



CORPORATE  
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Financing Change

# PRIVATE EQUITY DEMYSTIFIED

## An explanatory guide

John Gilligan and Mike Wright



# Financing Change

An initiative from the ICAEW Corporate Finance Faculty

This is the first report to be published under *Financing Change*, the thought leadership programme of the ICAEW Corporate Finance Faculty. The faculty is the world's largest network of professionals involved in corporate finance and counts accountants, lawyers, bankers, other practitioners and people in business among its members. *Financing Change* aims to advance the economic and social contribution of corporate finance activity by promoting better understanding and practice.

Once a niche market for finance, private equity today competes with the public markets as a provider of equity capital, and is the owner of many large companies which are household names and major employers. Private equity has been the subject of public debate in many jurisdictions and a number of common public policy challenges have arisen. If future private equity deals are to achieve their full economic potential and avoid being constrained unnecessarily by legislators and regulators, it is important that dealmakers continue to have regard to the context in which private equity transactions take place, and that greater effort is made to provide all stakeholders with clear, transparent and objective information.

*Private equity demystified – An explanatory guide* was commissioned to shed light on the motivations of the main participants in private equity transactions and on their risks and rewards. It deals with issues of international relevance, using UK-specific examples to illustrate operating models, remuneration practices, employment regulations and taxation policy.

The report also includes a review of academic studies on private equity transactions from around the world. The findings from these studies, which are woven into the analysis, show not only what we currently know about the impact of private equity on the economy, on companies and on other stakeholders, but also what we don't know.

Private equity's challenge will be to sustain a responsible approach to public scrutiny by regulators, governments and other stakeholders, such as trade unions and the media.

Media coverage of private equity and some public commentary have frequently displayed a poor understanding of how private equity operates, yet these sources are often relied upon as fact. This report provides an objective explanation of private equity, recognising that for public policy to be effective it must be developed on an informed basis.

The work is unlikely to result in a reduction in the scrutiny of private equity. Its value will be measured in better-informed debate, in private equity's effective engagement with wider stakeholders and in well thought-out public policies.

We welcome views and other comments on this work and related themes and on the areas identified for future research. For further information on the *Financing Change* programme and how to get involved please email [financingchange@icaew.com](mailto:financingchange@icaew.com) or telephone +44 (0)20 7920 8685.

For information on the ICAEW's work in funding academic research please contact Gillian Knight, Research Manager on +44 (0)20 7920 8478.

This report, which includes a summary of academic studies and references, is also available to download from [www.icaew.com/corpfinfac](http://www.icaew.com/corpfinfac).

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**John Gilligan and Mike Wright**

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# Overview

## Objective of the report

This report seeks to contribute to the debate about the private equity industry by bringing clarity to how the industry works and by providing a summary of the findings of approximately 100 peer-reviewed academic papers which have examined aspects of the private equity industry over the past 25 years.

## Issues raised in the debate on private equity

The public debate about private equity has focused on several areas: taxation, the impact of buy-outs on employment, and risks in the banking system related to money lent for buy-outs. In the case of the large buy-out market, questions have also arisen about the accountability, performance and mode of operation of private equity fund managers.

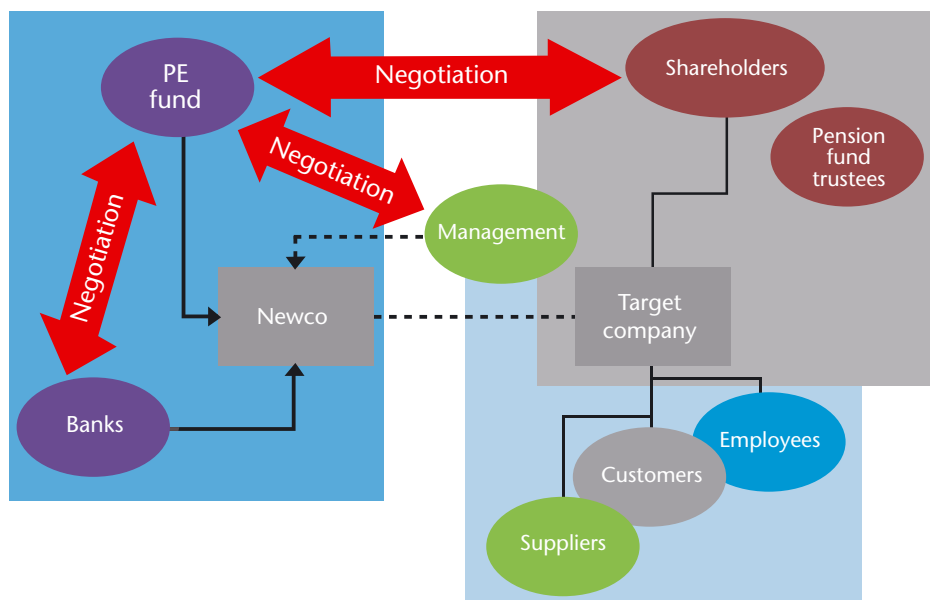
## What is private equity?

Private equity is risk capital provided in a wide variety of situations, ranging from finance provided to business start-ups to the purchase of large, mature quoted companies, and everything in between. Buy-outs are examples of private equity investments in which investors and a management team pool their own money, usually together with borrowed money (in which case they are called 'leveraged' buy-outs or LBOs), to buy the shares in a business from its current owners.

## Who are the participants involved in private equity?

The parties to a private equity transaction are: the private equity fund manager (who manages the pooled money on behalf of the investors in the private equity fund); the company, including both its shareholders and its management and, in the case of an LBO, the banks which are proposing to lend money. Each of these parties has their own perceptions of risk and expectations of reward.

### Participants in a leveraged buy-out



## Economic theory and the principal-agent problem

Economic theory argues that there is a principal-agent problem in many companies whereby managers (as agents of shareholders) are not incentivised to maximise the value to the shareholders (as principals) of a corporation. Private equity seeks to address this problem by tightly aligning the interests of managers and shareholders to achieve economic efficiencies. This idea of alignment is central to all the economic structures observed in the private equity market.

## What are the differences between private equity funds and quoted equity funds?

Private equity funds differ in strategy, structure and objective compared to other investment funds. In essence, private equity fund managers seek to control the businesses they invest in and to choose an optimum capital structure for their investee companies. Thus private equity funds operate with much better information and stronger controls and influence over management than funds holding quoted equities. To achieve this they forego liquidity in the individual investments and take on financial risk in each investment by the use of debt.

Similarly there are material differences between private equity funds and corporate investors and hedge funds. These are explained in the main body of the report.

## What do private equity fund managers do?

Private equity fund managers have four principal roles:

1. Raise funds from investors. These funds are used to make investments, principally in businesses which are, or will become, private companies.
2. Source investment opportunities and make investments.
3. Actively manage investments.
4. Realise capital gains by selling or floating investments.

**Fund raising:** funds are raised from international investors, many of which are pension funds, banks, insurance companies and high net worth individuals. These investors will generally invest via a limited partnership, as will the private equity fund managers themselves.

**Sourcing investments:** a private equity fund must source and complete successful transactions to raise further funds. A significant amount of effort and resource is invested in prospecting for transactions and relationship management with individuals who may give access to deals. These include investment bankers, accountants and other advisers and senior figures in industry. Increasingly, investment teams are focusing on particular sectors of the economy. This contrasts with early buy-out experience where investors were usually financial experts rather than sector specialists.

**Active management of investments:** increasingly, fund managers are becoming hands-on managers of their investments. While they do not exercise day-to-day control, they are actively involved in setting and monitoring the implementation of strategy. The academic evidence suggests that this active management style may be a significant factor in the increase in the value of many successful investments.

**Realising capital gains:** the industry generally talks of a three to five year exit horizon, meaning that the investment will be made with the explicit assumption that it will be sold or floated within that timeframe. The academic evidence suggests that there is a wide variation in the length of time any investment is held. There is no evidence that the industry systematically seeks to 'flip' investments in a short time period.

## How are private equity fund managers rewarded?

Private equity fund managers are generally rewarded with fee income and a share of other income and capital gains known as carried interest:

- **Fee income:** Fund managers receive management fees that are expressed as a percentage of the funds raised. The larger the fund, the greater the fee income, although the percentage generally declines from around 2% in smaller funds to 1-1.5% in larger funds. This fee income pays for the operating costs of the fund manager's business, and any excess belongs to the partners of the fund management company. Therefore, there is an incentive to maximise the fund size (consistent with the investment opportunities for the fund) in order to increase the management fee income.

- **Carried interest:** The second source of reward for private equity fund managers is a share in the profits of the fund; this is generally known as 'carried interest'. It has been estimated by the private equity industry that on average, carried interest constitutes around 30% of the average private equity fund manager's reward although the variance around the average is significant. Once the investors have achieved a certain pre-agreed rate of return (called the 'hurdle rate'), the fund managers will share in the excess, usually 20% of any excess. The hurdle rate is calculated on the total amount committed to the fund rather than the amounts actually invested. This acts as a disincentive against raising a fund larger than the capacity of the private equity fund manager to invest it, because the hurdle rate on un-invested funds reduces the manager's carried interest. As the market has matured there has been a constant refinement of industry practice to attempt to ensure that the carried interest calculation tightly aligns the interests of investors and fund managers. Management fees are often an advance of carried interest but are nevertheless payable to the manager even if the fund generates no profits and no carried interest.

### What risks do private equity fund managers take?

To further align the interests of investors and fund managers, it is almost always the case that fund managers must invest alongside the investors, on the same terms in any fund. If a fund loses money, the fund managers will make the same proportionate loss on their investment.

In some arrangements, managers (and sometimes other founder investors) are permitted to invest directly in each individual investment as well as, or instead of, in the whole fund. This practice is called co-investment. However, this is increasingly uncommon as it can create misalignment between the fund investors and the fund managers where the gains in one investment are disproportionate to the value of the overall portfolio.

The objective of all of these structures is to align the interests of all the parties and to heavily incentivise and reward performance above a threshold level.

### How are private equity fund managers taxed?

In the UK some rewards are taxed as income while some are subject to capital gains tax. Carried interest is typically a mix of capital profits, interest received, dividends and fees. Only the first element is taxed as a capital gain. Fee income is usually, but not always, taxed as income. The most common structure of a UK private equity fund is the limited partnership. This partnership is not itself subject to taxation (in the UK) but the individual partners are. The tax that they pay will depend on a number of factors including their residence and domicile. Common alternative structures to a limited partnership include investment trusts (eg, 3i Group plc) which are exempt from paying UK capital gains tax.

### What does the academic evidence say about investment performance of funds?

Private equity funds provide extensive information to their investors, but hitherto they have provided very little information to any external parties which has made it difficult to independently assess the performance of funds. The available data are contradictory. Evidence sponsored by the private equity industry trade associations indicates that private equity funds out-perform alternative forms of investment such as quoted shares, although the variation between the top performing funds and the others is very wide. Academic evidence attempts to adjust for risk and fees and finds that the private equity funds do not out-perform on average. However, these studies also find that the top performing funds have, to date, had enduring out-performance. One fact is clear: investors, who have good information and an incentive to get it right, continue to wish to invest in high quality private equity funds.

### Who are the investors in private equity funds?

Pension funds constitute the largest category of investors in private equity and venture capital (VC) funds and the largest proportion of funds raised are buy-out funds which accounted for 84% of private equity funds raised in 2006. Ultimately many of the investors are members of the wider public who contribute to pension schemes and collective saving funds and purchase pension products.

## Why is private equity attractive to investors?

Investors seek to have a balanced portfolio of investments that achieves their desired mix of capital growth and income yield. Private equity forms a part of the asset allocation of those portfolios that are seeking capital gains through higher risk/higher return investments.

Since commitments to a fund are drawn down as investments are made, as opposed to being drawn down in full when the private equity fund is raised, investors benefit from being able to use the capital committed but not drawn down for other investments until the cash is required by the private equity fund. This increases the returns on the amount committed to private equity funds when compared to certain other fund types. The private equity fund is protected from the risk of investors not being able to fund their commitments by both due diligence on their investors prior to allowing them to invest, and a series of agreements between all the investors to meet any shortfall.

## How are the investors in private equity funds taxed?

Many of the investors in private equity are exempt from paying UK capital gains tax. For example, UK pension schemes or investment trusts do not generally pay capital gains tax on any investments. Similarly, foreign financial institutions will generally pay tax in the country in which they are resident. This is true of all investment classes, not just private equity. As a result of these arrangements it is unclear what the total amount of tax attributable to private equity investment is in the UK. However, the same would apply to any other type of investment category operating in the UK: asset classes are not themselves taxed, investors are.

## What is the role of banks in private equity investments?

In traditional banking, a bank will lend and build a portfolio of loans, although some of the larger loans might be shared between banks through a process of syndication. In this model, bankers are constrained by the fact that any losses will fall on their own balance sheet. In recent years it has been increasingly common for banks to act as arrangers of loans rather than primarily as lenders, and the proportion of loans held by the arranging or 'lead' bank after a transaction has been falling for a number of years. In this 'arranger model' of banking, the incentive is to maximise the amounts lent, subject to the constraint of being able to syndicate the loans to other banks (and other investors).

## What are the banks' rewards and the risks?

In the 'arranger model', the lead bank's major source of income becomes fees from arranging the debt and syndication rather than interest from lending. There is very little academic research around this gradual change in banking incentives and the potential impact on risk and conflicts of interest within the arranging and syndications markets.

## How do banks manage risk in individual private equity investments?

If a business does not perform to plan, there will be a series of monitoring tools, or financial covenants, which will alert the lending banks. These covenants are agreed prior to a loan being granted. If a company breaches one or more of these agreed limits, the banks will typically have a series of options available to them. These include renegotiating the loan package and appointing a receiver to sell the business or its assets to repay the loans. The negotiation of the bank's covenants is therefore a crucial part of the management of the risk of a transaction for the company, the bank and the equity investors.

Where the covenant arrangements are less stringent or are not tested as frequently as industry norms or the agreement allows the private equity funds to inject new capital to rectify any breach, the loans are known as covenant light or 'cov-lite' loans. This may be viewed as a transfer of risk from the company and private equity funds to the banks, or as a mechanism to allow the private equity funds time to make changes to the business that will ensure that future covenants are met.

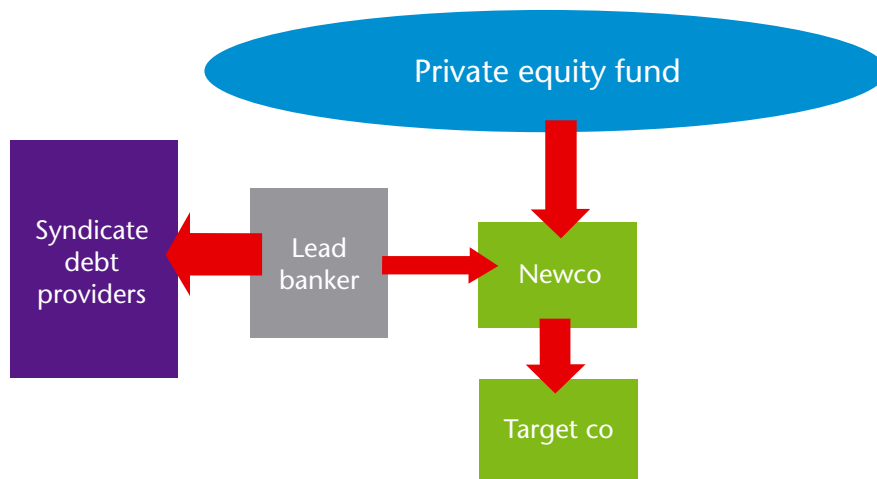
## How do banks spread risks through the financial markets?

A syndicated loan is one where a group of banks work together to provide funds for one borrower. The broad syndication of loans throughout the financial market has had two major consequences: firstly the total risk is distributed across many institutions, reducing the impact of any one corporate default or failure; secondly it has become increasingly difficult for observers of the markets to establish where the risks are actually held within the financial system. This uncertainty is considered to have exacerbated the problems seen during the credit crunch that began in late 2007.

## How is a buy-out structured?

In a buy-out, a new company ('Newco') is established that raises funds to acquire the target company.

### Outline structure of a leveraged buy-out



## What is the role of debt?

Private equity funds use a combination of their own funds and bank debt to acquire companies. The debt is the so-called 'leverage' or 'gearing'. The use of leverage increases the returns for private equity investors from successful investments and creates financial risk in under-performing investments.

## What are the limits on the amount of debt?

The amount of debt available to fund a buy-out is a function of the company's ability to repay the capital amount and to pay the interest on the capital, as well as the security available to the bank in the event that the company cannot repay the loans. Using debt increases financial risk in businesses, and if a business does not generate enough cash to repay the capital and interest, under-performance can lead to failure. A crucial skill of a private equity fund manager and a banker is to balance this risk/reward equation when structuring a transaction.

There are two common measures of gearing: 'interest cover' measures the ability to service the ongoing interest cost of a loan structure and 'capital gearing' measures the ratio of total debt to total equity in any investment. When interest rates are low, either interest cover rises and capital gearing stays constant, or the total amount of debt borrowed increases to keep interest cover constant. Since the late 1990s in the UK, capital gearing has increased as interest cover has been broadly held constant.

## What are the sources of cash to repay debt?

Cash can be generated in any business in a limited number of ways: from increased profitability; more efficient uses of capital; reduced taxation; or from new capital from outside lenders or investors. Any debt in a buy-out has to be serviced by either profits or capital efficiency improvements. Capital efficiency might mean selling assets that are under-performing or leasing assets rather than owning them. The body of academic evidence is weighted against the idea that buy-outs are successful simply because of asset sales or reduced investment.

## How does information assist in managing investment risk?

In order to minimise investment risk, it is generally necessary to have high quality information and the ability to act on it. In public companies information is tightly controlled and released to the market to prevent insider trading. In a private equity investment, private equity fund managers rely on information of a much more detailed kind from different sources, including:

- the management themselves, in a management buy-out;
- the results of extensive due diligence by accountants, lawyers and consultants prior to the investment; and
- unfettered access to all board minutes and day-to-day trading information of the company after the transaction.

## How do private equity funds control their investments?

As noted above, the ability to act decisively comes from the fact that a private equity fund manager actively manages and controls each company using:

- contracts which limit certain actions of management without the consent of the investors;
- voting control over all material matters;
- full access to company information and board minutes; and
- a culture and incentive system that rewards success highly and penalises failure.

## How does taxation impact on private equity-backed companies?

### The academic evidence

Using debt rather than equity to fund a business reduces the corporation tax bill of any company because some interest is deducted from profits before tax is calculated, whereas dividends are not. Since 2005 the rules in the UK have been tightened so that if debt is provided by a shareholder on a 'non-arm's length basis' then the interest is not allowed to be deducted against corporation tax. In LBOs, a great deal of effort is applied to creating a structure that is tax efficient. This is generally the case for almost any company, but comes into sharp relief when a company changes the way that it is funded, as in a buy-out. It has been argued that the returns earned by leveraged buy-outs can be explained by the effect of interest payments on corporation tax and there is extensive academic research investigating this hypothesis. Early studies in the USA showed some support for the argument, but since these studies were completed there have been many changes in the taxation of leveraged buy-outs in many countries, including the UK. The most recent studies around the world have found no evidence to suggest that taxation is an adequate explanation for the performance gains seen.

## How are management teams incentivised and rewarded?

### The academic evidence

Managers (and sometimes a wider employee group) in buy-outs are expected to invest in the shares in the company. Most of the rewards from buy-outs are derived from capital gains on the sale or flotation of the business, not from salary and bonuses. If a buy-out fails, the investment of the managers and employees will usually be lost. The incentive structures of the employee equity holders are therefore very similar to those of the private equity fund managers. Academic evidence strongly suggests that these incentives have a positive effect on company performance.



## What is the impact of private equity on employees?

### The academic evidence

It has been argued that the pressure to generate cash to repay loans results in reduced wages, benefits and pensions and worsening human resource management practices after buy-outs. The body of academic evidence addressing this question has produced mixed findings: it finds that wages seem to rise less rapidly in buy-outs but that non-wage incentives and other HR policies generally improve. This is especially true where new management joins the business with the transaction (a 'buy-in'). Employment subsequently increases after an initial decline, especially in MBOs and the employment effect is more positive in buy-outs than following traditional acquisitions. It is argued that buy-outs and buy-ins take place where performance improvements can be identified prior to investment, rather than occurring randomly. Therefore companies with unsustainably high wages and benefits are often the targets of private equity managers.

### Conclusions and closing remarks

This report highlights a number of issues that may be of interest to regulators and legislators regarding potential financial risk created by new entrants and new structures being utilised within private equity fund investments.

The review of academic papers shows that research is broadly supportive of the thesis that the alignment of incentives created by the private equity industry has a positive effect on the performance of the cohort of companies that have been acquired by private equity funds. While corporate failure does occur in leveraged buy-outs, with all the associated social consequences of any corporate failure, on balance it appears (based upon the evidence available to date) that private equity is an efficient tool to restructure and reinvigorate certain types of organisation.

There are many areas, however, where academic evidence is lacking. Areas for further research are referred to in the main report and include:

- How does the second wave of private equity deals of the 2000s differ from the first wave in the 1980s?
- How is value created in private equity deals in the short and long term? Is private equity a form of 'shock therapy' or a sustainable long-term form of ownership?
- What is the relative importance of cost and efficiency improvements versus growth in the performance of private equity deals?
- What is the role of private equity firms in the performance of investee firms? Is private equity a successful form of shareholder activism or not?
- To what extent do efficiency improvements in private-equity backed firms increase overall economic efficiency or do they largely just transfer the costs of supply chain inefficiencies to other companies, employees and customers?
- What differences are there in the extent and nature of value creation methods and returns generation in public to private deals, divisional buy-outs and family firm buy-outs?
- What differences are there between primary and secondary buy-outs of the same firm in terms of management equity, leverage, value creation, and returns?
- How is globalisation of private equity firms impacting on the economies of countries where they invest?
- What are the regional impacts of private equity deals?
- How will the growth in competition in the private equity market change the risks and rewards for both the private equity market participants and the broader economy?
- What are the causes of failure in private equity investments? Do they differ from other firms that fail?



- Is there any relationship between performance gains and the breadth of equity ownership, or not? Are large incentives for a few key individuals necessary to achieve success, or do all employees respond positively to equity incentives?
- How have changes in the global banking market affected the magnitude and ownership of risk in the financial markets? Has wide syndication increased risks by changing incentives or reduced risk by dispersing it more effectively in the wider market?
- How and by whom should the global private equity and wider alternative investment markets be regulated?

# 1. THE PRIVATE EQUITY MARKET

In section one we examine the size and growth of the private equity industry in the UK.



## 1.1 An introduction to the private equity market

In this section we examine the size and scope of the UK private equity market and the significance of larger buy-outs and high profile public-to-private buy-outs.

## 1.2 What is private equity?

The private equity market provides capital to invest in unquoted companies including public companies that are de-listed as part of the transaction. These investments may take the form of a purchase of shares from an existing shareholder (a buy-out if control is acquired) or an investment in new shares providing fresh capital to the investee company (development capital). Frequently both types of funding are provided in any given transaction.

A broader definition would include funding for early stage venture capital investments. However, we exclude this sector of the market from this report as it has not been the focus of attention in recent debate.

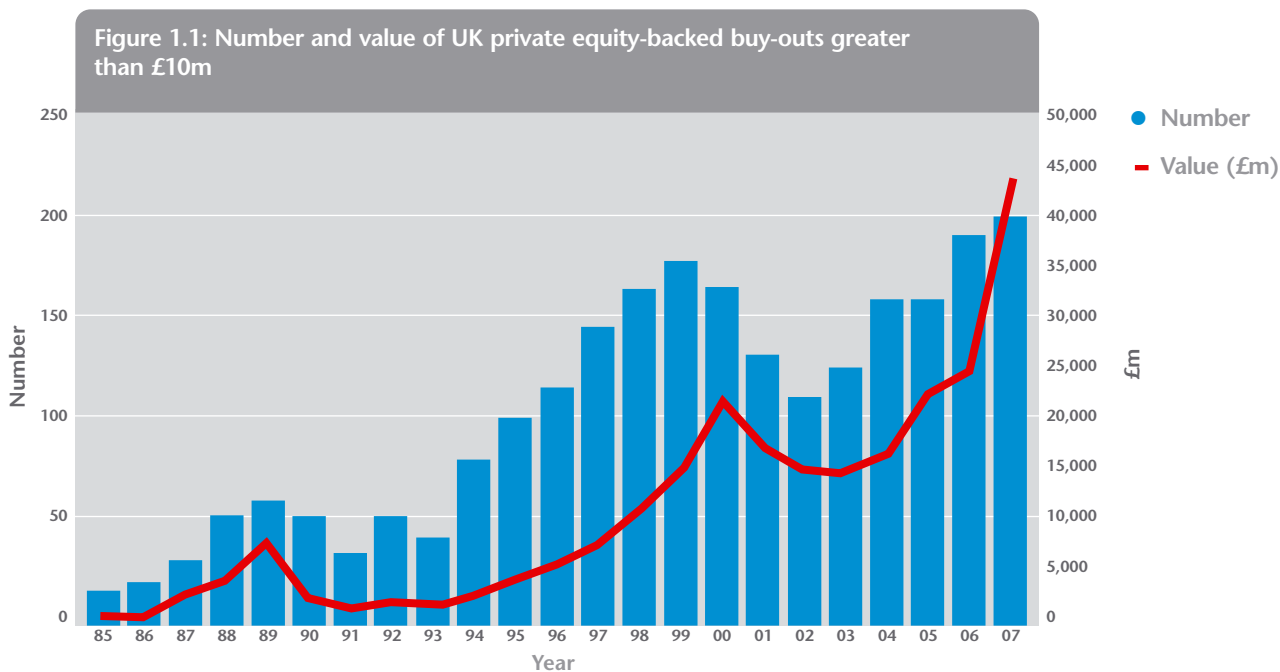
The term 'private equity' has no consistently-applied definition and is increasingly applied to any investor that is not quoted on a recognised financial market. In this report we employ the definition used within the established private equity industry and draw distinctions between private equity funds and other organisations that use similar investment strategies, but have important structural and strategic differences. Hedge funds, value funds, active funds and similar institutions have some similarities to private equity, but there are clear organisational and strategic differences that set them apart. Similarly organisations such as the Virgin Group of companies and the Icelandic group Baugur have many similarities in their investment strategies with private equity funds, but have material differences that set them apart from the mainstream private equity industry.

It is increasingly common to see private equity funds investing alongside other types of organisation and combining the industry knowledge of a trade bidder with the transactional and transformational skills of a private equity fund.

## 1.3 How big is the private equity market?

The private equity market has two distinct components: venture capital, targeted at new and early stage companies, and development capital and buy-outs, targeted at mature businesses. In this report, we concentrate on larger buy-outs.

