal

* Reputed * Small", I see that when there is a reputed PE firm involved in the transaction, larger club deals exits sooner; and smaller club deals take longer time periods to exit. This is because of the low riskiness of the club deal involving large target firm which helps the PE firms to exit the LBO faster. And finally from the variable "Club deal * Reputed * Large * Developing", I see that club deals exit sooner in developing nations when it involves a large target firm and at-least one reputed PE firm. To summarize, club deals exit sooner in case of larger target firms in developed countries and developing countries. Club deals involving smaller target firms take longer time to exit. This is again due to conflicts between the PE firms involved in club deals.

Table 28 looks at regression results where Annual Return is the dependent variable and individual number of PE firms are included as explanatory variables. From the results, if the target firms take more number of days to exit, then the return will be lower. Quick flips provide higher return of 2.11%. Reputed PE firms result in 7% higher returns. If the target firm is from a developing country then the return is 8% lower. When the number of PE firms is 2, return is 2.18% higher. When there are 3 or 4 firms involved in the transaction, the returns are negative. This could be due to greater discrepancies between each of the PE firms in such transactions. However when there are 5 or greater number of PE firms, returns are very high. This is because these transactions are very large and hence the PE firms have the advantage to reduce competing bids for the target firms.

Table 28: Regression with return as dependent variable and number of PE firms 1-8 included as explanatory variables

Variables	Coeffieient	P-value	Coeffieient	P-value
Constant	40.49423	0.0000	42.45497	0.0000
Days to Exit	-0.004296	0.0000	-0.004466	0.0000
Quick flips	2.11321	0.5930	1.343267	0.7350
Reputed	7.059797	0.0160	7.818315	0.0080
Developing	-8.138764	0.2010	-9.053397	0.1560
Same Country	-3.762945	0.2660	-3.590926	0.2900
Same Industry	-1.605671	0.7930	0.3731692	0.9520
# of PE firms (1)			-1.951466	0.4630
2	2.182086	0.4790		
3	-5.638718	0.2020		
4	-9.211076	0.3560		
5	37.1848	0.0050		
6	65.15801	0.0000		
7	30.80377	0.2370		
8	134.0828	0.0360		
Small	7.895577	0.0030	8.35142	0.0020
R-squared	0.0274		0.017	

In table 28, when the variable "one PE firm" is included, the co-efficient if negative. This means that non-club deals are less profitable when compared to club deals. If there is just one PE firm involved in the transaction, then the returns are -1.95%. This shows that club deals lead to higher returns as compared to non-club deals.

Table 29 shows results of OLS regression where "Number of days to exit" from the initial LBO period is the dependent variable. From the results, higher returns tend to make the firms exit sooner. If the PE firms are reputed, then the LBOs exit sooner. If the target firms are from a developing country then the LBOs exit sooner. Also from the two regression results in table 29, it can be seen that club deals (2 or more PE firms) exit sooner when compared to non-club deals (one PE firm). When there are 2 PE firms

involved in the transaction, the deal takes 186 fewer days to exit. And when there are 3 PE firms involved in the transaction, the LBOs exit 54 days sooner.

In the regression which involves "one PE firm" as the explanatory variable, the coefficient of "# of PE firms (1)" is 145.8. This shows that if there is just one PE firm involved in the LBO transaction (non-club deal) then it takes longer time periods to exit the LBO.

Table 29: Regression with "Number of days to exit" as dependent variable and number of PE firms 1-8 included as explanatory variables

Variables	Coeffieient	P-value	Coeffieient	P-value
Constant	2325.363	0.0000	2182.86	0.0000
Return	-1.895491	0.0000	-1.947765	0.0000
Quick flips	-1979.627	0.0000	-1979.696	0.0000
Reputed	-20.07995	0.7450	-18.71882	0.7600
Developing	-178.5271	0.1810	-170.1572	0.2020
Same Country	369.7882	0.0000	369.1985	0.0000
Same Industry	254.9037	0.0480	247.6251	0.0530
# of PE firms (1)			145.8226	0.0090
2	-186.5177	0.0040		
3	-54.3395	0.5580		
4	0.1423318	0.9990		
5	-157.4161	0.5760		
6	-417.4677	0.1800		
7	-31.15574	0.9550		
8	-278.8822	0.8360		
Small	-255.1802	0.0000	-259.663	0.0000
R-squared	0.2277		0.2285	

Table 30: Negative binomial regression with "Number of days to exit" as dependent variable and inclusion of club deals sorted based in the time period in which the initial transaction occurred.

