



**THE FINANCIAL STRUCTURE OF LEVERAGED BUYOUTS AND  
THEIR INFLUENCE IN THE POST-CRISIS DEVELOPMENTS  
OF PRIVATE EQUITY MARKETS: THE BRITISH CASE**

*By*

**CARLOS ZECENARRO MONGE**

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Supervisor: Dr. Joseph Agholor

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*Dedicated to Carlos & Ela*

## **STATEMENT**

The main purpose of this work is provide an insight about the ways capital structure of leveraged buy-outs has evolved in order to adapt itself to the changing markets conditions raised in the period immediately following the credit crunch that scourged capital markets in the year 2008. Special emphasis will be put on the assessment of the ways these developments are indeed contributing to the strengthening of the industry, or if are conversely leading the whole private equity industry to the dark depths of the financial downturn.

## **ABSTRACT**

The rise of the financial turmoil in the early 2008 and the consequent downfall of capital markets did raise a lot of questionings and concerns regarding the way private equity actors were performing in the industry. In this research -focused in the financial structure of leveraged buy-outs, we will appreciate how participants involved in the industry have gradually switched methodologies and strategies, in an endeavour to preserve market conditions and improve expected returns. This has implied to leave traditional capital structures typical by the superlative financial leverage, short-term holding periods, and large size operations behind, introducing instead a financial and operative reengineering, extending holding periods and postponing exits. More specifically, in regard to the financial aspect, the trend has shifted from the high levels of debt toward equity becoming the most predominant source of finance in all size of deals; however, the data has shown how a remarkable surge of a specific type of new debt securities has been recorded in recent times: senior-secured high yield bonds and leveraged loans in both primary and secondary markets. Although these debt securities have provided the long-awaited liquidity required by suffocated LBO deals given their high yield, long-term maturity and protection offered to investors, alarm voices have been raised; warning about the remarkable risk implied in the non-investment grade borne by all issuers is something to be considered by investors. The data available for this research show a rather benign trend in the relative to the low default rate recorded for these securities so far and their positive impact in the measures being in relation to the measures being applied to handle the maturity wall due to blow markets from the 2014. However, a further insight in performance of LBO companies in the aftermath of the crisis plus a close surveillance of the market developments in the months will be absolutely required in order to discover more accurately which has been the impact of the risky leverage so popular nowadays, and their real contribution in overcoming the maturity wall.

## **ABBREVIATIONS AND ACRONYMS**

<b>ABL</b>	Assets Based Lending
<b>BVCA</b>	British Venture Capital Association
<b>CLO</b>	Collateralized Loan Obligations
<b>CMBOR</b>	Centre for Management Buy-Out Research
<b>EBITDA</b>	Earnings before interest, taxes, depreciation and amortization
<b>EMPEA</b>	Emerging Markets Private Equity Association
<b>ELLI</b>	Standard & Poor's European Leveraged Loan Index
<b>EVCA</b>	European Private Equity and Venture Capital Association
<b>FTSE 100</b>	Financial Times Stock Exchange Index
<b>HYB</b>	High Yield Bonds
<b>GDP</b>	Gross Domestic Product
<b>GP</b>	General Partner
<b>IPA</b>	Institutional Partners Association
<b>IRR</b>	Internal Rate of Return
<b>IPO</b>	Initial Public Offering
<b>LBO</b>	Leveraged Buy-out
<b>LEMBO</b>	Leveraged Management Buy-Out
<b>LIBOR</b>	London Interbank Offered Rate
<b>LCD</b>	Standard & Poor's Leveraged Commentary & Data
<b>LL</b>	Leveraged Loans
<b>LP</b>	Limited Partners
<b>MBO</b>	Leveraged Management Buyout
<b>MBI</b>	Management Buy-In
<b>S&amp;P</b>	Standard & Poor's
<b>SPV</b>	Special Purpose Vehicle
<b>PE</b>	Private Equity
<b>PEGCC</b>	Private Equity Growth Capital Council
<b>PIK</b>	Payment In-Kind Loans
<b>TED</b>	T-Bill and Eurodollar
<b>UNPRI</b>	United Nations Principles for Responsible Investment
<b>VC</b>	Venture Capital

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## **I. INTRODUCTION**

### **I.1. Background of study**

The Leveraged Buyouts or LBO's are part of the Private Equity investment asset class, along with Venture Capital and Mezzanine capital. While the Venture Capital is more oriented to the initial stages of a business and expansion projects (seeds, start-up investments, expansion, and replacement capital), the Leveraged Buy-Outs are more oriented to mature non-listed companies concentrated and integrated in portfolio of investments intended to obtain the highest profitability from the business operation of each company.

The peculiarity of the buyouts is that they have been historically financed with a high debt leverage, which is brought by one or more Limited Partners (which can be individual investors, institutional investors, banks, hedge funds, public pension companies, etc) and guaranteed by the General Partner reputation, the assets of the acquired target and the potential cash-flows that will be generated after the operational improvements that are carried out during the post buy-out period. The General Partners (also called Private Equity Firms), which is the part undertaking the whole operation, may keep the existing managers or trust in an outsider managerial team that can have an equity ownership under certain conditions. Finally, after a certain holding period in which the managers introduces operational and strategic improvements to reach an outstanding performance and make the company attractive to trade buyers or capital markets through Initial Public Offering (IPO's), the management team executes an exit strategy to take advantage of the value generated to meet all the acquired commitments with shareholders and financial sponsors.

Therefore the debt is key component in the LBO process. The underlying logic behind the use of leverage is to allow new shareholders acquire companies using a relative small portion of equity. There are several kinds of leveraged buyouts like Leveraged Management Buyout (MBO), Leveraged Management Buy-In (MBI), Leveraged Employee Buyout (EBO), Leveraged Management Buy-Out (LEMBO), etc. There are as well different types of likely targets in the stock markets like family-owned companies, failed companies, public to private buyout, secondary buyouts and so on. Moreover, the principal institutions related to the Private Equity industry in the United Kingdom are the European Private Equity and Venture Capital Association – EVCA, the Private Equity Growth Capital Council – PEGCC, the Emerging

Markets Private Equity Association – EMPEA, the Institutional Partners Association – IPA and the British Venture Capital Association – BVCA.

The United Kingdom has historically been one of the countries with the highest and most enthusiastic Leveraged Buyout activity since the eighties. Several authors, whose contributions will be further analysed in the Literature Review of the present work, expressed their satisfaction with the LBO model dubbing it as ‘the ultimate business model’. During the period between the 1980’s and the early 1990’s the profits and returns generated by this financial activity in benefit of general partners and institutional investors led to a frenzy LBO activity in the whole world, but with an special emphasis in Europe and the United States (where the activity was heavily regulated after the 1992 downturn and the subsequent recession it caused). However, given to its economic nature, the private equity activity is subjected to the economic cycles, and the boom and bust cycles have not been an exception. Since the beginning of the new millennium the activity rose to levels never seen before, reaching the highest peak (either in value and funds raised) in the years 2005 and 2007, just to fall after the credit crunch in the 2008 to the lowest levels ever recorded. This economy compounding was properly described in the CIA World Factbook, where it was consigned that the 2008 global financial crisis hit the British economy particularly hard, due to the importance of its financial sector, pushing the economy into recession and prompting the Brown cabinet to implement a string of measures to stimulate the economy and stabilize the financial markets, including nationalizing parts of the banking system, cutting taxes, suspending public sector borrowing rules among others<sup>1</sup>. In general, the financial crisis had a deep impact on the whole private equity industry, including all investment asset classes. Low levels in number of deals, market value, mid markets transactions, and deal pricing in terms of EBIT have been seen in the specialised statistical information till the last quarters of 2009. General partners and managerial teams found themselves in the middle of a financial swamp, with capital markets shrinking down, investors becoming extremely wary of new deals and figures of bankruptcies and companies getting in receivership picking up swiftly.

However, after the arrival of the year 2010, the panorama has substantially changed. The United Kingdom - as well as most of European countries- has started to overcome the financial

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<sup>1</sup> Central Intelligence Agency CIA World Factbook

<<https://www.cia.gov/library/publications/the-world-factbook/geos/uk.html>>

Consultation date: 18 February 2011



turmoil and is experimenting a slow but steady economic recovery. The accuracy of this statement can be verified by the assessment of several sources like the International Monetary Fund IMF, which in its 2010 World Economic Outlook Report, in the case of the United Kingdom, states that during the second half of 2010 global financing conditions broadly improved, amid lingering vulnerabilities<sup>2</sup>. Equity markets have arisen and bank lending conditions in the whole Europe and other major economies has become less tight (even for small and medium sized firms) and financial health is expected to remain stable or improve during the year 2011, because of bank lending conditions easing further and bond issuance expected to strengthen. Moreover, the United Kingdom is rated number 4 in the Ranking elaborated by the World Bank Doing Business Report 2010<sup>3</sup>, where it has been considered like one of the most proper economic environments to start-up business, because the country does hold the second highest ratio of debt-to-GDP in the world.

This favourable context has also been highlighted for other sources. London remains one of the top three cities for business according with the European Cities Monitor 2010<sup>4</sup>, along with Paris and Frankfurt, and keeps the second position in the Foreign Policies Global Cities Index 2010<sup>5</sup>, with a rank by GDP of 5. The Economist Intelligence Unit<sup>6</sup> points out that although British

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<sup>2</sup> IMF 2010 World Economic Outlook Report  
<<http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/text.pdf>>  
Consultation date 22 February 2011

<sup>3</sup> World Bank Doing Business Report 2010  
<<http://www.doingbusiness.org/rankings>>  
Consultation date 22 February 2011

<sup>4</sup> European Cities Monitor 2010  
<<http://www.europeancitiesmonitor.eu/wp-content/uploads/2010/10/ECM-2010-Full-Version.pdf>>  
Consultation date 22 February 2011

<sup>5</sup> Foreign Policies Global Cities Index 2010  
<<http://www.foreignpolicy.com/node/373401>>  
Consultation date 22 February 2011

<sup>6</sup> Economist Intelligence Unit UK assessment  
<<http://country.eiu.com/UK>>  
Consultation date 22 February 2011

economic activity declined by 0.6% in the fourth quarter of 2010, according to a revised estimate by the Office for National Statistics (ONS)<sup>7</sup>, is a slightly better performance than the preliminary figure of -0.5%. Fourth-quarter GDP was 1.5% higher compared to 2009 last quarter, and the whole economy is estimated to have grown by 1.3%. The United Kingdom stands out as a blatant leader in world commerce and economy. Represents roughly the 15% of the European Union PIB and it has been that the country will have the strongest financial development of all the main European economies in the period 2011-2014.

This work aims to provide an understanding about the way the typical LBO structure, based in a dominant debt and a residual equity, is changing depending on the economic and financial events that are benchmarking the capital markets and the private equity industry, in a context of slow but steady British economic recovery.

## **I.2. Aims & Objectives**

The main objectives of this research will be:

- ✓ Determine the influence of the debt/equity proportion of the leveraged buyout's deal structure in the operational and financial performance of companies, considering the commitments made, the size of the transactions, the exit strategies, the corporate governance and other post-crisis contextual factors.
- ✓ Provide an insight in restructuring / reengineering strategies being applied by managers and general Partners, their benefits and the risk they might involve in the long term approach for the industry.
- ✓ Identify the different trends that the economic environment is imposing and the extent in which such trends might collide with the traditional deal structure of LBOs.

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<sup>7</sup> Office for National Statistics (ONS)

<<http://www.statistics.gov.uk/CCI/nscl.asp?ID=5871>>

Consultation date 22 February 2011

### **I.3. Research problems**

There are no ethical issues involved in the data gathering and investigation process. The data utilised does belong to public sources, freely available, and doesn't involve sensible information regarding people or institutions. Regarding the information belonging to the Centre for Management Buy-Out Research – CMBOR, the respective authorisation has been gathered prior to the use of the statistical data contained in their reports.

### **I.4 Structure of study**

This paper will be structured as follows: the Chapter I will include the introduction, providing a proper background of the problem and the context it is situated in, bringing an understanding about the main research topic as well as the intended purposes and objectives. This frame will guide the conceptual design of the rest of the document.

The Chapter II will be dedicated to analyse the way the main issue and its principal variables have been addressed in the pertinent scientific literature. This chapter will be organised in for important subsections: i) a general description of the private equity industry and the LBO process, the way it is carried out, the typical deal structure applied and the findings observed in paper works covering different timeframes; ii) an analysis of the financial structure in previous researches, highlighting the advantages and disadvantages exposed and the way authors have dealt with the topic of the risk entailed for the use of leverage and factors like the liquidity squeeze and the bounteous quantities of dry powder pending to be deployed while the maturity periods are about to be due; iii) a subchapter about the way holding periods and exit strategies are treated in the literature, and the expectations held by different authors based on the current economic context; and iv) a subchapter dedicated to analyse the restructuring options that managers and private equity houses are starting to apply in order to keep an acceptable performance of target companies while try to meet the acquired commitments with institutional investors. This will include an assessment of the increasing trend to renegotiate and amend covenants and loan agreements.

In the Chapter III we will address the matter related to methodology applied to undertake the present dissertation, putting special emphasis on the data collection and aggregation methods. As it will be properly specified in the chapter, the chosen methodology is the comparative-descriptive research based on statistical secondary data.

The IV Chapter of the study will be related to data analysis based on the information gathered from the secondary sources. The data will be displayed in a comparative way, including relevant tables and statistical figures according to different categories under study, in order to verify changes in the trends and make cross-studies of the different phenomena involved. The organisation of this subchapter will be given by three main topics: i) the general debt and deleveraging situation in the corporate and financial sector of the United Kingdom and the rest of Europe; ii) the average debt/ equity proportions in all size and types deals in Europe and the United Kingdom; and iii) the restructuring / reengineering strategies that are being applied by general partners in order to keep the investments running and commitments met. In the second subchapter we will remark the most important finding we did gather from all the processed data. All sources will be properly quoted, and the original charts and diagrams will be included in the appendices section the present dissertation.

The V Chapter will be related to the Conclusions of the present work, which will be completely linked to the findings threw by the data analysis, and that will lead to the formulation of the proper recommendations in the subsequent chapter. Furthermore, a subchapter will be dedicated to outline the limitations that have been found as a product of the data collection and other constraints. The final subchapter will be dedicated to suggest topics for further studies in order to achieve a better comprehension of the financial process under study.

The final chapter will be related to the proper Recommendations evacuated as a consequence of the whole analysis contained in the present work.

## **II. LITERATURE REVIEW**

### **II.1. Private Equity industry and LBO process**

Gilligan and Wright (2010) describe the term Private Equity as the risk capital provided in a wide variety of situations, from financing to business start-ups and everything in between. They differentiate the term Private Equity Funds from other investments classes like Hedge Funds, Real Estate, Commodities, Currencies or Interest Rates because Private Equity Fund managers seek to invest in securities through a negotiation process, choosing an optimum capital structure for the investee; process that, as Loos (2005) correctly express, only seek to control the business they invest in the case of the Leveraged Buyouts, while in other kind of PE investment like Venture Capital or Mezzanine Capital the objective is financing initial or expansion stages. This is also underlined by the European Union (2006), which outlines the two main characteristics required for European Private Equity industry: the fundraising from sophisticated investors and the process of pooling them in investment vehicles through three different sorts of capital: Venture Capital, Expansion Capital and Buy-Out Capital; being that this last type do not focus in any industry in particular (though most managers are specialised in certain industrial sectors), but in those areas of the financial activity where there is a potential high profitability. Wright, Amess, Weir and Girma (2009) make a deeper insight into the matter, pointing out that Buy-Outs are the principal focus of private equity investments, pooling Limited Partners' money (financial debt) along with their own money (called Equity) to buy shares of a listed or non-listed company (called target company or NewCo) from its current owners. This will be properly developed in the oncoming paragraphs.

With regard to the process, Loos (2005) accurately explains the leveraged buyout as the procedure whereby private investors purchase a controlling stake of a public or non public listed company -or part of it- upon a criteria that is not based on resource-relatedness or strategic positioning, but for criteria regarding industry dynamism and financial performance that is corroborated on the basis of cash flows, balance sheets and operational risk. This constitutes a critic mass enough to provide financial sense to the whole process. Other factors required are that the company must belong to a mature sector so therefore does not require heavy investments, must have a steady growth and must not have a strong dependence on another branches or any other company (autonomy). This author identifies four stages in the LBO period

of live: target selection, due diligence and deal structuring, post acquisition management and exit.

The main actors in the Private Equity backed Leveraged Buy-Out are the Limited Partner and the General Partner. Kaplan, Stromberg (2009), agreeing with Jensen (1989), define the General Partners as decentralised organisations with large investment professionals and employees –whom usually come from investment banking backgrounds- which commit private equity funds in a buy-out. Given its predominant position in the recent market transactions, authors like Nielsen (2008) consider that, because of its peculiar structure, Private Equity firms acting as a General Partners have different interests that are quite difficult to reconcile with the multiple stakeholders' interests in balance . This creates a managerial capitalism dominating these firms and orienting its actions to a capitalist form of finance. In the same line, Axelson, Stromberg and Weisbach (2009) point out that Private Equity firms have a major importance in the market economy nowadays, given their versatility and participation not only in leveraged Buy-Outs but also in Venture Capital and other kind of assets class investments. That is why Jensen (1989) considered Private Equity houses as significant actors in the economy, and the leverage Buy-Outs as the associated business model with more possibilities of fast widespread across Europe.