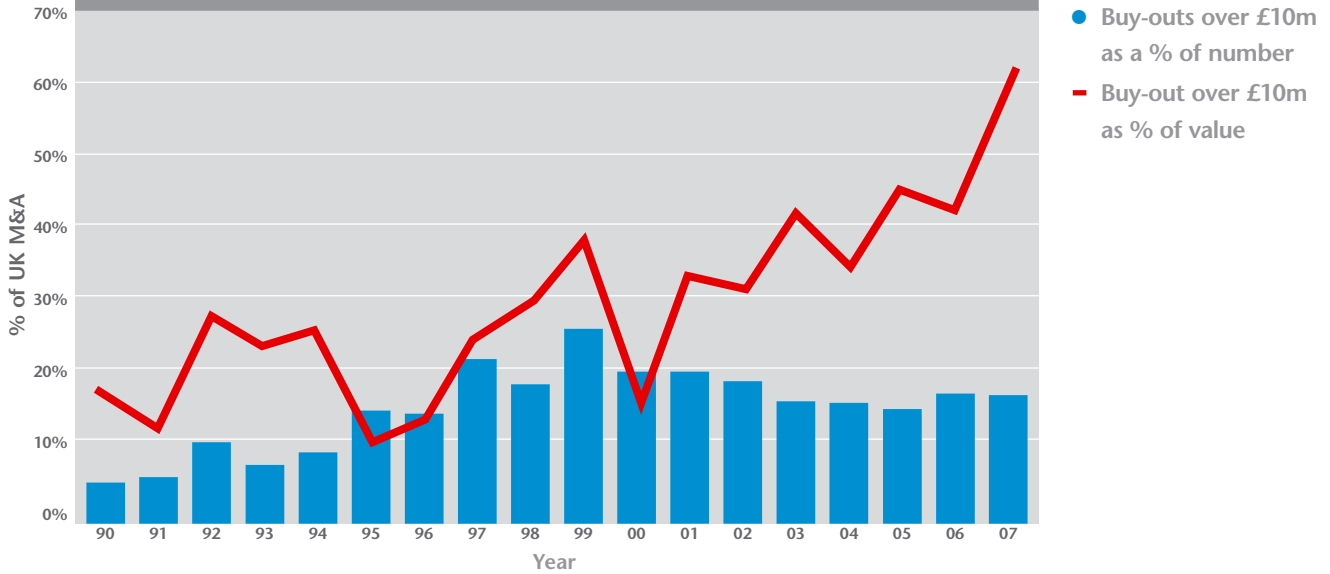
There are two important measures of the size of the buy-out market: the amount invested in buy-outs; and the amount of new funds committed to future buy-outs.



Source: CMBOR/Barclays Private Equity/Deloitte.

As illustrated in Figure 1.1, the market for larger buy-outs is cyclical around a strongly growing trend.

Figure 1.2: Private equity-backed buy-outs above £10m as percentage of UK takeover activity

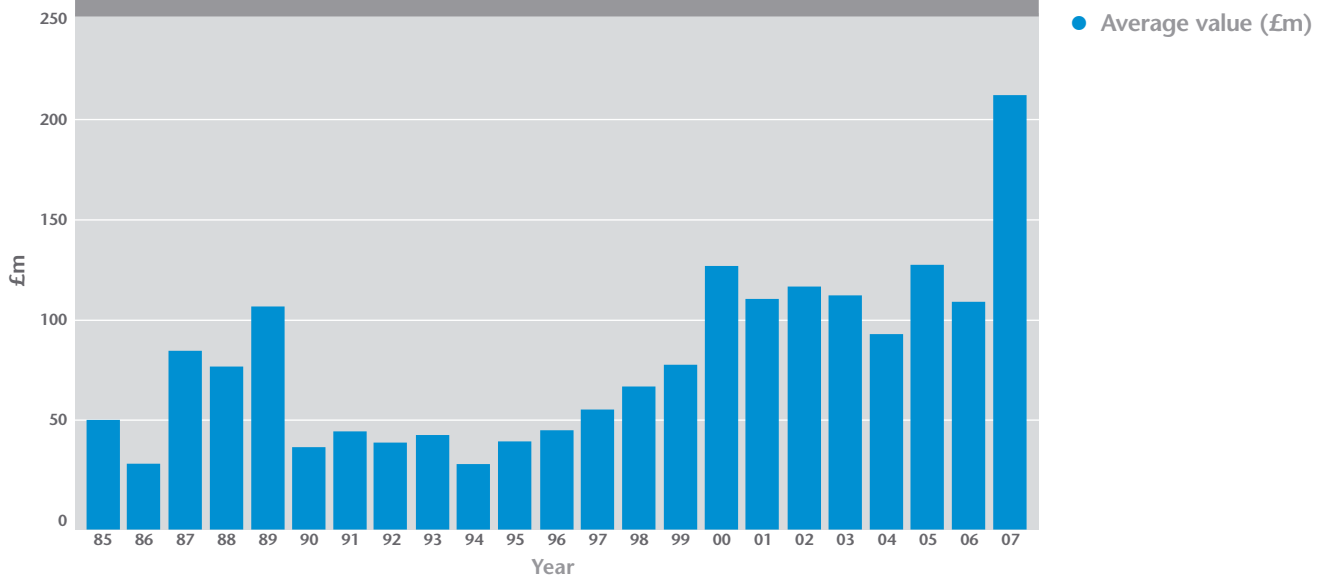


Source: CMBOR/Barclays Private Equity/Deloitte and Office for National Statistics.

From Figure 1.2 it is clear that private equity-backed buy-outs over £10m account for a substantial share of all takeover transactions by number and value: 15-20% of all acquisitions (excluding smaller deals) are buy-outs. However, this has represented an increasing proportion of the value of the acquisition market. In the past five years around 40-45% of the value of mergers and acquisitions (M&A) in the UK were private equity-backed buy-outs over £10m.

BVCA (British Private Equity and Venture Capital Association) data show that £29bn was raised in 2006 by funds focused on buy-outs. Of this money 85% (£25.1bn) is targeted at transactions with a value in excess of £100m. According to EVCA (European Private Equity and Venture Capital Association) data, in 2005 (the latest year for which they have published data) €71.8bn of venture and private equity funds were raised, of which €45.6bn (63.5%) was raised by UK fund managers. €57.7bn (80%) of the total amount was targeted at buy-outs.

Figure 1.3: Average value of UK private equity-backed buy-outs (£m), above £10m

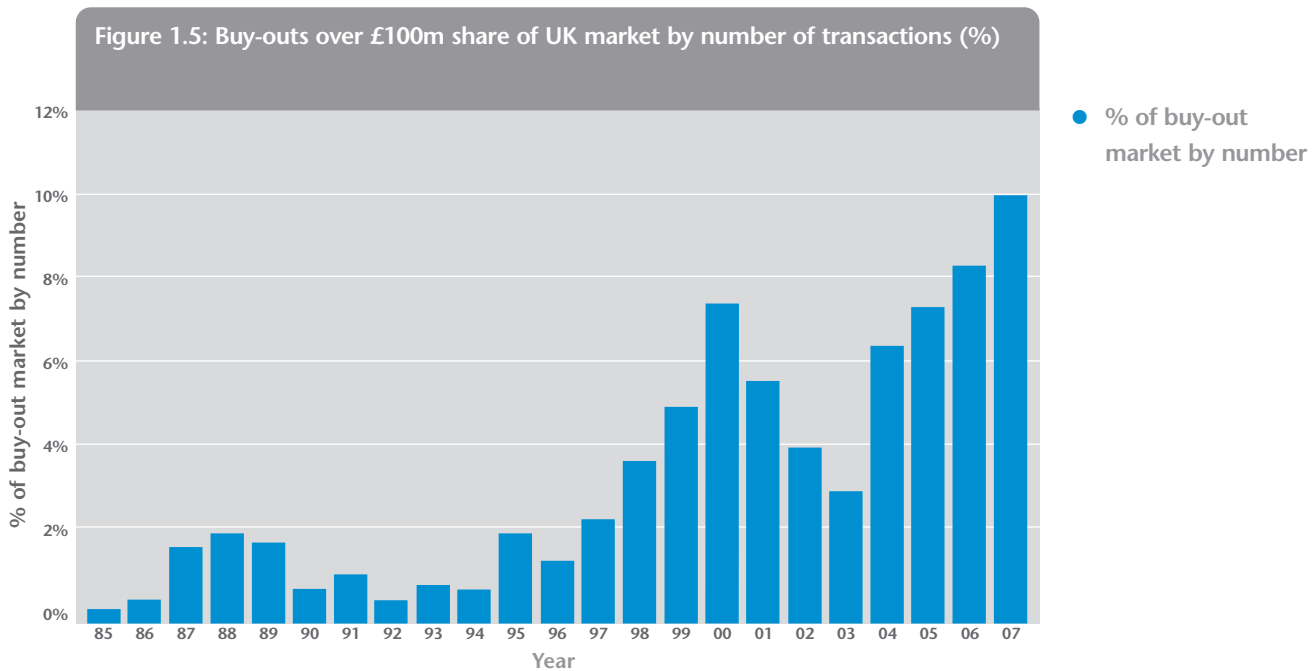
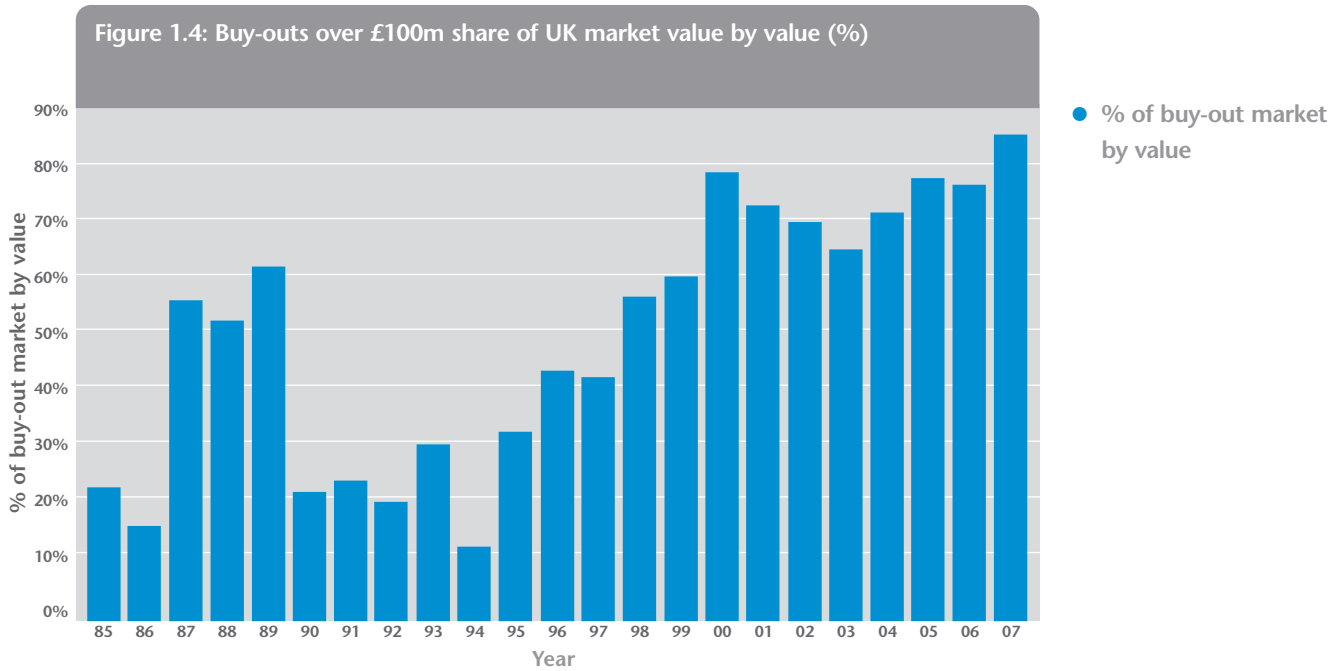


Source: CMBOR/Barclays Private Equity/Deloitte.

Figure 1.3 illustrates that average deal size in larger buy-outs fell after the end of the 1980s but has been generally increasing since the mid-1990s. The increase in 2007, primarily the first half, reflects the impact of the £11bn acquisition of Alliance Boots plc by funds managed by KKR. The impact of the subsequent credit crunch has been to reduce the availability of debt and therefore the average value of deals is expected to fall in 2008.

## 1.4 How significant are larger deals in the private equity market?

Most public interest is focused on the large buy-out market. However the most recent data (Figure 1.4 and Figure 1.5) show that buy-outs with a deal value of £100 million or more represented only a tenth of total buy-outs by number, despite representing almost nine-tenths by value. Buy-outs are therefore a very important feature of the UK mid-market.



## 1.5 What have been the biggest UK deals?

Table 1.1 shows the top 20 largest buy-outs in the UK to date.

**Table 1.1: Largest UK buy-outs to end April 2008**

Buy-out name	Year	Value (£m)	Source	Exit	Year
Alliance Boots	2007	11,100	P2P	None	
MEPC	2000	3,488	P2P	Trade sale	2003
Saga & AA	2007	est. 3,350	Secondary buy-out	None	
EMI Group	2007	3,223	P2P	None	
Spirit Amber	2003	2,510	UK divestment	Trade sale	2006
Somerfield/Gateway	1989	2,157	P2P	Flotation	1996
Yell Group	2001	2,140	UK divestment	Flotation	2003
Unique Pub Company	2002	2,013	Secondary buy-out	Trade sale	2004
Meridien Hotels	2001	1,900	UK divestment	Trade sale	2004
The AA	2004	1,750	UK divestment	Trade sale	2007
Debenhams	2003	1,720	P2P	Flotation	2006
Laurel Pub Company	2001	1,630	UK divestment	Trade sale	2004
Warner Chilcott	2005	1,614	P2P	Flotation	2006
United Biscuits	2006	1,600	Secondary buy-out	None	
BUPA Hospitals	2007	1,440	UK divestment	None	
Avecia	1999	1,362	UK divestment	None	
Saga Group	2004	1,350	Secondary buy-out	Secondary buy-out	2007
United Biscuits	2000	1,300	P2P	Secondary buy-out	2006
Brake Bros	2007	1,300	Secondary buy-out	None	
Gala Clubs	2003	1,240	Secondary buy-out	None	

Source: CMBOR/Barclays Private Equity/Deloitte.

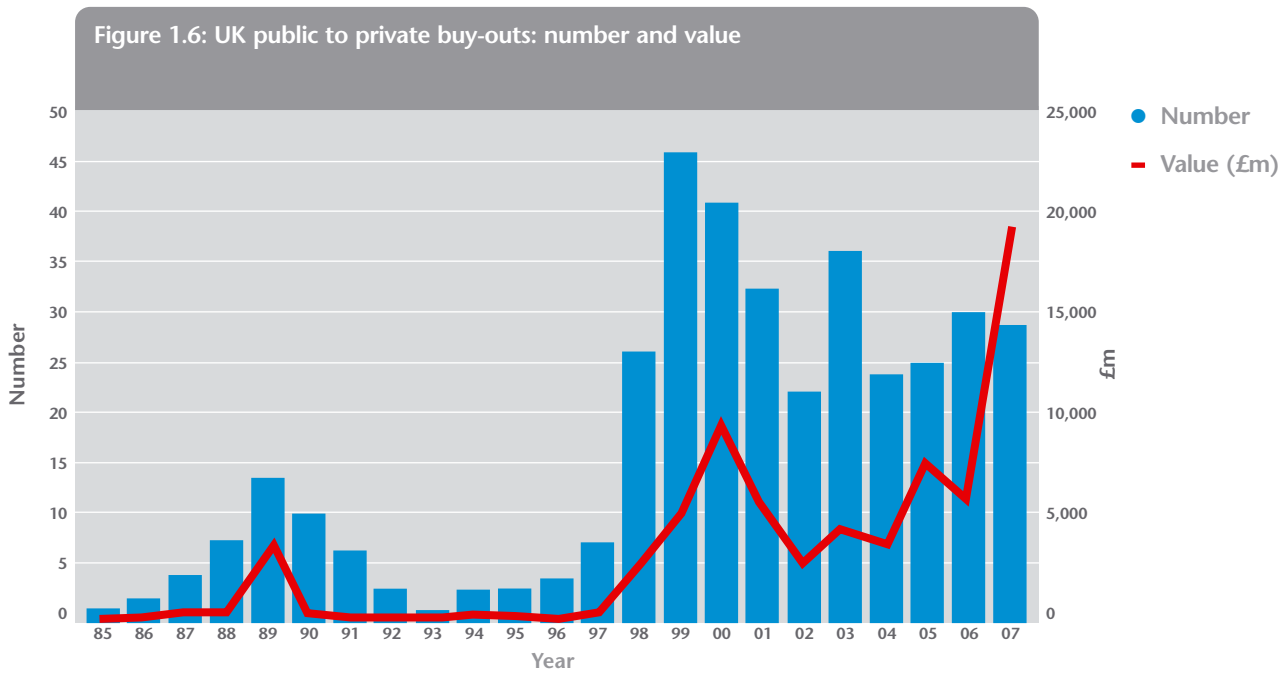
Of these deals:

- seven were divestments of divisions of larger corporations;
- seven were public to private transactions; and
- six were secondary buy-outs of businesses already owned by a private equity fund.

Therefore approximately a third of the largest buy-outs ever seen in the UK involve taking a company private, a third involve the acquisition of a division of a corporation and a third are sales of investments from one private equity fund to another, including United Biscuits and AA/Saga that have been both primary and secondary buy-outs.

Of the top 20, 12 of these have fully exited, three have partially exited and four have floated. None to date has failed, although not all are successes.

## 1.6 How significant are public to private transactions in the private equity market?



Source: CMBOR/Barclays Private Equity/Deloitte.

Public company acquisitions by private equity funds ('public to privates', or 'P2P's) have attracted much scrutiny and comment. Questions of insider dealing and failure of corporate governance have been examined by a number of authorities in the UK and USA. As seen in section 1.5 above, around a third of the largest buy-outs have been public to private buy-outs. Figure 1.6 illustrates the pattern of UK P2P activity, showing a sustained period of activity from around 1998 to date, culminating in the UK's largest transaction to date, Alliance Boots plc. However, P2Ps represent a relatively small proportion (by number) of the overall private equity market.

## 1.7 What is the rationale for a public to private transaction?

P2P transactions are predicated on an investment thesis that a company is either fundamentally under-valued by the market or, more commonly, that the optimal strategy for the business is inconsistent with the requirements of the public markets. It is argued that a turn-around strategy or a re-positioning can be more effectively achieved where the shareholders and managers are closely aligned and fully informed. A private company is free from the obligation to report in a prescribed format on a quarterly basis to shareholders who are free to sell their investment at any time in a liquid market. The private equity investors (shareholders), through the private equity fund managers, are compensated for the lack of liquidity by being able to materially influence corporate strategy and board composition by direct intervention. This ability to influence and control is one of the reasons put forward to explain the difference in the leverage of private equity-backed companies when compared to publicly quoted companies.

Managers of investee companies accept this increased leverage because they will share in the gains that will be generated if all goes well, yet they have a finite exposure to the costs of any failure. It is argued that this realignment of incentives results in better management of the business and its assets, especially during periods of transition.

### **Findings 1.1: Does corporate governance in public to private deals differ from other listed corporations before buy-out? The academic evidence**

The UK Combined Code on Corporate Governance recommends that the roles of CEO and chairman should be separately held and that to avoid concentration of power in one or two individuals, there should be a powerful presence of non-executive directors.

Studies have shown that before they go private, P2Ps tend to separate the functions of CEO and chairman of the board less often than those firms remaining public. However they do not, on average, have fewer non-executive directors.

Companies going private have a higher concentration of shares in fewer hands, including management, than firms remaining public. UK P2Ps have higher duality of CEO and board chairman than traditional acquisitions of corporations. P2Ps have lower valuations than traditional acquisitions of listed corporations by other corporations and it has been suggested that outside bidders may have been deterred from bidding because of the potential difficulties involved in dealing with significant board ownership. However, Australian P2P evidence indicates that insider ownership is not significantly higher in P2Ps than for traditional acquisitions of listed corporations.

Appendix Table 1 summarises studies of pre-buy-out governance in P2Ps.





## 2. WHO ARE THE PARTICIPANTS IN A PRIVATE EQUITY TRANSACTION?

In section two we examine the motivations and constraints around each of the major participants in the private equity market.

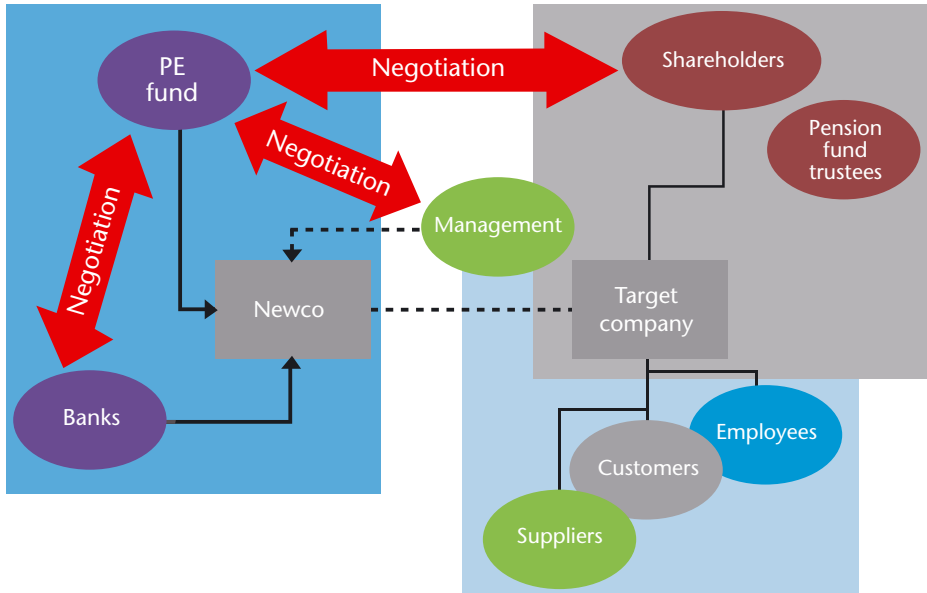


## 2.1 Introduction

In this section we examine the motivations and constraints around each of the major participants in the private equity market. We summarise the academic evidence to date regarding a number of the questions that have been raised about the activities of private equity firms and their impact on companies and wider stakeholder groups. We then go on to clarify the principles that underlie the taxation of the various parties.

### 2.1.1 Who's who?

Figure 2.1: Participants in a leveraged buy-out



There are two sides to every corporate transaction: those acting with or for the purchaser, and those acting with or for the owners of the target company (the target), the shareholders. In a buy-out the key figures on the purchaser's side are the private equity fund that will invest in the transaction and the bankers who will lend in support of the deal. They must negotiate between them a funding package to support the bid. The bid will be made by a newly-formed company, usually referred to as 'Newco', which will be funded by the bank and private equity fund.

On the target's side are the shareholders who are generally seeking to maximise the value they receive from any sale. They will be represented by the management of the business or independent advisers (or both) who will negotiate with the private equity fund acting on behalf of Newco. If the target has a pension fund, the trustees of the fund may also negotiate with the private equity fund regarding future funding of the existing and future pension fund liabilities.

The role of the incumbent management of the business in any buy-out varies. They may be part of the group seeking to purchase the business and therefore be aligned with the private equity fund (as illustrated in Figure 2.1). This is often termed an insider buy-out, or more often simply a management buy-out or MBO. Alternatively the private equity fund may be seeking to introduce new management if they successfully acquire the business. This is an outsider buy-out or management buy-in or MBI. In some circumstances management find themselves acting as both a vendor and a purchaser. For example, in a buy-out by a private equity fund of a company that is already owned by another private equity fund, management may on the one hand be vendors of their current shares, but also be purchasers of shares in the company set up to acquire the target. This is a secondary buy-out.

Where management have a conflict of interest the shareholders' interests are represented by independent financial advisers and often, in a quoted company buy-out, the non-executive directors of the target.

The role and rewards of management are a key difference between a corporate takeover and a management buy-out. In a management buy-out, management will be expected to invest their own money in the business acquiring the target and expect to have the risks and rewards of a shareholder of that business, not an employee. The majority of the rewards to management therefore, take the form of capital gains payable on successful exit, not salary

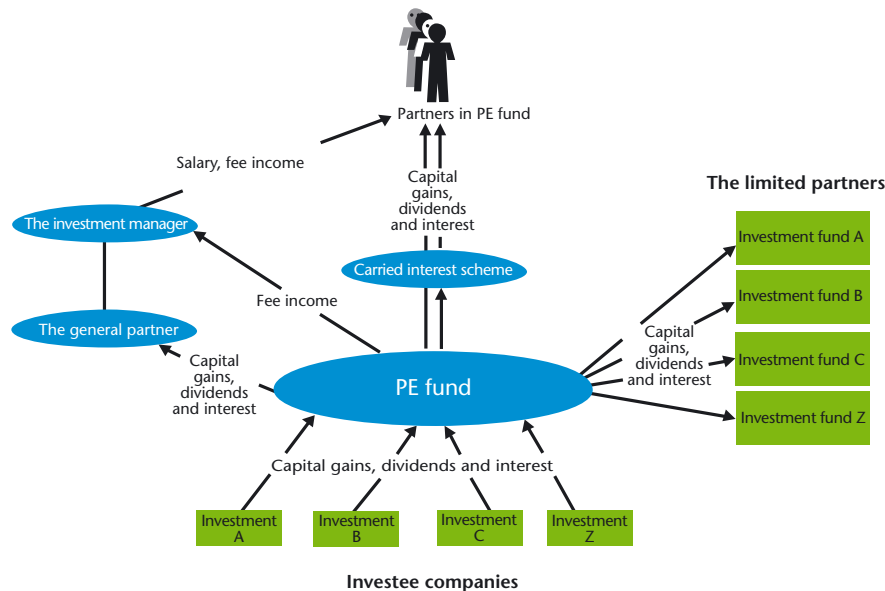
and bonuses paid during the life of the investment. This again tightly aligns the interests of management and investors.

In this report we examine the incentives and processes used by each participant to a transaction and summarise the evidence of the impact of private equity transactions on both these participants and the wider stakeholders.

## 2.2 The private equity fund

### 2.2.1 What is a private equity fund?

Figure 2.2 Structure of a typical private equity fund



Much, but not all, of the investing done in the private equity market is by private equity funds. A private equity fund is a form of ‘investment club’ in which the principal investors are institutional investors such as pension funds, investment funds, endowment funds, insurance companies, banks, family offices/high net worth individuals and funds of funds, as well as the private equity fund managers themselves. The objective of a private equity fund is to invest equity or risk capital in a portfolio of private companies which are identified and researched by the private equity fund managers. Private equity funds are generally designed to generate capital profits from the sale of investments rather than income from dividends, fees and interest payments.

A private equity fund may take minority or majority stakes in its investments, though invariably it will be the latter in the larger buy-outs. At the same time that a private equity fund makes an investment in a private company, there is usually some bank debt or other debt capital raised to meet part of the capital required to fund the acquisition.

### 2.2.2 How are private equity funds structured?

**Private equity funds** can be structured in many possible ways, though in essence they are similar to many other collective investment vehicles. The differences that arise are largely due to regulatory and tax issues in the various jurisdictions that impact the operation of the fund and its investors. Figure 2.2 illustrates one possible structure for a private equity fund, and this section describes the function of each entity in this illustrative structure.

The private equity fund (PE fund) is the collective vehicle that makes the investment in a portfolio of target companies. It will be structured to achieve a balance between:

- maximum tax efficiency to the investors and managers;
- managing regulatory cost/burden and benefit;
- controlling and managing potential liabilities to the investors and managers; and
- maintaining confidentiality regarding its partners and investors.

In larger private equity funds it will usually be one (or potentially in any individual investment, a combination) of an English or a Scottish limited partnership, an offshore limited partnership or a quoted private equity investment trust (PEIT).

In the UK the most common form is an English (or a Scottish) limited partnership. This type of vehicle has no legal status in its own right; it exists only to allow its partners to act collectively.

Each partnership:

- has a finite life (usually 10 years with a possible two-year extension, although some, eg, Alchemy Partners, have investors with rolling annual commitments);
- has one general partner with unlimited liability for the liabilities of the partnership;
- has a number of limited partners (LPs) whose liability is limited to the amount of their equity investment in the partnership; and
- is managed by an investment manager on behalf of all the partners.

**The investment manager** is a separate entity owned by the private equity fund managers collectively. It is structured as a partnership, possibly an English or a Scottish limited liability partnership but often an offshore limited partnership (eg, in Guernsey/Jersey).

The manager receives a fee from each fund it manages for providing management services to the fund.

**The general partner (GP)** is a company owned by the investment manager. The GP has unlimited liability for the liabilities of the private equity fund, a condition necessary for UK partnerships to comply with the Limited Partnership Act 1907. However, the individual partners cap their potential liability by investing through a limited company.