Variables	Co-efficient	p-value
Constant	7.4775	0.0000
Return	-0.0009	0.0000
Quick flips	-1.6165	0.0000
Reputed	-0.0195	0.4400
Same Country	0.0686	0.0280
Same Industry	0.0163	0.7580
# of PE firms	0.0219	0.2760
Club * 1980s	0.6020	0.0000
Club * 1990s	0.0393339	0.3550
Club * 2000s	-0.2953383	0.0000
Club * 2010-12	-0.466238	0.2110
Small	-0.0240082	0.3240
GDP	0.0172211	0.1580
GDP at exit	-0.0289489	0.0010
GDP less 0	0.177018	0.0140
GDP 2 – 5%	0.0986	0.0170
GDP above 5%	0.0282	0.7730
Exit GDP less 0	-0.0144	0.7770
Exit GDP 2 – 5%	-0.0951	0.0010
Exit GDP > 5%	-0.0863059	0.3610
Dev * GDP less 0	0.2439856	0.2190
Dev * GDP 2 - 5%	0.1732768	0.3860
Dev * GDP > 5%	0.2213854	0.2800
Dev * Exit GDP < 0	-0.6624826	0.0180
Dev *Exit GDP 2-5%	0.176297	0.3310
Dev*Exit GDP > 5%	-0.0948188	0.634
Public offering	0.1910	0.0000
SLBO	0.0307	0.3450
Strategic Sale	0.0994	0.0120
Bankruptcy	0.1220	0.0410
Govt effective	0.0895	0.0690
# of procedures	-0.0005	0.9050
Debt/Cap Ratio	0.0003	0.4700
Pseudo R-squared	0.0424	

Table 30 shows results of negative binomial regression where number of days to exit is the dependent variable. From the results, reputed PE firms exit sooner. If the return from the transaction is higher, then the LBO exits sooner. Among the explanatory variables, club deals are sorted based on the time period in which the initial LBO transaction took place. Club deals in the 1980s (club * 1980s) and 1990s (club * 1990s) take longer time periods to exit and club deals after the year 2000 exit sooner ("club * 2000s" and "club * 2010-12"). This is because after the year 2006 there was higher government scrutiny about the motive of club deals and hence the club deals were unable to exit sooner. OLS regression using the same variables in table 30 gave similar results.

Comparing the exit periods of developing economies during different exit time GDP benchmarks (variables "Dev * Exit GDP < 0", "Dev * Exit GDP 2-5%" and "Dev * Exit GDP > 5%"). LBOs exit sooner during periods of high GDP and during periods of low GDP. During moderate GDP benchmark, the exit periods are slower for developing economies.

Table 31 shows OLS regression using "annualized return" of the LBO as the dependent variable and the explanatory variables that include time period in which the club deal transaction took place. From the results, when the PE firm is reputed, it leads to higher returns of 5.24%.

Table 31: OLS regression with "Annualized return" as dependent variable and inclusion of club deals sorted based in the time period in which the initial transaction occurred.