Regarding Limited Partners, Gilligan and Wright (2010) define them as the external investor that has limited its total liability to the amount of committed equity capital they have invested. Limited partners are usually structured as corporations, funds or partnerships, and could be banks, hedge funds CLO managers, public pension managers or insurance companies among others. The agreement celebrated with the general partners is designed to align both interests. The European Central Bank (2007) explain the main characters of this part in the general structure of the deal, stating that there are two kinds of partnerships in the case of the Private Equity backed Buy-Outs: a limited partnership with a pass-through tax treatment (with investment gains not taxed not transferred to General Partners and therefore being assumed by the investors themselves) and a limited liability that protects investors from excessive risk-taking.

There is a third element that turns out to be highly important in the post buyout period: the management. After the Buy-Out has been agreed, a managerial team have to be designed to run the acquired company and make it profitable in order to fulfil the financial commitments

contracted. There is not a unique method to conform this management board, being that in many cases the Private Equity firms opt to keep the old managerial team (this is common in the cases of the Managerial Buy Outs or MBO's), whilst in most of the cases a new team is assembled. However, persists the agency problem whereby the interests of managers and shareholders clashes because of the risk sharing level, incentivisations schemes and pay performance. Because of this, Private Equity is based on a corporate governance model created to align interests of different actors and thus address the agency problem related to the asymmetric information. Clark (2007) defines the investment manager as the separate entity owned by the private equity fund managers which receives a fee from GP's of each fund managed, which is made up of an average (though not universal) 2% operational fee plus a 20% 'carry' or shares gaining over the managerial equity ownership. The purpose of this is to achieve maximisation by providing managerial incentives. This is also confirmed by Stathopoulos, Espenlaub and Walker (2006) and Wright and Nikoskeilainen (2006), whom affirm that the managerial-ownership theory is the most adequate to these situations, because it creates a positive relationship between pay performance sensitivity and firm risk, because under this postulate shareholders are able to offset the asymmetry in information by offering more performance-related pay to managers. In general, private equity houses use to have constant presence in the board of directors by keeping at least one member in it.

## **II.2. Leveraged Buy-outs and economic cycles**

The whole concept of the Private Equity and the Leveraged Buy-outs has a tight link with the concept of the boom and bust cycles in the economy. Jensen (1989), Kaplan (1989) and Smith, (1991) coincided in the idea that Private Equity model was beneficial for the economy and acted as a driver to create value within their respective portfolios (indeed Jensen went a bit beyond and established that the Private Equity model was the ultimate organisational form ever). However, in recent times several authors have addressed the phenomenon of the leveraged buyouts, associating them with the financial periods, the current situation of capital markets, the companies' performance, the availability of funds and the commitments made by both parts. Kaplan and Schoar (2005) undertook a thorough analysis of bought companies in the period spanning the years 1980 to 2001, and concluded that returns across funds raised had been constant during that period, but there was an interesting finding regarding the initial investment and the follow-on funds depending of the economic period (boom funds proved to be less likely

to raise a follow-on fund while in bust periods was extremely difficult to raise initial investment funds). Similar conclusion was reached by The European Central Bank (2007), which in a statistical analysis of the Private Equity activity during the period 1989-1999, observed that was the cheap and flexible financing what boosted the Private Equity market in the early 90's, making people believe that there were not any systemic risk involved, and that capital market's downturn was unlikely; however in 1994 the lengthening of syndication times provoked a sharp and unexpected downturn, causing strong risk of asset inflation and mispricing. Moreover, this study concluded that LBO credit risk is more sensitive to deterioration in the economic cycle than traditional risk, due to their highly leveraged nature. This, along with findings published by other authors (Achleitner, Braun, Engel, Figge and Tappeiner 2005, Loos 2005, Muscarella and Vetsuypens 1990, Ratner, Stein and Weitnauer 2009) allows us to conclude that from a very early stage there have been voices warning about the growing interrelation between financial markets and changes in loan structured, especially regarding weaker covenants. Nowadays, the general concern is the likely negative impact that high leverage might have on the value creation expected for next years, because of the liquidity problems it creates.

From the year 2001 on, the private equity industry experienced a massive growth. With the aid of complex statistical analysis, different authors pointed that even though the role of the leveraged buyouts as a value creators was proved, it was necessary to put especial emphasis on the role of that financial leverage plays in the financial success of the funds before the application of an exit strategy. Guo, Hotchkiss and Song (2009) studied a median market and risk adjusted returns to a subsample of deals with post-buyout for the period between 1990-2008, finding that notwithstanding from a time now deals have become somehow more conservatively priced and slightly less leveraged, the very essence of leveraged buyouts still entails a substantial default risk, because of the number of sponsors or the magnitude of the asset restructuring. These authors observed that returns of capital are more likely to be based on more on operating performance, industry and market valuation multiples and somehow tax benefits.

The potential conflicts derived of private equity leveraged buyouts in the recent times are properly outlined by Nielsen (2008), who reports about the issues created by highly leveraged buyouts with short term compensation, lack of the long term sustainability, the conflict of interests among the new PE shareholders and the holders of older bonds, the permanent conflict between new managerial team against the old one, and finally the conflict among



owners and employees. Kindelberg and Aliber (2005) emphasized the permanent risk derived of the moral hazard, especially in the case of the banks though boom times, focusing on the way European Central Bank tried to reduce moral hazard by appealing sponsor to be more disciplined regarding the financial leveraged they borrow, considering the possibility of consequent default in case they are not able to fill their commitments (indeed, the European Bank, aware of the growing interrelation between financial markets and liquidity problems, went further and rose the interest rate, containing any activity. Finally, Nielsen (2008), Blitz (2007), and Bruce (2007) call for a reform of the Private Equity LBO system, proposing new rules whereby acquired companies are obliged to meet the same reporting requirements demanded from public traded companies, which would solve the transparency problem notwithstanding this might collide with profits PE houses obtain from the flexibility and freedom they have.

### **II.3. LBO Financial engineering / reengineering**

In 1958 Franco Modigliani and Merton Miller created their famous theory about the capital & dividend structure of companies, affirming that the value of a company is not affected by the way it is financed, being meaningless whether external leverage or equity is used. The main idea underlying behind this theory was that the capital structure does not have influence in the company's value (hence is *irrelevant*), because the value could be obtained by capitalizing the cash flows over a Ku Ratio under certain perfect market assumptions.

Indeed, capital structure does matter when it comes to financial leverage in Private Equity financial markets. The capital structure of a company must fit the specific characteristics of the business in matters like yield and profits earned (distributed under the form of dividends). It is also important to take into account that all financial instruments employed in financing a deal have not the same traits: senior debt is secured, which means that holds a priority in repayment in case of bankruptcy, while junior and other kinds of debt are actually unsecured, having a subordinated position in the payment priority queue. Therefore, not all instruments do constitute a capital gain in matter of business value. Gilligan and Wright (2010) makes a detailed analysis of the capital structure of an average company, describing the equity as the market value of 100% of the shares issued in the market and the debt as the borrowed cash, and putting especial emphasis in the way this structure influence the planning and design of the purchase price of shares, the future treatment of the proceeds from assets sales, the working capital

required and the correspondent fees associated with the transaction (which typically includes legal costs, tax, accounting, financial advice, management fees and arrangement fees among others). These authors emphasize that all across PE activity, a special care must be put in designing the capital structure because it varies from investor to investor and from transaction to transaction, not existing an optimum of perfect structure applicable to all situations. Therefore, several implications like business strategies, holding expectations, volatility, risk appetite or growth must be taken in account in order to set up a proper scheme.

In the case of Leveraged Buy-Outs the financial structure has a cardinal importance not only from the point of view of the returns generated in an earning/share ratio, but also from the point of view of the minimum liquidity required for the subsistence of the business model. Raade, Dantas and Machado (2008) carried out a thorough analysis of the European Private Equity markets during the period 1999-2006, drawing some interesting conclusions. These authors explain the willingness of Private Equity houses to pay high prices for acquisitions and takeovers during the period prior to the financial crisis by the combined effect of the increasing competition among asset managers and the high liquidity available at financial markets. While liquidity was present, Limited Partners allowed themselves to put pressure on General Partners to carry out efficient investments, rising the competition between attractive fund opportunities, all eased by soft lending conditions that increased the debt burden (in the traditional view, profitability was linked to high leverage rather than operational or strategic actions). In the same line, in a study covering the period 1996-2005 in the United Kingdom PE market, Wright, Scholes and Simmons (2006) found that in recent years competition for larger buyouts had forced prices higher, and the flow was likely to go on. By the time they did their research, it was generally accepted that even large firms (including FTSE100 companies) were likely to go private on the upcoming years, whilst banks were more willing to gear up deals and even refinance them after a time. Albeit the risk implied in this strategy, the idea of attractive high returns and the growing secondary markets gave the sensation of a valuable liquidity available for a long time.

The idea of debt leverage in the financial structure of the deals was also highlighted by Wright, Jones and Weir (2005), whom did consider that the main elements that any PE-backed buyouts must necessarily include were: 1) an increased concentration of firms' equity held by managers and private equity firms, 2) a high leverage ratio, with the firm borrowing large amounts of debt

secured with future cash flows and/or the firms' assets; and, 3) an active involvement in monitoring of the Management Board and the operational activities, because high levels of debt requires efficiency that can generate sufficient cash flows to service the higher interest payments or otherwise company would fail. According with these authors, the presence of the debt led to a more effective monitoring and reduced the management capacity to expropriate any free cash-flow, because it had to be used to cover the interest payments. In the same line, Wright and Nikoskeilainen (2006) concluded that as leverage in buyouts tended to be high, a significant proportion of free cash flow was likely to be committed to service the debt, so the consequent threat of bankruptcy created by the failure to pay interests motivated organizations to become more efficient. Moreover, intensive use of debt reduces the share of equity in the financing structure, allowing private equity investors and managers to control the majority of stock which they would otherwise be unable or unwilling to undertake, concentrating in this way the ability to monitor and control the strategy of the target firm through an active presence on the board of directors. Finally, the European Central Bank (2007) established that during the period of economic prosperity that marked the rising of LBO all across the world, the ideas that the Private Equity fundraising capacity was resilient and dynamic (because of the market attractiveness for foreign funds) and the acceptance of Private Equity as a permanent asset class among institutional investors were a general consensus.

Nonetheless, in the immediate period after the credit crunch the financial panorama was bleak: rising burden on debts charges, lower earnings and lower asset valuation for investor; the lowest private equity investment in the history of the industry and the quality of early stage investments' flow affected by structural factors related to effectiveness of technology transfer. Rahimy (2011), and Schmidt, Steffen and Szabo (2007) raised the alarm voice about the risk of succumbing in the temptation of excessive fundraising from debt lenders, which is likely to bring up a massive risk, especially considering that at some point the corporate credit cycle is bound to turn, which may lead to a tougher economic environment and harder conditions impossible to handle with high cash-flows committed to service additional debt. In a similar position, Axelson, Stromberg and Weisbach (2009) established that unlike boom times, when are good projects and bad projects but bad projects can be financed in addition to the good ones, during recession times there are not only few valuable investment opportunities, but those that do exist present difficulties to be financed. This investment pattern provides an explanation for the common observation that the private equity investment process is pro-cyclical (Gompers and

Lerner, 1999). This is consistent with the idea that private equity activity is highly correlated with liquidity in the corporate debt market. This was considered by Kaplan and Stromberg (2009), whom in one of the most detailed researches regarding ex-ante financial structure of leverage buyouts, found that since buyout and venture capital markets are subject to boom and bust cycles, investors' commitments to Private Equity funds tend to remain robust while debt markets remain favourable; but as soon as the downturn strikes, a huge pressure for PE firms to invest the capital committed is created. According to these authors, a typical consequence of the cheap funds raised under weak covenants is that several PE may not return the money they received; and given that the transaction was driven by leveraged debt and not by governance improvements, the upcoming results will be disappointing. Less leverage and more equity, partial buyouts and general decline of commitments were forecasted for the post-crisis period (Reynolds, 2009).

That indeed happened. Recent studies and researches carried out in the post-crisis period (Suetin 2011, Wyatt 2009, Neuberger and Berman 2011) coincide in pointing out that the greatest survivors of the financial crisis have been the large banks and huge financial institutions, which had a sizeable large number of collaterals willing to invest and bail them out in case of a financial distress; while in the case of the medium and small financing companies, the situation was different. Since the second phase of the crisis has been local, the need of PE backed leveraged buyouts coming back to the basics has been an urgent claim, while acquisitions and large size investments have been subjected to close scrutiny, and smaller deals with more up-front cash were demanded from stakeholders. Reynolds (2009) reaffirm this point, claiming that while markets are shrinking and firms are becoming unable to raise funds and efforts to reduce commitments to existing funds, new strategies are going to be required in order to re-establish the financial system. Thus, with more conservative leverage and less focus on financial engineering, Private Equity returns will have to focus on operational improvements less supported on secondary and tertiary transactions and more on trade sales and IPO's. For this author commercial focus, add-value advice and incentivisation are fundamental to re boost the declined markets.

This need of decrease in the debt burden for the oncoming deals was put in evidence by Wright, Scholes, Bacon, Meuleman (2010), whom established the necessity of put leverage ratio back to moderated levels in new transactions, and opting by a healthy cash distribution of existing

investments to emphasize the value creation by the implementation of operational and strategic improvements, applying creativity to open new opportunities. Financial engineering and active secondary market expertise were considered as viable options as well. Similar idea was exposed by Axelson, Stromberg, and Weisbach (2009) addressed the matter of the leveraged debt raised as part of the two kinds of funds that General Partners require to undertake the LBO process. Analysing ex-ante and ex post cash flows from investments of different holding periods during the period between 1991-2007, concluded that in periods of market boom, when lenders tend to lend more aggressively, the ex-ante financing must be preferred (considering the low interest rates, transaction prices and cost of debt); but the average quality of investments is inferior compared with funds raised in times of market bust. The solution proposed by the authors is a new model whereby a finite structure could be especially important driving the maximum of the mixed financing options; and whereby cash flows coming from projects with clear financial boundaries and contractually separable. This also can help to overcome the agency problems, providing a source of efficiency, monitoring and incentivisation to general partners' management. Finally, Yousfi (2007) infers that the use of convertible securities influences the agents incentives as well as the financial structure (debt- to-equity ratio), considering that they can be converted into equity and provide the majority of voting rights.

But how does this financial reengineering actually work? While the financial engineering is the process of creating an optimal capital structure for a company (despite Modigliani and Miller's apprehensions), financial reengineering can be understood as a process whereby the balance sheet is restructured in order to fit the business plan (Suetin 2011). Of course, in most of the cases this includes covenant's amendments to be negotiated with the institutional investors. There are several ways to cope with financial distress, being the most important: rescheduling and re-pricing or existing debt, injecting new equity using an 'equity cure', do a 'loan-to-own' that swaps debt for equity, or even writing-off a portion of loans. In the last two years the proliferation of balance sheets with negative performance and losses has led to a trend of banking agreement's covenants renegotiation. Gilligan and Wright (2010) analysing the PE trends in the post crisis period, infer that the most common structure (though not universal) found in European buyout deals is made up of an average of 40% secured leverage composed by 'A' and 'B' senior loan and revolving facilities; a 44% unsecured equity investment composed by 'D' PIK institutional loan stock and institutional 'A' ordinary shares; and a increasing use of

mezzanine debt, composed by 'C' mezzanine loans heavily secured with warrants. The general structure is still made up of a predominant 95% loan obligations and just 5% shares trade sales.

Moreover, with the 2010 markets rebound new investment options that are flourishing. Addressing the matter, Griffin (2010) finds that PE equity fundraising commitments are improving, along with an increasing growing willingness from institutional investors to allocate more funds in oncoming deals (small and middle sizes are still preferred yet the first larger buyouts after the slowdown period have started to be seen in the last quarter of 2010). Cautious prevails, especially with the maturity terms and exits, but in general large investment amounts are returning to the market. The author summarizes this new market scenario by the following characteristics: more investor-friendly terms being applied, crescent use of due diligence and scrutiny, and high equity-backed deals prioritized. The European Central Bank (2007) points out how the search of yields has lead to a wave of structural changes in corporate financing, giving birth to new borrowing techniques and products offered by investors eager to take advantage of arising benign economic conditions. This display of financial options can be beneficial for both parts since borrowers can match debt more closely to their foreseen cash-flows and operate to a higher level of balance sheet efficiency while investors can choose a tranche of loans that fits better to their risk appetite. However, this same author remarks that LBIO actor must be extremely cautious with these sophisticated and complex new instruments because of the higher level of risk this financial engineering can bring, heading economy to tougher conditions again.

The rebound has been also caused by the unusual and massive quantities of dry powder, which is the capital that was committed but not deployed, usually dispersed among funds running around in the market and pending to be deployed (Brain 2010). This uncalled capital or *dry powder* requires activity to ramp up and go back to historic levels in order to make financial sense and be put to work (from 2010 this is actually happening in a very slow basis). In the specific case of buyouts, the same author estimates that dry powder might take roughly six years to be deployed, because of the lack of debt liquidity, the scarcity of deal and asset prices picking up enormously.