In addition, individual partners of the private equity fund manager are required by LPs to invest their own money directly in the fund; generally this will be in aggregate between 1% and 5% of the fund.

External investors are **limited partners (LPs)** as they have limited their total liability to the amount of committed equity capital they have invested. LPs themselves may be structured as corporations, funds or partnerships. The legal agreements between LPs and GPs are designed to align their interests one with the other.

### 2.2.3 What do private equity fund managers do?

Private equity fund managers:

1. Raise funds from investors which are used to make investments, principally in private companies.
2. Source investment opportunities and make investments.
3. Actively manage those investments.
4. Realise capital gains by selling or floating investments.

**Fund raising:** funds are raised from international investors, many of whom are pension funds, banks, insurance companies and high net worth individuals. These investors will generally invest via a limited partnership, as will the private equity fund managers themselves.

**Sourcing investments:** a private equity fund must source and complete transactions in order to be able to raise further funds. A significant amount of effort and resource is invested in prospecting for transactions and in relationship management with individuals who may give access to deals including investment bankers, accountants and other advisers and senior figures in industry. Increasingly investment teams are focusing on particular sectors of the economy. This contrasts with the early buy-out experience where investors were usually financial experts rather than sector specialists.

**Active management of investments:** increasingly, fund managers are becoming hands-on managers of their investments. While they do not exercise day-to-day control, they are actively involved in setting and monitoring the implementation of strategy. The academic evidence suggests that this active management style may be a significant factor in the increase in the value of many successful investments. (See section 3.)

**Realising capital gains:** the private equity industry generally talks of a three to five year exit horizon, meaning that the investment will be made with the explicit assumption that it will be sold or floated within that timeframe. This timeframe leads some commentators and critics to describe private equity investment as short term.



The academic evidence, summarised in Appendix Table 5, suggests that there is a wide variation in the length of time any investment is held. There is no evidence that the industry systematically seeks to ‘flip’ investments in a short time period, but it does occur occasionally.

## 2.2.4 How does a private equity fund differ from a quoted equity fund?

Private equity funds and funds that invest in public companies operate using different business models. Some quoted funds are specifically designed as income funds that seek to pay to investors a running yield generated from dividend income from shares and interest on bonds. As noted above, private equity funds do not generally aim to generate yield. They are comparable to capital growth quoted funds that seek to generate the majority of their return from increased value in their investments. Key differences between private equity fund models and capital growth quoted equity funds are set out in Table 2.1.

**Table 2.1: Key differences between private equity and quoted equity funds**

Private Equity Funds	Quoted Equity Funds
<b>Control and influence</b>	
Private equity funds usually own a substantial or controlling stake in the business.  Individual private equity investments are controlled using a detailed legally binding shareholder’s agreement that establishes the contractual rights and obligations of the company, its management and the investors.	Funds investing in quoted companies usually acquire small minority stakes, which offer no control and no special rights.  Institutional shareholders may be influential, but have no contractual control.
<b>Financial structure of individual investments</b>	
Private equity transactions are financed using a combination of the private equity fund’s own capital, and third-party debt provided on a deal-by-deal basis; thus there is usually a degree of debt in a private equity fund’s individual investments.  The financing structure of a private equity investment usually requires the business managers to personally invest in the company they manage. They share the risks and rewards of the business.	Funds that invest in quoted shares do not increase the borrowings of the company that they invest in. They may have borrowings within their fund structure, but they do not introduce debt as part of their investments.  The rewards for management in quoted companies are a matter for the remuneration committee, not the shareholders. Managers are not generally required to buy shares in their company although they may benefit from capital growth through option schemes.
<b>Information prior to investment</b>	
Private equity funds will undertake substantial financial, commercial and legal due diligence prior to making an investment.	Quoted company funds have access to and rely only on publicly available information on the companies they invest in.
<b>Information and monitoring while invested</b>	
Private equity fund managers receive wide ranging commercially sensitive information including detailed monthly management information and board minutes from each company the fund is invested in, and also often have board representation.  Investors in private equity funds receive regular detailed information and commentary on each of the private equity funds investments from the fund managers, including opinions on future prospects. The guidance for this communication is summarised in the EVCA Reporting Guidelines.	Quoted fund managers predominantly rely on company announcements, management presentations and analysts’ research to monitor their investments.  Investors in quoted funds receive no detailed information on the operations or management of the individual investments.
<b>Liquidity in underlying investments</b>	
Private equity investments are illiquid: private equity funds cannot generally sell a portion of their investments and therefore rely on a sale of the whole company to achieve a capital gain.	Quoted shares are freely tradable, albeit in small ‘parcels’, on whatever stock exchange they are quoted. Quoted funds can therefore readily vary the proportion of their investment in any company.
<b>Rewards to fund managers</b>	
Private equity fund managers receive management fees from each fund they manage, but they also invest directly in the funds they manage and further share in any aggregate realised profits of the fund over its whole life through ‘carried interest’. As carried interest can take many years to build up and be paid, it has been argued that private equity fund managers are in effect tied into their funds for a longer period than equivalent quoted fund managers.	Quoted fund investment managers receive fee income from the funds they manage and are often rewarded for the quarterly increase in the value (realised and unrealised) of the portfolio they manage.
<b>Rewards to the managers of the company acquired/invested in</b>	
Management are incentivised primarily to achieve a capital gain. They invest in the financial instrument with the highest risk/reward profile in the capital structure. The private equity investor negotiates the senior managers’ employment terms directly with the managers.	Managers are incentivised to achieve whatever their employment contracts reward and whatever the board agrees. In many cases this is not explicit, but may be a combination of increasing the share price, increasing profits or growing the scale of the business. Public shareholders have little direct control of employment terms which are usually agreed at a remuneration committee of non-executive directors.

**Table 2.1:** continued

Private Equity Funds	Quoted Equity Funds
<b>Fund structure and fund liquidity</b>	
<p>Generally private equity funds have a limited life of 10 years. Investors in private equity funds make commitments to invest in the fund, and pay in their capital when required to do so to fund investments recommended by the private equity fund managers. When realisations occur, the fund will repay capital to investors. An investor cannot withdraw their investment and future commitment from a fund. If they wish to change their commitment they require the private equity fund manager's approval of an alternate investor. There cannot therefore be a 'run' on a private equity fund.</p> <p>Earnings are distributed not retained.</p> <p>Private equity funds do not have leverage within the fund.</p>	<p>A quoted equity fund has permanent capital in the form of share capital or units in a unit trust, and investors in such a fund commit all their investment to the fund when they invest but can sell their shares or units when they choose to. Funds are provided by new investors and retained earnings. Some also use borrowings at the fund level to increase returns.</p>

In essence, private equity fund managers seek to control the businesses they invest in and to choose an optimum capital structure for their investee companies. Thus private equity funds operate with much better information and stronger controls and influence over management than funds holding quoted equities. To achieve this they forgo liquidity in the individual investments.

### 2.2.5 How does a private equity fund differ from a group of companies?

The analysis below compares and contrasts private equity funds and trading groups of companies.

**Table 2.2: Key differences between private equity and trading groups of companies**

Private Equity Funds	Trading Groups
<b>Control and influence</b>	
In principle, similar.	
<b>Financial structure of individual investments</b>	
<p>Borrowings are ring-fenced within each investment without recourse to the private equity fund.</p> <p>Profits and losses in each investment are taxed separately from other investments and therefore interest cannot be offset against profits in other investments.</p>	<p>Any borrowings are often cross-guaranteed by all companies in a trading group.</p> <p>Profits and losses within a group can be offset against each other. This allows interest to be offset against profits in a group wherever profits occur.</p>
<b>Information prior to investment</b>	
Similar but private equity firms, as professional acquirers with less sector knowledge, may use more external advisers than a corporate acquirer during due diligence.	
<b>Information and monitoring while invested</b>	
In principle similar, although private equity firms are known for their tight monitoring of cashflow and performance against budget.	
<b>Rewards to the managers of the company acquired/invested in</b>	
<p>Management are shareholders and are incentivised primarily to achieve a capital gain. They invest in the financial instrument with the highest risk/reward profile in the capital structure. The private equity investor negotiates terms of employment directly with the senior management.</p>	<p>Managers are employees whose rewards are a function of their employment contracts and parent company policy.</p> <p>In a quoted group, managers are likely to own shares possibly through a share option scheme or other share incentive scheme.</p>
<b>Liquidity in underlying investments</b>	
Similar: both must sell/float an investment to realise value although value created may be reflected in the share price of the holding company in a quoted group of companies.	
<b>Rewards to fund managers/corporate managers</b>	
<p>Fund managers share in the net performance of the investment portfolio over the life of the fund and are incentivised to realise capital gains.</p>	<p>Parent company management are incentivised as managers, not investors. There is no explicit assumption that companies are bought with a view to a subsequent sale to realise a capital gain.</p>
<b>Fund structure and fund liquidity</b>	
<p>Usually private equity funds have a limited life of 10 years. Investors cannot generally withdraw their investment and future commitment from a fund. If they do wish to do so, they require the private equity fund manager's approval of an alternate investor. There cannot therefore be a 'run' on a private equity fund.</p> <p>Earnings are distributed not retained.</p> <p>Private equity funds do not have leverage within the fund.</p>	<p>If quoted, the shareholders (and option holders when options are exercised) can sell their shares in parcels in the market.</p> <p>The organisation will fund itself by a mix of debt, equity and retained earnings.</p>

A group structure therefore shares a number of the features of a private equity fund. In particular the information asymmetries seen between private equity funds and quoted funds do not generally exist. However, there are significant differences including tax advantages for corporate entities that are not available to investment partnerships. The key differences are in the incentives that private equity funds provide. Private equity funds and managers of investee companies are tightly aligned to generate capital gains on a sale/flotation, whereas trading groups may have to seek a wider range of goals that are articulated by the trading strategy of the overall group, rather than the individual company within the group. Managers in corporations are rewarded typically annually with a relatively small proportion tied to medium/long-term realised value growth.

**2.2.6 What are hedge funds and how do they differ from private equity funds?**

Hedge funds emerged to invest in shares and in derivative assets used by corporations to hedge their risks. They usually create a portfolio of trading positions based on selling some shares short (or an equivalent position in derivatives) and hedging their risk by buying other assets or derivatives. The hedge fund investment proposition is that the fund manager can make a superior return by making a series of trades in these derivatives and the underlying assets. The original hedge funds often sought arbitrage opportunities arising from the misalignment in the price of derivatives and/or the assets underlying the derivatives.

In order to generate these returns the hedge fund manager will use both financial leverage, in the form of borrowings in the fund itself, and leveraged trading positions (derivatives). This generates increased risk, matched by increased returns when successful.

As markets have become more globally integrated and liquid, the returns earned from pure arbitrage by hedge funds have diminished. These funds have therefore sought to widen their trading strategies to achieve returns and some have turned to investing in private equity transactions as debt and/or equity providers.

**Table 2.3: Key differences between private equity and hedge funds**

Private Equity Funds	Hedge Funds
<b>Investment strategy</b>	
Private equity funds are skilled in using transactions and active management to generate profits outside the quoted markets.	Traditionally hedge funds make returns from a series of related trading positions, rather than single investment decisions. They are generally skilled in using markets and market inefficiencies to generate profits.
<b>Control and influence</b>	
Private equity funds usually own a substantial or controlling stake in the business.  Individual private equity investments are controlled using a detailed legally binding shareholder's agreement that establishes the contractual rights and obligations of the company, its management and the investors.	Hedge funds generally invest in quoted companies and may acquire large minority stakes, which offer no control and no special rights, but may have some influence over the company's board. Trading strategies differ: some are 'active funds' that seek to change management or strategy; some are pure trading funds seeking to benefit from market price movements.
<b>Financial structure of individual investments</b>	
Private equity investments have borrowings within the investment company, but generally no borrowings in the private equity fund.	Hedge funds may create financial risk and reward by using derivatives (options, swaps etc) rather than debt. It is common for larger hedge funds to have borrowings within the fund, using financial leverage to increase risks and rewards.
<b>Information prior to investment</b>	
Private equity funds will undertake substantial financial, commercial and legal due diligence prior to making an investment. In a management buy-out, the knowledge of the incumbent management is extremely valuable in assessing risk and reward.	Investors in quoted shares, such as many hedge funds, have access to and rely only on publicly available information on the companies they invest in. However hedge funds use similar due diligence methods to private equity funds when investing in unquoted assets.
<b>Information and monitoring while invested</b>	
Private equity fund managers receive wide ranging commercially sensitive information including detailed monthly management information and board minutes from each company the fund is invested in, and also often have board representation.	Where shares are quoted, hedge funds rely on public information to monitor their investments. The active funds' investment thesis is that they will use their stake to positively influence the direction of the businesses in which they invest.  Pure trading hedge funds may simply take a 'position' in a company in the anticipation that the company's value will change to their benefit.



**Table 2.3:** continued

Private Equity Funds	Hedge Funds
<b>Liquidity in underlying investments</b>	
Private equity investments are illiquid: private equity funds cannot generally sell a portion of their investments, they rely on a sale of the whole company to achieve a capital gain.	Quoted shares are freely tradable, albeit in small 'parcels', on whatever stock exchange they are quoted. Large stakes are less easy to place (sell) than smaller ones. Therefore, broadly, the greater the influence sought, the less liquidity is available.
<b>Rewards to fund managers</b>	
Private equity fund managers invest in the fund they manage and share in any aggregate realised profits of the fund over its whole life through 'carried interest'. As carried interest can take many years to build up and be paid, it has been argued that private equity fund managers are in effect tied into their funds for a longer period than equivalent quoted fund managers. Fee income is also paid by each fund.	Hedge fund managers are often rewarded for the quarterly increase in the value (realised and unrealised) of the portfolio they manage. In addition they receive fee income from the funds. There is not usually a hurdle rate of return to exceed.
<b>Fund structure and fund liquidity</b>	
Private equity funds are usually long-term illiquid commitments for a finite period and they cannot suffer a 'run' on the fund. There is rarely any borrowing within the fund and therefore there is generally no bankruptcy risk.  Private equity funds usually have a defined narrow investment focus, although this is becoming broader and less defined in successful funds.	Hedge funds are open ended investment commitments that allow their investors to sell their units of investment, either in a public market or a periodic private market. They also often have borrowings within the fund. They therefore carry a risk of bankruptcy and can have a 'run' on the fund. Hedge funds can, and do fail.  Hedge funds often combine wide ranging investment strategies seeking superior returns.

Hedge funds (in their private equity activities) therefore generally sit between the private equity fund model based on low liquidity, financial engineering, high control and information and the quoted fund model based upon a trading strategy in highly liquid stocks.

The key difference is that private equity funds are long-term commitments by the investors and have not historically used debt within the fund structure itself to generate returns.

It is possible that hedge funds may emerge with different mandates and a focus on private equity investments, in which case such funds (often unregulated) may create market risks that do not currently exist in the private equity market, for example:

- hedge funds, which themselves are leveraged, investing in investments using debt, would increase gearing and thus compound the risks associated with leverage; and
- funds that offer investor liquidity investing in illiquid investments would create a mismatch of assets with liabilities.

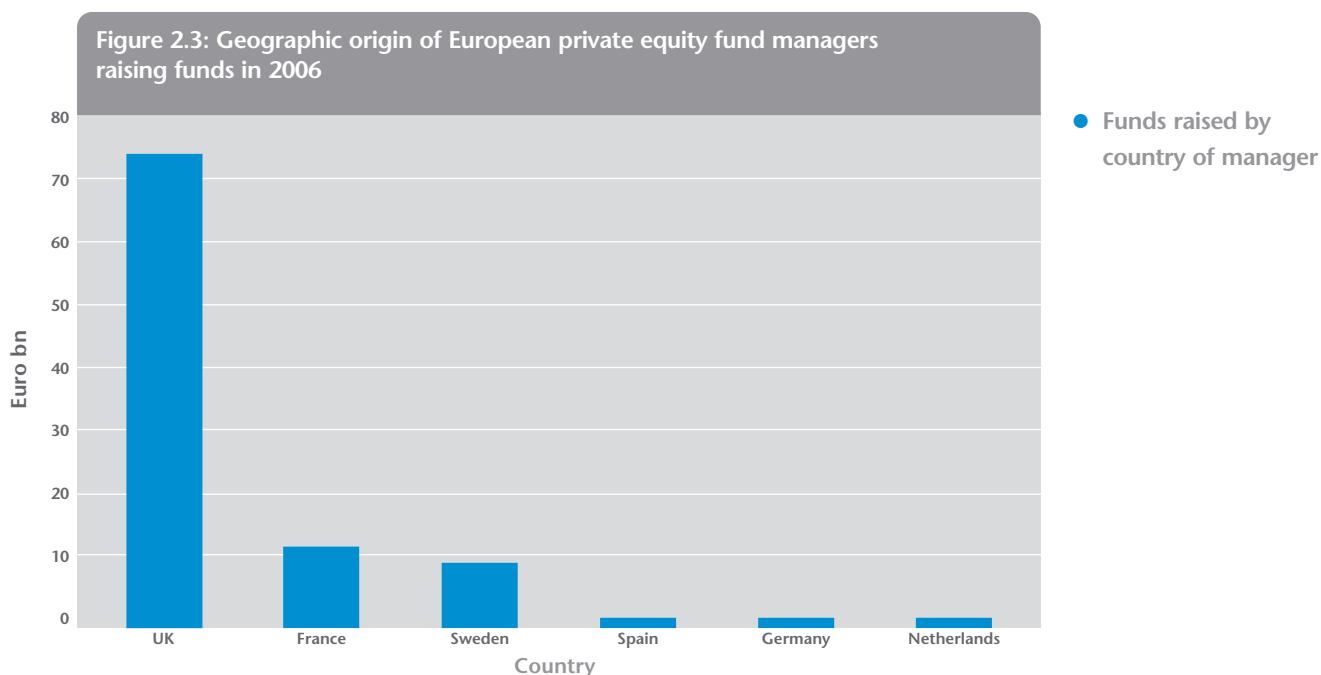
The term 'hedge fund' does not have a precise definition and covers a wide variety of fund models which makes drawing general differences difficult. We have tried above to characterise fairly the key differences in the general business model and structures utilised. In reality there is overlap between the various fund types at the margins: some private equity funds invest in alternative assets and quoted assets, and some hedge funds have long-term capital commitments. However, the general principles of fund management remain that the fund must match the term of its assets and liabilities and that competitive pressure can lead institutions to a mismatch that only becomes apparent when liquidity tightens.

### 2.2.7 Emerging and converging alternative asset investors

The analysis above draws distinctions between fund structures. As funds have grown in size they have in some cases also diversified into other areas. The prospectuses supporting the flotations of US private equity fund manager Blackstone and the quoted European fund of KKR show that while both are primarily private equity funds, they also invest in areas traditionally outside the scope of a private equity investor, including quoted companies, property, fund-of-funds and hedge funds. Similarly 3i Group in the UK has a specialist team targeting so-called public investment by private equity (PIPE), an investment approach that is undertaken while companies remain listed on a recognised exchange. The failure in 2008 of an \$11bn hedge fund managed by Carlyle Group, traditionally seen as a private equity specialist, illustrates the differences in risks in funds that contain gearing versus the traditional ungeared private equity fund.

Some hedge funds have also become more active in providing support to leveraged transactions that are buy-outs in all but name. For example, Och Ziff, a business founded as a pure hedge fund supported the leveraged takeover of Manchester United and has invested in Cobra Beer in the UK.

## 2.2.8 Where do private equity fund managers operate?



Source: EVCA/PWC/Thompson Financial.

Historically the UK private equity fund market was a national market funded by international investors. Most funds were limited to investing in UK companies. Since the late 1980s, however, many of the larger private equity fund managers have opened overseas offices in order to source deals outside of the UK. In the 1990s, US private equity funds began to establish European offices, predominantly in London. Today the largest private equity funds operate in a multi-national market funded by international investors and the UK private equity community is the second largest in the world after the USA.

## 2.2.9 Why are European private equity funds based predominantly in the UK?

Private equity fund managers require four necessary conditions to operate:

- availability of funds to invest;
- opportunities to make investments ('deal flow');
- people with the necessary skills to source, negotiate, structure and manage investments; and
- the availability of exit opportunities (stock market, M&A market).

Each of these necessary conditions is met in the UK. However, the number of alternative locations worldwide where they are also met is increasing due to the globalisation of both financial markets and professional service firms. The choice of the UK is therefore increasingly dependent on a complex inter-relation of other economic, legal and cultural factors, including:

**Economic environment:** local costs and benefits and the overall economic infrastructure of the location are very important. Private equity funds are heavily reliant on third-party advisers both for the provision of services (legal, accounting, corporate finance, etc) and for deal flow. Similarly, the reliance on leverage requires a banking infrastructure able to provide efficient support for leveraged acquisitions. There is an increasingly symbiotic relationship between the private equity industry and the various providers of professional services and leveraged capital. The latter are heavily dependent on transaction-driven fees, the former are reliant on external technical advice and sources of deals. Similarly, the availability of exit opportunities in a location is a further factor favouring the UK. The London stock markets provide both deal flow and exit opportunities.

**Regulatory environment:** at the margin, regulatory risk impacts both the availability of funds and the cost of funds. This in turn flows directly to managers' personal rewards. The UK's regulatory environment imposes costs, but nevertheless confers benefits, on fund managers that are generally regarded as being at best favourable, or at worst, not unacceptable.

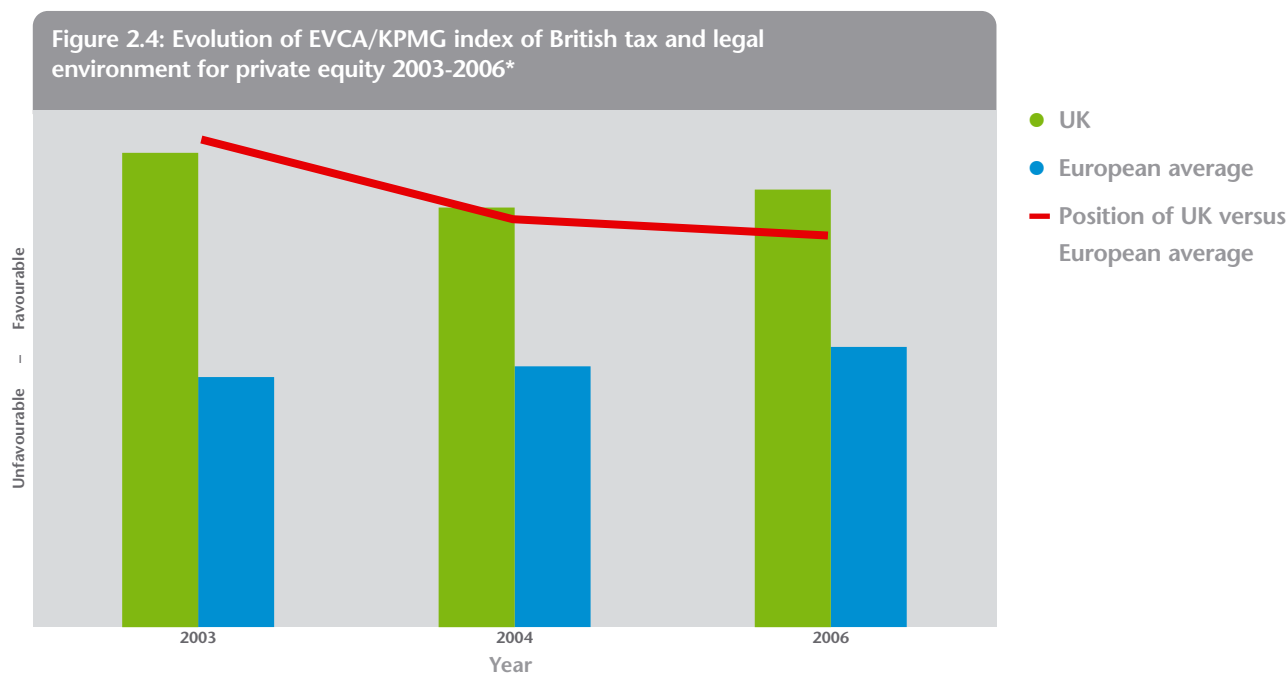
**Taxation environment:** the objective of any fund manager is to maximise the returns to the investors. The funds are structured to attempt to manage the tax burden from the investee company to the ultimate fund investors in such a way as to avoid double taxation and legitimately to minimise the overall tax burden. In principle this is no different to any other investment business.

**Legal environment:** the efficient enforcement of contract law is important where there are potential default risks and the stated objective is to sell or float the investment in a given period. There are also particular legal structures such as the limited partnership available in the UK (and indeed in other jurisdictions) which allow for the management of liabilities without causing double taxation.

**Cultural environment:** private equity funds are becoming increasingly multicultural as they expand their activities internationally outside Anglo-Saxon economies. They are, however, by ancestry an Anglo-Saxon phenomenon, and while this may be less important in the future due to the changing mix of new recruits, they are still largely run by senior partners from the UK and North America. A degree of institutional inertia may therefore favour location in the UK in the short/medium term.

According to the December 2006 EVCA/KPMG report, *Benchmarking European Tax and Legal Environments*, 'the United Kingdom is ranked as providing a very favourable environment for private equity and venture capital, thus maintaining its position in the top three of the overall European classification'. The analysis suggests that the UK is favoured for its environment for funds, funders and employee retention, but less favoured due to an absence of so-called pillar one (public) pension investors and in the environment for the companies invested in by private equity funds.

However, the report also shows that the overall European environment is improving and the UK for the first time was not the most favourable environment in Europe. Figure 2.4 illustrates their assessment of the evolution of the UK's relative position in recent years (see UK versus European average below).



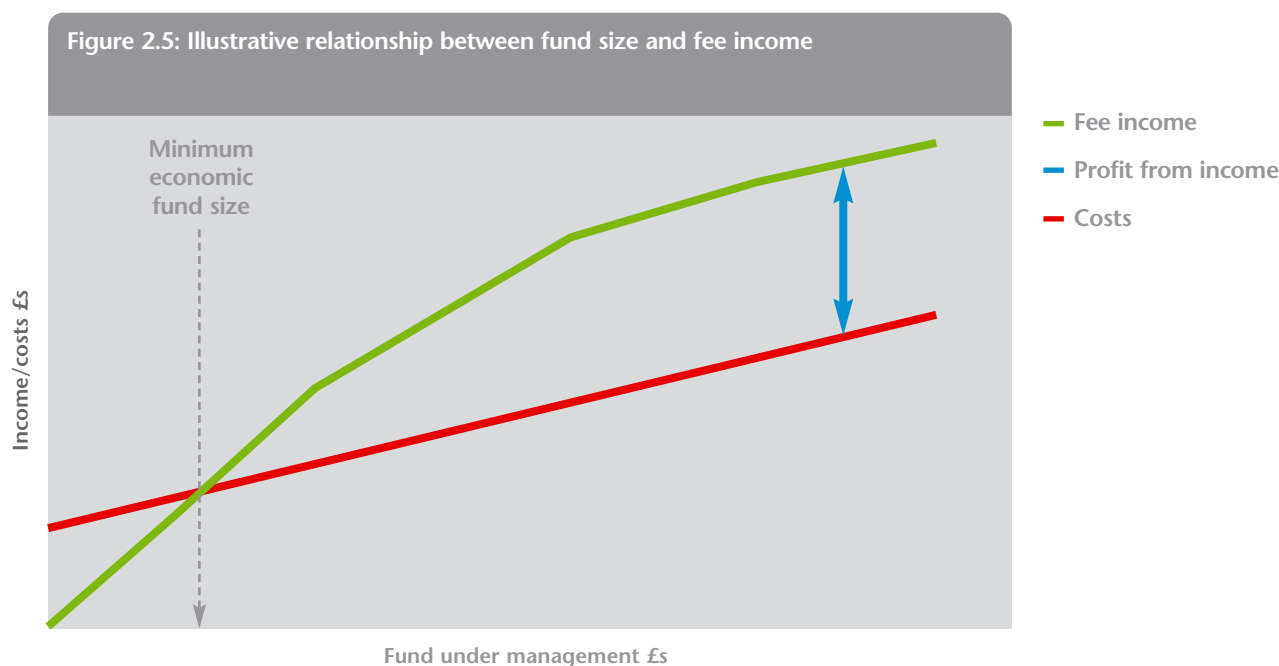
In summary, the necessary infrastructure and services to support larger buy-outs are found in the UK, together with a strong capital market. As the industry has developed, the UK has continued to have a wide range of competitive advantages over other potential locations. However, the scale of the industry and its increasing international outlook may weaken the cultural and historical ties to the UK.