Variables	Co-efficient	p-value
Constant	24.84003	0.0870
Days to exit	-0.0038	0.0000
Quick flips	7.2453	0.0770
Reputed	5.2375	0.0840
Same Country	-4.3974	0.2350
Same Industry	0.5477	0.9310
# of PE firms	7.65991	0.0010
Club * 1980s	20.67761	0.1340
Club * 1990s	10.9727	0.0300
Club * 2000s	-6.8093	0.1730
Club * 2010-12	-105.3140	0.0180
Small	5.5266	0.0590
GDP	2.2712	0.1140
GDP at exit	-1.373532	0.2010
GDP less 0	-10.25262	0.2360
GDP 2 – 5%	-0.6315	0.8950
GDP above 5%	0.9870	0.9310
Exit GDP less 0	4.9055	0.8870
Exit GDP 2 – 5%	6.2058	0.7960
Exit GDP > 5%	1.1936	0.9640
Dev * GDP less 0	9.790469	0.7210
Dev * GDP 2 - 5%	-15.39437	0.5540
Dev * GDP > 5%	-13.4079	0.6200
Dev * Exit GDP < 0	-12.82	0.044
Dev * Exit GDP 2 - 5%	7.4903	0.037
Dev*Exit GDP > 5%	21.2125	0.059
Public offering	-8.6008	0.0230
SLBO	3.070152	0.4300
Strategic Sale	-7.686658	0.1050
Bankruptcy	-8.2168	0.2510
Govt effective	3.8301	0.5130
# of procedures	0.1398	0.7750
Debt/Cap Ratio	-0.0296	0.5150
R-squared	0.0461	

In table 31, when the club deals happened in the 1980s then the returns are positive. This is because there was less government scrutiny and also the economy was in a boom. Hence during the 1980s the club deals results in 20.67% higher returns. In the 1990s club deals have returns that are lower in absolute terms due recession in early 1990s. However, club deal returns are positive in the 1990s time period. In the 2000s there was higher government scrutiny about the motive of club deals after the 2005 time period. Also there was the great depression in 2008-2009 time period. Hence club deals after the year 2000 results in negative returns.

In table 32 and 33 I look at the returns and the days to exit respectively when club deals are sorted based on post 2006 period and pre 2006 period. In the year 2006 there was higher scrutiny about the motive of club deals and hence club deals were not intentionally reducing competition. From the table 32, it is evident that club deals were profitable pre-2006 period (1.13%) and after 2006 they have negative returns (-7.66%). This clearly shows that after 2006, the benign motive of club deals were reduced. Also from table 33, club deals were able to exit sooner by 1017 days pre-2006 period. And after the year 2006, club deals took longer periods to exit (days to exit = 40.82 days longer). The results in tables 32 and 33, prove Hypothesis 5 that club deals were more profitable and exit sooner until 2006 and after that they were not that profitable and took longer time to exit.

Table 32: OLS regression with "return" as dependent variable and explanatory variables "club deals pre and post 2006"

Variables	Coefficient	p-val	Coefficient	p-val
Constant	27.30165	0.061	24.21493	0.099
Days to exit	-.0035415	0.000	-.003536	0.000
Quick flips	7.184168	0.079	7.04176	0.085
Reputed	5.421187	0.073	5.583186	0.065
Developing	-3.421062	0.929	-2.8055	0.942
Same Country	-4.656373	0.210	-4.3365	0.243
Same Industry	.595061	0.925	.7217591	0.910
# of PE firms	4.064928	0.005	7.037937	0.001
Club deal * pre 2006	1.131155	0.893		
Club deal * post 2006			-7.66229	0.068
Small	5.422242	0.065	5.452213	0.063
GDP	2.261647	0.117	2.2766	0.112
GDP at exit	-1.209295	0.261	-1.2533	0.244
GDP less 0	-10.75583	0.215	-10.464	0.227
GDP 2 – 5%	-1.607601	0.737	-1.0221	0.831
GDP above 5%	1.723051	0.880	2.707114	0.813
Exit GDP less 0	7.861901	0.846	7.541465	0.852
Exit GDP 2 – 5%	8.414477	0.805	7.413595	0.828
Exit GDP > 5%	3.285474	0.923	3.211548	0.925
Dev * GDP less 0	12.19626	0.727	12.4486	0.721
Dev * GDP 2 - 5%	-13.19278	0.663	-13.3235	0.660
Dev * GDP > 5%	-12.81554	0.678	-13.7736	0.656
Dev * Exit GDP < 0	-12.13731	0.057	-12.647	0.047
Dev * Exit GDP 2– 5%	7.067475	0.050	7.452916	0.038
Dev*Exit GDP > 5%	20.34546	0.071	20.17247	0.073
Public offering	-9.167916	0.016	-8.79013	0.021
SLBO	3.047951	0.434	3.67151	0.347
Strategic Sale	-7.59106	0.111	-7.51028	0.114
Bankruptcy	-8.364178	0.244	-7.9267	0.269
Govt effective	3.951967	0.507	3.940632	0.508
# of procedures	.1712297	0.727	.1587199	0.746
Debt/Cap Ratio	-.0268844	0.554	-.02995	0.510
R-squared	0.0299		0.0311	