To finish this section of our literature review, is important to carry out a summary about the Principles for Responsible Investment (UNPRI) elaborated in 2007 by the United Nations as an

effort to address the problems regarding performance of investment portfolios and the lack of objective's alignment with those of the society at large. The principles aim to include the environmental, social and corporate governance principles (ESG) in the investing decision-making process of all institutional investors that have signed the document (around 850 so far). The six key principles it contains are<sup>8</sup>:

- Incorporate ESG issues into investment analysis and decision-making process.
- Be active owners and incorporate ESG issues into our ownership policies and practices.
- Seek appropriate disclosure on ESG issues by the entities in which we invest.
- Promote acceptance and implementation of the principles within the investment industry.
- Work together to enhance effectiveness in implementing the principles.
- Report on activities and progress towards implementing the principles.

This efforts have been complemented in the local ambit by the UK Corporate Governance Code and the UK Stewardship Code, whose last version was published in 2010 by the Financing Reporting Council (FRC)<sup>9</sup>, and which intend to lay the foundations of a more responsible and disciplined style to manage investments, heavily based on public disclosure of policies, fulfilment of social responsibilities, stewardships conflicts management, intense monitoring , shareholder value enhancing collective collaboration among institutional investors, and constant reporting of activities. All of these efforts have the purpose of create a more transparent investment activity that can take into account not only the interest of shareholders, but the ones of all stakeholders directly or indirectly involved in the process. In the specific case ogf the leveraged buyouts and their particular structure, as it was said paragraphs above, the implementation of clear reporting requirements similar to those required to public traded companies which solve several transparency issues; but resistance has been found since the alleged transparency clashes with profits PE houses obtain from the flexibility and freedom they currently have.

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<sup>8</sup> Principles for Responsible Investment - UNPRI

<[www.unpri.org](http://www.unpri.org)>

Consultation date: 22 May 2011

<sup>9</sup> Financing Reporting Council Resources

<<http://www.frc.org.uk/>>

Consultation date: 22 May 2011

#### **II.4. Holding periods and exit strategies**

As Gilligan and Wright (2010) do affirm, the PE business usually have a three or five exit horizon period, with the assumption that the investment has to be floated or sold during that timeframe. This has brought one of the most common sources of criticism to the PE model since is considered that private equity companies actually do not focus long-term value creation (building prosperous companies in terms of operational strategy and reputations) but only are focused in improving it till the holding period reach its maturity, after which they are only worry about a swift yet successful exit strategy (however, as it will be seen later, with the recent economic, the trend has gone to a long term investments rather than shorts). In their paperwork Wright, Scholes, Burrows and Burdett (2006) drew a timeline recording the different exit strategies undertaken in the United Kingdom LBO market in the period 2000-2002, finding that from the year 2001 there has been exit difficulties despite the fundraising boom, recording high numbers of receiverships and secondary buy-outs. From 2003 to 2005 they observed an increasing trend of dropping trade sales and secondary buyouts reaching a record in 2005, and the apparition of risky buyouts financed with hedge funds. In the big picture Raade, Dantas and Machado (2008) found that during the 2000-2004 exits via Initial Public Offerings (IPO's) outperformed trade sales and secondary buyouts; but from 2005 to the start of the financial crisis, the growth on divisional buyouts unveiled the intention of the management to remain independent by means of a partial exit, increasing their equity stake and embarking on riskier growth strategies with little control. These authors affirm that General Partners must put especial emphasis in the short - medium terms in order to keep gains, efficient performance, efficiency, productivity, cost reductions and entrepreneurial actions, giving to limited partners the opportunity of analyse and invest in new products and markets.

According to Schmidt, Steffen and Szabo (2007) during the investment lifetime, investors usually do not expect any fix regular or dividend payment; but they do expect to achieve high capital returns after the exit of the business, or at the end of the investment holding period. For these authors, the exit decision driven by the market orientation (cyclical) seems to be irrelevant. Lerner (2000) and Daniels (2004) ascertain that the exit strategy is fundamental because it will have a deep impact on the reputation and the ability of the firm, hence influencing future fundraising attempts they might be willing to do. As Lerner affirms, the exit strategy shapes every single aspect of the equity capital cycle, from the fundraising until the sort of portfolio investments that will be done. Schwienbacher (2008) considers four main forms of exit



strategy: the IPO's (given the swiftness of this strategy, should be the preferred one in case of urgency), trade sales, secondary sales and buybacks. Regarding write-offs, these must be considered a last resort, given its relation with portfolios with a high failure ratio and the lack of reputation on operational performance they imply. Nevertheless Schmidt, Steffen, Szabo (2007) refer that PE investors actually do prefer to write-off instead of having life lasting investments because of the called 'signal effect'.

It is important to make a reference of the matter regarding investments that were supposed to mature and enter in the exit phase during the period 2008-2010, when the crisis was unleashed (i.e. those investments raised and invested during the peak of the fundraising, reached in 2005-2006, most of them financed with high leverage burden). With that regard, Reynolds (2009) identifies some very interesting expectations, like a general postponement of exit plans in general -which brings up an unavoidable impossibility to carry out secondary or tertiary transactions in the near future, but can be considered good from the point of view of the long term value of the business- and the fact that these changes on the duration of the expected holding period of investments will increase dramatically the need to generate the internal rate of return required to fulfil the agreed commitments with lenders. This author considers the trend to use IPOS as the preferred exit strategy as the most likely to growth, unlike Wyatt (2009), who recognizes that in the afterwards of the financial crisis there has been a swift recovery in secondary market activity with attractive opportunities for disciplined secondary managers with intimate knowledge of underlying portfolios and attractive investments options.

However, this must be confronted with other types of studies like the one carried by Baule, Aule, Groh and Gottschalk (2008), whom conclude that higher amounts of debt are associated with an increasing possibility of business failure or restructuring, causing a lot of buyouts entering into receivership at the impossibility of renegotiating the debt or to formulate a proper exit strategy because the pressing need to manage current operations to achieve the required rates of return.

## **II.5. Operational distress and restructuring strategies**

Several authors have addressed the topic of the operational strategy and its importance within the LBO investment. Acharya, Hahn and Kehoe (2009) remarked the link between corporate

governance and value creation in the case of the PE backed leveraged buy-outs, finding strong evidence about the deep influence of active ownership practices undertaken by private equity houses in the value creation at the business portfolio. This author highlighted several ways to implement the operational engineering, such as due diligence during the phase prior to the acquisition, drafting of value creation plans, early management changes, use of incentives based on equity for top management, time investing upfront and so on. At its turn, Goosens Manigart and Meuleman (2008) point out that the type of change in the ownership (family firm, divisional buyout, private equity backed or management buyout) has not any impact on the post-buyout operational efficiency, but so has the post buy-out ownership, because PE backed firms grow more in EBITDA and employees but less in assets, while other authors like Cruikshank (2006) and Desbrieres y Schatt (2002) support the idea that Private Equity houses and the top management must focus on the value creation based on the strong performance, competitiveness, and employment, specially because in several occasions a Buy-Out is the only way forward for an organisation with poor performance. Notwithstanding the liquidity and the funds' availability is fundamental, the engineering required to boost returns must not be restricted to initial or follow-on investments; in fact capital takes part in both financial and non financial aspects of operations. Scholes, Wright, Westhead, Bruining and Kloeckner (2009) manifest the especial importance of engineering in the case of the family-owned companies being taken over by private equity houses: in these cases consistent evidence have shown that PE firms participating in such process showed strategic improvements and efficiency improvements leading to growth, expansion and gains, which they explain from the perspective of the expertise PE firms have, as well as their privileged access to information related to market opportunities.

The strategic and operational advantages of leveraged Buy-Outs with regard to the venture capital and other kinds of Private Equity funds investment has also been addressed in the specialised literature. Metric and Yasuda (2011) after a thorough analysis of various revenue measures with past performance and specific characteristics (mixed revenue components) in the US and UK spanning the period 1993-2006, found that LBO funds managers earn lower revenue than Venture Capital managers, but professional LBO managers increase the size of their funds faster than VC, adding value to extremely large companies by using inherently labour intensity and skill based business. Similar findings can be observed in the works of Cochrane (2005), Kaplan and Shoar (2005), Cao and Lerner (2006), and Guo, Hotchkiss, Song (2006).

Referring to strategic perspective of Buy-Outs of previous years, Meuleman, Amess, Wright and Scholes (2009), analysing the period between 1993-2003 under a methodology based on the assessment of the strategic perspective in order to provide a complementary insight to the agency problem (asymmetric information in the governance and control of targets), revealingly found that in the case of the divisional –or partial- buyouts there were significant changes in efficiency and growth (but not in profitability), and that PE firms experience and follow-on investments are both essential to promote growth in divisional buyouts. In the same line, Achleitner, Braun, Engel, Figge and Tappeiner (2010) made an analysis of the LBO situation for the period 1991-2005 from the perspective of the EBITDA growth, EBITDA multiple expansion and debt repayments, concluding that debt leverage boosted one third of the returns while the other two thirds were boosted by operational improvements. These authors remarked the financial discipline as the control mechanism and control by excellence to manage high leverage ratios. The financial engineering is reputed as negative, yet they admit that banks tend to accept high debt-equity ratios when it comes to private equity backed companies.

The idea of operational improvement as a major source of value creation for private equity deals is supported for several literature. Kaplan (1989) and Jensen (1989) have already stated years ago that LBOs promote the efficiency of companies and improve their performance because of the pressure they create in General partners and management teams by the debt and leverage commitments, the managerial equity ownership and the introduction of an active monitoring and supervision by the financial sponsors. At their turn, Aigner, Albrecht, Friederich and Kalepky (2008) recognize the importance of operational engineering in the running of the business in a study carried out in the timeframe prior to the economic turmoil (1990-2007), albeit they found that the longer a general partner holds a single portfolio company, the more likely for the portfolio's companies to generate negative returns. Wright, Amess, Weir and Girma (2009) remark that the governance mechanisms implemented by PE managers are important because of the experience and specialisation brought by them, which generates steady performance gains, conclusion shared by Kaplan and Shoar (2005) and Jensen (1989). Of course, persist the problem related to the agency problem and asymmetric information, as well as the long-term persistence of substantial gains. Moreover, in regard to the last period of capital markets, signed by the economic downturn, Reynolds (2009), Neuberger (2011) and Rahimy (2011) coincide in sustain that emphasis in value creation by means of operational/strategic improvements instead

of financial engineering will be strongly preferred in the future, and that expertise and creativity will open new opportunities. There's a general consensus about the fact that after the 2008-2011 downturn swift exit strategies must be forgotten (besides IPOs, which are always a quick way to exit), especially considering that market is shrinking, firms unable to raise funds and efforts to reduce commitments to existing funds. The new role focused on the role of the new private equity firms and their commitment to provide stability for the management in a long term day-to-day running of the business.

Wright and Scholes (2009) diagnosed that in the middle of a considerable turnaround activity, buyouts of distressed companies in secondary markets seems to be an interesting option, (because of discounted prices that can be found in distressed markets), The focus on distressed markets has not been alien to the financial crisis, being rather a consequence of such. Authors like Gilligan and Wright (2010) points out that after the crisis many private equity companies have targeted underperforming loans seeking to acquire under-valuated debt (in some cases buying back their own buyout debt) by using mix of cash generated by shares issued and equity injection, in order to acquire traded bonds below par that offer senior position in the capital structure of the distressed company (nevertheless, since buying-out failing companies require quicker decisions with less scope and due diligence and proper assessment are key elements in downturn environment). At its turn, Price Water Cooper (2008) considers that private equity firms have an special advantage over any other buyer in the distressed environments, given the especial nature of distresses companies, characterised by funding, liquidity and financial reporting challenges as well as the lack of formal controls, which make distressed debt impossible to be bought by corporate buyer or public companies, but feasible for PE houses that can carry out their reengineering away of the public scrutiny. Despite this, due diligence is required in order of cope with hidden liabilities and non-obvious financial problems that may arise. In the same line stands Bain (2010) considers that distressing buyout investing has near perfect conditions and opportunities for non-control debt investors because of the broad array to industries to invest in, and the availability of high-leveraged high-quality companies pushed by the economic crisis in distressed territories, with debt prices falling, debt face value way beyond the market value, and limited if none option to restructure because of stiff covenants. This author also agrees in the advantage private equity investors have over other potential investors because of their expertise, capabilities and wisdom gained from past downturns and turmoil.

## II.6. Regulatory and legal aspects of the operation

Although the legal and regulatory aspect of the operation is not the matter of these study (albeit its deep influence in the market developments), a mention of the principal legal instruments currently in force related to the LBO and Private Equity in the United Kingdom will be useful to see how the government implements efforts designed to keep a balance in the activity, taking care of national interests (taxation), competitor, consumers, shareholders and bondholders in case of receivership or bankruptcy. These legal instruments can be summed up as follows<sup>10</sup>:

- **The Enterprise Act 2002:** The official British governmental regulation in charge of consumer and competitors defence and protection. Applied by the Office of Fair Trading – OFT, it covers all topics related fair competence in mergers and acquisitions. And can intervene in mergers that might lessen competition under the frame of the European Community Merger Regulation (ECMR).
- **Companies Act 2006:** Based in the common law applied in the United Kingdom by the former Companies Act 1985, it regulates the UK corporate activity.
- **Finance Act 1996:** Cover all aspect of financial operations, mainly in topics regarding income tax, capital gains tax, inheritance tax and corporation tax.
- **Public Offers of Securities Regulations Act 1995:** As it is implied in the name, is meant to regulate listing of securities on a stock exchange and information concerning listed company's securities.
- **Financial Services and Markets Act 2000:** Regulates all kinds of financial services and markets offered by all sort of societies.
- **Law of Property Act 1925:** Regulates all kind of property ownership in England and Wales.
- **Insolvency Act 1986:** Enactment of all kind of insolvencies in England and Wales including winding up and bankruptcy of individuals.

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<sup>10</sup> Please note that all definitions have been extracted of the official Introductory Text of each Act, as it appears in the official UK legislation and Acts website [www.legislation.gov.uk](http://www.legislation.gov.uk).

### III. METHODOLOGY

#### III.1. Data and Aggregation Methodology

Maxwell (1996) establishes a difference between deductive quantitative techniques and inductive qualitative techniques by denominating the quantitative technique as the 'variance questions' and the qualitative technique as the 'process questions'. The variance questions aim to give a response to the distribution of one or more variables in a segment, like for instance: How many LBO operations were made during the period 2001-2007? How much money was fetched during this term? Which is the magnitude of the British LBO operations with relation to continental Europe? As well as questions related to how any variation on the variables' values is associated or affects any other values (direct or inverse relationship).

The qualitative studies have a hypothetic inductive logic, because the researcher gets closer to the phenomenon without pre-established analysis categories, previously defined variables nor hypothesis. The categories and the hypothesis will be being developed insofar as the study advances and observations are collected and the emerging hypotheses are put to empiric test from the same data. On the other hand, the studies with a **quantitative methodology** are characterized by its deductive hypothetic logic, given that the researcher selects a list of variables or characteristics from his subject matter (events, people, organisations, groups, etc) that will be put to test. These variables are included in the hypothesis that will be empirically tested, which at its turn has been derived of a theoretical referential framework whose functions is to explain the studied phenomenon. In agreement with Cabrera and Martinez (2002) it is possible to affirm that the quantitative techniques attempt to measure the strength of the bond or relation between two or more variables, as well as the generalization and objetivisation of the results through a sample. From this we can associate this result to a cross-section of populations where the sample comes from. Beyond the assessment of the relations and associations, the study aims to give an explanation about why things happen or not in a certain way.

There are different methods within the quantitative research, and some of them are:

- The experimental designs, where one or more independent variables are manipulated in order to measure the effect over the dependent variables and the internal validation of the experimental situation.
- The social survey, commonly applied in Social Sciences, and consists in applying a string of specific techniques with the purpose of collect, process and analyse characteristic within a certain social group or environment.
- The quantitative studies with secondary data, which unlike the preceding techniques address the analysis employing pre existent validated data & information.

Likewise, is so important to focus on the design of investigation, which guides the phases of data gathering and analysis. In the specialised literature, this can be done by means of three types of investigation: the exploratory investigation (when the research aims to get deep into some specific issue with specific data), the explicative investigation (when is necessary to explain one variable that influence in other), and the descriptive investigation (which is used to analyse markets). The character and purposes of the descriptive investigation are substantially different to those of the exploratory investigation. The descriptive investigation is characterised by the clear enunciation of the decision problem, specific investigation objectives and detailed informational needs. Given that the purpose is to provide information relative to questions or specific hypothesis, the investigation must be designed to secure the accuracy of the findings. A reliability test that makes reference to the degree in which the measurement process is free of random errors will be necessary in order to guarantee the accuracy of the study.