It is important to note that being located in the UK does not preclude any business from having significant offshore activities.

## 2.2.10 How are UK private equity fund managers rewarded?

The fund manager receives a fee for the management of the funds and a share in the profits of the fund. However, the fees received are typically an advance on carried interest, not in addition to the share in capital growth.

## 2.2.11 Management/advisory fee



During the investment phase, the management fee will typically be 1.5% – 2% of the committed fund size. The bigger the fund, the larger the management fee (albeit at a lower percentage than for smaller funds) and the more funds under management the greater the fee income.

The management fee was originally intended to pay for the operating costs of employing staff and other expenses associated with the fund manager's business, plus the reasonable salaries of the partners. Any excess over these costs is retained by the management company (the manager) and may be paid to its partners/shareholders. Fund managers have to balance the use of fee income to reinvest in growing the personnel, infrastructure and assets of the business with the requirement to recruit and retain their best partners by offering industry competitive remuneration.

## 2.2.12 Carried interest

The share of capital profits ('carried interest' or 'carry') is shared among the fund managers and their staff according to whatever arrangement they have agreed among themselves and with their limited partners. The share is typically 20% once the investors have received an agreed minimum hurdle rate return (currently around 8%, but variable from fund to fund), less fees received.

## 2.2.13 Other fees

In addition to these fees and profit share that are common to most funds, other fees may be receivable by the fund managers.

Monitoring and/or non-executive director fees are widely payable by individual investee companies to defray some of the costs of employees and partners of private equity managers monitoring the investment. These fees may be payable to the private equity fund or to the manager, or more likely are split between them in a pre-determined proportion. They are not usually material in a large fund and would typically be £20-£50,000 per annum per investment.

Transaction costs incurred by the private equity fund in making an investment are usually payable by the Newco and not by the private equity fund. Abort costs of transactions which fail to complete may be borne by the fund or the manager or more likely shared in a pre-agreed ratio.

Private equity fund managers may charge an arrangement fee to the investee company expressed as a proportion of the amount of money invested in a deal. These may be up to 3.0% of the equity invested (although less in larger deals). Usually these fees are credited to the fund but they may be split on a pre-agreed basis with the manager.

Typically the net of all these fees would be included in the calculation of the management fee and do not typically increase the overall rewards of the private equity fund managers.

All of these individually negotiated arrangements within a fund manager's business impact upon the individual returns of investors over the long term.

#### 2.2.14 Broad principles of UK fund taxation

As a general principle, it is usually the investor who pays taxation on any investment activity, not the investment vehicle. The country in which an investor pays tax will be determined by where they are resident for taxation purposes and the country in which the investment itself is located. As illustrated in Figure 2.8, most investors in UK private equity funds are not UK-based but are located in a wide variety of tax jurisdictions and many are themselves collective investment vehicles. Taxation will therefore generally be paid by the ultimate investors in those funds wherever they happen to be resident for tax purposes. A fund manager has a duty to maximise the returns to the investors in the fund. The investments made by UK-based private equity funds are often in multi-national companies that are located in a wide variety of countries. The funds are therefore structured to allow the returns to be earned without creating 'double taxation'. Double taxation occurs when a government taxes a gain in one country and it is taxed a second time (without offset of the first tax paid) when it is received by the ultimate investor.

Taxation of fund managers will depend upon where they are resident and where they earn their income. Income earned in the UK is taxable in the UK. Income earned offshore by UK residents is also taxable in the UK. Income earned offshore by non-UK residents is not taxable in the UK.

#### 2.2.15 Taxation of carried interest

Most UK private equity fund managers are structured as limited liability partnerships which are 'transparent' for tax purposes: the partners are taxed, not the partnership itself.

The gain element of carried interest is treated as a capital gain for tax purposes, and this was confirmed in the 1980s in a memorandum agreed between HM Revenue & Customs (HMRC) and the BVCA, and again in 2003.<sup>1</sup> These memoranda were published by HMRC. This treatment is based upon the argument that the partners invest in the capital of the business and only achieve a gain if the fund increases in value. Nevertheless, as explained below, much of the carried interest may be received as fees and salary and taxed as income. It is a condition of the HMRC/BVCA agreement, for example, that all partners must be paid market rate salaries. These will be taxed as income if they are earned in the UK.

Fees are taxed as income when earned or entering the UK, although many funds pay them to the manager as an advance of future capital gains that are taxed as capital.

Since 6 April 2008, carried interest is taxed at 18%. Since income is taxed (in the upper band) at 40%, there is a significant incentive (22%) for partners and employees in any business to have cash receipts taxed as capital gains rather than income. In an investment business focused on generating capital gains, such as private equity funds, this incentive is put in stark relief.

#### 2.2.16 What was taper relief and how did it affect the incentives of private equity fund managers?

Taper relief was abolished in April 2008. However, due to the level of comment on the effect of taper relief, we explain the system and changes to it briefly below.

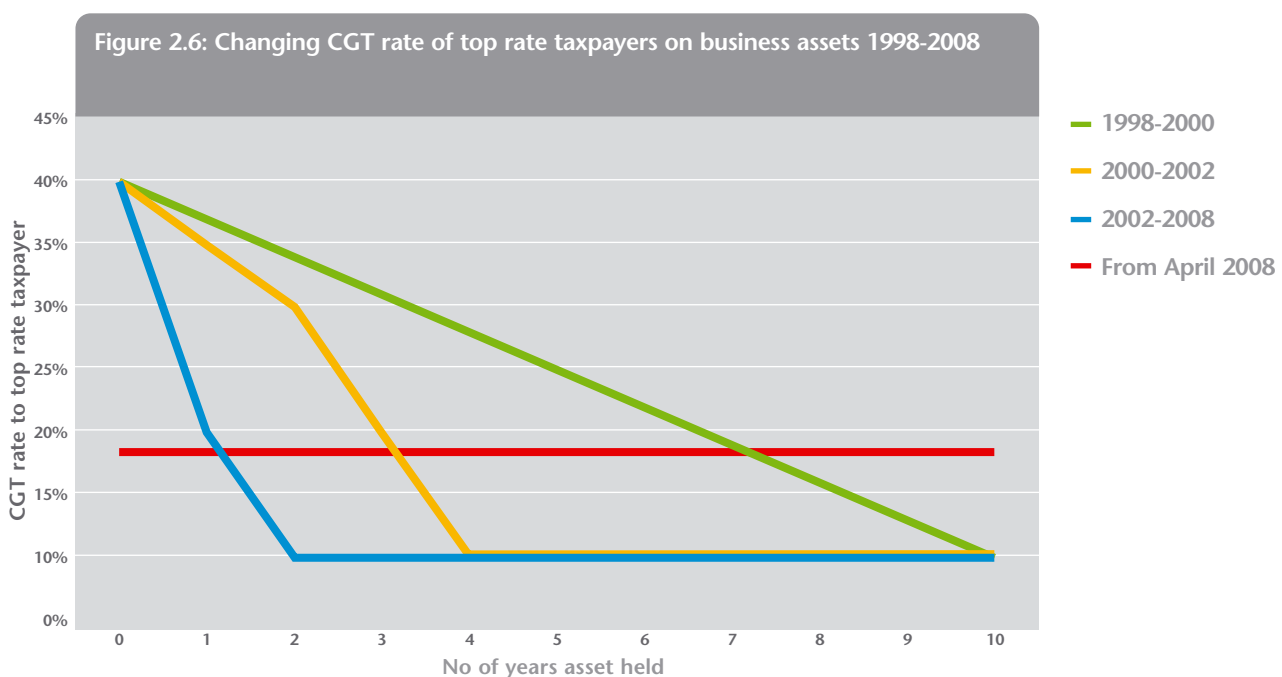
<sup>1</sup> [http://www.hmrc.gov.uk/shareschemes/bvca\\_and\\_fb2003\\_carried\\_interest.pdf](http://www.hmrc.gov.uk/shareschemes/bvca_and_fb2003_carried_interest.pdf)

Prior to April 1998, capital gains were reduced by an allowance, known as indexation, to reflect notional increases in value due to inflation. From April 1998 indexation was frozen and certain assets benefited from taper relief. This allowed the capital gains tax charge to be reduced depending upon how long an investor had held an asset, up to a maximum of 10 years. The effect for a higher rate tax payer could be to reduce the tax rate from 40% to 10%. The length of the taper (10 years) was designed to encourage long-term investment in business assets. As the maximum taper was only available after 10 years, which is greater than the life of most private equity investments, the benefit was not generally fully utilised by most private equity fund managers.

In 2000 the period to qualify for maximum taper relief was shortened from 10 years to four years and it was further shortened to two years in 2003. This was designed to 'boost productivity and increase the provision of risk capital'<sup>2</sup> and brought most private equity investments into the period of maximum relief and led to considerable debate about the equity of taxation of private equity fund managers.

In 2008 taper relief was abolished and a single flat rate of capital gains tax at 18% was introduced.

These changes to the capital gains tax rate for higher rate tax payers on qualifying business assets are graphically illustrated below:



As Figure 2.6 illustrates, the effect of the changes was to make taper relief available earlier and therefore increasingly relevant to many private equity investments which are made with a three to five year exit horizon in mind.

### 2.2.17 Non-UK domiciled persons

There exists in common law a concept of being domiciled in a particular country. It may be different to a person's nationality or the country in which they live. The concept broadly encompasses the idea of where an individual is 'actually from' and is confusingly different to either where they are resident, or where they are resident for tax purposes. There are a series of tests that establish whether a person is UK domiciled, relating to where they were born, where they live and the nationality of their parents.

A non-domiciled person will pay tax on income and capital gains earned in the UK, but would not, prior to April 2008, be taxed in the UK on other sources of income and capital gains if they were not brought into the UK. Since April 2008 non-domiciled persons generally pay a flat tax (£30,000) after they have been resident for any seven of the previous nine years, or are taxed as a UK domiciled person.

<sup>2</sup> 'Changes to Capital Gains Tax Taper Relief', HMRC press release 21 March 2000.

## 2.2.18 Competition for funds by private equity managers

When funds are being raised, investors are offered the opportunity to commit an amount of capital to the fund. As the fund has no underlying assets, other than the goodwill of the manager, there is no pricing mechanism in the cost of fund units to ration demand. There is however generally a minimum amount which can be committed. If a fund is over-subscribed, by agreement with LPs, the private equity fund managers may enlarge the fund, or may scale back investors' applications.

The demand for investing in a particular fund will, to a large extent, depend on the investment track record of the private equity fund managers. However, an investment decision by an LP will also be influenced by the way it is proposed to share investment returns between the LPs and the manager. There is therefore, competition between funds based upon the management fees charged, the hurdle rate of return, and the priority of the returns between LPs and the GP and the carry percentage.

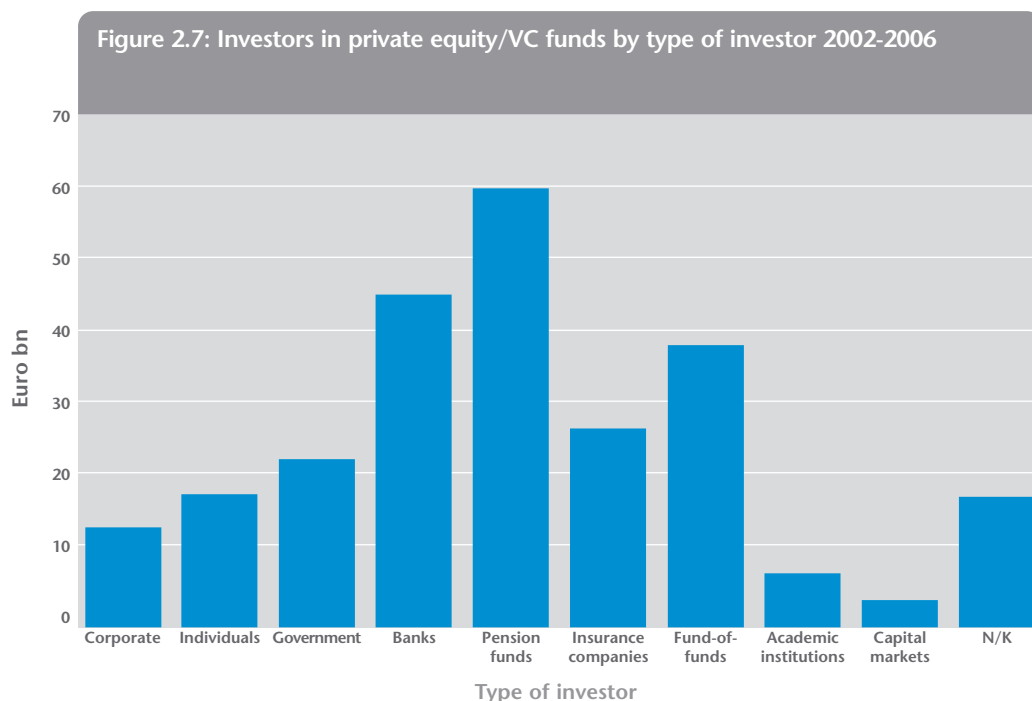
## 2.2.19 Can a private equity fund or a private equity manager fail?

Private equity funds are not usually structured using third-party debt and therefore do not generally carry a significant bankruptcy risk. As noted in the discussion in section 2.2.6 regarding the differences between private equity and hedge funds, a private equity fund may lose all the investors' capital, but, unless they create liabilities by mis-management (eg, guaranteeing obligations of investee companies), they are unlikely to become formally insolvent. However, while the absolute risk of bankruptcy is remote, it is clear that some funds perform badly and investors do lose some or all of their committed capital.

Some fund management teams do fail. The process of failure is however slow and difficult to detect: it may take the form of an inability of the fund managers to raise new funds, or fund management contracts may in extremis be cancelled. Contract cancellation has happened in a number of private equity funds, including those managing funds targeted at the large buy-out market.

## 2.3 Investors in private equity funds

### 2.3.1 Who are the investors in private equity funds?

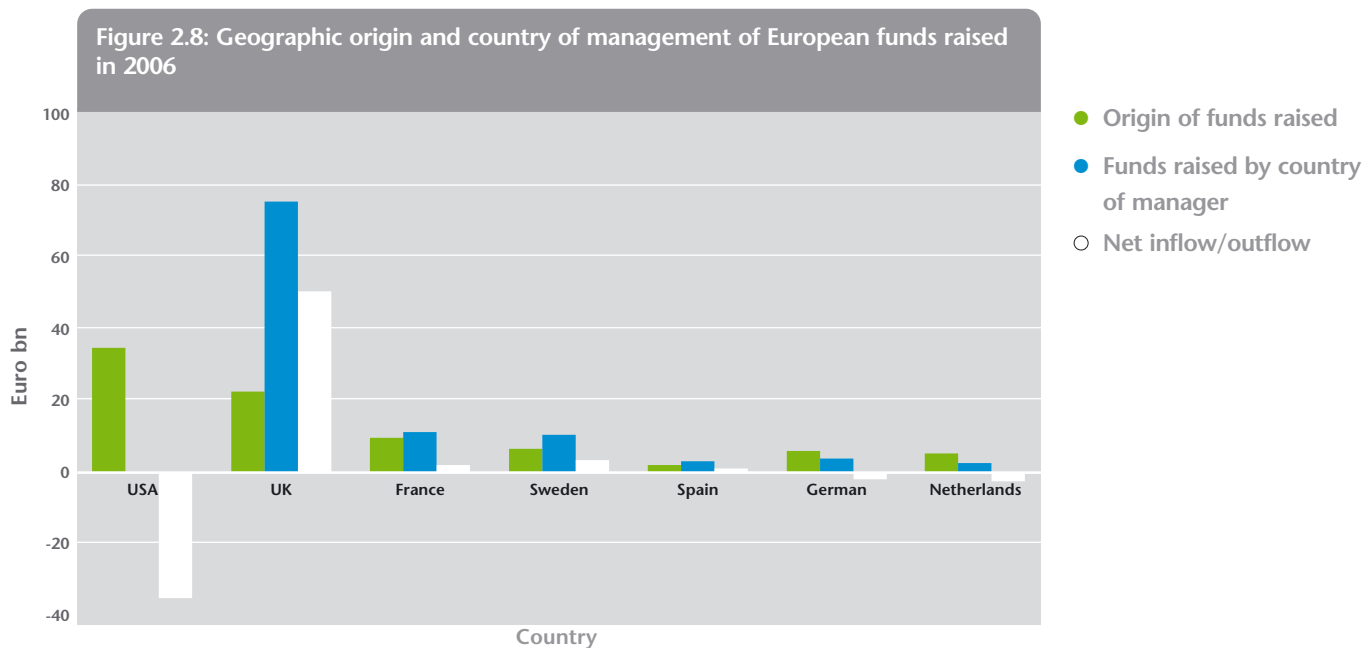


Source: EVCA//PWC/Thompson Financial.

Figure 2.7 above shows that the largest investors in the private equity and venture capital (VC) asset class are pension funds. Segregated data for the large buy-out funds alone are not published by the quoted sources, but are likely to be similarly distributed, though with fewer individuals and academic and government agencies investing. Buy-out funds accounted for 85% of funds (by value) raised in 2006.



It should be noted that investors in fund-of-funds are usually pension funds, insurance companies and high net worth individuals. The wider public are therefore indirectly investors in the private equity industry through these international collective investment vehicles.



Source: EVCA/Thompson Financial/PWC.

Figure 2.8 shows the European private equity and venture capital fund market by country of origin of funds raised and country of the fund manager. The domination of the UK market within Europe and the significant capital inflows managed by UK fund managers are clearly illustrated.

From anecdotal information, it seems likely that this data understates the capital inflows into the European market from countries other than the USA. For example it does not show inflows from the Middle and Far East.

### 2.3.2 Are institutions long-term investors in private equity funds?

Investors in private equity funds typically commit to a 10-year investment in each fund. Compared to many other investment fund types, this is a long-term commitment.

For investors seeking to exit from these commitments there is a growing market in private equity fund positions, the secondary market, and a number of specialist funds now exist to acquire secondary positions.

With the private equity fund manager's consent, the investor can sell to another party both their share of the actual investments in the private equity fund, and their obligation to fund future investments.

Historically, the early secondary purchases were generally only of actual investments rather than future commitments and were usually sold at a discount. Today secondary purchases may be at a premium or discount depending on how the fund is performing at that time and may include the acquisition of the obligation to future funding commitments.

This lack of liquidity for the investors in a private equity fund is a key difference between private equity funds and other fund types. The long-term capital commitments to the fund ensure that the private equity fund is able to match the terms of its assets and liabilities. In alternative fund structures such as hedge funds, investors are able to seek to have their investments repaid periodically. If these funds do not hold sufficient assets that can be sold to enable these repayments to be made, there is a risk that the fund will face a liquidity crisis or a 'run' on a fund. Private equity funds typically are structured to avoid this risk, enabling them to make investments in illiquid shares over the medium term. This structural difference is a key element in the claim that private equity is long-term investment.

Some of the largest fund managers with multiple investment strategies that encompass both private equity and other asset classes do have third-party borrowings within their fund structures. However, these usually take the form of revolving facilities to enable the fund manager to more effectively manage the drawdown of investment funds without having to delay an investment while calling for cash from each and every fund investor when a transaction completes.



However, as the organisations have grown and as their investment portfolios have become larger and more valuable, there has been a growth in gearing within fund structures operating in private equity. This can be clearly seen in the 2007 prospectuses of, for example, funds managed by KKR and the Blackstone general partnership flotation. 3i and other investment trusts have always used some financial engineering within their capital structure.

### 2.3.3 What are the average returns of the private equity market for investors?

Table 2.4 shows the pooled returns in 83 mid-large European buy-out funds from survey data to December 2006 provided by the BVCA. Throughout this report other academic work on returns is summarised. Most of this academic work is focused on the returns to US investors and fund managers.

**Table 2.4: Pooled returns in mid-large buy-outs**

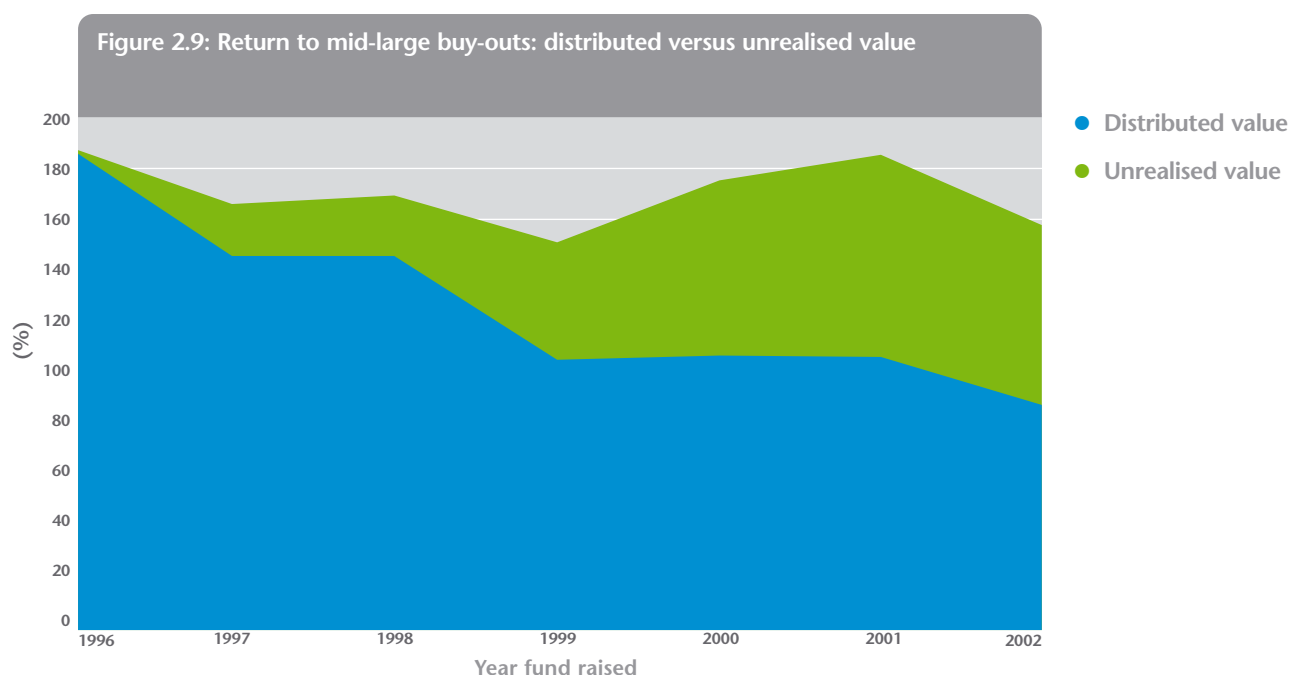
Year fund raised	No of funds	IRR(%)	Distributed value (%)	Unrealised value (%)	Total value (%)
1996	11	17.8	185	2	187
1997	12	14.4	146	20	166
1998	12	12.5	146	21	167
1999	14	10.4	98	52	150
2000	12	20.6	103	72	175
2001	16	29.9	103	80	183
2002	6	31.3	86	72	158

Source: BVCA/PWC.

Fund returns are often expressed as internal rates of return (IRRs). These are conceptually equivalent to annual compound interest rates. Thus a 20% IRR will give a gain of 20% pa compound. IRRs are sensitive to time and usually fall over time towards a stable long-term rate, so a high, short-term IRR is often seen in the early years of funds, while the final IRR on the liquidation of the fund will usually be lower.

Furthermore, private equity funds tend to invest for around five or six years and realise their investments after three to five years. This results in a substantial proportion of the value of funds being unrealised in the early years of a fund's life and at any point in time funds will have both distributed and undistributed sources of value. The latter are uncertain and are often valued according to guidelines issued by the BVCA, whereas the former are certain cash returns. The only true measure of fund performance is the return achieved once a fund is fully liquidated at the end of its life.

This is illustrated in Figure 2.9 below.



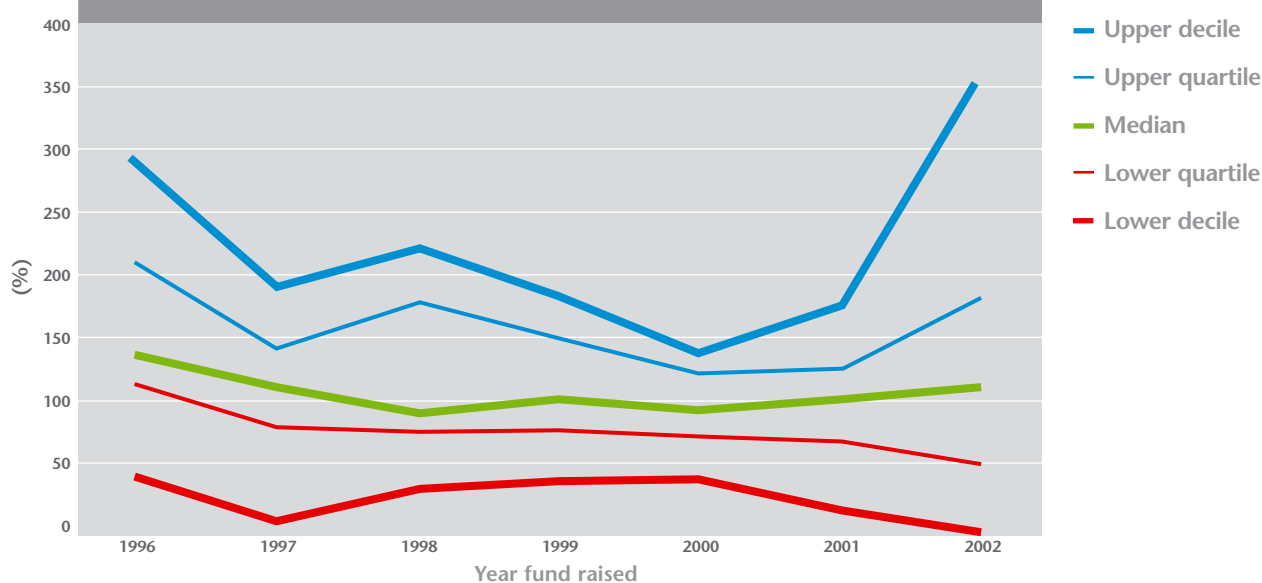
Source: BVCA/PWC.

The returns of private equity funds are almost invariably negative in the earliest years reflecting the impact of management fees, but more importantly the build up of the investment portfolio. This results in a so-called 'J curve', where returns start negative and then become positive.