Table 33: OLS regression with "days to exit" as dependent variable and explanatory variables "club deals pre and post 2006"

Variables	Coefficient	p-val	Coefficient	p-val
Constant	1509.337	0.000	1473.043	0.000
Return	-1.52819	0.000	-1.54797	0.000
Quick flips	-1953.786	0.000	-1975.72	0.000
Reputed	-69.18573	0.271	-80.7619	0.201
Developing	2084.319	0.009	2117.698	0.008
Same Country	252.0691	0.001	253.5213	0.001
Same Industry	223.5618	0.090	230.7996	0.082
# of PE firms	-14.40266	0.630	-61.3529	0.172
Club deal * pre 2006	-1017.169	0.000		
Club deal * post 2006			40.82346	0.642
Small	-114.8018	0.060	-104.176	0.089
GDP	43.86259	0.143	60.42183	0.044
GDP at exit	-44.74551	0.045	-42.6729	0.058
GDP less 0	683.5883	0.000	677.687	0.000
GDP 2 – 5%	302.1223	0.002	271.3735	0.007
GDP above 5%	196.0191	0.409	125.9627	0.598
Exit GDP less 0	168.8362	0.202	154.7357	0.246
Exit GDP 2 – 5%	-303.7731	0.000	-273.819	0.000
Exit GDP > 5%	-390.7715	0.095	-378.273	0.108
Dev * GDP less 0	-569.735	0.432	-471.396	0.518
Dev * GDP 2 - 5%	-765.0787	0.224	-793.275	0.210
Dev * GDP > 5%	-394.8371	0.539	-411.482	0.524
Dev * Exit GDP < 0	-2244.242	0.008	-2232.55	0.008
Dev * Exit GDP 2– 5%	-602.1877	0.396	-649.854	0.363
Dev*Exit GDP > 5%	-1030.737	0.145	-1090.10	0.125
Public offering	458.454	0.000	492.299	0.000
SLBO	-40.49344	0.617	-9.59566	0.906
Strategic Sale	162.8418	0.100	187.2136	0.060
Bankruptcy	97.50782	0.513	149.4871	0.319
Govt effective	280.7048	0.023	271.97	0.029
# of procedures	-.3126607	0.976	1.356244	0.895
Debt/Cap Ratio	.8765135	0.353	.9519138	0.317
R-squared	0.2920		0.2827	

Table 38 in APPENDIX E, shows that if the deal is a club deal, then if the target firm is smaller, then it exits the LBO sooner; and in a club deal, larger firms take longer time to exit. Also among deals where the buyer firm is reputed, if the target firm is smaller, then the firm exits sooner; and the target firm is large, the LBO takes more number of days to exit.

I test if the industry of the target firm or the issuer firm has an influence on the returns or exit patterns of the LBOs (results in APPENDIX A, B and C). Generally target firms in high growth industries tend to perform better and have shorter exit periods than those in slower growth industries. There have been studies that show that certain industries perform better than others. Hsu, Reed, and Rocholl (2012) find that industries with higher visibility have lower returns. Ambrose and Winters (1992) found that industry effect does not exist. They show that there is LBO activity is not found to be higher in any specific industry.

In my study, from results in APPENDIX A, I find that during the period 1980-1990, automobiles, healthcare, chemicals, consumer good and construction had the highest returns in the same order. Mining, finance and technology industries performed poorly during this period.

From the results in APPENDIX B, during the period 1991 – 2000, telecom industry performed good and most of the other industries performed poorly. This was because of the recession in early 1990s.

In APPENDIX C: in the time period between 2001 to 2012, returns of healthcare and financial industries were high. Whereas most of the other industries performed badly, due to the recession in this period Appendices A, B and C.

CONCLUSION

The results show that LBO targets in developed nations have higher returns on average. However, when I look at LBOs in developing nations during the period of higher GDP growth rates, I find that the LBOs have higher returns.