As an example of descriptive analysis with quantitative data, we can quote Garayalde (Garayalde, 2007), who made its study about the effect of the leveraged buyouts on the efficiency of Spanish companies basing her model on the analysis of the different ratios per each company, like profitability, cash flow, net benefit, investment return, PBIT, PAT, gearing, liquidity, and operative ratios during a term of 5 years after the buyout. The aim of the study was to determine if the ratios evolved better that the other companies after the acquisition. According to Patton (1990), most all the studies of the kind strongly depend on the formulation of questions to the respondents and the **availability of information in secondary data sources**. The descriptive investigation has been properly done when the objectives include:

- A graphic description of the characteristic of the phenomenon and the determination of the frequency in which they occur.
- A determination of the association degree with the market variables
- A formulation of predictions regarding the occurrence of the market phenomena.

In the particular case of the present dissertation, the methodology of study will be driven by **deductive quantitative techniques** and the research method will be the **descriptive investigation** (most suitable to clear and define the nature of the proposed problem). The data will be gathered and collected from secondary sources with the purpose of reunite all the possible information about the issue and define action curses. Given that the present investigation refers to the specific case of the leveraged buyouts in the particular context of the United Kingdom, the exploratory investigation will allow us to carry out a more complete assessment.

The method of data analysis will be basically the documental research.

This research will be based on statistical set of data collected from different companies and institutions specialised in the private equity business, for which the pertinent permissions and authorisations have been requested. It os note worthy that given the general and statistical character of this research, there were no need of information regarding specific companies or firms' [performance or EBITDA ratios in the market, being entirely based on the secondary data provided by the chosen **secondary data sources**:

- The **UK Buy-Outs Report** published in a quarterly basis by the Centre for Management Buyout Research – CMBOR, sponsored by the University of Nottingham, the Bracklays Private Equity group and Private equity International – PEI. The statistical information corresponds to the four quarters of the years 2009 and 2010 (although the charts and diasgrams analysed contains trends for past years as well), and has been elaborated on the basis of to a hand collected dataset of 1,333 buyouts only in the United Kingdom. It is noteworthy have been made with the management team of CMBOR in order to obtain the authorisation for the utilisation of the statistical information contained in this publication.



- The **2008, 2009 and 2010 EVCA Buyout Reports**, published by the European Private Equity & Venture Capital Association EVCA, elaborated with a mixed use of Standard & Poor's LCD data, CMBOR statistics and their own databases. The data sampled corresponds to all countries part of the European Union and aggregated regions, and comprises EVCA members and non members focus on direct private equity investments. The data has been collected via surveys and public available information. This includes the EVCA Analytics Reports.
- The **2009-2010 Global Fundraising and Buyout Deals Report** published in a quarterly basis by PREQIN Ltd., on the base of their own Funds and Market online database hosting information of 1,500 private equity funds, 6,000 funds closing since 2003.
- The **Standard and Poor's** ratings, indices and the S&P Leveraged Commentary & Data (LCD) available at [www.standardandpoors.com/home/en/eu](http://www.standardandpoors.com/home/en/eu) and [www.facebook.com/lcdcomps](http://www.facebook.com/lcdcomps) The information accessible at those websites is free and public, and all the proper references have been included..

### **III.2. Validity and reliability**

The information gathered will be used exclusively to make a cross-examination of the proportion of LBO operations carried out (depending on the quantity of information available) in a specific period of time, in order to undertake a comparative analysis of the main factors driving the private equity markets in the post-crisis developments. The main variables will be the use statistics in order to evaluate the variables that have contributed to the main problem, the variables related to the way companies in the market are using to overcome the raised problem in an efficient way, and finally analyses the relationship underlying between the firsts and seconds in order to foresee what will happen in the future with regard to the main problem. The accuracy of the finding will be giving on the basis of the past result –since the financial cycles are not predictable at all- and the content validity will be given by literature researches and specialised information, and the construct validity will be reinforced by the inclusion of a variable map establishing the connection of every instrument with its correspondent theoretic support.

The reliability of the data presented in the present dissertation is driven by the methodologies used on its collection, previous literature findings and past researches. Although abundant academic literature have been used to analyse the effects and consequences of the leveraged buyouts in the capital markets and the average companies' performance, there are limited information regarding the post-crisis period (from 2008 on) in Europe. Even the latest works regarding buyouts, corporate governance and financial structure of deals (Wright, Scholes, Bacon, Meuleman, Rahimy, Kaplan, Stromberg, Wright, Scholes, Axelson, Stromberg, Weisbach and others) are based on data spanning the 1990-2007 period and therefore they don't take in account the effects of the turmoil caused after the credit crunch, and the consequent bear market it did create.

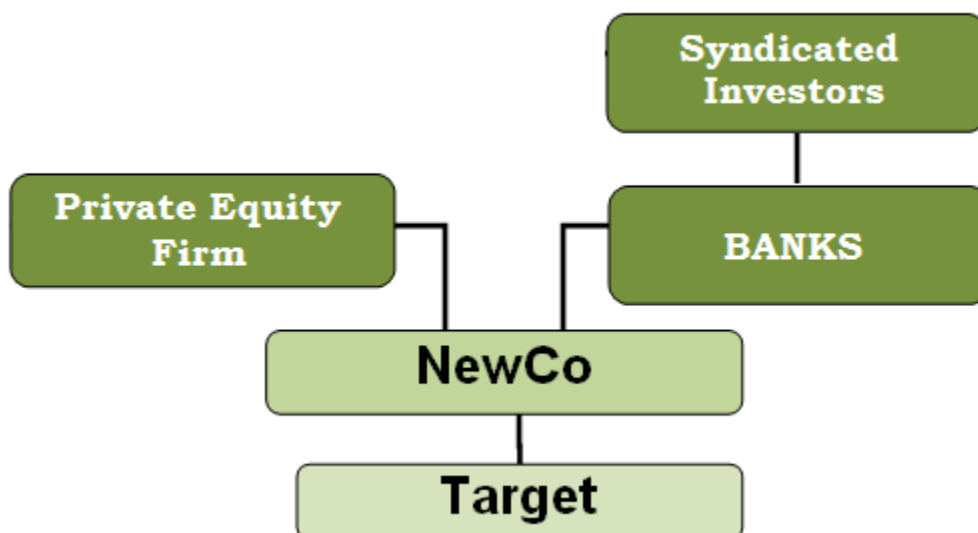
## IV. DATA ANALYSIS

### 4.1. Description of the process

As it was described in the literature review of the present research, the Leveraged Buyouts (LBOs) are not other thing than a way to multiply the profitability of a certain capital invested in a target company. Is simply a process whereby the financial/operative structure of a given company is maximised, and so do is the return for shareholders and investors. The process habitually five actors which are the Private Equity house or General Partner, the target company, the NewCo, and the Bank and other institutional investors (syndicated debt providers or simply limited partners).

To structure the operation properly, the creation of a NewCo is required. This NewCo is a just created company that will receive the investments (debt) and the equity injections done by the general partners (which is the amount that will be used to acquire the target company).

For a better understanding, the described Leveraged Buyout process can be charted as follows:



## 4.2. Financial structure & definitions

The financial instruments that are utilised in this kind of operations have different characteristics given the different grades of risk and reward they entail. The main purpose of undertake a financial engineering is to find out the exact proportion of debt & equity that will lead to the investment's returns maximisation, considering factors like the type of repayment priority the security has, the expected yield for the investor, and covenants and amendments that are going to be applied. There also several other types of components to be borne in mind prior to any transaction, like the kind of payment (fixed or variable), the expected maturity in the case of debt contracted and bonds issued, the involvement of shares in capital growth and the level of intervention granted in the case of Participating Preferred Ordinary Shares.

The expected efficiency in terms of financial engineering is achieved only when a proper combination of financial instruments, the introduction of efficient operational / strategic improvements, and a proper incentivise of the managerial team is accomplished, generating cash-flows enough to service the debt and provide returns to shareholders. Special emphasis must be put on some imbalances or breakdowns that can occur in this scheme, like the called 'equity illusion' (rising equity valuation in relation to the nominal income), etc.

The capital structure of an average LBO is made up of roughly 70% debt and 30% equity. A brief explanation of the array on financial methods usually employed to structure this debt/equity categories is outlined as follows:

Financing Methods	Repayment priority	Usual investor	Type of yield	Stock Collateralisation
<b>Collateralised Loan Obligations CLOs (institutional / pro-rata)</b>	Senior	Banks / Institutional investors	Interest paid	Secured
<b>Leveraged loan</b>	Senior	Institutional investors	Interest paid	Secured
<b>Unsecured loan</b>	Junior	Private Equity firm	Interest paid	Unsecured
<b>High yield bonds</b>	Senior / junior	Institutional investors	Interest paid	Secured / Unsecured

<b>Preference share</b>	Junior	Private Equity firm	Interest paid	Unsecured
<b>Ordinary share</b>	Junior	Management team	Dividend paid	Unsecured (except the participating preferred ordinary shares)
<b>Mezzanine loan</b>	Debt / Junior	Institutional Investors	Interest paid	Secured

The **definitions** of the terms that will be employed on the present research are herewith given:

- **Secured debt:** Also known as secured debt or secured credit is a debt collateralised by an asset or stock. In other words, this kind of debt entitles to the lender to claim for the property of the company's assets or stocks in case of payment failure. Generally, they have low interest rates because of the low risk.
- **Unsecured debt:** A debt or loan that is not secured against any company's asset or stock.
- **Senior debt:** That one that has repayment priority in case of business failure and subsequent bankruptcy.
- **Junior debt:** Debt that is in the lower level of the queue for repayment purposes.
- **Investment grade:** Is a classification given by credit rating agencies like Fitch Ratings, Standard & Poor's or Moody's. Can be **Speculative Grade**, which implies that, the issuer present high risk that might lead to an eventual failure in obligation's fulfilment. On the other hand, the **Investment Grade** is referred to bonds and instruments with a solid backup and ability to fulfil any future financial compromise.
- **LIBOR:** Is an acronym that stands for London Interbank Offered Rate. Forbes<sup>11</sup> defines it as the rate that banks in the London wholesale money-market reference when lending unsecured money to other banks.
- **TED Spread:** Is the price difference between three-month futures contracts for U.S. Treasuries and three-month contracts for Eurodollars having identical expiration months<sup>12</sup>.

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<sup>11</sup> FORBES BLOG

< [blogs.forbes.com/billsinger/2011/04/25/libor-antitrust-varney-trojan-horse](http://blogs.forbes.com/billsinger/2011/04/25/libor-antitrust-varney-trojan-horse)>

Consultation date: 17 February, 2011.

- **Leveraged Loan:** Collateralised loans issued by non-investment grade companies that generate a floating income according to a base type, usually the LIBOR rate. Given the seniority of these loans, the interest rates are expressed as a difference upon the LIBOR (so while this one fluctuates in a daily basis, the leveraged loans differential remains the same regardless market conditions, unless a substantial change occurs in the credit quality of the backed company). The market-weighted performance of the institutional leveraged loans measured by market weightings, spreads, and interest payments is expressed in S&P/LSTA Leverage Loan 100 Index.
- **Collateralised loan obligations:** A special purpose vehicle (SPV) with securitization payments. Are syndicated, i.e. the loan is divided among more than one lender (usually banks have limits regarding how much can lend to leverage operation, because of a required risk spread in all their portfolios). The leveraged loans comprise three tranches:
  - **Institutional Term Loans tranche** (Term Loan B): High yield loans with longer maturity, usually of 6 years or more, and whose investors are primarily institutions (hence its name).
  - **Pro-rata Loans Tranche** (Term Loan A): Primarily sold to banks, with significant principal amortization and a lesser final maturity, usually of 5 years.
  - **Equity tranche.**
- **High Yield Bonds** (or *junk bonds*): Speculative-grade bonds rated below BBB/Baa3 (hence rated BB, B or CC, which means high risk) by the main credit rating agencies like Moody's Service, Standard & Poor's or Fitch Ratings. Given their high risk, companies that issue them (not rated in the "investment-grade" ratings by the institutions aforesaid) must offer a yield high enough to persuade investors to risk their money in them. Mainly sold to institutional investors, their maturity is set between 9 and 11 years. It is worth mentioning that in recent years high yield bonds have become one of the most used financing means used by private equity firms to finance acquisitions or supply cash-flows to pay the debt over time.
- **Redeemable preference shares:** A hybrid among ordinary shares and bonds. Indeed, they work under the same principle of bonds: a fixed payable coupon and the value valuation around the emission nominal value. Their price is more related to the interest rates evolution

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<sup>12</sup> INVESTOPEDIA

<[www.investopedia.com/terms/t/tedspread.asp](http://www.investopedia.com/terms/t/tedspread.asp)>

Consultation date: 17 February, 2011.

than the issuer's performance. Are redeemable because are likely to be buy back at their normal price.

- **Participating preferred ordinary shares:** Extensively used by private equity owners, are shares that offer a periodic yield in the way of percentage or cash. The dividends received by holders of this shares are higher than the received by the ordinary shareholders, and have preference in the profits redistribution. This type of shares also grants their holders a preference right in case of bankruptcy.
- **Mezzanine loan:** A combination of options from subordinated debt and equity, useful to raise funds quickly. The debt is subordinated to the senior debt of the company, so the investor can only demand participation in the cash-flow only afterwards the senior debt has been integrally paid (doesn't allow any claim right before that situation, whatsoever). Is used when the a leveraged company has no more space for senior debt -given the financial structure chosen and the asset security backed fully used- but have cash-flows able to support a quick long-term high yield loan. It is noteworthy that Mezzanine Debt entails a premium because of the higher level of risk assumed and lower priority in the repayment. A typical mezzanine loan includes a 3 years term and a return made of front- and back-end fees (of perhaps 1% each) plus the 60-day LIBOR rate plus 4% (currently about 8%).

#### **4.3. Current trends in Equity / Debt markets**

The present data will be displayed in the form of comparative statistical charts and diagrams based on the data collected from the sources listed in the chapter before. The data has been selected under different criteria, covering the general fundraising panorama of the PE LBO industry, the historical average capital structure of the deals -with special emphasis in the post-crisis development-, the first investment and follow-on's; and the kind of debt instruments whose demand is currently soaring in financial markets: high-yield bonds and, in lesser extent, leveraged loans. Mezzanine loans, equity or collateralised loan obligations have been left aside given the limited scope of this research and the low demand recorded for these debt/equity instruments in current financial trends.

Regarding the organisation criteria of the information, the data will be grouped and assessed in diagrams and charts displayed according with the topic addressed, with their respective

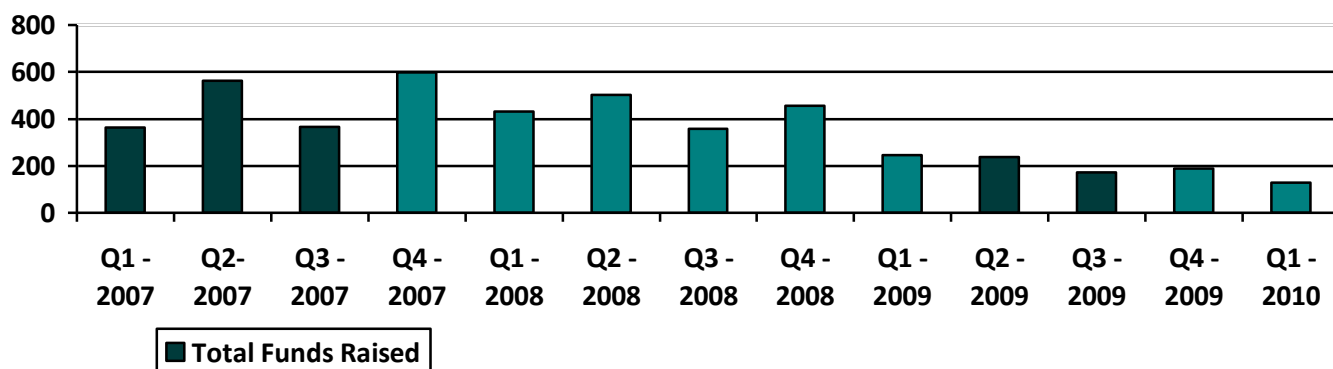
explicative tables when necessary, as well as the clear indication of the sources where the information have been found.

### 4.3.1. Insight of the Buy-Outs market and findings

#### 4.3.1.1. Buy-Outs fundraising

The set of data collected has been uniform regarding a trend toward the LBOs capital markets recovery both in Europe and the United Kingdom. Regarding the global panorama, the Diagram 1 evinces a slight global buyout downward trend, with amounts unable to surmount the peak recorded on the last quarter of the year 2007, when \$598.1 billion were raised. The last figure available corresponds to the last quarter of 2010 and shows a total fundraising of \$129.4 billion. Notwithstanding the general recovery and financial mend in private equity markets, the situation is still far from reaching back the 2007 liquidity bonanza.