### 2.3.4 What is the range of returns for investors?

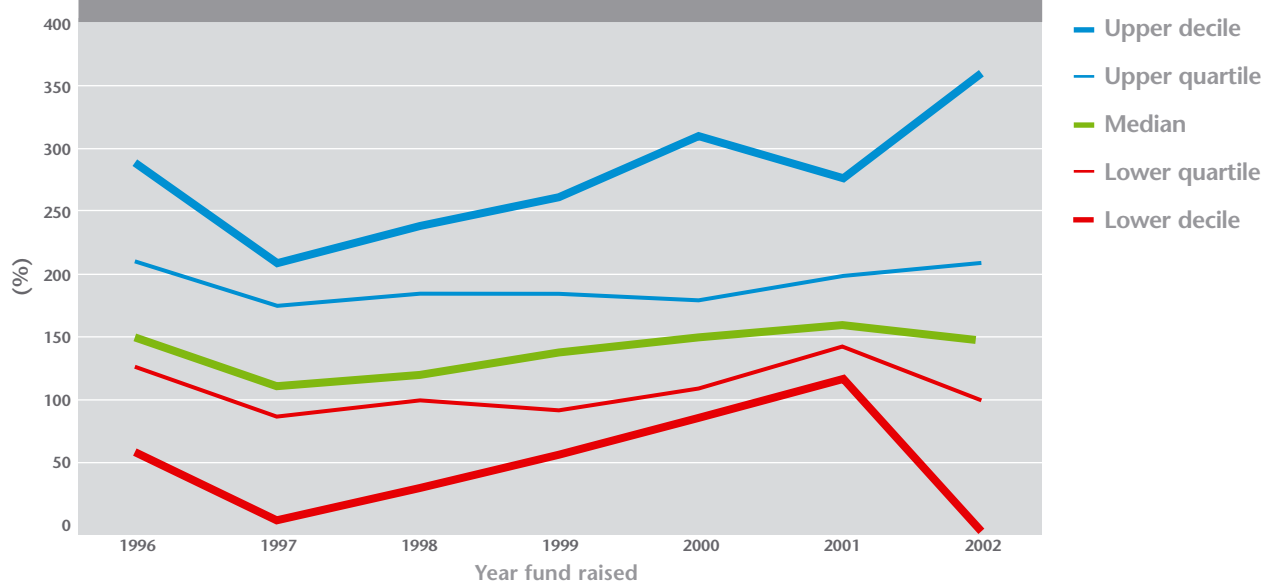
It is important to understand both the overall industry returns and their volatility over time. In addition, the variation in returns between the most successful and least successful fund managers is a key statistic to understand the performance and risks of the industry. Data on the performance of mature funds is presented annually by the BVCA. The latest data were published in July 2007, covering periods up to 31 December 2006 and are summarised in Figure 2.10 and Figure 2.11. These illustrate the average (median) return to mid-large buy-out funds, and give data on the distribution of the returns of the various funds.

Figure 2.10: Distribution of returns to mid-large buy-out funds: value per £ invested



Source: BVCA/PWC.

Figure 2.11: Distribution of returns to mid-large buy-out funds: cash distributed per £ invested



Source: BVCA/PWC.

These limited data and further data available from both the BVCA and EVCA illustrating the distribution of IRRs between upper quartile/decile funds and lower quartile/decile funds suggest that:

- upper decile large buy-out funds have the highest returns of all types of private equity fund; and
- the inter-decile range is highest for large buy-out funds.

Thus, while the median outcome in large buy-out funds is favourably compared with many other investment categories, the variance of outcomes is the widest of all private equity fund types. As these are measures of funds, not of fund managers, it is difficult to extrapolate these conclusions further. However, it is clear that there are very material variations in performance between funds.

According to the BVCA Performance Measurement Survey and Report on Investment Activity (for 2006):

- Half of all private equity funds pay no carried interest.
- 1 in 4 of funds loses 25% of its capital.
- 1 in 10 of funds loses more than 50% of its capital.

The academic studies of private equity fund performance are reviewed in more detail below.

### **Findings 2.1: Do investors earn superior returns? The academic evidence**

As shown above, fund level data published by national venture capital associations and EVCA consistently show that the IRRs on buy-out funds outperform any other form of private equity/venture capital investment and other alternative investment classes.

A number of academic studies have sought to deepen this analysis using both fund level and firm level data (Appendix Table 2). These studies have attempted to estimate risk-adjusted rates of return and to identify whether private equity deals generate better or worse returns than investing in listed securities gross and net of fees. These studies have used various approaches to adjusting for risk and survivor bias. Some studies have taken a broad view of private equity, which includes early stage venture capital. Some studies use data from single funds or single LPs while others involve large numbers of funds. We focus here on the returns to investors in respect of later stage buy-out deals.

US evidence shows LBO fund returns (gross of fees) exceed those of the S&P 500 but that net of fees they are slightly less than the S&P 500. After correcting for sample bias and overstated accounting values for non-exited investments, separate evidence shows that average fund performance changes from slight over-performance to under-performance of 3% p.a. with respect to the S&P 500. There is also some evidence that some buy-out fund managers generate more from fees than from carried interest.

Although evidence is mixed, VC funds appear on average to generate higher returns than buy-out funds after adjusting for risk. Buy-out fund managers earn lower revenue per managed dollar than managers of VC funds. The timing of fund raising seems to be important: private equity returns on funds appear to be higher for those funds raised in the 1980s than those raised in the 1990s. Funds raised in boom times seem less likely to raise follow-on funds and thus appear to perform less well.

An important and often quoted finding is that, unlike mutual funds, there is persistence in returns among top performing funds. When this study was done in 2005, it was found that in private equity fund performance, the past had been a guide to future performance.

### **2.3.5 How can individual investors invest in private equity funds?**

There are retail funds and venture capital trusts (VCTs) that invest in smaller private equity transactions. There are also quoted investment trusts that invest in private equity transactions including larger deals and, as commented on above, both KKR and Blackstone, which are partnerships, have offered interests to the public. However, in general, larger private equity funds have a minimum investment amount that precludes most private investors. This minimum varies from fund to fund but a minimum investment of \$10m is not uncommon. Furthermore, due to the regulatory protections afforded to retail investors in the UK, the costs and regulatory

burdens of raising retail funds mean that no large private equity fund markets to a retail investment audience.

The flotation of a portion of Blackstone and the raising of a quoted fund by KKR may alter the ability of retail investors to access private equity in the future, but this is not addressed in this report.

In order to provide wider access to private equity funds a number of fund-of-funds have emerged. These allow smaller institutional investors, who cannot justify the costs of an in-house team making private equity fund investments, to collectively invest in the larger private equity funds. However, the fund-of-funds manager will charge a fee (and take a share of any profit) before the investor earns a return and for similar reasons to those above, few are open to retail investors.

In any reasonable sense, other than a few exceptions (eg, indirect investment in section 2.3.1), the private equity market should therefore be viewed as a wholesale market available only to institutional investors and regulated accordingly.

## 2.4 Banks

### 2.4.1 What role do banks play in private equity?

Banks provide the 'leverage' in LBOs and this debt may take many forms and be provided by many different market participants including one or more of commercial banks, investment banks, dedicated mezzanine providers and hedge funds or similar specialist funds.

Many smaller loans are syndicated within the traditional banking industry. Larger loan facilities frequently have many different 'layers', some of which are structured to be sold through global capital markets.

More information about the layers of debt structuring is given in section 3.

### 2.4.2 How has the banking market changed?

In traditional banking, a bank will lend and build a portfolio of loans, although some of the larger loans might be shared between banks through a process of syndication. In this model, bankers are constrained by the fact that any losses will fall on their own balance sheet. In modern banking it is increasingly common that banks act as arrangers of loans rather than primarily as lenders, and the proportion of loans held by the arranging or 'lead' bank after a transaction has been falling for a number of years. In this 'arranger model' of banking, the incentive is to maximise the amounts lent, subject to the constraint of being able to syndicate the loans to other banks (and other investors).

**The bank's rewards and the risk:** the lead bank's major source of income becomes fees from arranging the debt and syndication rather than interest from lending a portfolio of loans. There is very little academic research around the impact of this gradual change in banking incentives and the potential impact on risk and conflicts of interest within the arranging and syndications markets.

**Bank covenants:** if a business with borrowings does not perform to plan, there will be a series of monitoring tools that will alert the lending banks. These ratios, or financial covenants, are agreed prior to a loan being granted. If a company breaches one or more of these agreed limits, the banks will typically have a series of options available to them. These include renegotiating the loan package or appointing a receiver to sell the business or its assets to repay the loans. The negotiation of the banks' covenants is therefore a crucial part of the management of the risk of a transaction for the company, the banks and the equity investors. This is described in more detail in section 3.

Where the covenant arrangements are either not tested as frequently as industry norms or the agreement allows the private equity funds to inject new capital to rectify any breach, the loans are known as covenant light or 'cov-lite' loans. This may be viewed as a transfer of risk from the company and private equity funds to the banks or it can allow the private equity funds time to make changes to the business or its capital structure that will ensure future covenants are met.

**Syndication:** the broad syndication of loans throughout the financial market has had two major consequences. Firstly the total risk is distributed across many institutions, reducing the impact of any one corporate default or failure. Secondly it has become increasingly difficult

for observers of the markets to establish where the risks are actually held within the financial system. This uncertainty is widely considered to have exacerbated the problems seen during the credit crunch that began in late 2007.

### 2.4.3 How much leveraged lending have banks undertaken?

Third-party data on the total borrowings in the LBO market is not routinely collated. However, the FSA has collated survey data which indicated that the total amount of respondent banks' exposures to LBOs grew 17% from €58.0bn at June 2005 to €67.9bn at June 2006. These exposures can be relatively concentrated, with firms' top five deals representing on average 47% of their exposure.<sup>3</sup>

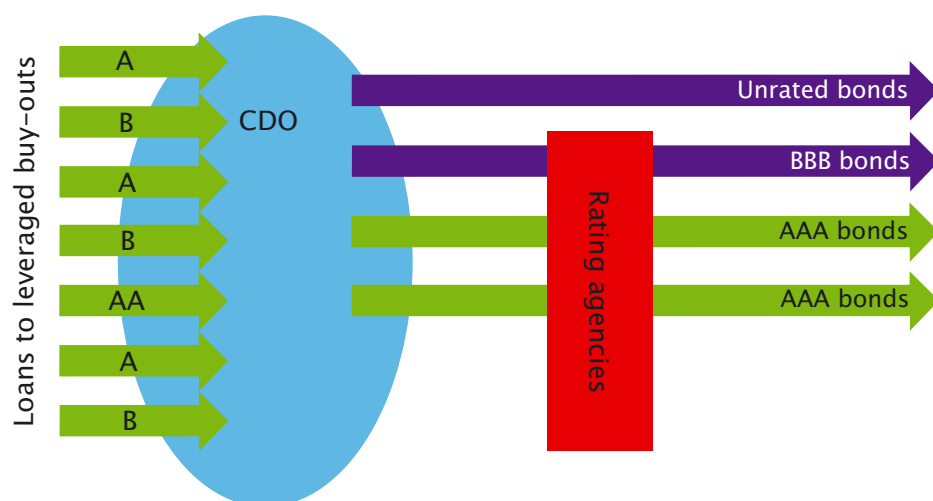
Banks' exposures are also increasingly complex with enhanced use of mezzanine, bridge and payment-in-kind debt. These instruments are described and discussed in sections 3 and 4.

The FSA argues that this was a response to the appetite in the institutional debt market for such products prior to the credit crunch.

As discussed above, the banking market has seen a change in the business model used: banks are increasingly distributing the debt that they underwrite. The FSA found that 120 days after transaction finalisation, banks were holding, on average, 19.4% of their original exposure to their top five transactions. Anecdotal evidence suggests that the final hold level of many banks, usually achieved within six months, is substantially lower than this.

### 2.4.4 What are collateralised debt obligations, collateralised loan obligations and structured investment vehicles?

Figure 2.12: Schematic of a CDO/CLO/SIV



While not the only new participants in the debt market, collateralised debt obligations (CDOs) and collateralised loan obligations (CLOs) together with structured investment vehicles (SIVs) are important and little understood fund structures. CDOs have existed for many years as vehicles to enable banks to sell a portion of their loan books, thereby increasing capital efficiency and returns on capital.

For simplicity we ignore the terminological differences between CDO/CLO and concentrate on the economics of the transaction rather than the assets or management style of the fund. The SIV is simply the legal entity that takes in loans and assets that are blended together to create the CDOs.

There are basically two forms of CDO:

**Balance sheet deals:** these have existed for many years and involve a bank selling a portion of its loan portfolio to a SIV that pays for the assets from the receipts of a bond issue, or a series of contracts to transfer the default risk to other investors, usually by a credit default swap (an insurance policy against non-repayment). These deals are usually constructed to allow a bank to manage its regulated capital base efficiently.

<sup>3</sup> FSA 2006 DP06/6, *Private equity: a discussion of risk and regulatory engagement*.

**Arbitrage deals:** these structures attempt to capture the difference between the yield of an underlying asset and the cost of the bonds issued by the SIV to acquire the assets (or the price paid for the asset) and can be broadly characterised as being of two forms.

The first involves a trading strategy where the SIV actively trades bonds to generate a return. These types of vehicle are heavily involved in the sub-prime lending market and are the focus of much public discussion.

The second are cash-flow deals. These are most relevant in the LBO syndication market. In these transactions, the SIV participates in the debt syndication. It builds a portfolio of loans financed by its own equity and bridge finance from its bankers. Once the portfolio is large enough it will issue a series of bonds backed by the loans. The senior bonds are rated by a credit rating agency and are ranked first. These are bought by investors in the bond market. Rated mezzanine bonds are also issued that rank after the senior bonds. These have a higher interest rate, but carry more risk and are sold to investors seeking higher yield assets, often hedge funds and alternative asset investors. Finally, any profit or loss on the underlying assets is paid to unrated bonds ranking last. These bonds have returns and risks that are comparable with equity. They are sold to investors seeking equity returns and usually held by the SIV manager. This process of so-called 'slicing and dicing' enables risk to be dispersed throughout the market. It also makes it exceptionally difficult to know exactly where risk resides.

CDO managers earn returns in the same way as private equity fund managers; they receive fees and a carried interest. Indeed a number of CDO funds are sponsored and managed by teams affiliated with private equity fund managers and are invested in by them.

## 2.5 Advisers

### 2.5.1 Who are the advisers in the private equity market?

Private equity funds outsource many functions. Few have in-house accountants and lawyers, and most outsource as much as possible.

Advisers derive significant fee income from services to the private equity industry and include:

- Investment bankers: both a source of deals for the private equity fund, when the investment bank is advising the vendor of a business, and a provider of advisory and distribution services (ie, syndication) when advising the private equity funds.
- Accountants: providers of due diligence and taxation advice on transactions and on-going audit and tax advice to individual investee companies, the funds and the partners of the funds (subject to independence regulations). The corporate finance advisory businesses in accounting firms provide similar advisory services to investment banks in the mid-market.
- Lawyers: providers of legal and tax advice on transactions and fund raisings.
- Placement agents: used by some funds, these specialist advisers assist in raising funds and provide advice and access to potential investors in private equity funds globally.

## 2.6 Employees and other stakeholders

### 2.6.1 What is the impact of private equity transactions on wider stakeholders?

The wider stakeholders in the business including the employees, customers and suppliers are generally not party to the negotiations in a buy-out. In the case of quoted companies there are strict rules regarding confidentiality of price-sensitive information that preclude wider involvement.

If the assets of a business are sold rather than the shares in the business, then there is a statutory right for employees to be consulted regarding any change in employment terms under the Transfer of Undertakings, Protection of Employment (TUPE) regulations.

### 2.6.2 What is TUPE and when is it applied?

TUPE legislation is designed to protect UK employees from being adversely impacted by the sale of businesses and/or their assets rather than a sale of the shares in the company. TUPE was established in 1981 and revised in 2006 to incorporate the European Union Directive on Acquired Employment Rights.

Employees have a legal contractual relationship with the company that employs them. This is embodied in their employment contract and is supplemented by protections guaranteed by

employment law. When shares are sold and the ownership of the company transfers to new owners, this has no impact on the contractual relationship between the employee and the company being sold: the legal relationship remains unchanged and is legally identical before and after a sale. If a purchaser subsequently wishes to change any employment conditions they must do so in exactly the same way as if no sale had occurred.

If the assets or the business undertaking are sold rather than shares, the employees will have a new contractual relationship with the acquiring company. They will cease to be employed by their former employer and become employees of the company that bought the assets or undertaking.

TUPE is designed to protect employees from employers who seek to use the change of legal employer to vary the employment terms or to use the sale to dismiss workers. TUPE gives employees an automatic right to be employed on the same terms (with the exception of certain specific occupational pension rights which are outside the scope of this report) by the new employer. These rights include the right to be represented by a trade union where the employees transferred remain distinct from the employees of the acquiring company. This is almost always the case in a private equity transaction because Newco has no business prior to the transaction, and therefore no employees other than those acquired as part of the transaction. The regulations apply to all companies and public bodies without exception.

The regulations require that representatives of the affected employees be consulted about the transfer by the employers. They have a right to know:

- that the transfer is to take place, when and why;
- the implications for the employees legally, socially and economically; and
- whether the new employer intends taking any action that will have a legal, social or economic impact on the employees.

TUPE also places obligations on the selling employer to inform the acquirer about various employment matters.

### **Findings 2.2: Do private equity and buy-outs adversely affect employment? The academic evidence**

Evidence on the effects of buy-outs on employment is mixed (Appendix Table 3 Panel A). Some US studies from the 1980s report small increases in total firm employment following LBOs. Others report that buy-outs do not expand their employment in line with industry averages but that non-production workers experience the largest fall over a three-year period, while employment of production workers was unchanged. UK evidence from the early 1990s suggested that job losses occurred most substantially at the time of the change in ownership. UK evidence from buy-outs completed over the period 1999-2004 shows that employment growth is 0.51% higher for MBOs after the change in ownership and 0.81% lower for MBIs. More detailed data indicate that employment in MBOs dips initially after the buy-out but then continues to rise, on average. In contrast, for MBIs, the employment level remains below the pre-buy-out level. The majority of both MBOs and MBIs show an increase in employment. Further evidence suggests that private equity-backed buy-outs have no significant impact on employment while traditional acquisitions have negative employment consequences. The impacts of buy-outs on employment growth rates are similar to those for traditional acquisitions. A private equity deal would be unlikely to occur if the pre-buy-out firm was performing well because there would be few performance gains to be obtained from restructuring. As on average MBO/I plants have lower productivity before the buy-out than their non-buy-out counterparts, it is not surprising that some labour shedding occurs. However, shedding labour at the time of a buy-out helps set the firm on a more viable footing, reducing the likelihood that the firm will subsequently fail with an even higher loss of employment. Where there is little alternative except closure, a private equity deal may have its attractions.



### Findings 2.3: Do private equity and buy-outs adversely affect wages? The academic evidence

US studies from the 1980s indicate a decline in the relative compensation of non-production workers (Appendix Table 3 Panel B). Evidence from the late 1990s and 2000s in the UK shows that the average growth in wage levels in MBOs and MBIs is marginally lower than in firms which have not undergone a buy-out. Buy-outs have more negative wage effects than traditional acquisitions. MBIs typically are under-performing problem cases prior to the change in ownership, that require more restructuring and which generally have a higher failure rate than MBOs. Pre-buy-out remuneration may not have been sustainable if firms had been under-performing. The impact of private equity-backed deals may be different from that of non-private equity-backed deals but preliminary evidence indicates that this difference disappears once the problem that certain types of firm are selected as buy-outs is taken into account. Data are not available concerning whether buy-outs had a higher or lower wages trend than non-buy-outs and hence whether the position is worse, better or the same after a buy-out. It is also problematical to integrate the weekly/monthly wage aspects of remuneration and any benefits from the introduction of employee share ownership schemes at the point of the buy-out; the latter may substitute for standard wage payments which may not necessarily be the same in non-buy-outs. Thus, these findings are likely to bias against finding positive wage effects due to buy-outs if they are more likely to use such schemes than non-buy-outs.

### Findings 2.4: What is the impact of private equity on human resources management? The academic evidence

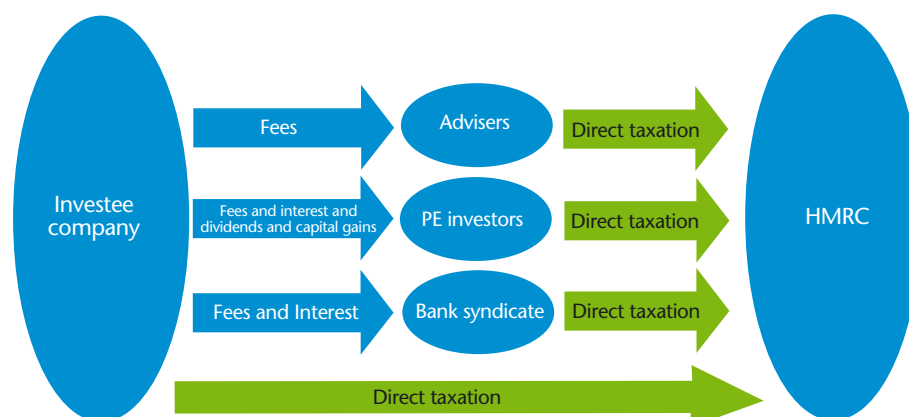
Buy-outs in the UK and the Netherlands result, on average, in an improvement in human resource management practices (Appendix Table 3 Panel C). Buy-outs in general result in the adoption of new reward systems and expanded employee involvement but the effects depend on the type of buy-out. 'Insider' buy-outs and growth-oriented buy-outs had more commitment-oriented employment policies. Preliminary evidence also suggests that buy-outs backed by private equity firms report fewer increases in high commitment management practices than those that are not private equity-backed. Employees in UK MBO firms tend to have more discretion over their work practices than comparable workers at non-MBO firms, with skilled employees, in particular, having low levels of supervision at MBO firms.

## 2.7 Taxation

### 2.7.1 The wider impact of leverage on UK tax revenues

Private equity investments, like any investment, are made in anticipation of a positive return. In the case of leveraged buy-outs this arises due to a combination of operating performance improvements and financial engineering. To assess fully the impact on tax revenues it is necessary to examine two separate items: reduced corporation tax due to interest deductibility and increased corporation tax due to improved performance. Furthermore, in order to trace fully the tax impacts of a leveraged structure, it is necessary to trace the complex recipients of the interest and fees paid by the company to arrange and fund the transaction as well as other tax impacts such as VAT and stamp duty incurred as part of the transaction.

Figure 2.13: Taxation general schematic





It is likely, but not certain, that the interest deduction on third-party borrowings will create an equal and opposite taxable revenue for the institution receiving the fee or interest. This may or may not be in the UK, depending on a wide array of factors. Anecdotally it would seem likely that, as UK banks are significant participants in the international leveraged finance market, the UK receives a disproportionate amount of taxable revenues from leveraged transactions.

Similarly, many advisers (see section 2.5) to international transactions are UK based and earn taxable profits in the UK from their overseas activities.

The number of assumptions that are required to be made to compare the overall tax take from leveraged and un-leveraged companies makes it difficult to make simple declarative statements about the impact of leverage on taxation.

### Findings 2.5: What are the effects of private equity on debt holders and taxation? The academic evidence

With respect to publicly quoted debt, the value of existing bonds (as measured by the pricing of the debt) will be adversely affected if new debt, issued at the time of the buy-out, impacts adversely on the perceived riskiness of the original debt (Appendix Table 4). US evidence is mixed: some studies fail to detect any such wealth transfer but others report a small average loss of market value but those original bonds with protective covenants showed a positive effect.

As buy-outs typically substitute debt for equity they tend to reduce corporate tax liabilities but this tax saving generally accounts for only a small fraction of the value gain in buy-outs.

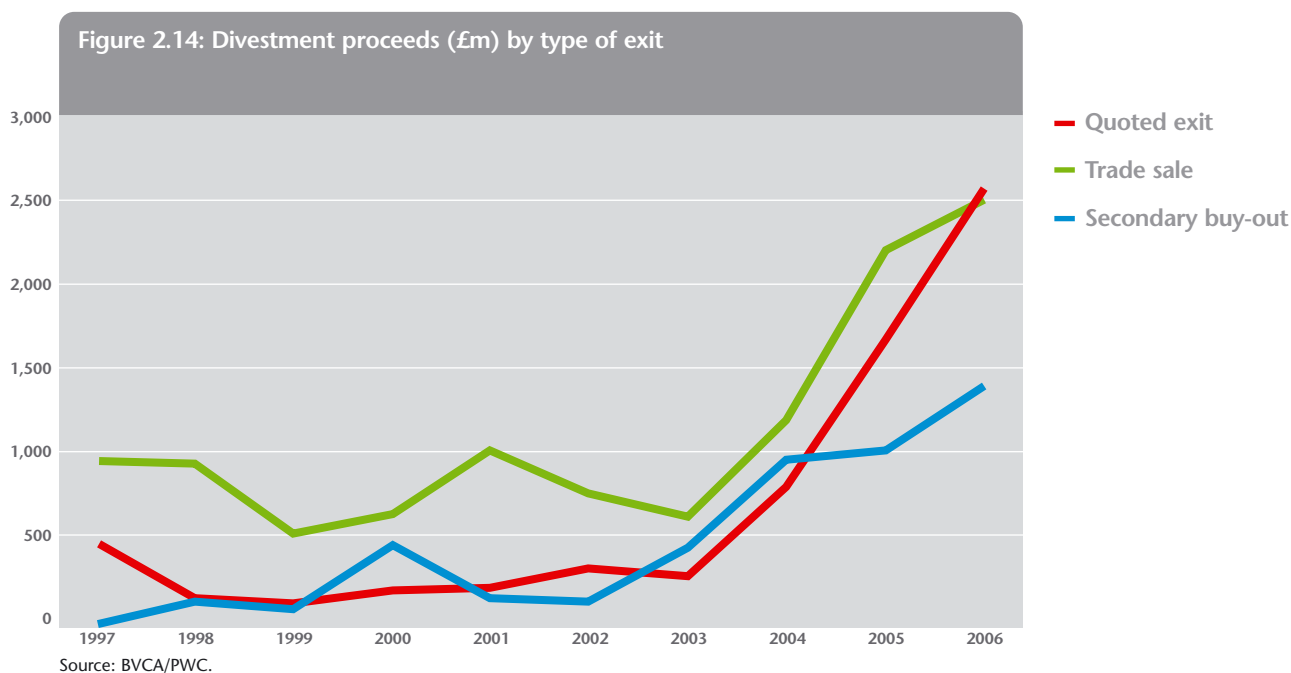
## 2.8 Refinancing and exits

### 2.8.1 Types of exit

All private equity transactions are structured with an exit in mind. Historically there were three exit routes:

- Trade sale: sale of the business to a corporate acquirer.
- Flotation on a stock market.
- Receivership and liquidation.

This report does not explain these types of exit as they are well understood.

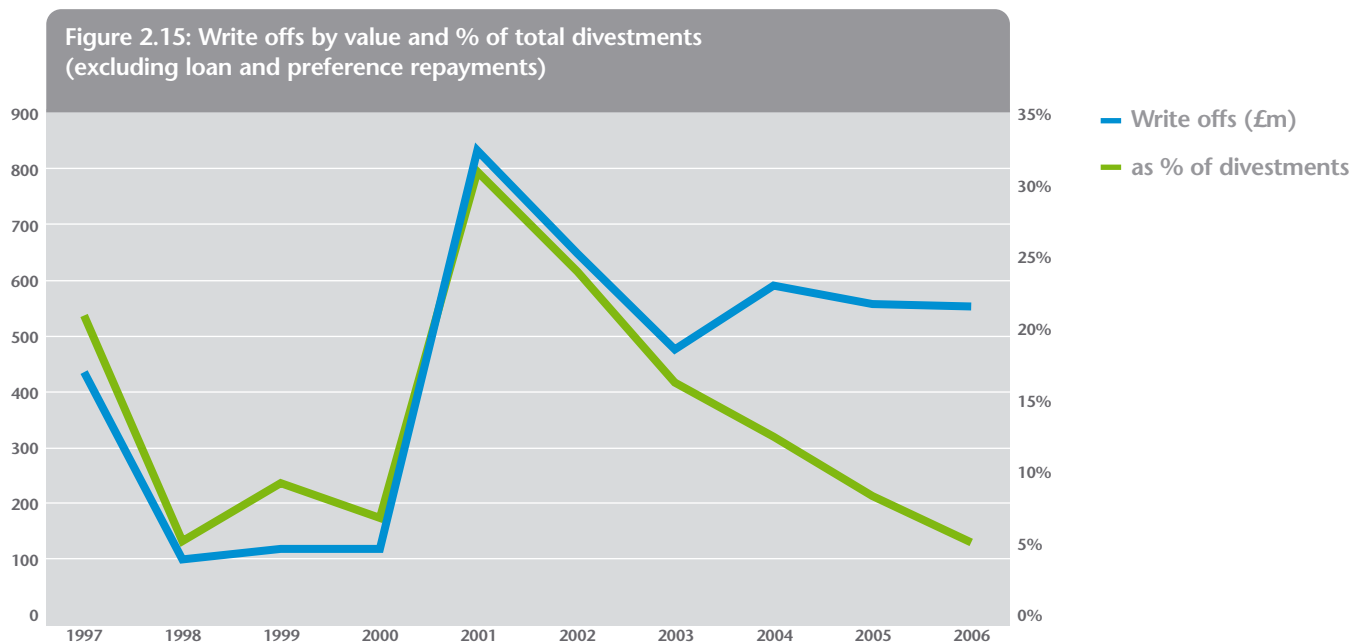


As illustrated in Figure 2.14, as investment values have increased, so the value of exits has risen. The commonest exit is a trade sale to a third party. It is clear that new routes to exit have emerged over the past decade:

- secondary buy-out/sale to another private equity fund;
- leveraged recapitalisation/repayment of loans and preference share; and
- secondary market transactions including the sale of portfolios of investments to other financial institutions.