During periods of very high economic growth and in periods of negative economic growth, LBOs in developing economies take shorter time to exit when compared to LBOs in developed economies. This is because of high returns of developing nations during periods of higher growth periods that they would like to take by exiting sooner; and also the PE firms also try to avoid major losses if the economic growth rate becomes negative and hence exits sooner.

I find that reputed PE firms result in higher returns and lesser days to exit. I also find that smaller firms have higher returns when compared to the larger firms, and take lesser days to exit. The results also show that club deals result in higher returns and take shorter time to exit when compared with single PE deals in the 1980s and 1990s. This is because of the reputation of the syndicate of firms in club deals which lets them get better terms on the initial LBO and hence it results in higher returns. Moreover, due to the reputation of club deal firms, they can also exit sooner. After the year 2006 there was higher government scrutiny about the motive of club deals and hence they exit alter. However club deals of in developing economies are not profitable and exit sooner.

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APPENDIX A: TABLE 34 SHOWING REGRESSION RESULTS WITH RETURN AS A DEPENDENT VARIABLE AND VARIOUS INDUSTRIES AS EXPLANATORY VARIABLES (LBOS DURING THE PERIOD 1981-1990)

Variables	Coefficient	Std. Error	t-stastictic	p-value
C	20.9900	20.8700	1.0057	0.3156
AUTO_N_PARTS	72.58275	24.6937	2.939324	0.0036
CHEMICALS	19.55005	26.9430	0.725607	0.4689
COMMERCIAL_SER	-3.2079	24.6937	-0.1299	0.8968
CONST_N_MAT	15.0096	21.7585	0.6898	0.4910
CONUMER_GOODS	16.8042	21.1261	0.795425	0.4272
CONSUMER_SERV	5.516895	22.4180	0.246093	0.8058
ELECTRONIC	1.6079	29.5146	0.0545	0.9566
FIN	-10.5675	24.0986	-0.4385	0.6614
HEALTHCARE	19.55005	21.3984	0.913622	0.3619
IND_MACHIN	9.148708	25.5604	0.357925	0.7207
IND_METALS	12.0790	23.6643	0.5104	0.6103
IND	5.0785	23.0726	0.2201	0.8260
MINING	-20.92115	29.5146	-0.70884	0.4792
OIL	2.117694	26.9430	0.078599	0.9374
TECH	-3.8340	21.5327	-0.1781	0.8588

R-squared = 0.168851

APPENDIX B: TABLE 35 SHOWING REGRESSION RESULTS WITH RETURN AS A DEPENDENT VARIABLE AND VARIOUS INDUSTRIES AS EXPLANATORY VARIABLES (LBOS DURING THE PERIOD 1991-2000)

Variables	Coefficient	Std. Error	t-stastictic	p-value
C	55.6067	10.80335	5.147172	0.0000
AIRLINES	-36.9493	24.15702	-1.52954	0.1263
AUTO_N_PARTS	-22.9964	12.4966	-1.8402	0.0659
CHEMICALS	-17.2516	12.4121	-1.3899	0.1647
COMMERCIAL_SER	-18.874	11.5450	-1.6348	0.1022
CONST_N_MAT	-19.4485	11.63556	-1.67147	0.0948
CONUMER_GOODS	-21.1607	11.06529	-1.91235	0.0560
CONSUMER_SERV	-19.4000	11.4301	-1.6973	0.0898
ELECTRONIC	-58.2087	17.7986	-3.2704	0.0011
FIN	-21.4769	12.5660	-1.7091	0.0876
HEALTHCARE	-30.0294	11.48633	-2.61436	0.0090
IND_MACHIN	-11.8484	12.81361	-0.92467	0.3552
IND_METALS	-27.2220	12.9476	-2.1025	0.0356
IND	-13.7934	11.7244	-1.1765	0.2395
MINING	-40.9771	28.5830	-1.4336	0.1518
OIL	-33.7015	13.73082	-2.45444	0.0142
TECH	-16.5608	11.28373	-1.46767	0.1423
TELE	39.7086	17.0816	2.3246	0.0202
TRANS	-25.0982	14.0265	-1.7893	0.0737
UTILITIES	-22.1432	54.0168	-0.4099	0.6819