Diagram 1: Global incremental fundraising during year in \$ billions



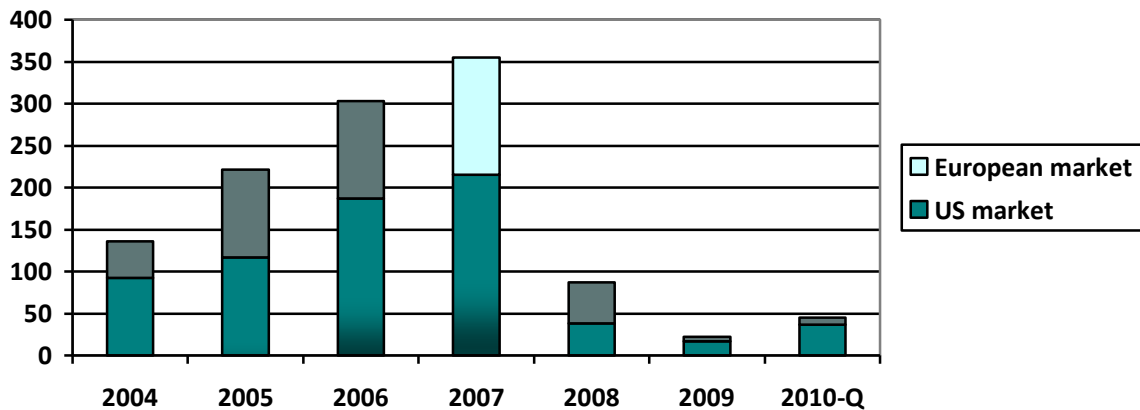
(Source: PREQIN)

In a more local approach, a comparative analysis of the European zone displays a clear positive fundraising trend in the area, with the Diagram 2 showing a high level called and distributed capital in each quarter since 2008 (both types of capital were deeply affected by the financial crunch), with fundraisings of €37 billion in Europe and \$8 billion in USA in the second quarter of 2010. The local European statistical reflected in Diagram 3 evinces how from the 2009 the United Kingdom has surpassed the United States in the top position in the global ranking of



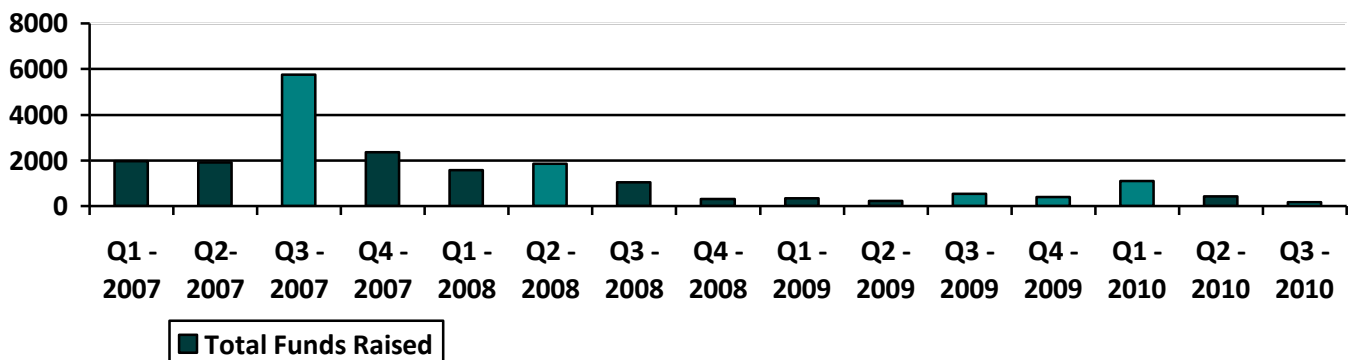
LBO activity in the world, recording £1,705.7 millions fundraised in 2010 despite the of £1,490.4 million raised during the year 2009 (but still far from the £10,994.8 million recorded in 2007, during the peak of the LBO activity, though). It is noteworthy to mention that this is even more reflected in the value of the deals rather than the number of them, because despite the amounts raised, the number of deals closed in 2010 remains below all recorded in past years, reaching only 179 funds closed in relation to the 275 of 2009 and 414 of 2007. The amount of funds collected in 2010 (£1,705) also reflects a notable improvement with regard to previous year, though still far away from the peak reached in 2007.

**Diagram 2: Comparative Europe / US LBO fundraising in € billions**



(Source: EVCA Analytics)

**Diagram 3: United Kingdom incremental fundraising during year in £ millions**

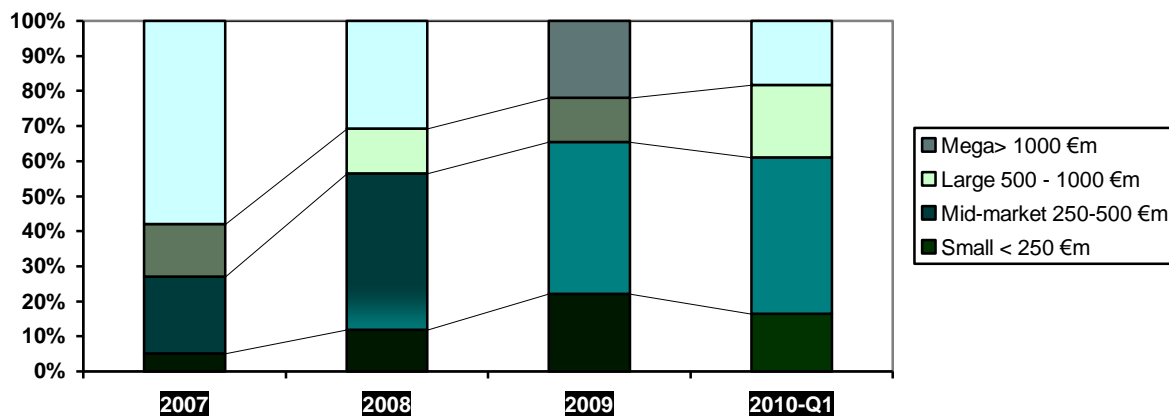


(Source: CMBOR, Ernst & Young)

### 4.3.1.2. Buy-Outs activity by deal size

In the matter related to the LBO by funds size, the statistical data reflected in the Diagram 4, relative to the European scenery, is clear when it shows how middle-market transactions are taking over the capital markets, with an increasing trend that started with a 12.9% in 2008 and completed 20.6% in 2010, constituting the highest percentage of deals being undertaken in the market. Conversely, the mega and large buyouts have frozen, going from an important 57.9% in 2007 for mega deals, to a poor 18.3% in 2010. Large deals have slightly improved from a 12.6% in 2008 and 2009 to a 20.6% in the first quarter of 2010. On the other hand small buyouts are also experiencing a slow increase, reaching a 16.5% of the market in 2010 in comparison with the 5.1% of activity registered in 2007.

**Diagram 4: European buyout only activity (% of total transaction value) for deal size**

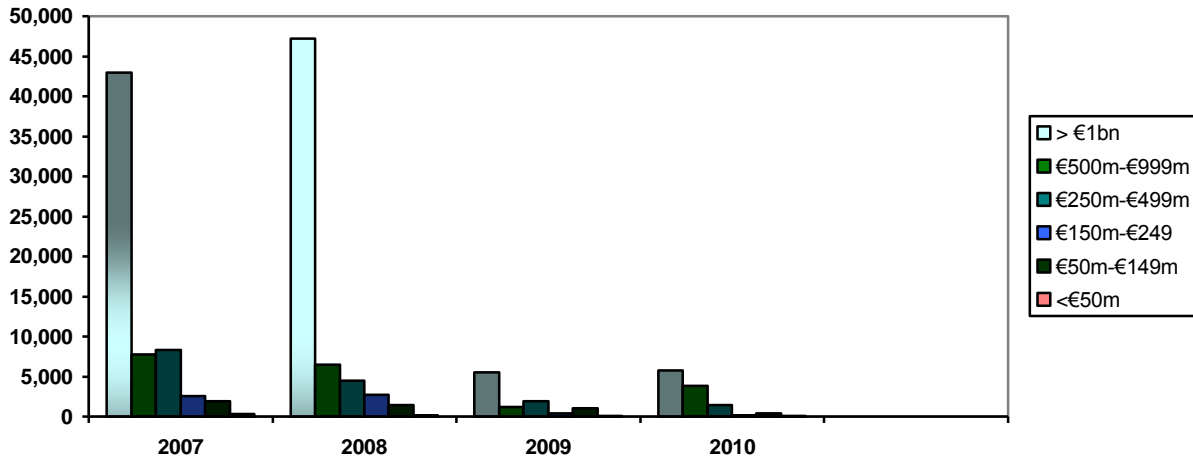


(Source: EVCA/PERE Analytics)

Nevertheless, those percentages not necessary imply that the overall value was created in the middle markets: on the contrary, Diagram 5 our shows us that, regarding total value created, deals above €1 billion rendered the biggest values recorded in the year 2010, beating all the value created by other sizes (€5,746 billion, compared only to the value created in the range €500 m - €999m, which reached the €3,845 billion. The middle market transactions, present a modest €143 billion value for deals among €250m – 499€m ad €200 billion for deals in the range €150 - €249 m, but an important €428 billion in the range €50m - €149 m, having as well the second highest number of transactions in the 2010 (5). The lowest value recorded in that

showed by small transactions, which in the range of operation with deal price below €50 only created €57 billion value. The number of transactions has deeply shrunk, with less than 20 total transactions per year in all sizes combined.

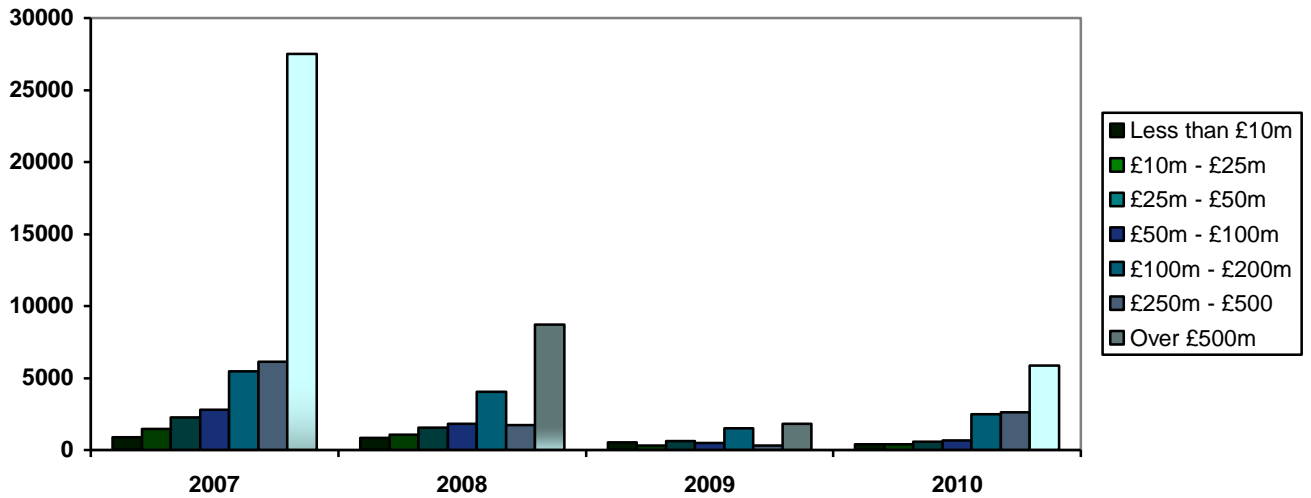
**Diagram 5: European Buy-Out for deal size (in €m)**



(Source: EVCA/PERE Analytics)

In the British case, the findings are remarkable. The information contained in the Diagram 6 shows a surprising recovery of mega and large deals, after they reduced to the minimum in 2009. Thus, it is confirmed that mega buyouts recorded £5,866 billion, high in relation to the low £1,801 billion of the past year but still low in comparison to the £27,518 billion of the 2007. In the related to large and mega buyouts the figures attest how the industry could start its recovery and reach again the record £6,133 billion achieved in 2007, with £2,623 billion created in 2010 after two years or relative poor performance. In both cases the number of deals closed has improved in a low basis (5 in the case of mega buy-outs and 8 for large ones). In the case of the medium-size deals, (considered as such those in the range £50m - 250m), there is a uniform trend to improve yet the data doesn't shown unexpected upturns. Thus, for example the average value for deals between £10m - £25m had a modest increase of £90 million of difference, while in certain cases like the deals located in the range of £50m - £100m there has been a decrease in the trend, with £590 billion in 2010, despite the £619 billion in 2009 and the £2,266 of 2007. In general, the trend goes toward a strengthening of mega deals backed by huge firms, while medium small markets show a slow pace of recovery.

**Diagram 6: United Kingdom Buy-Out - Buy-In activity for deal size (in £m)**



(Source: CMBOR, Ernst & Young)

#### **4.3.2. Market Analysis: Debt-Leverage in capital structures**

##### **4.3.2.1. European debt-leverage ratios**

There are also surprises in the changes experimented in the capital structures of the deals. In the European case, the Diagram 7, relative to deals below €100 millions, we do appreciate an unstoppable trend to the equitisation of deals unlike the use of debt, mezzanine (which has almost disappeared recording an unprecedented 0% in 2010), and other sources of finance; thus, debt accounts 30% in 2010 from a 46% in 2007, while equity accounting for 67% from a humble 44% in 2007. About operations above the €100 million, the data disaggregated in Diagram 8 shows how the trend follows a similar pattern, with 29% debt in detriment of the 58% in 2007; while equity records 67%; huge percentage in comparison with the 44% recorded when the capital markets were enjoying high liquidity in 2007.

**Diagram 7: European Debt-Leverage ratio in deals less than €100 m**

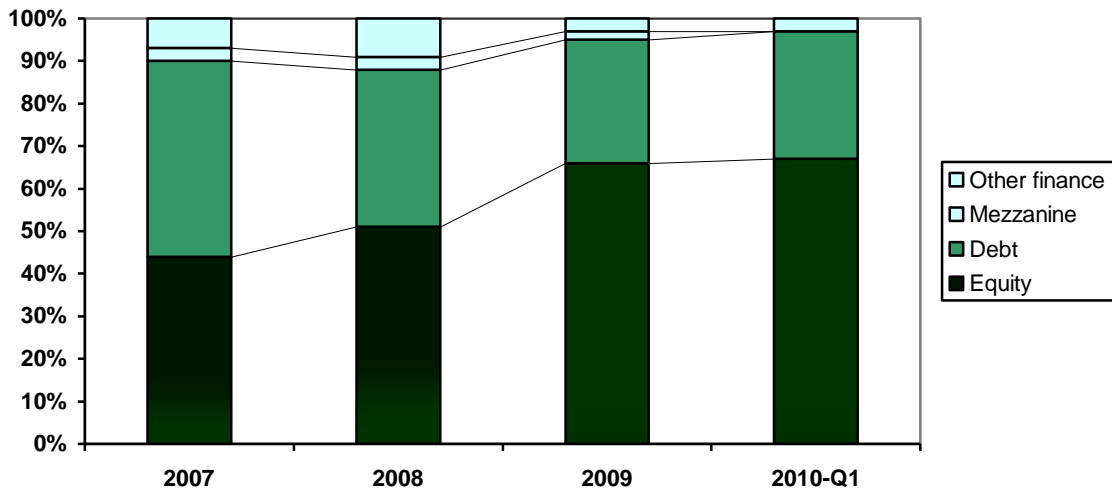
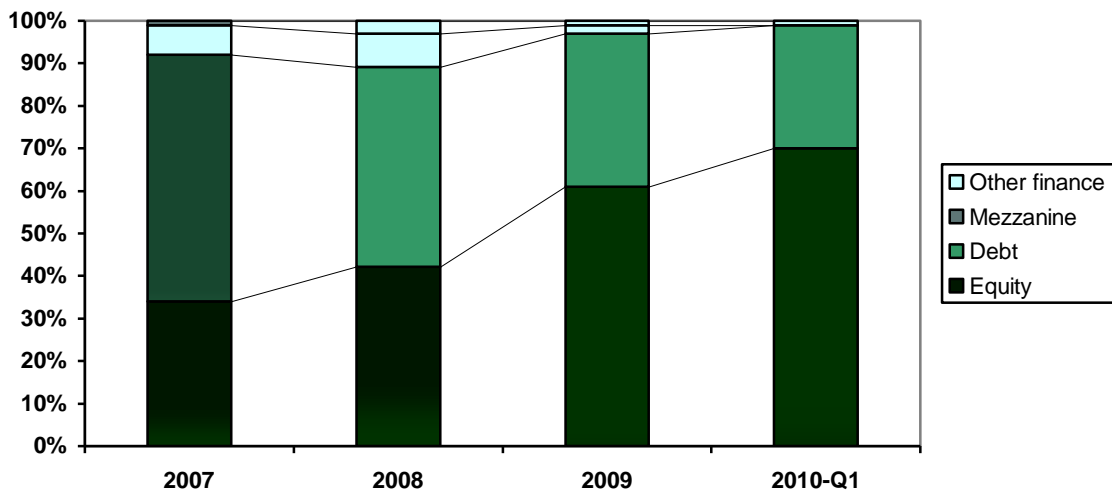


Diagram 8: European Debt-Leverage ratio in deals more than €100 m



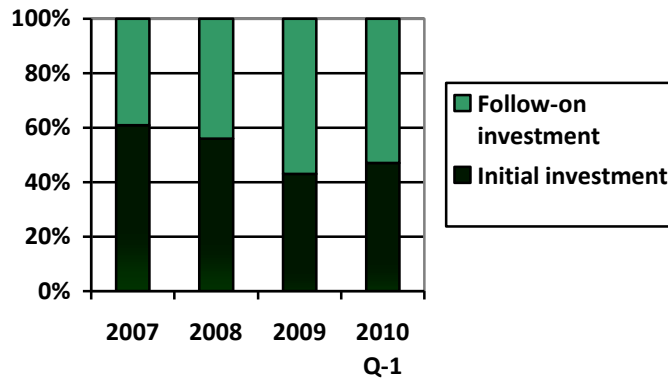
(Source: CMBOR/Barclays Private Equity)

#### 4.3.2.2. Initial / follow-on investment and debt syndication

The information provided by EVCA also show interest finding regarding the switch in the use of follow-on investments and initial investment in the years subsequent to the financial crunch. Diagram 9 shows how 53% of companies will invest higher amounts in follow-on investments in the first quarter of 2010, instead of carry on with initial investments in new deals; this is particularly revealing respect of how managers and private equity directors are shifting from the

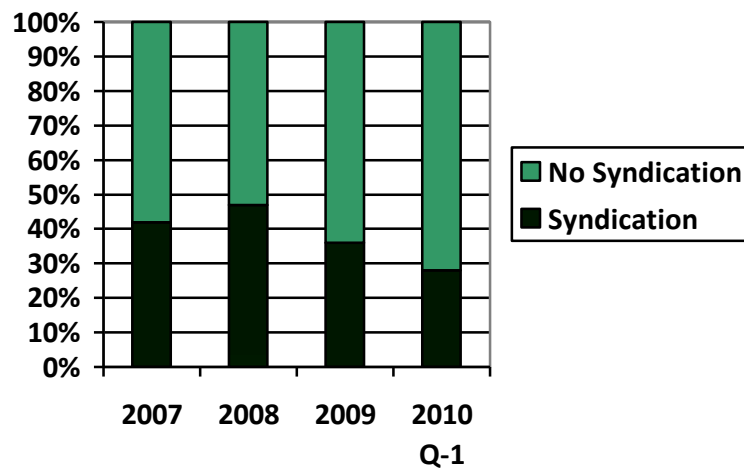
returns generation and profitability to the sustainability of the cash-flow through the financial engineering.