These are discussed in more detail in sections 2.8.2–2.8.4 below.

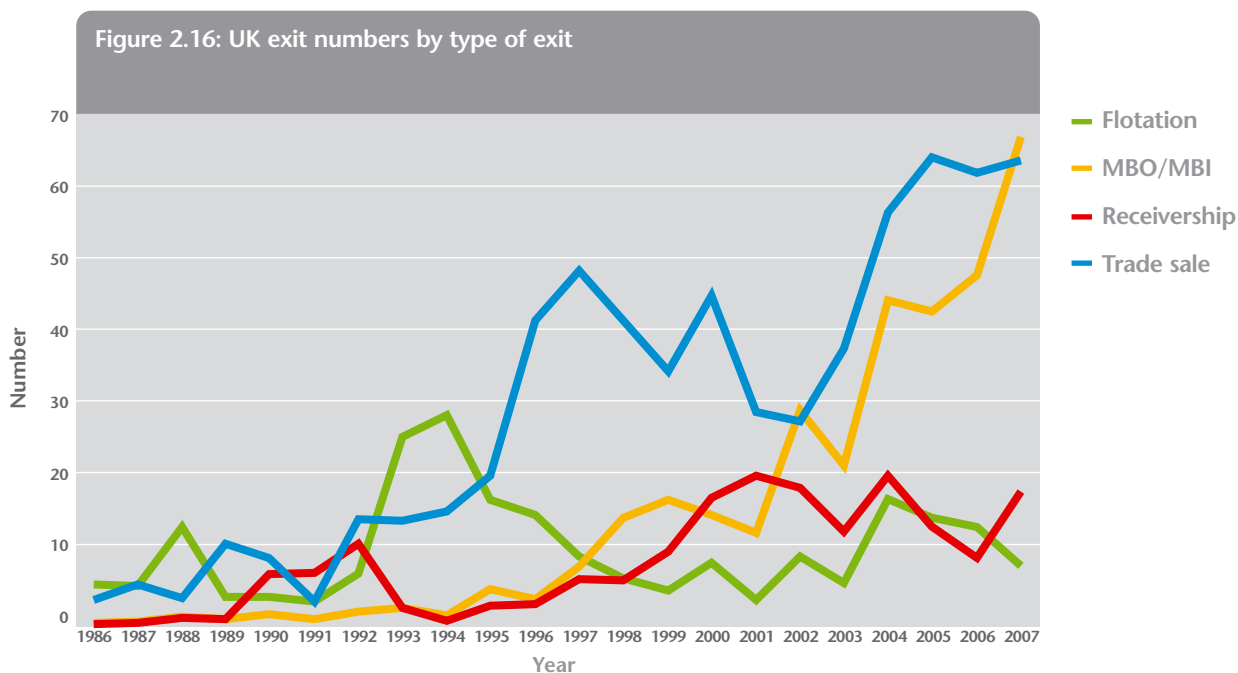
Not all exits crystallise increases in value; some investments are written off.



Source: BVCA/PWC.

Figure 2.15 shows the value of amounts written off by private equity investors between 1997 and 2006 in absolute terms and as a percentage of divestment proceeds. The data are consistent with the underlying cyclical trends in new investment activity seen in Figure 1.1.

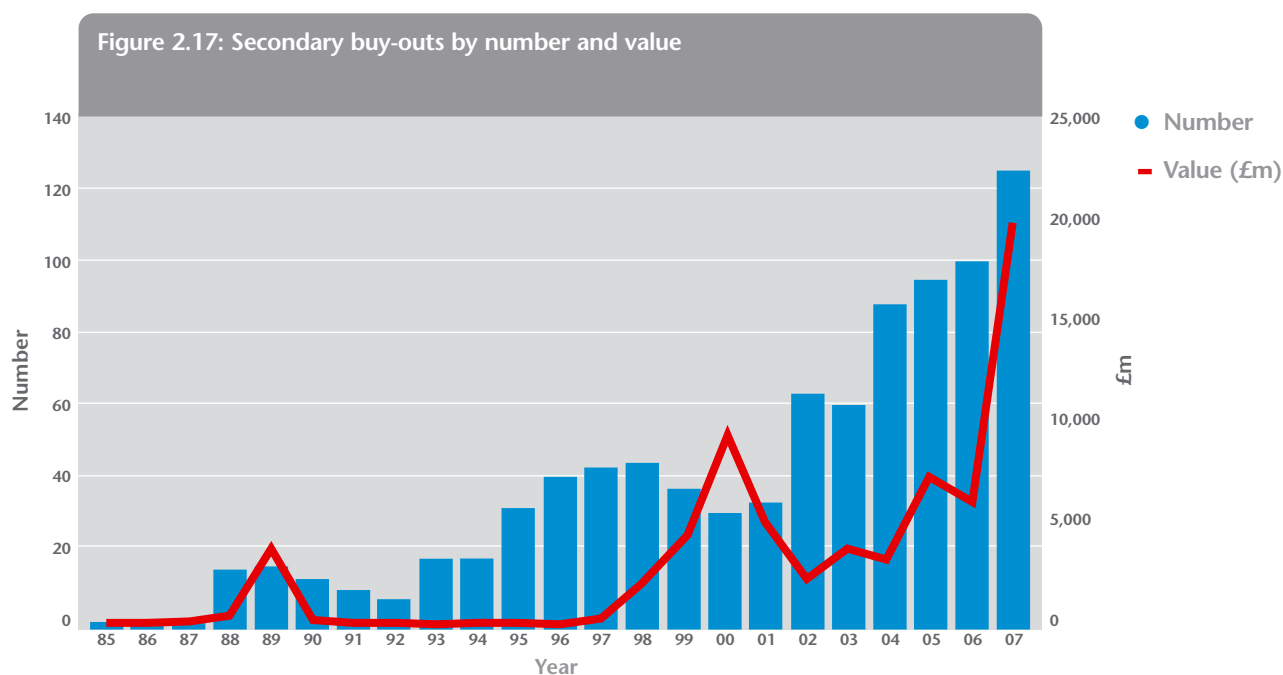
### 2.8.2 What has been the pattern of exits from private equity deals?



Source: CMBOR/Barclays Private Equity/Deloitte.

As shown in Figure 2.16 the past two decades in the UK have been marked by a general decline in the number of private equity deals that float on a stock market (IPO). However there has been a notable growth in the number of large secondary buy-outs, providing liquidity for the buy-out market at a time when alternative exit routes have been difficult. These deals may lead to the prolongation of disintermediation from public markets, but may maintain the positive benefits of private equity governance and incentives as a longer-term organisational form. However, these transactions raise important and challenging unresolved issues relating to performance evaluation. In particular, if the original private equity financiers were effective, how likely is it that further performance gains can be achieved? Little evidence is available on the performance of secondary buy-outs compared to other forms of exit, but that which is available indicates that returns on exit are below those for IPOs and trade sales.

### 2.8.3 Secondary buy-outs



Source: CMBOR/Barclays Private Equity/Deloitte.

In the early years of the buy-out market it was rare for a private equity fund to be prepared to buy a business from another private equity fund. Today it is common, accounting for about a third of larger buy-out exits. This has raised a number of issues regarding 'churn' in the private equity market.

Where a fund is approaching the end of its agreed life and has yet to exit an investment, a fund manager may face an unusual set of incentives. If the fund is extended to maximise the value of the last investment(s) there are penalties for the fund manager. Therefore it may be more rewarding to the manager to sell the asset for whatever value can be achieved today, rather than attempt to maximise the value in the longer run. In this sense there is an apparent paradox in private equity fund structures: the longer an investment has been held in a fund, the more likely it is that the private equity fund manager is incentivised to act based on short-term considerations.

In recent years, the most liquid acquirers of corporate assets have been private equity funds. Therefore a fund seeking a quick exit will very probably approach, among others, private equity funds. One way to mitigate the potential foregoing of value in such a transaction might be for the vendor private equity fund managers to co-invest in the business alongside the new private equity fund and do this from another fund under their management. This could trigger the carry in the old fund and carry forward the asset in the new fund at the value established by a third-party purchaser.

As the market has evolved, investors in private equity funds have had to be careful to ensure that the incentives of the fund manager and the investors in each and every fund are tightly aligned. Ultimately the constraint on fund managers is reputational: investors will not support fund managers that abuse their relationships.

## 2.8.4 Leveraged recapitalisation

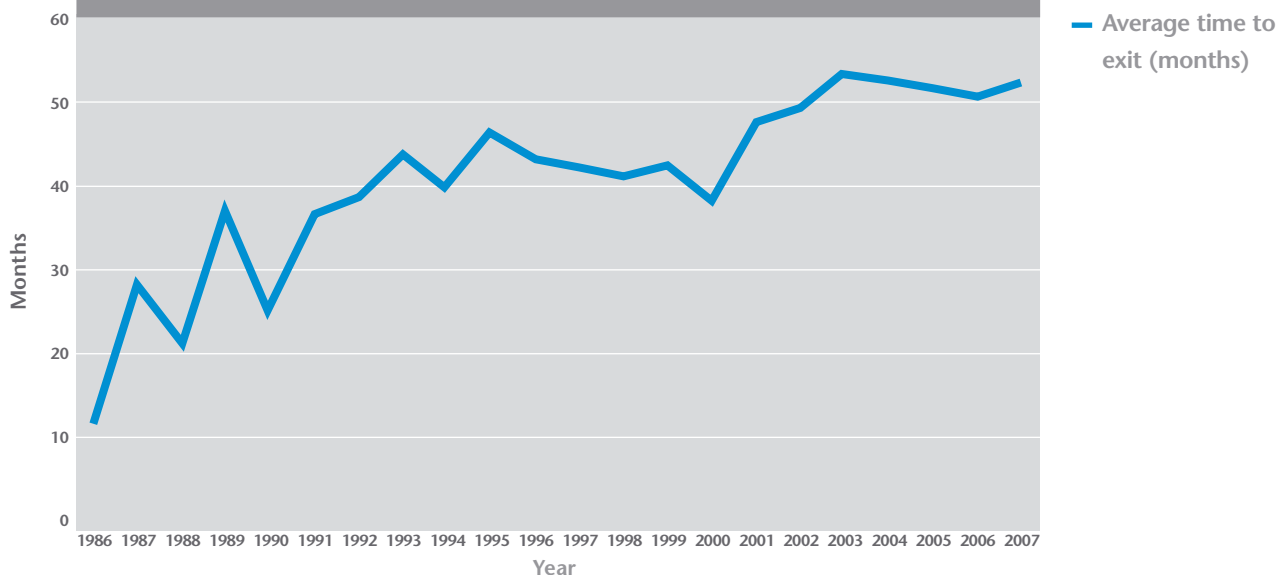
As with secondary buy-outs, the market in leveraged recapitalisations (or 'recaps') has become more active over the past decade. A recap involves the investee company re-borrowing debt previously repaid and/or increasing borrowings (usually due to increased performance since the original buy-out) from the wider banking industry. These new borrowings are used to repay and/or restructure the loan elements of the original financing structure, sometimes including the private equity investment in loanstock and/or preference shares (and sometimes paying a dividend).

The return will generally take the form of a repayment of loanstock and a dividend. The capital repayment is tax free (as there is no profit or loss) and an individual receiving the dividend currently pays tax at 25%.

### Findings 2.6: Do private equity deals involve the short-term 'flipping' of assets? The academic evidence

The systematic evidence shows that few private equity deals can be described as involving the flipping of transactions (assets or shares) within a short period of time following the buy-out (Appendix Table 5). Evidence from the 1980s in both the US and UK shows that some buy-outs are exited in a relatively short period of time, while others remain with the buy-out structure for periods in excess of five years. On average, larger deals exit significantly sooner than small deals. There have been some recent very short periods to exit of private equity deals but this is neither new nor surprising. Some deals fail quickly while others may receive unsolicited bids by trade buyers within a short time after buy-out. Over the past two decades, the average time to exit has been increasing (Figure 2.18). The most common timing of exit for those deals that have exited since 2000 is in the range of four to five years.

Figure 2.18: Average time to exit: private equity-backed buy-outs over £10m by year of exit



Source: CMBOR/Barclays Private Equity/Deloitte.

## Findings 2.7: What is the extent of asset sales and refinancing?

### The academic evidence

US evidence from the 1980s suggests that larger buy-outs involving P2Ps engage in substantial divestment of assets (Appendix Table 6) to an extent significantly greater than for buy-outs of divisions. The extent of asset sales among UK buy-outs completed in the 1980s was much less than in the US. It should be noted that buy-outs divesting assets may also have been making acquisitions. Partial sales made up just over a third of the total value realised in the UK in 2001, but have since become less frequent and accounted for just over a tenth of the total in 2006. The number of partial sales recorded is generally between 70 and 100 per annum, with a further £4.3 billion value realised through partial sales in the UK in 2006. With respect to refinancing, in the UK in 2006 total refinancing accounted for just under a fifth of the total value realised, compared to a little over a tenth in 1997. Between 55 and 90 recapitalisations have been recorded each year in the UK. The total value of recapitalisations in 2006 was £7.5 billion compared to a total buy-out value of over £26 billion.

## Findings 2.8: Do the effects of private equity continue after exit?

### The academic evidence

An important unresolved issue is whether the claimed benefits of private equity deals are sustained once the buy-out structure ends (Appendix Table 7). US evidence is that while leverage and management equity fall when buy-outs return to market (reverse buy-outs), they remain high relative to comparable listed corporations that have not undergone a buy-out. Pre-IPO, the accounting performance of buy-outs is significantly higher than the median for the respective sectors. Following the IPO, accounting and share price performance are above the firms' sector and stock market benchmarks for three to five years, but decline during this period. This change is positively related to changes in insider ownership but not to leverage.

Private equity-backed MBOs in the UK tend to IPO earlier than their non-private equity-backed counterparts. There is some evidence that they are more under-priced than MBOs without private equity backing, but not that they perform better than their non-private equity-backed counterparts in the long run. Private to public MBOs backed by more active private equity firms in the UK tend to exit earlier and these MBOs performed better than those backed by less active private equity firms.

### 3. EVALUATING AND STRUCTURING A PRIVATE EQUITY INVESTMENT

In section three we look in more detail at the considerations of each party in the negotiation and structuring of a private equity investment.



## 3.1 Value and pricing

There are many guides to the basic principles of structuring a leveraged private equity investment. In this section we therefore take a relatively detailed look at the process used and the questions being asked when a deal is structured. We consider only leveraged buy-outs and primarily the case of an acquisition of shares (as opposed to a purchase of assets).

### 3.1.1 What is 'value'? The difference between enterprise value and equity value

When talking about structuring any transaction it is of the utmost importance to understand what is meant by the terms 'price' and 'value'. There are two widely used, but different, measures of the value of a business:

- **Equity value** or **market capitalisation** is the value of 100% of the shares of the business. It measures the equity value after all other claims on the business, including debt, have been deducted. Price earnings ratios (PE ratios) measure the equity value divided by post-tax profits (note that as published, PE ratios are based on profit before tax less notional tax at the mainstream corporation tax rate, not the company's actual tax rate).
- **Enterprise value** is the debt free/cash free value of the operating business. Enterprise value is measured by reference to profit before interest and tax (EBIT) or profit before interest, tax, depreciation and amortisation (EBITDA) and reflects the estimate of the value of the business regardless of how it is financed.

The calculations are illustrated in Table 3.1 below.

**Table 3.1: Calculation of enterprise value and equity value**

Balance Sheet	£m	Notes
Net tangible assets	150	Net value of assets less liabilities not including cash or borrowings
Goodwill	50	The difference between net tangible assets and enterprise value
<b>Enterprise value</b>	<b>200</b>	Value of the business
<b>Financed by</b>		
Net debt	100	Short and long-term borrowings less cash
<b>Equity value</b>	<b>100</b>	Market value of 100% of the shares in issue
<b>Enterprise value</b>	<b>200</b>	Value of the business

Profit and Loss Account		Notes
EBITDA	25	Earnings (profit) before interest, tax, depreciation and amortisation
Depreciation & amortisation	(5)	
EBIT	20	Earnings (profit) before interest and taxation
Interest	(10)	
NPBT	10	Net profit before tax
Tax	(3)	
PAT	7	Profit after tax

Pricing Statistics		Notes
PE ratio	14.29	Equity value/profit after tax
EV/EBIT	10.00	Enterprise value/EBIT
EV/EBITDA	8.00	Enterprise value /EBITDA

Private equity is about structuring a funding package for the enterprise value of the business. A purchaser must finance both the purchase of the equity capital (including goodwill) and refinance the existing net borrowings, as well as meet the transaction costs.

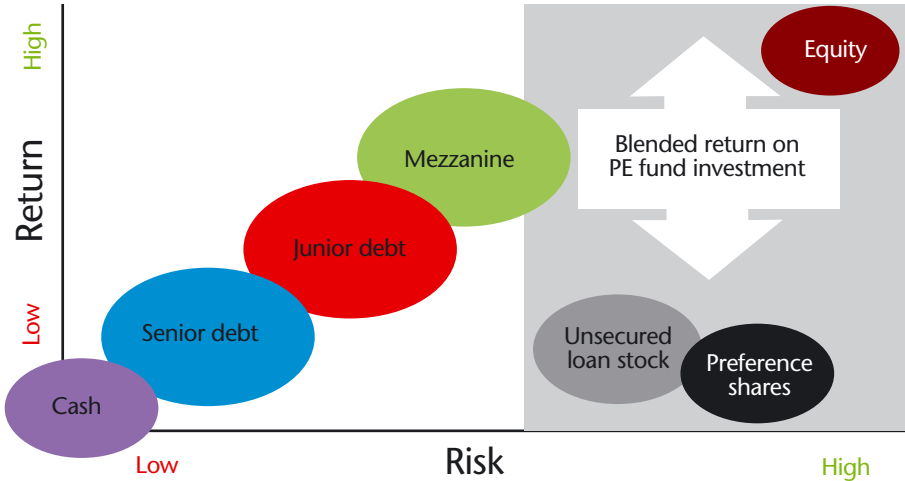
### 3.1.2 What is 'financial engineering'?

Financial engineering is the term often used to describe the process of creating an optimal capital structure for a company. At its simplest level it amounts to answering the question: 'How much is it prudent to borrow from a bank?' In practice a capital structure will be more complex than simply an amount of permanent equity (ordinary shares) and a bank facility.



The structure will have to be sufficient to finance the business plan of the company, which in a buy-out includes financing the acquisition and the associated acquisition costs. It will also need to be flexible enough and have sufficient headroom, to accommodate the vagaries and volatilities of the commercial world. It should be efficient, minimising unnecessary taxation as well as currency and interest rate risk. It also needs to accommodate the need to incentivise key management and staff at the same time as rewarding the other investors for the risks they are taking.

**Figure 3.1: Types of financial instrument: risk and reward**



In a large buy-out it is usual to see multiple layers of debt, mezzanine and equity that carry different risks and rewards (see section 4.3 for a detailed example). Using financial engineering prudently is therefore a core skill of the successful private equity investor. The detailed structural mechanics are usually outsourced to lawyers and accountants, but the key commercial skill is to be able to assess the investment risk and design a structure which delivers an appropriate reward.

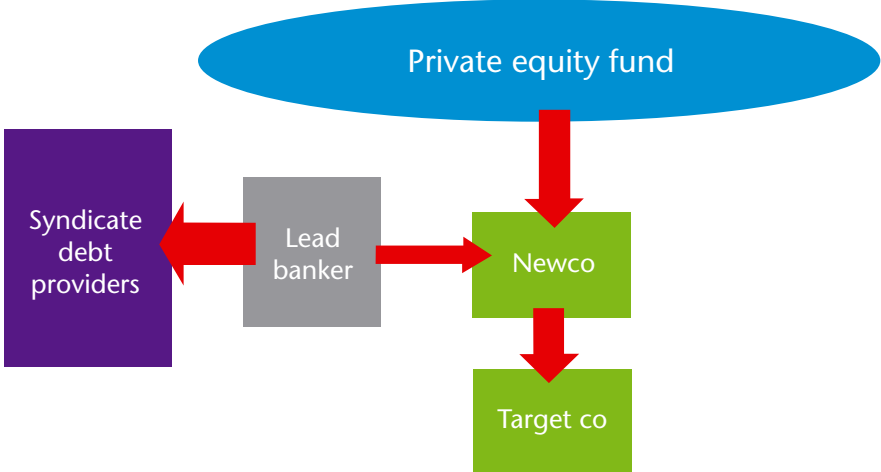
A private equity investment is often made using a combination of different types of financial instrument that together generate the required blended return. Management will normally only invest in the highest risk, highest reward equity instrument. This is done to ensure that management’s rewards are only earned once the private equity fund has recovered the vast majority of its investment.

The objective is to minimise the cost of capital used to fund the business subject to the risk profile of the business. Any value that is created by this minimisation process is available to fund investment and acquisitions or is available to the ordinary equity shareholders who carry the highest risk.

It should be noted that the simplest way to minimise risk is to pay the lowest price for a company or asset. Therefore negotiation skills are a key component of the skill set of any acquisitive investor, including private equity funds.

**3.1.3 What is a ‘Newco’?**

**Figure 3.2: Outline structure of a leveraged buy-out**



To make an offer for a target company, a new company is established (Newco) which raises the necessary funds for the acquisition from the private equity fund and the bank(s). A number of Newcos may be established to achieve the required subordination or priority of return of the various different sources of funding.

### 3.1.4 How do you decide whether to buy shares or assets?

The legal and tax positions of a share transaction are different from those of a purchase of assets:

- **Asset purchase:**
  - the purchaser acquires only defined and identified assets, while historic liabilities remain with the vendor;
  - the purchaser pays stamp duty on the value of fixed assets acquired;
  - the purchaser will be able to claim capital allowances on certain of the assets acquired which can be offset against corporation tax; the vendor will have (in principle) an opposite balancing charge;
  - the vendor may have a tax liability on any gain (this could be a capital gains tax, corporation tax or income tax charge depending on the identity of the vendor and the type of asset). If the vendor is a company, the vendor's shareholders will pay further tax on any distribution that subsequently occurs; ie, there is a risk of double taxation and the amounts received by the shareholders may be treated as income (taxed at 40% for higher rate tax payers) not capital gain (taxed at 18% in the UK since April 2008); and
  - even though employees are transferred from the vendor to a new employer (the purchaser), their employees rights are protected by TUPE legislation, see section 2.6.2 above.
- **Share purchase:**
  - the purchaser buys the shares and inherits all the shareholder's rights and obligations, including historical liabilities;
  - the purchaser pays stamp duty on the price paid for the shares (but at a lower rate than for assets);
  - unless the vendor is a group selling a division or subsidiary, the vendor will only pay capital gains tax on the profit on the share sale; and
  - there is no change of employer so all employee rights will remain intact and TUPE does not apply.

Generally, a sale of shares is preferred by vendors to avoid double taxation and is by far the most common transaction in larger buy-outs. However, where there are significant unquantifiable potential liabilities (eg, environmental claims or potential litigation) an asset deal may be the best way to proceed commercially.

### 3.1.5 Pricing a transaction

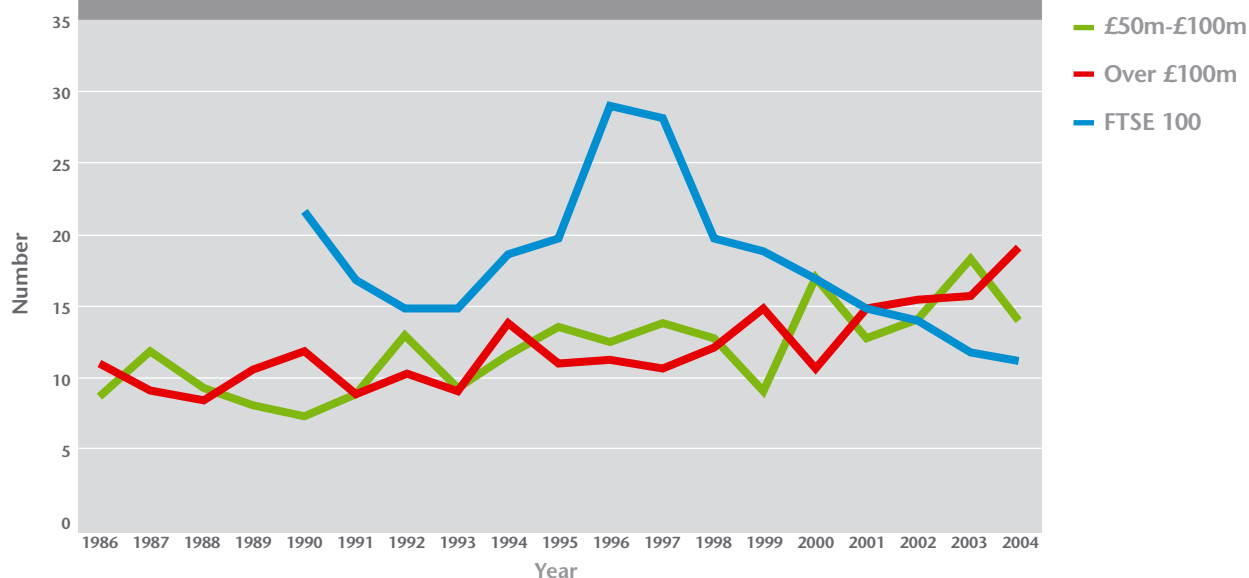
The price offered for any business must achieve two objectives: be acceptable to the vendor and be financeable in the prevailing markets.

Private equity funds (and indeed most rational bidders) typically work back from a financeable solution to an acceptable offer.

#### Findings 3.1: Has deal pricing been increasing? Industry data

In addition to increased leverage, concerns have also emerged about the sustainability of private equity returns due to the general increase over time in entry EBIT multiples (Figure 3.3). For the largest deals, there has been a marked increase in EBIT multiples from a little over 10 in 1989 to almost 20 in 2007. While the average PE multiples of FTSE 100 companies were above those for larger buy-outs throughout the 1990s, since 2003 there has been little difference and since 2005, buy-out multiples have exceeded those of FTSE 100 firms.

Figure 3.3: Price: EBIT multiples in buy-outs 1989-2004



Source: CMBOR/Barclays Private Equity/Deloitte/DataStream.

### 3.1.6 A financeable offer

The basic questions to answer in structuring a leveraged transaction are:

1. How much debt can be raised from the various participants in the banking market?
2. How much equity is therefore needed from the private equity fund to finance an acceptable offer to the vendors?
3. Does the business plan demonstrate that investors will receive an acceptable risk-adjusted return on the equity required to fund the offer?