R-squared = 0.023044

APPENDIX C: TABLE 36 SHOWING REGRESSION RESULTS WITH RETURN AS A DEPENDENT VARIABLE AND VARIOUS INDUSTRIES AS EXPLANATORY VARIABLES (LBOS DURING THE PERIOD 2001-2012)

Variables	Coefficient	Std. Error	t-stastictic	p-value
C	42.8158	6.8903	6.2139	0.0000
AIRLINES	-7.7136	13.4318	-0.5743	0.5658
AUTO_N_PARTS	-3.4508	8.0797	-0.4271	0.6693
CHEMICALS	-8.0525	8.0234	-1.0036	0.3156
COMMERCIAL_SER	-2.9852	7.4321	-0.4017	0.6880
CONST_N_MAT	-3.3083	7.3724	-0.4487	0.6537
CONUMER_GOODS	-5.8485	7.0789	-0.8262	0.4088
CONSUMER_SERV	-2.9942	7.2117	-0.4152	0.6780
ELECTRONIC	17.7230	16.4023	1.0805	0.2800
FIN	-7.4126	7.5962	-0.9758	0.3292
HEALTHCARE	0.5591	7.3943	0.0756	0.9397
IND_MACHIN	-25.2135	9.4817	-2.6592	0.0079
IND_METALS	-4.2889	8.6483	-0.4959	0.6200
IND	-1.1898	7.4088	-0.1606	0.8724
MINING	-2.2758	32.3186	-0.0704	0.9439
OIL	-6.6979	8.0324	-0.8339	0.4044
TECH	-10.9584	7.2282	-1.5161	0.1296
TELE	-1.9141	9.2641	-0.2066	0.8363
TRANS	-10.1235	9.9300	-1.0195	0.3080
UTILITIES	-1.9000	11.5833	-0.1640	0.8697

R-squared = 0.008606

APPENDIX D: TABLE 37: NEGATIVE BINOMIAL REGRESSION USING "DAYS TO EXIT" AS THE DEPENDENT VARIABLE

Variables	Co-efficient	p-value
Constant	7.3112	0.0000
Return	-0.0009	0.0000
Quick flips	-1.6507	0.0000
Reputed	-0.0272	0.2880
Developing	1.1357	0.0010
Same Country	0.0875	0.0060
Same Industry	0.0387	0.4750
# of PE firms	-0.0115	0.3370
Small	-0.0307	0.2170
GDP	0.0258	0.0380
GDP at exit	-0.0264	0.0040
GDP less 0	0.2322	0.0020
GDP 2 – 5%	0.1159	0.0060
GDP above 5%	0.0602	0.5450
Exit GDP less 0	-0.0127	0.8110
Exit GDP 2 – 5%	-0.0915	0.0020
Exit GDP > 5%	-0.1381	0.1500
Dev * GDP less 0	-0.5763	0.0620
Dev * GDP 2 - 5%	-0.3107	0.2240
Dev * GDP > 5%	-0.2357	0.3620
Dev * Exit GDP < 0	-1.2353	0.0010
Dev * Exit GDP 2 - 5%	-0.5247	0.0990
Dev*Exit GDP > 5%	-0.6605	0.0310
Public offering	0.2009	0.0000
SLBO	0.0151	0.6470
Strategic Sale	0.1100	0.0070
Bankruptcy	0.1184	0.0520
Govt effective	0.1490	0.0030
# of procedures	0.0021	0.6210
Debt/Cap Ratio	0.0004	0.3790
Pseudo R-squared	0.0397	

APPENDIX E: TABLE 38: REGRESSION WITH RETURNS AS THE DEPENDENT VARIABLE. Table 38 includes interaction variables of club deal with size of the target firm; and interaction of reputation with the size of the target firm.