**Diagram 9: European LBO initial / follow-on investment (%) in LBOs**



At its turn, Diagram 10 informs about the sizeable decrease of syndicated lending, given to the virtual disappearance of collateralised loan obligation and the blatant diminution in the emission of institutional / pro-rata loans caused as a consequence of the liquidity squeeze created by the crisis.

**Diagram 10: Debt syndication in LBO deals**

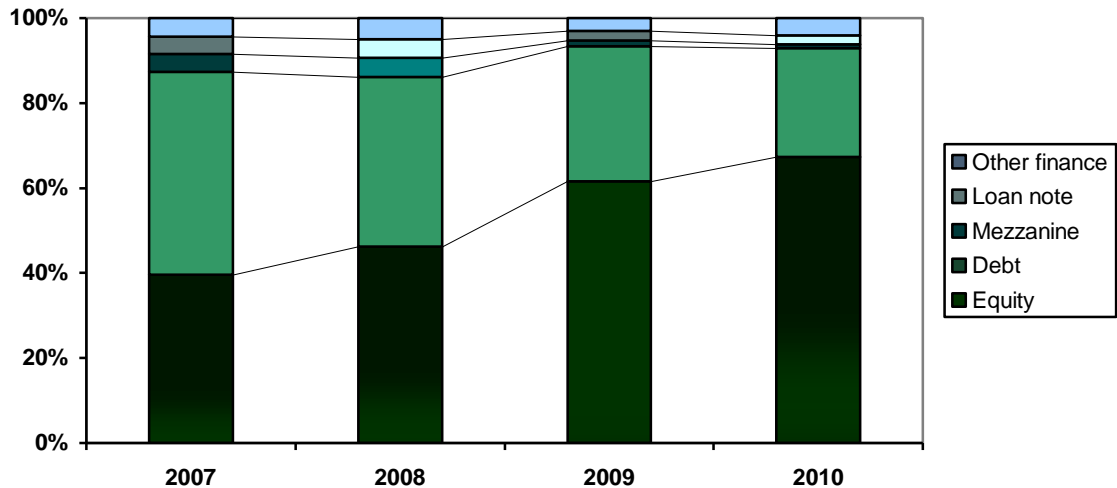


(Source: EVCA/PERE Analytics)

### 4.3.2.3. UK debt-Leverage ratio

In the British case, as is indicated in Diagram 11, the average deal structure followed similar pattern to the European case, with equity accounting by 67.2% and debt 25.7% in 2010, while in 2007, during the peak of the LBO activity and the frenzy lending-borrowing activity, the equity accounted by only 39.7% in detriment of the massive 47.8% of debt, mainly manifested under the form of collateralised loan obligations and junior unsecured high yield bonds.

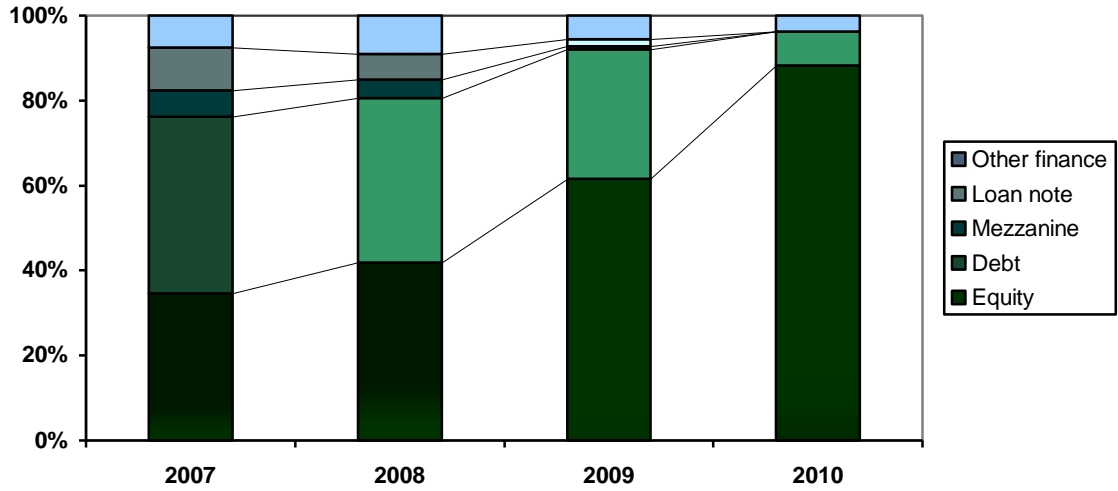
**Diagram 11: UK average deal structure for buy-outs and buy-ins (%)**



(Source: CMBOR/Barclays Private Equity/Ernst & Young)

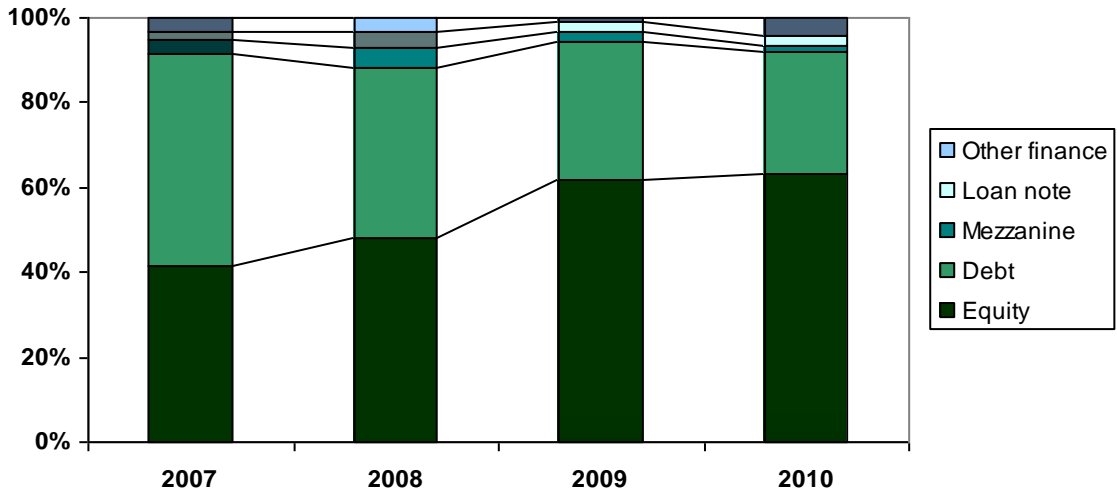
The trend to the equitisation and deleveraging is also shown in the data regarding the size of the deals, illustrated in Diagrams 12 and 13, with debt accounting only for 8.1% in deals less than £10m and 29.1% in deals above such amount. Regarding other types of finance, there is an unequivocal trend to the diminution of debt in all its forms, with average mezzanine recording a poor 0.9% on 2010 compared with the 4.2% used in 2007; but showing a 0% in the category of deals less than £10m. Conversely, other sources of finance (which comprises unsecured loan and equity injections by IPOs, among others), the data express a recovery and improvement of this kinds of financing, accounting almost the same amount of 2007, which is 4.4%. The trend is more significant in deals over £10m, while in deals of less value the use of these sources of financing show reach a low 3.7% in comparison of the 7.6% used in 2007.

**Diagram 12: European Debt-Leverage ratio in deals less than £10m**



(Source: CMBOR/Barclays Private Equity/Ernst & Young)

**Diagram 13: European Debt-Leverage ratio in deals more than £10m**



(Source: CMBOR/Barclays Private Equity/Ernst & Young)

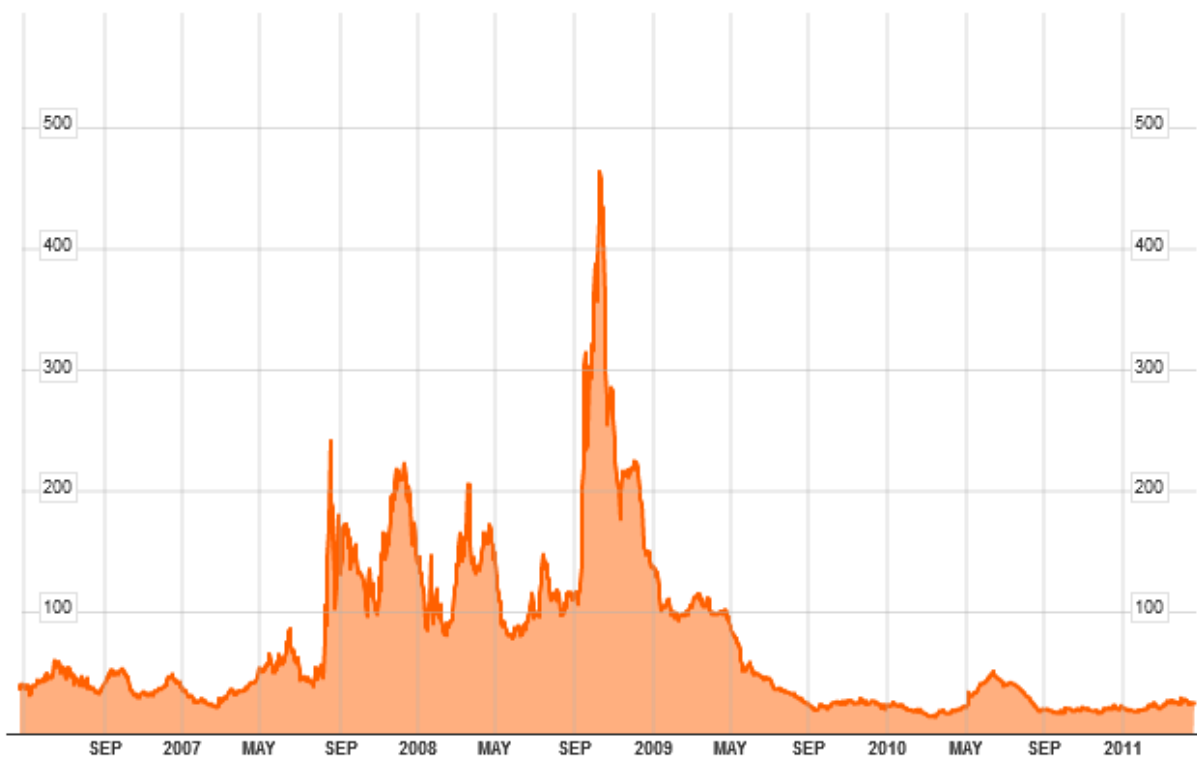
### 4.3.3. Market Analysis: Refinancing challenges



### 4.3.3.1. High yield bonds and leveraged loans in the market

As it was aforementioned, the TED spread is a measure of the interest rates of three-months T-Bills with the three-month dollar Libor, in order to serve as a general indicator of loan risk in the market. Any the increment in the basis points measures indicates the approximation of a period of financial upheaval. The data presented in the Diagram, 14 shows us how, from the 100 -200 basis points recorded in September 2007- September 2008 (being the average for a normal not-too-risky market the 10-50 basis points), the market has been going down gradually, recording healthy 27.44 basis points for August 2010 (in a trend that seems to keep going during the first quarter of 2011), which constitutes an unequivocal indicator that loan market has growth, which may lead to a likely reappearance of collateralised loan obligations fuelling the debt markets again. This also shows an increase in the leveraged loan pricings, given that leveraged loan activity in secondary markets has rocketed thanks to a sudden (though not normal) loan liquidity.

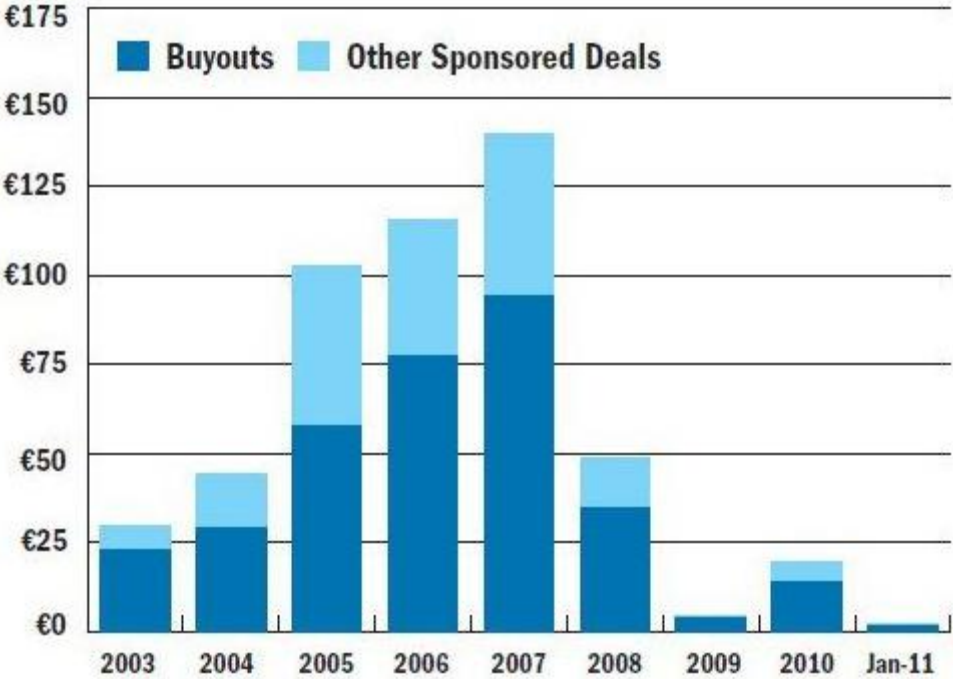
**Diagram 14: TED spread for three-month dollar LIBOR less three-month Treasury Bills**



(Source: Bloomberg)

The loan volume in Europe did shrank considerably after the crash, as it was explained in the section relative to the debit/equity ratio of the deals. However, in the Diagram 15 we can observe how the year 2010 saw a strong recovery in the range of debt used in leveraged buyouts, basically because of the increase in the issuance of the leveraged loans to non-investment grade companies, in addition to a rising covenant-relief loan amendment activity, and corporate earning rebounding notably (which leaves good margins of EBITDA to be used in extra leverage). However, Diagram 16 show us how the change in outstanding loans hasn't been uniform, recording more defaults than surpluses changes, yet there is a remarkable recovery in the last stretch of 2011. This remarkable recovery is confirmed by the data showed in Diagram 17, where in an a detailed analysis of the evolution of default rates we can observe how loan default rate reaches its lowest levels of the last three years in the 2011 stretch.