## 3.2 Senior debt and mezzanine

### 3.2.1 How much debt?

In simple terms, banks look at two aspects of the business:

1. How much cash is available to pay interest and repay the loans?
2. If the company were to default on the loan, how much would the bank recover on a distressed sale of the business or its assets?

Cash flow is the lifeblood of leveraged transactions and at the due diligence stage of the investment cycle, an enormous amount of analysis and technology is applied in assessing what the range of probable cash flows of the target business is likely to be.

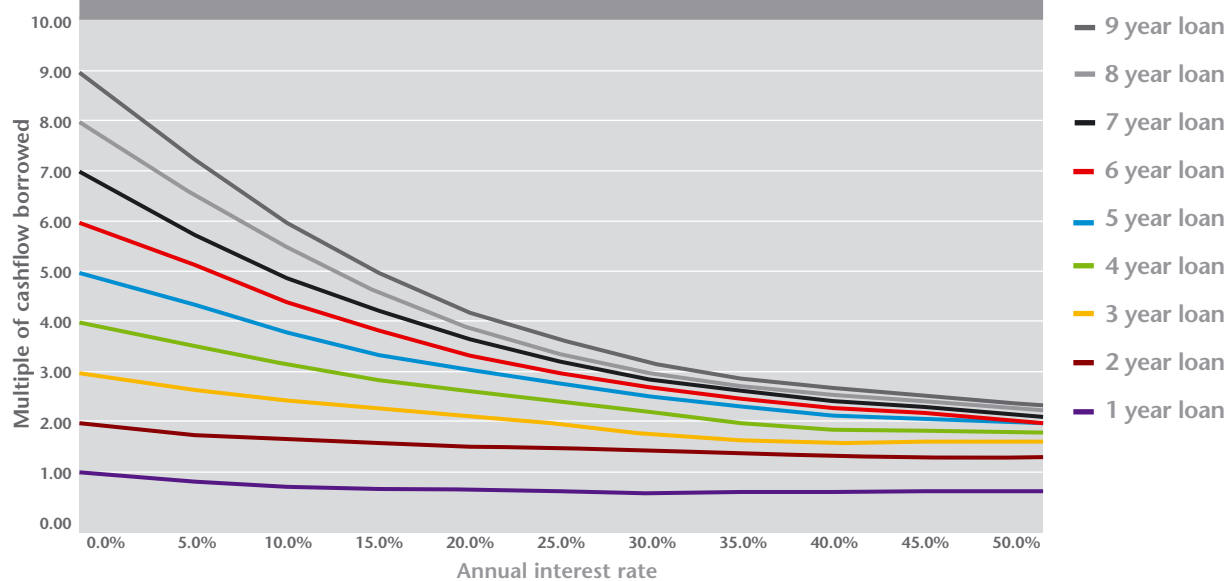
The amount of debt that a business can support falls as the interest rate rises: at low interest rates a business can either reduce its interest payments or keep its interest payments constant by borrowing more. Similarly the amount that can be borrowed against a given cash flow increases as the term of the loan increases. You can borrow more if you pay it back more slowly.

Figure 3.4 illustrates the relationship between the interest rate, the term of the loan in years and the amount that can be borrowed on an amortising loan. For example, a 0% interest loan repaid in equal instalments over eight years can be afforded at multiples up to eight times the (risk free) cash flow of the borrower. The same loan at an interest rate of 10% can only be afforded at multiples of up to 5.33 times the same cash flow. Therefore, the amount of debt that a business can support is inversely related to the interest rate and directly related to the term of the loan.

A private equity fund will therefore seek to maximise the term of the loan and minimise the interest rate subject to its appetite for financial risk.

Conversely, banks will seek to maximise the interest rate while matching the term of the loan to the demands of the syndication market and their own loan portfolio. These are both ultimately driven by the term and rates seen in the bond markets.

Figure 3.4: Relationship between length of loan, interest rate and multiple of free cash flow (in an equal payment fully amortising loan)



A typical loan package will consist of a variation around the 'standard' leveraged loan package:

- Seven year A senior amortising loan: a loan repaid in equal instalments over seven years.
- Eight year B senior bullet loan: a loan paying interest only until the capital is repaid in one instalment (a bullet repayment) in eight years.

Banks compete to win mandates both by competing on price and by attempting to maximise the quantity of debt available.

### 3.2.2 What is payment in kind debt?

One way to increase the amount of debt capacity in a business is to roll up the interest rather than pay it in cash. This has impacts on cash, profitability and taxation.

Payment in kind (PIK) debt is a form of loan that does not receive cash interest. Instead it receives more of the same type of loan. At maturity or on sale or flotation if earlier, the total amount of the original loan plus the PIK notes issued in lieu of interest is repaid. This enables the company to borrow without having the burden of a cash repayment of interest until the end of the loan.

For the lender the attraction is that PIK loans pay higher nominal interest rates than normal cash interest loans. A similar result is achieved if interest is 'rolled up' and repaid at the end of the loan. The only economic difference between PIK and a roll-up is that interest may accrue more rapidly on PIK debt if there is no 'interest-on-interest' on the roll up.

### Findings 3.2: Does higher leverage lead to increased likelihood of failure? The academic evidence

Private equity deals can sustain high capital leverage if they have high and stable interest cover. Studies of larger US buy-outs and UK research provide strong evidence that higher amounts of debt are associated with an increased probability of failure or the need for a restructuring to take place (Appendix Table 8). Higher turnover per employee and the reduction of employment on buy-out is negatively associated with failure; this suggests the importance of measures taken to restructure an underperforming company early in the buy-out life-cycle. P2Ps that subsequently enter receivership have higher initial default probability and distance to default than P2Ps that exited through IPO, trade sale, secondary buy-out or no exit.

### 3.2.3 Can Newco repay the borrowings?

The first measure used in this process is the ratio of EBITDA to total borrowings.

This ratio measures, approximately, the amount of cash flow available to pay interest (and to make loan repayments on the appointed dates).

Tax will be recalculated on the target company's projected profits based on the new capital structure ie, after interest deductions.

Depreciation and amortisation are excluded because these are non-cash items and have no impact on cash flow. However, any cash required to fund future capital investment will be taken into account in the new capital structure.

The EBITDA ratio has, on average, been rising over the recent past and, as noted above, concerns have been expressed about the prudence of certain leveraged structures with perceived high debt ratios. However, it is important to note that the ratio does not tell the whole story. For example, in businesses that have completed a major investment programme and have no further significant capital expenditure (Capex) requirements in the immediate foreseeable future, a higher EBITDA multiple will be more tolerable than in companies with major future capex needs.

Generally the more volatile and uncertain the earnings of the target, the lower the EBITDA multiple should be, and vice versa.

### 3.2.4 What security will the banks have?

The second measure is the ratio of realisable assets to total borrowings.

This ratio requires judgement on both the value of the target company's assets and how readily realisable they would be in a forced sale. It is an approximate measure of the total amount of security available to the lender in the event of default on the loans. This is relevant to both the amount of debt lent and the pricing of that debt.

Bankers will typically price debt in layers. The first layer will be the most secure with a first charge over the assets of the borrower, and therefore be regarded as carrying the lowest risk, and priced accordingly. It may, for example, be 60-70% of the estimated realisable value of the assets. If there is sufficient cash flow to support further senior debt, the next layer will be priced at a higher margin, and so on.

### 3.2.5 What are the potential sources of cash flow to repay borrowings?

Companies generate cash flows from three sources:

1. Increasing post tax profits.
2. Reducing working capital.
3. Selling fixed assets.

All other cash inflows come from the shareholders or external lenders.

Leveraged transactions focus on each source of cash flow and how they interact.

### 3.2.6 Increasing post tax profits

Increasing profitability can be achieved in five ways, only four of which impact cash flow:

1. Increase gross margins.
2. Increase volumes or sales.
3. Reduce overheads.
4. Reduce the tax charge.
5. Change accounting policies or the way they are applied.

The first three of these will flow from strategic and tactical decisions made by management and will involve management skill and hard work by all employees in a business. Such actions are not specific to private equity investment, and therefore they are not discussed further here. They are however absolutely at the centre of any investment and banking decision, and are in many ways the core skill set of any manager and investor.

The tax charge is dealt with in a detailed worked example in section 4 below.

Any change in accounting policies or their application would be a matter for independent consideration by the auditors of the business.

### 3.2.7 Reducing working capital

The amount of cash tied up in a business as working capital is (broadly) determined by the relative speed of being paid by customers compared to the speed at which suppliers are paid.

All private equity investors will look very closely at the working capital of the business. Many will have an explicit plan to reduce the amount of working capital by reducing stocks, or paying suppliers later or speeding up customer collections or a combination of all of these. From the perspective of the company, this is unequivocally a positive thing to do; it represents a step change in efficiency of the business.

From the perspective of the overall economy, if all that happens is that the reduction in working capital in a company creates an equal and opposite increase in the working capital of its suppliers and customers, then there is unlikely to be a gain in efficiency in the supply chain. However, if the pressure to reduce working capital flows up and down the supply chain, it is a net gain in economic efficiency: the product or service is being produced using less (valuable) capital.

Irrespective of the overall effect on the economy, it is one significant way that leverage creates the imperative to maximise cash flow.

### 3.2.8 Fixed assets: to own or lease?

Virtually all businesses have a mix of owned and leased assets. The decision to own or lease will be based on attitudes to risk and the strategic importance of owning an asset. In leveraged buy-outs the ownership of all material assets will be reviewed.

Assets that have no productive worth should always be sold. Other assets need to be reviewed in the context both of business efficiency and the security underlying the debt structure. Banks will usually wish to negotiate that some or all of the proceeds from any asset sales are used to repay borrowings, or they may want a block on asset sales that are not in the agreed business plan.

The decision therefore becomes one of owning a fixed asset or selling it. Often, where the asset is a property, the decision will be taken to sell and lease back the building. It is important to emphasise that selling any particular asset may increase overall economic efficiency, if it can be put to better use under a different owner, especially if the current owner is not using it to its full potential.

#### Findings 3.3: Where do buy-outs get the cash to pay down the debt? The academic evidence

Research on US buy-outs during the 1980s indicates substantial average improvements in profitability and cash flow measures over the interval between one year prior to the transaction and two or three years **subsequent** to it (Appendix Table 9). UK evidence from the 1980s also indicates that the vast majority of buy-outs show clear improvements in profitability and working capital management. These buy-outs generated significantly higher increases in return on assets than comparable firms that did not experience an MBO over a period from two to five years after buy-out. Financial ratio analysis of medium-sized MBOs in the Netherlands showed that they had significantly better ratios than the average financial ratios of the industries in which they were involved in terms of cash flow, sales and return on investment. In France, MBOs outperform comparable firms in the same industry both before and after the buy-out. However, the performance of French MBO firms declines after the transaction is consummated, especially in former family businesses.

US plant level data shows that MBO plants had higher total factor productivity (TFP) than representative establishments in the same industry before they changed owners (Appendix Table 10). MBO plants experienced significant improvements in TFP after the MBO which could not be attributed to reductions in R&D, wages, capital investment, or layoffs of shop floor/blue-collar personnel.

UK evidence based on company-level data shows significant improvements in efficiency for up to four years post buy-out compared to non-buy-out firms. Data for approximately 36,000 UK manufacturing establishments, of which some 5,000 were buy-outs, shows that MBO establishments were less productive than comparable plants before the transfer of ownership but experienced a substantial increase in productivity after buy-out. These improvements appear to be due to measures undertaken by new owners or managers to reduce the labour intensity of production, through the outsourcing of intermediate goods and materials.

### **Findings 3.4: To what extent do private equity deals involve strategies to grow the business? The academic evidence**

Buy-outs are associated with refocusing the strategic activities of the firm, especially for deals involving listed corporations (Appendix Table 11). Divestment activity by buy-outs appears to be greater than for comparable non-buy-outs. However, US, UK and Dutch evidence from the 1980s shows that buy-outs are followed by significant increases in new product development and other aspects of corporate activity such as engaging in entrepreneurial ventures, technological alliances, increased R&D and patent citations. More recent evidence shows private equity funders contribute to keeping added-value strategies on track, assisting in new ventures and broadening market focus, and in having the knowledge to be able to assess investment in product development. Private equity firms also contribute to the development of management control systems that facilitate strategic change in different types of buy-outs.

### **Findings 3.5: Do private equity deals and buy-outs have adverse effects on investment and R&D? The academic evidence**

US evidence from the 1980s strongly supports the view that capital investment falls immediately following the LBO as a result of the increased leverage (Appendix Table 11). The evidence on UK MBOs from the 1980s indicates that asset sales are offset by new capital investment, particularly in plant and equipment. The effect of buy-outs on R&D is less clear, although on balance US evidence suggests there is a reduction. However, as many LBOs are in low R&D industries, the overall effect may be insubstantial. There is evidence from buy-outs that do have R&D needs, that this expenditure is used more effectively.

#### **3.2.9 Asset stripping and financial assistance**

There has been much discussion about so-called 'asset stripping'. In simple terms, asset stripping as seen in the late 1960s involved buying a company, selling all its assets and keeping all the proceeds. The company would then probably be liquidated and the creditors left unpaid. This is a criminal offence in the UK. It is illegal to purchase a business with the intention of selling its assets and leaving its creditors (including its employees and pensioners) unpaid.

To prevent asset stripping, it is currently illegal for any company to give financial assistance for the purchase of its own shares, unless it goes through a process established in the 1981 Companies Act and commonly known as the 'white wash' procedure.

Financial assistance arises in leveraged buy-outs when banks, or other lenders, take security on the assets of the target company. The banks would not lend without the security given by the company being acquired. The acquired company is therefore assisting in the raising of the finance to complete the acquisition.

In a white wash, the directors of the target company at the date of the transaction give a statutory declaration that at the time this is given, the company will continue to be a going concern. 'Going concern' in this context is usually taken to mean it is reasonably expected that it will be able to pay all of its current and future creditors for at least the next year. It is a criminal offence to give a statutory declaration knowing it to be false.

The white wash procedure is only available to private limited companies, not public limited companies.

Under the Companies Act 2006, the prohibition on financial assistance by private companies was removed with effect from October 2008, but it remains in place for public companies.

#### **3.2.10 What protections exist for publicly quoted companies?**

In a public to private transaction, the plc must be converted into a private limited company prior to giving financial assistance. This can only happen after a company is de-listed. Banks therefore cannot perfect their security in a UK P2P until after the company has de-listed and been converted to a private limited company.

To de-list and convert from a plc to private limited company requires the consent of a majority (75% of all votes) at an extraordinary general meeting. However, a private equity fund will



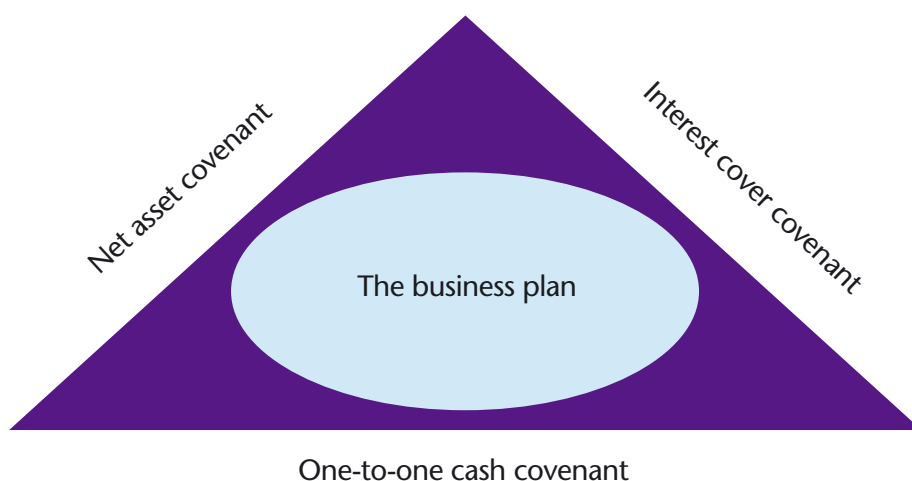
want to acquire 100% of the shares of the target company, which it can do under the Companies Act once 95% of shareholders (by votes and value) have accepted the offer, since the remainder of the shares are then capable of being compulsorily acquired (or 'squeezed out').

For this reason, leveraged offers for public companies are often conditional upon achieving at least 75% acceptances and may even require 95% acceptance.

The de-listing and conversion into a private limited company may be some weeks after the offer has been completed. In the intervening period the bank will be at risk due to the imperfection of the security. It is expensive (and often impossible) to syndicate debt prior to perfecting security. This process therefore extends the period that banks are at risk. Typically there are penalty clauses in the debt package that are triggered if security is not perfected within a given period after completion.

### 3.2.11 The risks of leverage: financial covenants and events of default

Figure 3.5: Schematic illustrating banking covenants



Any loan is a contractual obligation to repay interest and capital on pre-agreed dates. If the business performance deviates negatively from the business plan around which a debt package has been tailored, the debt structure will be put under pressure. A key part of tailoring the package is to 'stress-test' the scenarios in which the debt structure might become overly burdensome for the company.

As part of the debt package, the bank will agree a set of covenants that have to be periodically met. Covenants are a series of tests that measure the underlying business performance to establish whether or not the business plan that formed the basis of the debt structure is being met. They operate as both early warning devices to the bank of problems with a customer and as powerful tools in the renegotiation of a company's capital structure if the problems are serious.

Each set of covenants is individually negotiated for each transaction, but there are basic principles common to most.

The purpose of the various covenants is to monitor cash generation, profitability and the asset base of a company against the business plan on an ongoing basis and to provide lenders with early warning signals of things going wrong.

### 3.2.12 One-to-one cash covenant

As a general rule banks will not lend money for the purpose of repaying their own borrowings: companies usually cannot repay term loans using an overdraft facility, for example. Therefore there is usually a covenant that states that the borrowing company must be able to pay interest and capital out of cash generated by trading. This is the one-to-one cash cover covenant.

### 3.2.13 Net assets covenant

Banks also wish to preserve the asset base of the company that provides their security. They will therefore generally impose a covenant stating that the net assets of the business must be greater than an agreed amount based upon the business plan. This is the net assets covenant.

### 3.2.14 Interest cover covenant

The bank will wish to see that interest is being paid out of profitable trading, not out of capital. They will therefore specify a ratio of interest to pre-interest profit that must be met. This is the interest cover covenant.

A breach of the interest covenant arises due to falling profits (as opposed to cash flow) or increasing interest rates.

### 3.2.15 An event of default and corporate failure

Failure to meet one or more of the covenants is an event of default which gives the banks the right to either increase the cost of the debt or to potentially demand immediate repayment of their loans. It is relatively rare for a bank to seek to recover all the loans immediately that an event of default occurs. Typically they will seek to renegotiate the entire debt package on new terms that reflect what they see as the new circumstances of the business. This might, for example, mean rescheduling the loans to reduce the repayment in each year but charging a higher interest rate (and fees) for doing so. When a restructuring cannot be negotiated, a company may be sold or forced into administration, receivership or liquidation.

### 3.2.16 How can the risks of leverage be mitigated?

As illustrated above, banking risk is generally caused by a combination of declining trading performance relative to the business plan and/or interest rate risk.

The risk of declining trading performance is anticipated when the business plan is finalised at the time of the transaction and the most effective way to mitigate this type of risk is therefore to plan prudently.

Interest rate risk can be managed by borrowing at long-term fixed rates. This is expensive as the cost of fixed-rate loans is higher than variable rate loans to reflect the fact that the lender takes on the interest rate risk of the borrower.

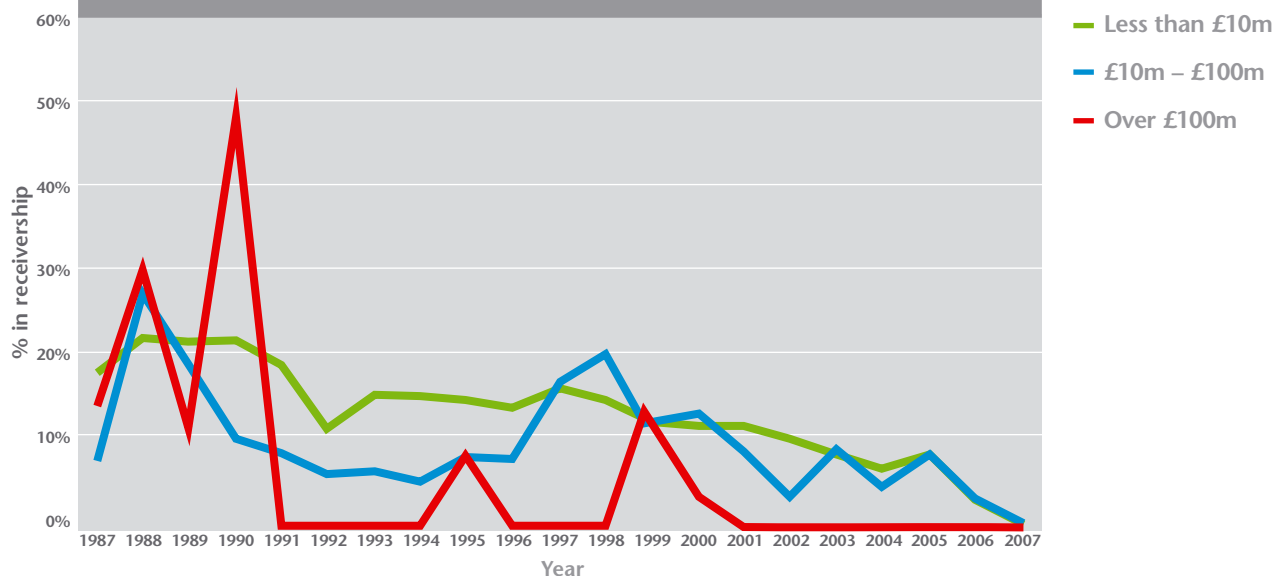
A variety of techniques exist to reduce, but not wholly eliminate, interest rate risk by hedging the interest rate on the loans. These include a variety of financial products including:

- Swaps: the borrower of a fixed-rate loan swaps their variable rate exposure with another borrower who has a variable rate loan and pays them a fee to transfer the risk. These are arranged by a bank which will charge a fee for arranging the swap.
- Caps: the borrower agrees a limit with the bank on their interest rate exposure. Up to the cap, the borrower still incurs the risk; above the cap the bank takes on the risk. This limits the risk to a known maximum over the term of the cap.
- Collars: to reduce the cost of hedging the interest rate risk, a borrower may agree to both a cap with the bank and a collar below which any fall in interest rates will be to the benefit of the lenders not the borrowers. This effectively limits the interest rate to a maximum and minimum over the life of the arrangement.

#### Findings 3.6: What proportion of buy-outs fail? Industry data

Since 1985 there have been some 13,000 UK buy-outs of which around 12% have (at the date of writing) entered receivership. The historic pattern of receiverships is shown in Figure 3.6. The receivership rate varies according to vintage year, peaking at 21% for buy-outs completed in the boom years of 1988-1990 which subsequently encountered problems in the recession of the early 1990s. The large majority of receiverships occur in smaller firms and to date, few of the largest deals in the UK have failed. CMBOR data indicate that 94% of the receiverships were from buy-outs with initial deal values of less than £20 million. In recessionary conditions, there is a notable increase in failure rates. The average time to failure has been increasing over the last two decades. The time to exit is noticeably shorter in the recessionary years of the early 1990s but currently stands at a little over six years.

Figure 3.6: Percentage of UK buy-outs ending in receivership: by value range and vintage year



Source: CMBOR/Barclays Private Equity/Deloitte.

### Findings 3.7: What do secured creditors recover? The academic evidence

US buy-outs that defaulted on their loans in the 1980s generally had positive operating margins at the time of default and, from pre-buy-out to distress resolution, experienced a marginally positive change in (market- or industry-adjusted) value (Appendix Table 8). In UK buy-outs that defaulted, secured creditors recovered on average 62% of their investment. In comparison with evidence from a more general population of small firms, MBOs experience fewer going concern realisations in receivership (30%), make a lower average repayment to secured creditors and make fewer 100% repayments to these creditors. These results appear to contrast with expectations that the covenants accompanying high leverage in buy-outs will signal distress sooner than in firms funded more by equity. However, that these MBOs entered formal insolvency procedures despite the presence of specialised lender monitoring suggests that these are cases that will have been the ones considered most difficult to reorganise. UK evidence on failed buy-outs shows that coordination problems among multiple lenders do not create inefficiencies resulting in significantly lower secured creditor recovery rates. However, when there are multiple secured lenders, the senior secured lender gains at the expense of other secured creditors as the lender first registering the charge over assets obtains priority. Evidence on the returns to subordinated creditors in buy-outs is generally lacking.

### 3.2.17 What is mezzanine?

Mezzanine finance comes in many forms. The common features of all mezzanine instruments and products are that they offer a risk: return profile that lies above that of debt and below that of equity. It may be provided by the bankers or by specialist mezzanine funds.

Mezzanine is used to increase the financial leverage of transactions where the lead bankers have no appetite to lend further senior debt but there is still more capacity for long-term borrowings. This may happen for a number of reasons. It might be that the security provided by the assets of the company is fully utilised to support the senior debt package, but the cash flows will support further borrowings. A banker will therefore wish to receive a higher yield on the instrument that has no underlying asset cover.

Another example could be where there are large forecast cash flows that are contingent on executing a particular part of the business plan: for example, reducing excess stocks or selling excess assets or non-core companies in a group. In these circumstances, the banks may take the view that they will lend against these future lumpy cash flows, but require an adequate return to reflect their risk. This is often achieved by attaching warrants (options) to the mezzanine loan which enable the bank to share in the equity value of the business at exit.

### 3.3 Institutional and management equity

The process of structuring a debt package is the first step in constructing a financeable offer. In the second step, there are three questions at the centre of the process:

1. What is the appropriate amount of equity to raise to fund the bid and the future needs of the company?
2. How much equity should be put aside to recruit or retain and then motivate a management team to execute the business plan that underpins the financing structure?
3. How much equity do the banks expect to see invested?

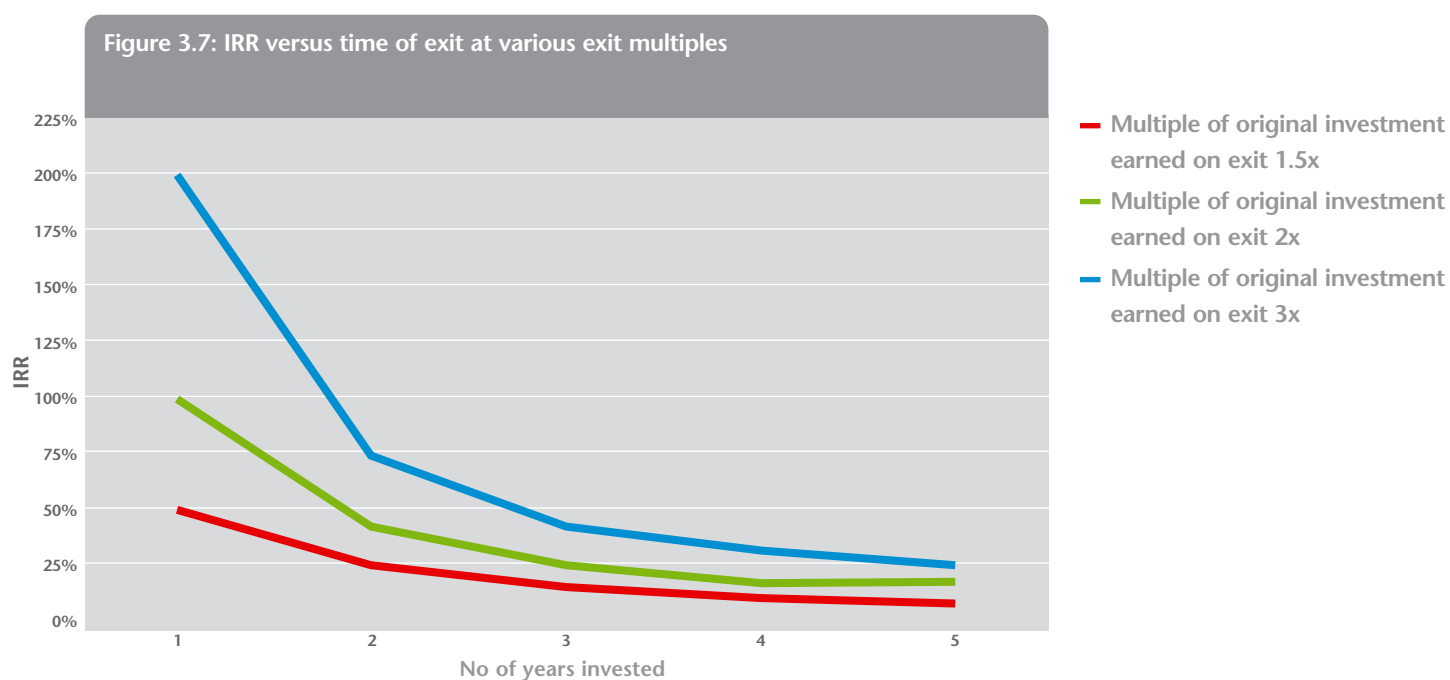
#### 3.3.1 How much institutional equity?