Variable	Coeff	p-value	Coeff	p-value
C	26.3345	0.072	26.0437	0.075
Days to Exit	-0.0036	0.000	-0.0035	0.000
Quick Flips	7.0344	0.085	7.1763	0.078
Reputed	-4.0227	0.385	-3.0022	0.517
Developing	-1.0373	0.978	-0.1870	0.996
Same Country	-4.6151	0.213	-4.4475	0.230
Same Industry	0.0306	0.996	-0.1507	0.981
# of PE firms	4.3574	0.016	5.4253	0.002
Club Deal * Small	-5.4525	0.324	-7.0839	0.200
Club Deal * Medium			-6.2438	0.167
Club Deal * Large	-0.8676	0.875		
Reputation * Small	3.7617	0.633	2.6998	0.732
Reputation * Large	19.9058	0.001	16.5817	0.005
Small	7.5758	0.029	6.8242	0.052
GDP	2.2050	0.124	2.1440	0.134
GDP at Exit	-1.2527	0.243	-1.2583	0.241
GDP less 0	-9.3648	0.280	-9.3119	0.283
GDP between 2-5%	-0.6738	0.888	-0.4636	0.923
GDP above 5%	2.1108	0.853	2.5897	0.820
Exit GDP less 0	-12.4773	0.050	-12.4594	0.050
Exit GDP between 2-5%	7.4327	0.038	7.5254	0.036
Exit GDP above 5%	20.5158	0.068	20.2869	0.071
Dev * GDP less 0	10.0877	0.772	10.1767	0.770
Dev * GDP 2-5%	-13.4612	0.656	-13.0295	0.666
Dev * GDP above 5	-13.2109	0.669	-13.3941	0.664
Dev * Exit less 0	5.2237	0.897	4.2450	0.916
Dev * Exit GDP betw 2-5%	7.1231	0.835	5.7637	0.866
Dev * Exit GDP above 5%	3.6870	0.914	2.5873	0.939
Public Offering	-10.8454	0.004	-10.8231	0.005
SLBO	2.6308	0.499	2.7577	0.478
Strategic Sale	-8.7442	0.066	-8.8763	0.062
Bankruptcy	-9.3091	0.194	-9.0812	0.205
Gov	4.5743	0.442	4.4272	0.457
Numb of proced	0.1967	0.688	0.1949	0.690
Target debt/cap ratio	-0.0372	0.413	-0.0371	0.415
R-squared	0.0464		0.0471	

APPENDIX F: TABLE 39: DEPENDENT VARIABLE "NUMBER OF DAYS TO EXIT" THE LBO.

Table 39 includes interaction variables of club deal with size of the target firm; and interaction of reputation with the size of the target firm.

Variable	Coefficient	p-value
C	971.9266	0.004
Return	-2.33531	0.000
Reputed	-407.2751	0.000
Developing	2582.104	0.004
Same Country	257.9821	0.003
Same Industry	263.5625	0.074
# of PE firms	47.62479	0.257
Club Deal * Small	97.8291	0.450
Club Deal * Large	410.8265	0.001
Reputation * Small	-575.6971	0.002
Reputation * Large	363.4991	0.012
Small	-224.4137	0.005
GDP	104.2994	0.002
GDP at Exit	-68.77574	0.006
GDP less 0	645.5803	0.001
GDP between 2-5%	173.2331	0.120
GDP above 5%	-86.60249	0.741
Exit GDP less 0	8.09707	0.957
Exit GDP between 2-5%	-321.9554	0.000
Exit GDP above 5%	-311.8812	0.231
Dev * GDP less 0	-666.0395	0.415
Dev * GDP 2-5%	-678.6848	0.339
Dev * GDP above 5	-746.7649	0.301
Dev * Exit less 0	-2761.902	0.004
Dev * Exit GDP betw 2-5%	-672.4689	0.401
Dev * Exit GDP above 5%	-1338.176	0.093
Public Offering	519.1856	0.000
SLBO	145.5043	0.108
Strategic Sale	357.4337	0.001
Bankruptcy	-33.05359	0.829
Gov	380.5865	0.006
Numb of proced	-5.51522	0.630
Target debt/cap ratio	1.302547	0.223
R-squared	0.112893	

APPENDIX G: GRAPH FROM AN ARTICLE BY GAVYN DAVIES, MARCH 2011, FINANCIAL TIMES BLOG COMPARES AVERAGE ECONOMIC GROWTH RATE OF DEVELOPED AND EMERGING ECONOMIES.