**Diagram 15: Private Equity Loan volume in Europe**



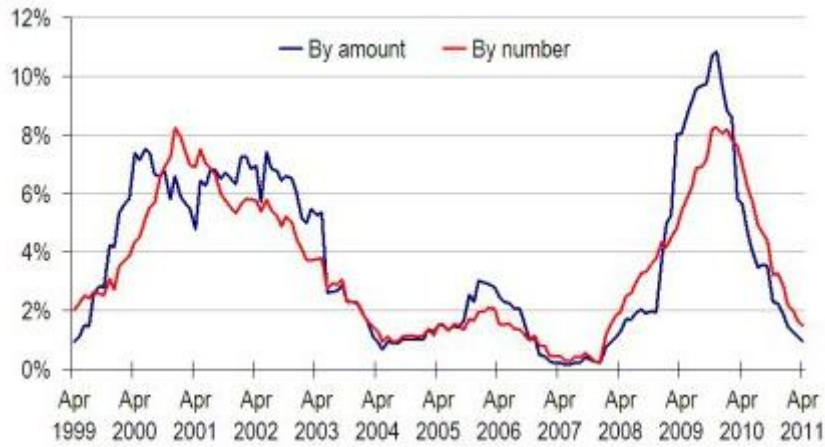
*(Source: Standard & Poor's Lcd)*

**Diagram 16: Historical change from surplus to deficit in outstanding loans (secondary market)**



(Source: Standard & Poor's Lcd)

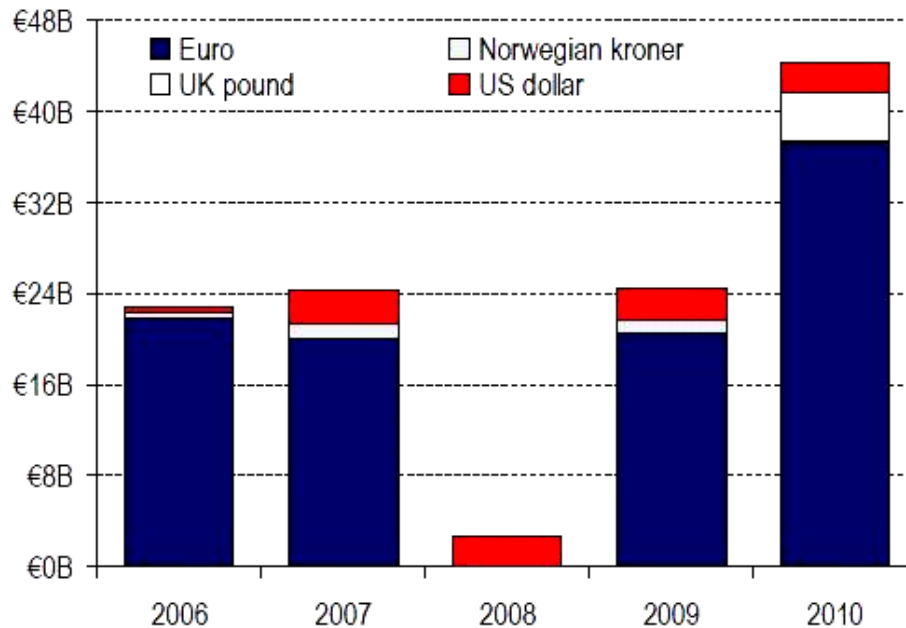
**Diagram 17: Global 12-month loan default rate**



(Source: Standard & Poor's Lcd)

Regarding high yield bonds, the soaring demand of this kind of asset class has especially high in the case of the operations carried out in UK Pounds, as is shown in Diagram 18, where we can see not only how the emission of this risky assets in sterling outperform the euro, but also how their emission records the highest levels of the last five years.

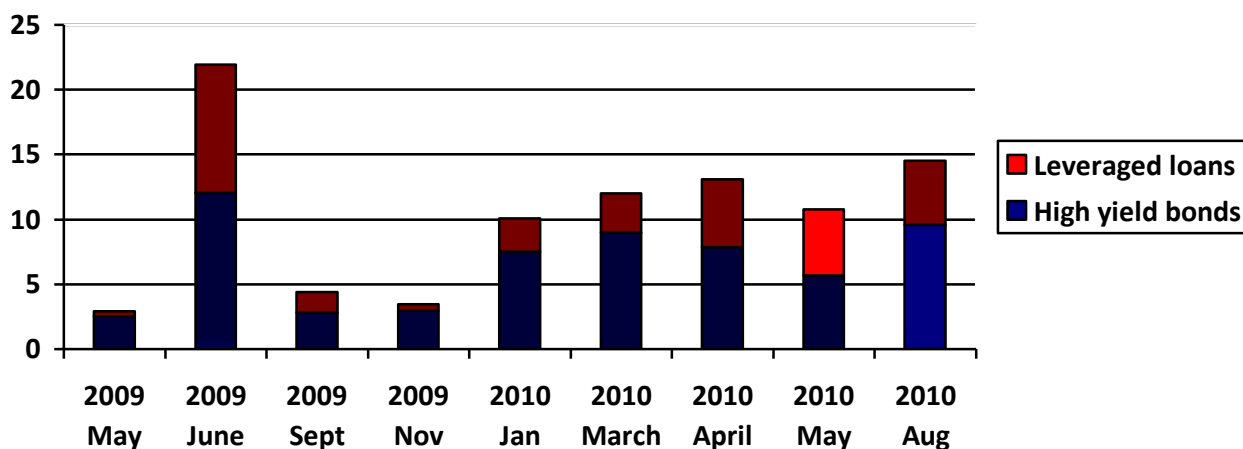
**Diagram 18: High-yield bonds volume by currency**



(Source: Standard & Poor's Lcd)

Regarding use of debt in primary markets, Diagram 19 evinces a remarkable rise in the issuance of leveraged loans and high yield bonds, probably as consequence of leveraged loan default rates rising falling and refinancing/amendment needs. The LBO European market is still not as mature as the American, but despite this a total of €4.97 billion of high yield debt was issued in August 2010, marking an increasing primary market activity fuelled by the rise of the called 'Fallen Angels', or companies that have lost the investment grade and offer attractive loans in order to ease default rates. The data in Diagram 17 shows a clear tendency for both high yield bonds and leveraged loans to soar in a steady basis, having reached the €9 billion in the case of the high yield bonds and almost €10 billion in the case of leveraged loans by August of 2010.

**Diagram 19: Volume of new-issued loans and high yield bonds in €b**

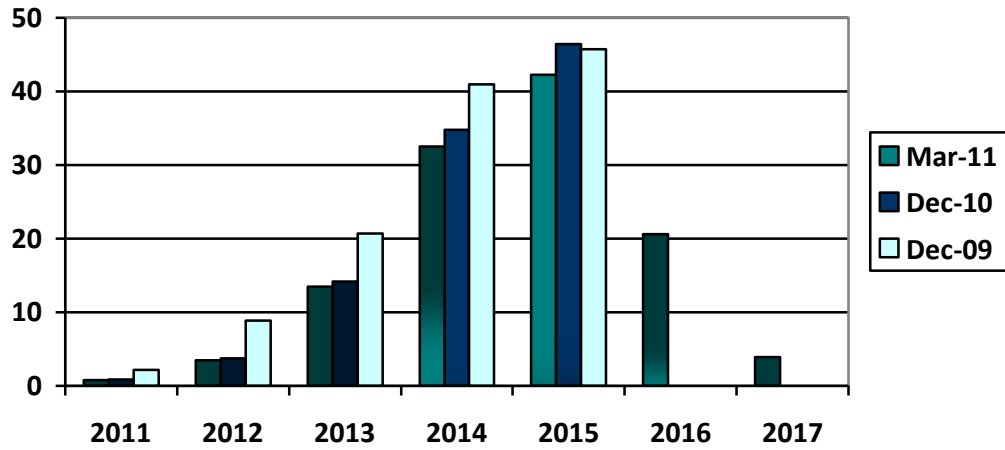


(Source: Standard & Poor's Lcd)

#### 4.3.3.2. Maturity schedule of European high-yield debt

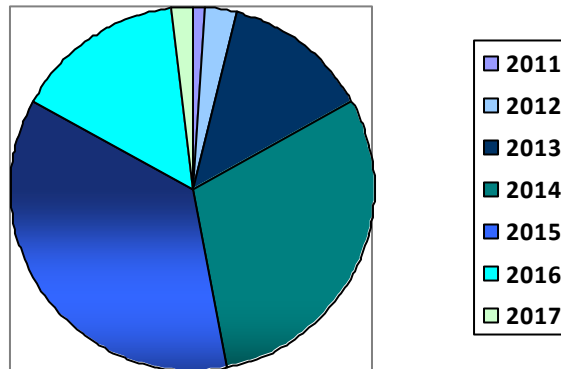
In the specific case of the leveraged loans expected maturity, although a wave of maturities is about to be due on the oncoming year, the data in Diagram 20 allow us conclude that the immediate risk has been put off, with the nearest big maturity wall expected in 2014 (30%) and 2015 (365) for leveraged loan issued as march 2011. This extension on the maturity period might have been achieved by Private Equity directors by using refinancing strategies like swapping all maturing leveraged loans with low or BB- rate by high yield bonds of any B/B+ loans, adding in this way some extra years to the maturity). Diagrams 20, 21, and 22 are clear regarding the fact that 2014 and 2015 will be crucial for the industry as leveraged loans maturities will reach €45.3 billion at the pick of the financial wall, which will boost the use of senior-backed high-yield bonds (as well as other kinds of floating-rate bonds) that are highly risky, causes poor deals and strip all investors safeguards, leading to a cyclical economic bust. A similar pattern can be found in the statistical analysis of high yield bonds expected maturity, where the data shows how the gradual reduction of maturities in leveraged loans implies the increase of high yield bonds though not in the same proportion.

**Diagram 20: Leveraged loan maturity schedule by par outstanding (ELLI at March 2011)**



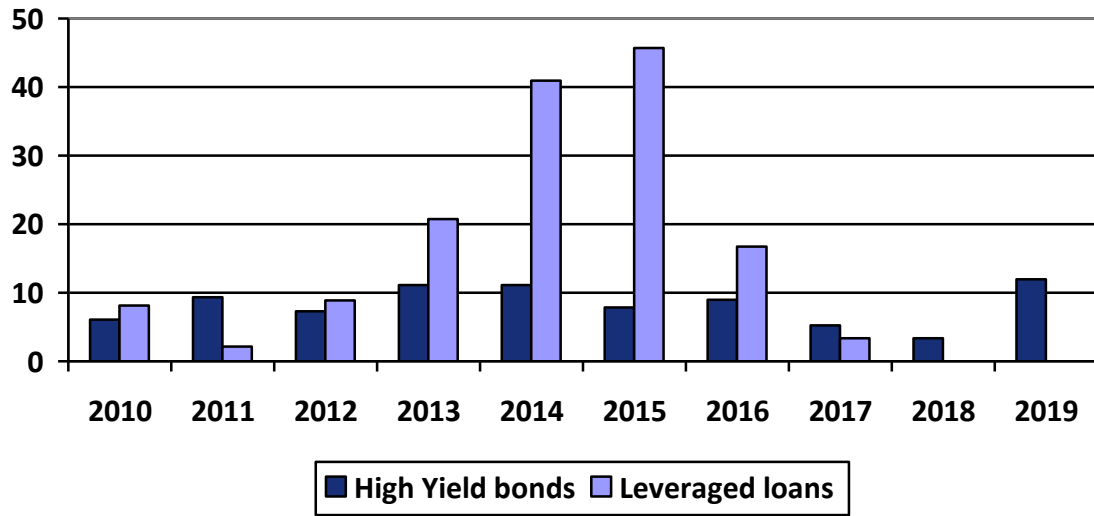
(Source: Standard & Poor's Lcd, ELLI)

**Diagram 21: Leveraged loan maturity schedule by par outstanding in % (ELLI at June 2010)**



(Source: Standard & Poor's Lcd, ELLI)

**Diagram 22: European High yield bonds maturity profile in €b**



(Source: Standard & Poor's Lcd, JP Morgan)

## V. CONCLUSIONS

The data processed and assessed to carry out the present research has shown how the capital structure of LBO deals has changed across the times. The leveraged buyouts are operations made up with heavy leverage by definition, and the main key of their profitability has historically been linked to the use of diverse types of debt, basically Collateralized Loan Obligations split in Institutional term and Pro-rata loan tranches, and high yield bonds; plus a small portion of equity. According to the principles of the LOBs, the debt acquired by the firm is supposed to be repaid with generated cash-flows of the acquired business after the implementation of an operative engineering. Although certain downturns had been previously recorded, the model was proving to be highly successful both in United States and Europe (the two main global markets for private equity activity), working the industry up into a frenzy in the period between 2005-2007, with leveraged buyouts reaching the highest levels ever recorded regarding quantity of deals, deal pricing, fundraising, deals closed, and utilization of debt to leverage operations. Covenant-lite loans and cheap debt widely available to everyone took the industry on the edge of the financial abyss, especially because the main driver of this debt bonanza –the CLOs- were heavily relied in the sub-prime mortgage market, which was the first industry affected after the financial crash hit the global markets in 2008.

The LBO activity, as any other financial activity, is subject to the boom-bust economic cycles, as it was enough proven in several academic researches outlined in our literature review. After the bust of the crisis, the British / European LBO industry panorama did change dramatically, and everything point to a permanent rather than a temporal change, with the consequent affectation to the current and future deals. Banks –main drivers of liquidity in debt markets- succumbed to the turmoil created by the credit crunch in real estate industry, capital markets started to squeeze with the lowest levels of activity ever recorded, and few options were left for Private Equity firms to cope with the increasing corporate default striking. As consequence, operations number did shrank considerably as well as the average value of de deals. Managerial teams have seen themselves in the middle of a tough scenario, with high cash-flows been increasingly demanded by PE directors in order to be meet covenants and conditions agreed with syndicated institutional lenders. As it has been shown in the figures displayed at the present work, the activity level during the last years did record huge losses in the industry as well as a high rate of financial failure, with several companies going either to receivership or eventually starting the



liquidation process. The liquidity squeeze had spread all around the LBO industry (as well as all the other investment assets PE invests in, like Venture Capital, Real Estate, Hedge Funds, etc.), giving birth to the toughest times for exiting LBOs and prospective new deals. Since then, reluctance from banks and institutional investors to issue new loans has marked the activity, forcing deals to shift from large & mega deals toward middle & small market, where energetic levels of activity has been lately recorded. This, along to a considerable increase of activity in secondary markets as well (probably caused by the abundant quantity of dry powder pending to be deployed near the end of most investments period) has pushed up high quality asset prices, enhanced high price competition, and doing extremely difficult to achieve large buyouts because of the scarcity of likely targets. It is noteworthy to mention how distressed debt investing has become highly attractive for institutional investors after the beginning of the economic recovery, because of the broad availability of carved out deals and defaulted companies looking for survive bankruptcy threat. Summarizing, the scenario left by the crisis has been characterised by a considerable liquidity squeeze that have affected the availability of average debt (collateralised loan obligations), causing that PE firms that had financed their LBOs using CLOs in the past have to struggle with the limited reinvestment periods. All of this in the middle of deficient balance sheets, scarcity of liquidity on the market, increasing legal and regulatory constraints, increasing requirements of dividend recapitalisation and the need to meet commitments related to the over leverage acquired during the days of thoughtless LBO activity. All of this, plus companies facing the imminent maturity wall looming in the horizon -which increases even more the likelihood of default- present a very complicated panorama for the Private Equity industry with an eye toward the future.

Nevertheless, the data collected has shown us how the phenomenon described in the preceding paragraph has fuelled the soar of new though riskier financing methods as an alternative to refinance/restructure portfolios. Albeit there are different ways to cope with the problem including equity injection, covenants amendments, senior debt refinancing, debt-for-equity swap among others, there are two kinds of debt securities that have experimented a considerable rise in late times: the high-risk senior-secured high-yield bonds and leveraged loans (with predominance of the first over the second). Regarding the leveraged loans, borrowers of these loans are usually non-investment grade, so lenders do require increased levels of security (yet most of the times the collateralization with senior debt means few or nothing). These loans offer an average yield of 170 basis points in the TED spread and an average maturity period of 6

years. As it was shown in this research, in absence of CLOs in capital markets (the lack of liquidity has put 'real-secured debt' only within reach of big PE firms, which hasn't been affected that much for the turmoil), leveraged loan issuance rose to unprecedented levels, becoming the main source of debt for all leveraged buyouts undertaken after the 2007. These instruments have recorded high default rates in the 2009-2010, with a tendency in the S&P/LSTA Default Rate rising in relation to other comparable issue-denominated rates. Nevertheless, leveraged loan defaults have been rather low during most of the stretches of the year 2011, showing a uniform trend to remain low, making unlikely the lack of liquidity and high default of 2009 to happen again.

In the case of high-yield bonds, these are typically issued by corporations rated with speculative-investment grade by specialized credit rating agencies, offering medium term maturity of 6-7 years, and high interest rates backed up with the senior debt of the company (which also entails a high level of risk for borrowers because of the high issuer default chance). The issuance of HYB has rocketed to unprecedented levels in the last times, surpassing even the issuance and use of leveraged loans; and this remarkable trend has not been affected by the fact that capital markets seem to be coming back to former levels with covenant-lite loan agreements scattering around again. The historical default rate calculated for these debt instruments has remained low, so they are generally considered as a valuable source of funds (mainly bought by mutual funds, pension funds and, in general, institutional investors constantly looking for risky asset class with generous yields, high protection and increased security), either for LBOs facing refinancing needs or new deals with capital requirements. Although so far the default rate for HYB has been rather benign there is still a high risk implied, for which PE firms must be rather cautious with regard to the debt they issue.

Another objective of this work is the analysis of the maturity wall looming in the near horizon and the refinancing options that PE firms are trying to implement in order to fulfill the obligations they have acquired through the covenants, without falling in receivership or failure. The maturity wall will be roughly starting in the year 2013, when significant amounts of loan debt will become due. Taking in account the average maturities of debt securities and counting backwards from the boom years of 2006 and 2007, the statistics suggest that the first in the line will be pro-rata loans, then institutional term loans, and finally high yield bonds. Albeit the data related to 2009 showed that near maturities for all instruments acquired in the boom years were due to happen

from the year 2012, data from 2011 points that leveraged loans will be reaching the maturity cliff on 2015 and 2016; from this, it is possible to have an insight about how proactively PE managers have addressed the maturity wall issue successfully. In the case of high yield bonds and leveraged loans acquired in the aftermath of the crisis, all issuers have put off maturities to the long term, providing a valuable breathing room for lenders/borrowers; however, special care must be taken regarding the use of high yield bonds as instruments to refinance looming debt, because as was stated before, these bonds offer little if nothing guarantees given the non-investment grade of the issuers.

Investors in Europe will continue facing financial restructurings and breakages, especially in the case of companies suffocated by the lack of liquidity. In this scenario, with a market interested in debt securities to cope with failure, operative and strategic aspects of the PE backed LBO could play a fundamental role in the upcoming developments of the industry (which is confirmed by a mounting global trend to get disciplined regarding LBO investing and stewardship). A rise in expected cash-flows and a performance strengthening seem to be one option to overcome the financial squeezes and maturity walls looming in the horizon, which can be complemented by a rational and controlled use of debt securities to provide any lack of remaining funds. Limited Partners and institutional investors appear to be more interested in companies offering sustainable returns through structural reengineering (even at expense of growth), which guarantees secured cash-flows, securitisation and priority in payments. The trend toward the focus in management and operational issues is a consequence of one of the most popular lessons learned from the crisis: the no abuse of debt to leverage the deals; and this acquires even more relevance in the current scenery, with massive flows of money from non-investment grade institutions, which potentially could lead to a new bubble in PE sector if this trend keeps on going on.

As a final conclusion, we can point out that we are attending to a general reconfiguration of PE industry, with loads of changes going on and new perspectives arising with regard to the ways the classic LBO process have been traditionally carried out. In general, LBOs have become more long-term approach, considering operational and strategic aspects of the business in the value creation process, instead of the classic short-term perspective focused in immediate and buoyant returns, and assets stripping that have caused damage in local economies. Nonetheless, the debt markets have experienced a sudden recovery with the mass apparition of

cheap financial instrument and covenant-lite bonds offering high yields and an even higher risk. In this context it is important to understand and learn the lesson left but the financial downturn and keep the debt levels at a certain conservative level in order to avoid market unbalances and impairments, making the industry able to cope with the upcoming maturity walls. In a scenery of debt markets recovery, short-term opportunistic LBOs must be left behind giving pass to a new perspective of value creation through business growth, incentives and focus in the entrepreneurial activity, forsaken the common belief that the only objectives an LBO must pursuit are profitability and returns. Organic and strategic growth, managerial incentivisation programs along with stock control measures, credit control and cash management will be useful tools to achieve this operational restructuring, allowing PE directors and limited partners to cope better with future market turmoil and maturities horizon, whilst the current debt due to mature from the year 2014 will have to be proactively handled for PE firms using the array of financial options available. At this point it must be said that nowadays there is not enough data related to these options and their effectiveness, so further studies will be required in order to monitor the success or failure degree of such methods upon the next years.

## **V.2            Limitations**

The extent of this research has been greatly constrained by two main factors: the **lack of time enough** to undertake a deeper insight about the current trends regarding financial instruments and the way they are reacting in the still-in-recovery private equity capital markets; and in the other hand the difficulty to collect substantial data from primary sources, due partly to the complexity of Private Equity firms procedures to hold interviews with their directors and executives as well as the procedures to release information regarding operational and financial measures; and partly due to the mentioned time limitation.

The **complexity** of the addressed topic and the fact that all the phenomena studied are currently underway has been a constraint as well.

Albeit news regarding bonds, loans rates and PE market fluctuations follow a common pattern, there have been over-night changes, especially because of the proximity of the maturity wall

and the increased need of cheap refinancing instruments. Thus, in the next subsection, the further studies required will be outlined in order to obtain a better understanding of the whole process and its developments in the current economic situation.

### **V.3 Future studies**

Although the present study has been done addressing the matter related to the financial structure of PE leveraged buyouts and the way general and limited partners have adapted their methods and strategies to the post-crisis market developments, deeper studies will be useful in order to obtain an accurate insight of the way Leveraged Buyouts and Private Equity industry is evolving in times of uncertainty. Further studies addressing the matter of the operational engineering, post-crisis LBO IRR performance and governance mechanisms, holding periods, IPOs and responsible exit strategies as well as managerial team intervention will provide understanding about likely future developments of the industry, allowing us to discover the exact impact of operational and strategic reengineering in returns generation, making feasible to meet all the commitments with limited partners and investors without recurring to complicated and risky financial reengineering. Given the scarcity of studies addressing the performance and performance of acquired companies in the aftermath of the crisis, there is not valuable data about how the introduction of operational/strategic changes will effectively contribute to the success of the LBO industry without falling in the financial distress that heavy leverage usually leaves. This has especial importance in the case of those investments whose maturity was expected for the period among 2007-2010, which have had to be delayed in order to restructure the whole business strategy to fulfil the covenants without falling into bankruptcy or receivership, in which case a deep study of the business performance will be extremely valuable to discover in what extent a radical operative redevelopment might help to ease debt requirements due to the volume of cash-flows generated. The data regarding this point is scarce and have not been made public yet, so only predictions about the matter have been done so far.

The actual situation regarding the financial reengineering also is also an interesting topic to carry out further researches. PE firms need real specialised advice in order to find accurate proportions of debt/equity that can be hold in a sustainable way, as well as the strategies that can be applied in such way. Since there is not yet information to that regard, a close monitoring

of the PE markets will provide in the next two years with valuable data regarding the new tendencies in financial engineering.

Finally, in order to have a more complete comprehension of the way leveraged buyouts might affect the development of the corporate sector in the United Kingdom, deeper studies regarding the impact of governmental regulation and tax structures on debt / capital markets will be fundamental. Capital allowances, interests accrued but not paid and goodwill deductibility, double taxation, etc., as well as regulations related to high yield bonds, mezzanine loans or even leveraged loans are instruments with a high likelihood to lead to another downturn for the national economy, leading the country to another turmoil with the consequent economic and social after-effects we have witnessed in the last three years, for which studies and researches about the topic will be highly required in the oncoming years.

## **VI. RECOMMENDATIONS**

What can Private Equity firms do in this general panorama of distress? Albeit the wide array of restructuring and refinancing techniques being proposed by specialised literature, including additional debt financing, additional equity injections, covenants amendments, sales proceeds, bond tender offer schemes, senior debt refinancing, debt for equity swap, receiverships or even liquidation, there is no reliable data about which –or what combination- is the most appropriate in order to face the looming maturity wall about to be due. Statistical information to that regard is not enough, given that the results of the financial engineering techniques will be able to be observed in two or three years from now, so the predominant trend in Europe has been the search of amend-and-extend solutions to push off maturities, but the lag in some will be unavoidable, especially in lower-rated and highly-leveraged credits (including leveraged loans, the most available post-crisis debt) are likely to be unable to refinance via high-yield instruments, IPOs or sale in the secondary market.

Given the debt burdens recorded and the difficulty for private equity firm to restructure their debt or finance acquisitions and/or capital expenditure, the exit strategies have been delayed by at least three or four more years more than originally expected. With a slow and constrained decision-making process is necessary for Private Equity firms to go conservative and get disciplined in the referred to the use of leverage, while Limited Partners require to get disciplined with regards to new investment and capital commitments to private equity firms. Although liquidity is in its recovery thanks to governments subsidies and interest rates rising, especial care must be put in the alleged reopening of debt leverage markets, starred by cheap debt securities with a high spread of risk implied, such as leveraged loans and high yield bonds buyers. Responsible investment must be undertaken in order to conjugate profitability and value creation with overall industry sustainability.

Although high yield secured with senior debt and leveraged loans have provided enough liquidity to LBO industry in recent years, filling the gap left by the disappearing of collateralised loan obligations and other sources of debt, both lenders and borrowers must analyse carefully the likely effects of these insecurities in the long-term, specifically in the maturity wall they will generate after the general CLOs wall looming from 2014. An extensive and stronger regulation

in this case might be helpful in order to preserve the loan market deep enough to be sustainable.

Covenant-lite and leverage loans are thought to provide poor deals, low returns, high risk and potential crisis. Investment must be done considering the long-term value creation of the business, the financial health of the industry and the organic growth. Companies currently facing financial disruptions as a consequence of the financial cliff must be prudent at the moment of choosing a proper reengineering strategy, which should fit to their particular needs, immediate obligations and the size of the debt burden to be re arranged. However, a considerable number of businesses going into receivership or bankruptcy, as well as companies with assets being totally or partially stripped and sold in secondary markets will be increasingly seen as an unavoidable consequence of the adjustments produced by the way the system is reacting to actual lending thig conditions and the presence of distressed assets spread through the balance sheets. Turnarounds toward asset class must be done carefully while side activities like mergers and acquisitions or financial insurance are still in the recovery.

Investors are becoming more selective and strong growth oriented, and general partners must focus in a greater integration of the early stages of the project. , creating acquisition policies uniform with existing debt, in order , especially considering that M&A activity has become fundamental as part of the operational restructuring and aggressive business plans that take in account the business environment. Acquisitions and equitisation are the expected main drivers in the buyout industry, and the trade sales and exit strategies via IPO's on secondary must be preferred in order to keep the capital market warm and working, which in the long run will lead not only to the deploy of the outstanding dry powder capital, but also a general trend to invest from institutional investors eager of channel their money in a rebounded market.



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<[http://www.watsonwyatt.com/asia-pacific/EAlerts/AU/PE\\_secondaries\\_final.pdf](http://www.watsonwyatt.com/asia-pacific/EAlerts/AU/PE_secondaries_final.pdf)>

## APPENDICES

Rod Ball [Rod.Ball@nottingham.ac.uk]

Actions

To:

Zecenarro Monge, Carlos

15 March 2011 13:26

Carlos,

As long as the data is sourced there is no problem using our data.

Rod

Regards Rod Ball

CMBOR

TEL: 0044 (0)115 951 5091

To:

cmbor@nottingham.ac.uk

Sent Items

15 March 2011 10:16

**Sirs Centre for Management Buy-Out Research & PEI Media**

My name is Carlos Zecenarro and I'm a last-year MBA student of the University of Wales Institute. Currently I'm working on my Dissertation about private equity-backed leveraged buy-outs and their role in the British post-crisis recovery, for which some of the data contained in your quarter publication UK Buy-Outs Report (available at the British Library) would be highly useful.

Therefore, I would like to request your kind permission to reproduce (with the correspondent references to the authors) parts of such publication on my ongoing research.

Thank you in advance, yours sincerely

Carlos Zecenarro

C.Zecenarro\_monge@uwic.ac.uk

**Diagram 2: Comparative Europe / US LBO fundraising in € billions**

(Source: EVCA Analytics)

Europe/US fundraising in €b	2004	2005	2006	2007	2008	2009	2010
European market	92	117	187	215	38	17	37
US market	44	104	116	140	49	5	8
Top Limited Partners in the world	USA	USA	USA	USA	USA	UK	UK

**Diagram 3: United Kingdom incremental fundraising during year in £ millions**

(Source: CMBOR, Ernst & Young)

UK incremental fundraising in £m	2007	2008	2009	2010
Buy-outs funds raised (amount)	£10,994.8 millions	£4,737.3 millions	£1,490.4 millions	£1705.7 millions
Number of Buy-outs deals closed	414	385	275	179

**Diagram 4: European buyout only activity (% of total transaction value) for deal size**

(Source: EVCA/PERE Analytics)

Europe Buy-Out activity in %	2007	2008	2009	2010
Less than €250 m	5.1	11.8	22.1	16.5
€250 m - €500 m	22	44.6	43.3	44.6
€500 m - €1000 m	15	12.9	12.6	20.6
Above €1000 m	57.9	30.7	22	18.3

**Diagram 5: European Buy-Out for deal size (in €m)**

(Source: EVCA/PERE Analytics)

European activity by deal size in €b and number	2007	2008	2009	2010
> €1bn total value	42925	47191	5513	5746
> €1bn number of deals	12	15	2	3
€500m-€999m total value	7731	6510	1238	3845
€500m-€999m number of deals	12	10	2	6
€250m-€499m total value	8318	4456	1958	1436
€250m-€499m number of deals	25	14	6	4
€150m-€249 total value	2568	2714	367	200
€150m-€249 number of deals	15	15	2	1
€50m-€149m total value	1918	1452	1004	428
€50m-€149m number of deals	20	17	10	5
<€50m total value	360	188	110	57
<€50m number of deals	17	8	4	2

**Diagram 6: United Kingdom Buy-Out - Buy-In activity for deal size (in £m)**

(Source: CMBOR, Ernst & Young)

UK Buy-Out - Buy-In activity in £m and number	2007	2008	2009	2010
Less than £10m number of deals	416	409	328	203
Less than £10m value in £m	900	841	548	380
£10m - £25m number of deals	89	68	18	25
£10m - £25m value in £m	1476	1065	320	410
£25m - £50m number of deals	67	45	19	17
£25m - £50m value in £m	2266	1542	619	590
£50m - £100m number of deals	42	25	7	10
£50m - £100m value in £m	2799	1823	483	678

<b>£100m - £200m number of deals</b>	35	26	10	18
<b>£100m - £200m value in £m</b>	5445	4026	1504	2469
<b>£250m - £500 number of deals</b>	17	5	1	8
<b>£250m - £500 value in £m</b>	6133	1712	325	2623
<b>Over £500m number of deals</b>	15	8	2	5
<b>Over £500m value in £m</b>	27518	8715	1801	5866

**Diagram 7: European Debt-Leverage ratio in deals less than €100 m**

**Diagram 8: European Debt-Leverage ratio in deals more than €100 m**

*(Source: CMBOR/Barclays Private Equity)*

<b>Debt-leverage (%)</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Average equity in transactions below €100m</b>	44	51	66	67
<b>Average equity in transactions above €100m</b>	34	43	61	70
<b>Average debt level in transactions below €100m</b>	46	37	29	30
<b>Average debt level in transactions above €100m</b>	58	48	36	29
<b>Average mezzanine in transactions below €100m</b>	3	3	2	0
<b>Average mezzanine transactions above €100m</b>	7	8	2	0
<b>Other finance in transactions below €100m</b>	7	9	3	3
<b>Other finance in transactions above €100m</b>	1	3	1	1

**Diagram 9: European LBO initial / follow-on investment (%) in LBOs**

**Diagram 10: Debt syndication in LBO deals**

*(Source: EVCA/PERE Analytics)*

<b>Categories in %</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Percentage of buyout deals done using investment syndication</b>	47%	36%	28%
<b>Percentage of follow-on financing respect of the total amount invested</b>	44%	57%	53%

**Diagram 12: European Debt-Leverage ratio in deals less than £10m**  
**Diagram 13: European Debt-Leverage ratio in deals more than £10m**

(Source: CMBOR/Barclays Private Equity/Ernst & Young)

Debt-Leverage ratios (in %)	2007	2008	2009	2010
<b>Average equity</b>	39.7	46.3	61.6	67.2
<b>Equity in deals more than £10m</b>	41.6	48	61.7	63.1
<b>Equity in deals less than £10m</b>	34.6	41.9	61.6	88.2
<b>Average Debt</b>	47.8	39.8	31.7	25.7
<b>Debt in deals more than £10m</b>	50	40.1	32.7	29.1
<b>Debt in deals less than £10m</b>	41.7	38.7	30.4	8.1
<b>Average mezzanine</b>	4.2	4.6	1.5	0.9
<b>Mezzanine in deals more than £10m</b>	3.4	4.7	2.2	1.1
<b>Mezzanine in deals less than £10m</b>	6.2	4.3	0.7	0
<b>Average loan notes</b>	4	4.3	2.2	2.1
<b>Loan notes in deals more than £10m</b>	1.8	3.6	2.5	2.6
<b>Loan notes in deals less than £10m</b>	10	6	1.8	0
<b>Others</b>	4.4	5	3	4
<b>Others in deals more than £10m</b>	3.2	3.5	0.9	4.1
<b>Others in deals less than £10m</b>	7.6	9.1	5.5	3.7

**Diagram 14: TED spread for three-month dollar LIBOR less three-month Treasury Bills**

(Source: Bloomberg)

Period	Basis points (average 10-50)
Sept 2007 – Sept 2008	100 -200
Oct 2008 – Oct 2009	450
Nov 2009 – Feb 2010	191
March 2010	10.57
June 2010	48.64
August 2010	27.44

**Diagram 20: Leveraged loan maturity schedule by par outstanding (ELLI at March 2011)**

*(Source: Standard & Poor's Lcd, ELLI)*

Category (€b) as of March 2011	2011	2012	2013	2014	2015	Cumulative
Leveraged loan maturity at March-11	0.76	3.49	13.51	32.49	42.3	92.55
Leveraged loan maturity at Dec-10	0.88	3.77	14.18	34.74	46.45	100.02
Leveraged loan maturity at Dec-09	2.18	8.85	20.72	40.96	45.73	118.45

**Diagram 21: Leveraged loan maturity schedule by par outstanding in % (ELLI at June 2010)**

*(Source: Standard & Poor's Lcd, ELLI)*

Category (%) as of March 2011	2011	2012	2013	2014	2015	2016
Leveraged loan maturity schedule	1	3	13	30	36	15