To understand the structuring of an investment we need to understand the interaction between pricing a transaction, financial risk and equity returns.

#### 3.3.2 Internal rates of return

Private equity funds have rules of thumb regarding acceptable rates of return. To a degree these vary over time as inflation and returns on alternative assets vary. However, due in part to the long-term nature of the funds' commitments, the correlation with the returns of alternative asset classes is very low.

As noted earlier, returns are generally measured and talked about as internal rates of return (IRRs). An IRR is the annualised return on an investment. As illustrated in Figure 3.7, IRRs are sensitive to time. When investments are rapidly turned, IRRs tend to be higher but when investments are held longer, IRRs tend to a stable long-term rate.



Over the years the target rate of return in a 'vanilla' buy-out has been falling due to increased competition from new entrants to the private equity market as well as reflecting the sustained period of lower interest rates and lower inflation. The rule of thumb is currently 'double your money in three years' and as shown in Table 3.2 this equates to an IRR (annual compound rate of return) of 26%. Trebling the value of an investment in five years equates to an IRR of 25%.

Table 3.2: IRR versus exit multiple and number of years to exit

No of years invested	1 X	2 X	3 X
1	50%	100%	200%
2	22%	41%	73%
3	14%	26%	44%
4	11%	19%	32%
5	8%	15%	25%

A private equity fund manager will therefore have to form a view as to what a reasonable rate of return for a particular investment will be relative to the industry norm of around 25% IRR. An acceptable rate of return will reflect the private equity manager's view of the risks, both company specific and of the overall sector and the economy.

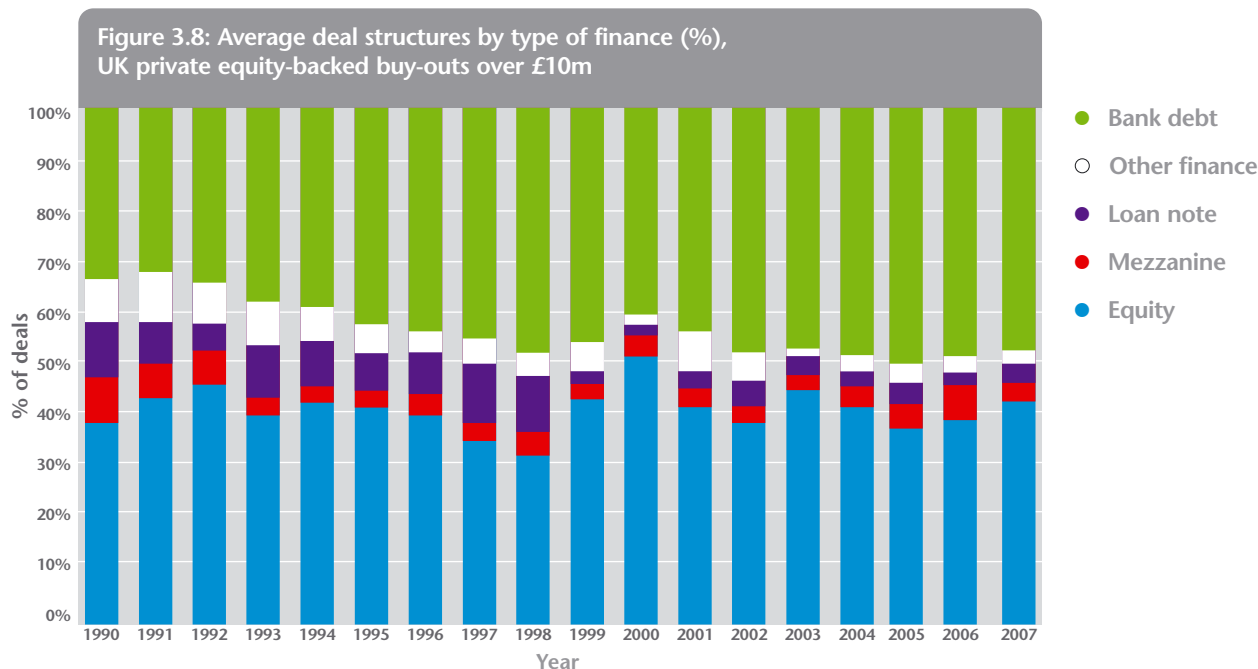
### 3.3.3 Debt: equity ratio

The banks will expect to see an appropriate sharing of risk in a financial package. The ratio of total bank debt to equity invested is an approximate measure of this risk. Since the detailed structure of the loan package in any particular transaction is not usually publicly available at the time of a transaction, the ratio of total debt to total equity is used by many commentators as a measure of the aggregate financial risk in the buy-out market.

As illustrated in Figure 3.4, the amount of debt usually rises as interest rates fall (and vice versa).

#### Findings 3.8: Has the debt:equity ratio been increasing in private equity deals? Industry data

Concern has been expressed that high levels of debt in the private equity system currently could pose potential dangers. To date there have been very few large scale defaults, but overall the share of senior debt in the financing structures of private equity-backed deals has increased in recent years (Figure 3.8). Only recently has this approached levels seen in the boom of the late 1980s. The average share of mezzanine debt remains below that seen in the late 1980s. The average share of debt in financing structures varies markedly across deal sizes, with larger deals having the higher shares. Among the very largest European deals, the average combined share of financing structures accounted for by senior and mezzanine debt increased from 58% in 2002 to 67% in 2006, with the major part of this increase accounted for by senior debt.



Source: CMBOR/Barclays Private Equity/Deloitte.

### 3.3.4 How much equity do management get in a buy-out?

There are two principal drivers of how much equity management get in a buy-out structure:

- the maximum a management team can get is what is left after all the other providers of finance have received their returns; or
- there will also be a minimum required in order to retain and incentivise management to deliver the business plan and hence generate the returns of all parties to the transaction.

The amount of money that the management have to invest rarely has a significant influence on the amount of equity they receive. In all but the smallest buy-outs, they will be required to invest what is often called 'hurt money'. Although in recent years the traditional rule of thumb has begun to break down, it used to be the case that the senior manager in a team might be expected to invest in the region of the greater of one year's gross salary or a third of their net wealth in a typical buy-out.

### 3.3.5 What is a ratchet?

Where agreement cannot be reached between the PE fund manager and management on a simple equity split, a performance ratchet may be put in place. A ratchet is a mechanism that varies the equity share of the management depending on the achievement of certain objectives, typically driven by exit valuation or the IRR of the private equity fund on exit. There are two types of ratchet:

- positive ratchets increase the equity stake of the management team if certain things are achieved; and
- negative ratchets reduce the equity stake of the management team if certain things are not achieved.

Taxation of ratchets is complicated and needs careful consideration in structuring any agreement. The area has been subject to an agreement between HMRC and the BVCA<sup>4</sup> and is outside the scope of this report.

#### **Findings 3.9: To what extent are managerial equity, leverage and private equity involvement responsible for performance changes? The academic evidence**

Management team shareholding size has by far the larger impact on relative performance compared to leverage in both US and UK MBOs (Appendix Table 12). Active monitoring and involvement by private equity firms is also an important contributor to improved performance. In particular, industry specialisation, but not buy-out stage specialisation, of private equity firms adds significantly to increases in operating profitability of private-equity backed buy-outs over first three buy-out years. More experienced private equity firms help build better businesses as their deep experience in making buy-out deals helps them take the right decisions during the deal and after the acquisition. A clear strategic focus on specific target industries enables these private equity firms to build up and leverage expertise. Early and honest communication of what the buy-out means for the company and its employees, including targets, risks and rewards, is important in creating the motivation necessary to meet ambitious business plans. A strong and trust-based relationship between company management and private equity investors is the basis for value added involvement in strategic and operational decisions.

<sup>4</sup> See ERS30520 Restricted Securities, Schedule 22, FA 2003, Memorandum of understanding between the BVCA and HM Revenue & Customs on the income tax treatment of managers' equity investments in venture capital and private equity-backed companies and ERS90500 Post Acquisition Benefits from Securities.





## 4. A DETAILED WORKED EXAMPLE OF A LEVERAGED BUY-OUT

In section four we present a detailed fictional example illustrating how and why a financing structure is created.



## 4.1 Illustrative operating projections

The projections in Table 4.1 and Table 4.2 below show the fictional business plan of the target company. The actual figures represent the performance in the year prior to the proposed investment. The subsequent years are projections.

**Table 4.1: Illustrative operating projections**

£m	Actual	Year 1	Year 2	Year 3
Turnover	16,725	16,223	16,710	17,211
Cost of goods	(9,199)	(8,598)	(8,856)	(9,122)
Gross profit	7,526	7,625	7,854	8,089
Overheads	(6,250)	(5,625)	(5,794)	(5,968)
Lease costs	0	(40)	(80)	(80)
EBITDA	1,276	1,960	1,980	2,042
Depreciation	(500)	(417)	(264)	(262)
Restructuring costs	0	(350)	0	0
EBITA	776	1,193	1,716	1,780
<b>Growth in turnover</b>		<b>-3.0%</b>	<b>3.0%</b>	<b>3.0%</b>
<b>Gross margin</b>	<b>45.0%</b>	<b>47.0%</b>	<b>47.0%</b>	<b>47.0%</b>
<b>Overhead inflation</b>		<b>-10.0%</b>	<b>3.0%</b>	<b>3.0%</b>
<b>EBITDA%</b>	<b>7.6%</b>	<b>12.1%</b>	<b>11.8%</b>	<b>11.9%</b>
<b>EBIT%</b>	<b>4.6%</b>	<b>7.4%</b>	<b>10.3%</b>	<b>10.3%</b>

**Table 4.2: Illustrative operating cash flows**

£m	Actual	Year 1	Year 2	Year 3
EBITA	776	1,193	1,716	1,780
Capital expenditure	(250)	(500)	(250)	(250)
Depreciation	500	417	264	262
Working capital	0	306	(30)	(31)
Proceeds of sale of fixed assets	0	1,000	0	0
Operating cashflow	1,026	2,416	1,700	1,761

The illustration is based upon a number of structural and strategic changes to the business acquired that are commonly seen in private equity transactions. These include:

- **Asset disposals:** the plan assumes a sale and lease-back of £1bn of assets during the first year after the transaction. This creates a new lease charge in the profit and loss account as well as a cash inflow from the sale.
- **Overhead reduction:** there is a planned reduction of overhead costs by 10% in year 1. It is assumed that the restructuring costs will be £350m in year 1. The reduction might be achieved by simple cost cutting but might also involve staff redundancies.
- **Price increases:** the plan projects an increase in gross margins from 45% to 47% by increasing prices. This price rise is projected to result in a 3% fall in sales in year 1.
- **Increased investment:** to achieve efficiency gains, a one-off increase in capital expenditure of £250m is included to update the assets of the business. The depreciation charge falls in year 2 because of the sale of assets.
- **Working capital improvement:** the amount of working capital in the business is also forecast to reduce in year 1, generating a positive cash flow. This reflects a step change in the rate at which debtors are collected and creditors are paid.

Thereafter, both costs and revenues are forecast to grow at 3.0% pa and working capital grows in line with sales growth.

Therefore, the projections show the financial implications of a typical restructuring and repositioning plan for a business as summarised in the profit bridges in Table 4.3 which break down the forecast movements in EBITA and EBITDA below.

**Table 4.3: Profit bridges**

£m	Year 1	Year 2	Year 3
Profit increase/(decrease) from sales increase/decrease	(226)	229	236
Profit increase/(decrease) from gross margin increases	324	0	0
(Increase)/decrease in overheads including leases	585	(209)	(174)
Increase in EBITDA	684	20	62
(Increase)/decrease in depreciation	83	153	2
(Increase)/decrease in exceptional costs	(350)	350	0
Increase in EBITA	417	523	64

£m	Year 1	Year 2	Year 3
Opening EBITA	776	1,193	1,716
Increase in EBITA	417	523	64
Closing EBITA	1,193	1,716	1,780

£m	Year 1	Year 2	Year 3
Opening EBITDA	1,276	1,960	1,980
Increase in EBITDA	684	20	62
Closing EBITDA	1,960	1,980	2,042

## 4.2 Funding requirement

The task is to structure an investment proposal against these projections and offer a purchase price of £11bn to the shareholders, representing a ratio of enterprise value/EBIT of 15.5 times. This is, by most normal measures, a full price.

**Table 4.4: Funding requirement**

	£m
Purchase of 100% of shares	11,000
Refinance 100% existing debt (interest rate = 8%)	1,000
Enterprise value	12,000
Working capital requirement	750
Stamp duty	55
Transaction costs including VAT	545
Total requirement	13,350
<b>Acquisition Statistics</b>	
Enterprise value	12,000
Current EBITDA	1,276
Current EBITA	776
EV/EBITDA	9.4
EV/EBITA	15.5
Equivalent PE ratio (based on enterprise value and corporation tax rate = 28%)	21.5

There is stamp duty payable at 0.5% of the value of the shares and VAT payable on some (but not all) fees and expenses incurred as part of the transaction.

## 4.3 Funding structure

The funding structure needs to accommodate:

1. The purchase price of the shares.
2. The proceeds of the planned sale of assets, which will enable some of the loans to be repaid early.
3. Working capital requirements.
4. Fees and other costs associated with the transaction.

A wide array of potential funding solutions could be constructed.

**Table 4.5: Sources of funding**

	£m	Percentage
Private equity investor	4,599	34%
Bank	6,750	51%
Mezzanine	2,000	15%
Management	1	0%
Total	13,350	100%

Around one third of all funding in the example comes from the private equity investors. Just over half comes from secured banking and the balance is in the form of mezzanine finance, which we assume is provided by the banks.

The detailed structure of the transaction is given below.

**Table 4.6: Illustrative financing structure**

	£m	Margin %	Fixed rate %	Equity %
Revolving facility	750	2.00		–
'A' senior loan	4,000	2.00		–
'B' senior loan	2,000	3.50		–
'C' PIK mezzanine loan	2,000		12.00	2.0
'D' institutional loanstock	4,590		10.00	–
Institutional 'A' preferred ordinary shares	9	–		88.0
Management ordinary shares	1	–		10.0
Total	13,350			100.0

The overall structure contains seven different layers of finance as explained below.

The banking and mezzanine package provides two-thirds of the total funding package and consists of four layers:

1. **A revolving facility** to fund periodic working capital movements during the trading year. This is in effect an overdraft facility and is secured alongside the senior loans.
2. **'A' senior loan:** a seven-year loan at an interest rate of LIBOR<sup>5</sup> + 2.00%. This loan has a flat repayment profile and will be repaid in equal annual instalments. In this example; there is a significant cash inflow from asset disposals which will be used to repay part of the 'A' loan in year 2. This payment is calculated using a so-called 'cash sweep' mechanism whereby all operating cash flow in the particular period is applied to repaying the loan.
3. **'B' senior loan:** an eight-year loan at a higher margin of LIBOR + 3.50% to reflect its longer term. For security purposes it ranks alongside the 'A' senior loan. Typically this would be a 'bullet loan' ie, repayable in a single instalment in year 8 but in this example it starts to be repaid after year 3 reflecting the early repayment of part of the 'A' loan.
4. **'C' PIK mezzanine loan:** a long-term loan ranking after the 'A' and 'B' senior loans for security purposes, and repayable after the senior debt (items 2 and 3 above) has been repaid. To reflect the increased risk of this loan, the interest rate is higher (12.00% fixed) and the loan also has an equity warrant entitling the mezzanine providers to subscribe for 2% of the equity of the group. The loan is a PIK loan which, as explained in section 3, rolls up its interest by issuing further mezzanine rather than paying interest in cash.

<sup>5</sup> See glossary for definition.

The private equity fund provides funding in two layers:

5. **'D' institutional loanstock:** this loan ranks after the senior debt and mezzanine, is unsecured and therefore carries significant risk. It has an interest rate of 10% that is rolled up rather than paid.
6. **Institutional 'A' preferred ordinary shares:** these shares will have preferential rights when compared to the other ordinary shares invested in by management.

The private equity fund is seeking to maximise the blended return on their total investment (the two financial instruments 5 and 6) in the scheme. The relative cost of each layer provided by the private equity fund is therefore less significant than the blended cost of the layers taken together.

7. **Ordinary shares,** having no additional rights other than to share in capital gains. As noted in section 3.3.4, the management provide a nominal investment which is not significant in the total funding structure, but represents the 'hurt money' commitment of the key people that the private equity investor wishes to incentivise.

#### 4.4 The impact of leverage on profits and cash

The proposed funding structure is overlaid on the operating projections in Table 4.7 showing the projected profit and loss account after funding costs.

**Table 4.7: Summary of profit and loss after funding**

£m	Actual	Year 1	Year 2	Year 3
Turnover	16,725	16,223	16,710	17,211
EBITA	776	1,193	1,716	1,780
Goodwill amortisation		(445)	(445)	(445)
EBIT	776	749	1,271	1,335
<b>Interest</b>				
Existing debt (Table 4.4)	(80)			
Overdraft/cash on deposit		48	40	30
'A' senior loan		(310)	(266)	(167)
'B' senior loan		(185)	(185)	(185)
'C' PIK mezzanine loan		(240)	(398)	(468)
'D' institutional loanstock		(459)	(505)	(555)
	(80)	(1,146)	(1,313)	(1,346)
Profit/loss before tax	696	(398)	(42)	(10)

The business thus reports a fall in net profit before tax from £696m profit before tax to a £398m loss. However this apparent reversal of performance reflects both the accounting treatment of goodwill (see Table 4.14) and interest charges (both paid in cash and rolled up) which are summarised in Table 4.8 below.

**Table 4.8: Reconciliation of interest charges**

£m	Year 1	Year 2	Year 3
Interest rolled up and not paid	(699)	(903)	(1,024)
Cash interest paid	(447)	(410)	(322)
Profit and loss charge	(1,146)	(1,313)	(1,346)
<b>Interest rolled up by instrument</b>			
'C' PIK mezzanine loan	240	398	468
'D' institutional loanstock	459	505	555
Interest rolled up	699	903	1,024

The actual interest paid in each year is lower than the interest charge shown in the profit and loss account. The interest rolled up preserves the cash flows of the business and mitigates the financial risks of the highly geared structure.

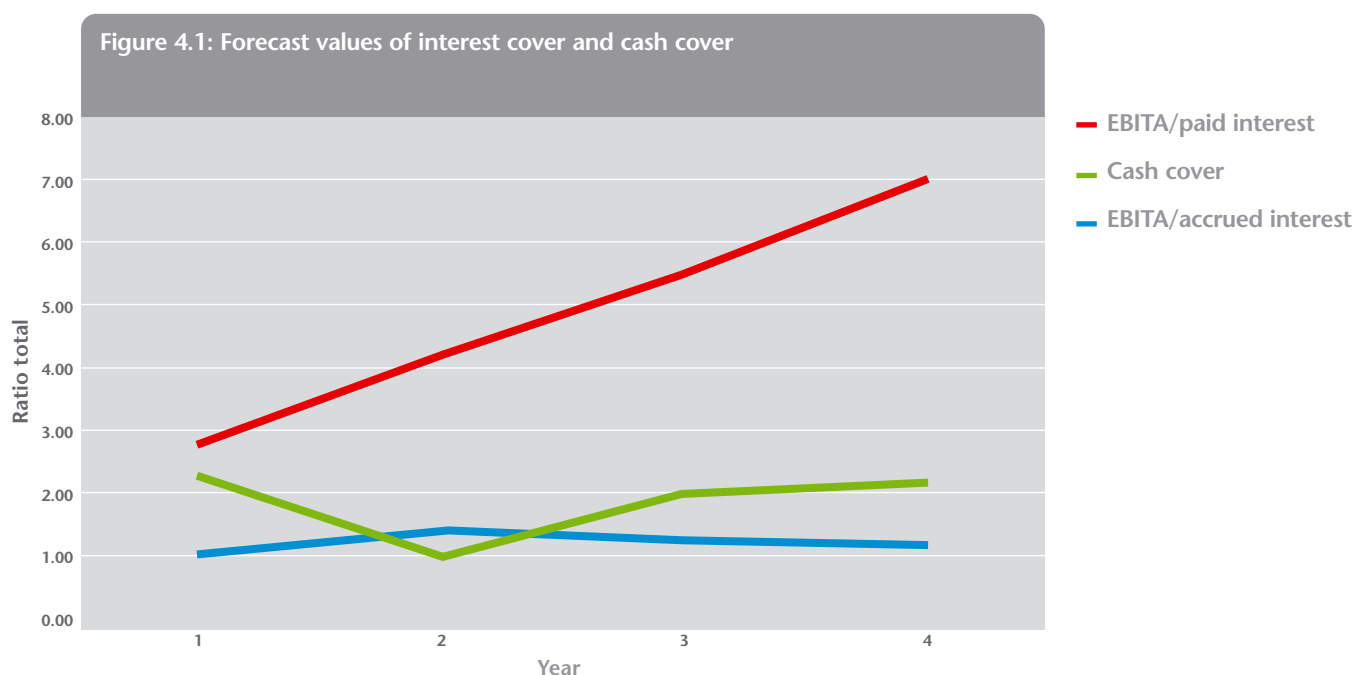
The cash flows of the business are therefore materially different to the reported profits, as shown in Table 4.9 below.

**Table 4.9: Summary of cash flows after funding**

£m	Year 1	Year 2	Year 3
EBITA (Table 4.3)	1,193	1,716	1,780
Capital expenditure	(500)	(250)	(250)
Depreciation	417	264	262
Working capital	306	(30)	(31)
Proceeds of sale of fixed assets	1,000	0	0
Operating cash flow	2,416	1,700	1,761
Interest	(447)	(410)	(322)
	1,968	1,290	1,439
Tax	(201)	(298)	(369)
<b>Repayment of debt</b>			
'A' senior loan	(571)	(1,276)	(430)
'B' senior loan	0	0	(141)
'C' PIK mezzanine loan	0	0	0
'D' institutional loanstock	0	0	0
Net inflow/(outflow)	1,196	(285)	499
Opening cash/(overdraft)	0	1,196	911
Closing cash	1,196	911	1,409

Despite recording an accounting loss the business still has an increased liability to corporation tax. This is explained in detail in section 4.5.

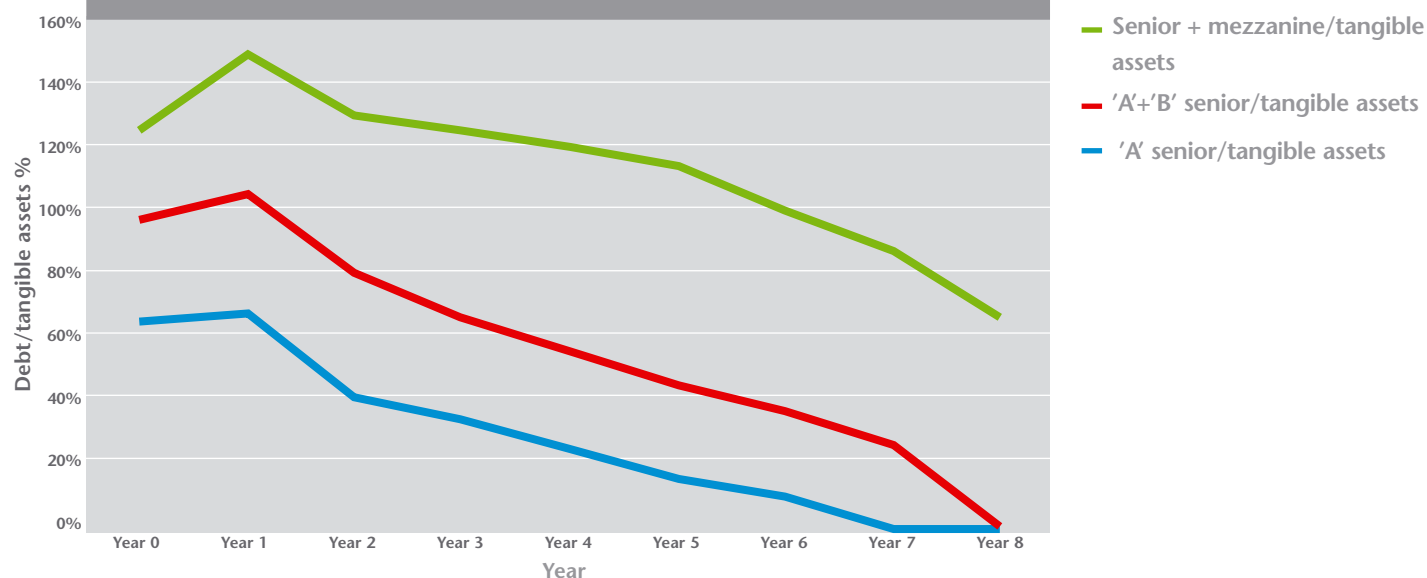
In section 3, the basic banking financial covenants were explained and described. Figure 4.1 below shows the projected values of three key ratios: cash generation to total debt service (cash cover), and two calculations of interest cover, one based on the charge in the profit and loss account, the other reflecting the actual interest payment made.



The ratio of total debt service to cash flow is analogous to the ratio of total mortgage repayment to salary in a house purchase: it measures the ability to service the loan.

Similarly the ratio of tangible assets (ie, excluding goodwill) to secured borrowings is summarised in Figure 4.2, showing each loan layered on the next separately. The bank 'A' and 'B' senior loans become progressively less risky as they are repaid. As the 'C' mezzanine loan is PIK debt, the balance owed on the PIK increases over time due to the interest rolled up. Therefore the ratio of senior debt + mezzanine/tangible assets does not fall as rapidly over time. These ratios are analogous to the loan to value ratio in a house purchase.

Figure 4.2: Forecast security cover



These projected values of the various financial ratios would form the basis of the negotiation around setting the levels of the financial covenants in the banking agreements. Typically one might expect to set covenants with headroom of 20-50% before a breach would occur depending on the particular ratio and the dynamics of the business.

The forecast balance sheet of the business is shown in Table 4.10 below. The rolled up interest has been shown as an increase in the mezzanine and loanstock.

Table 4.10: Summary of projected balance sheets

£m	Opening	Year 1	Year 2	Year 3
<b>Fixed assets</b>				
Goodwill	8,895	8,450	8,005	7,561
Tangible fixed assets	2,500	1,583	1,569	1,558
	11,395	10,033	9,575	9,118
<b>Working capital</b>				
Stocks	1,500	1,411	1,453	1,496
Trade debtors	2,000	1,896	1,952	2,011
Other current assets	250	243	250	257
Creditors	(2,250)	(2,271)	(2,340)	(2,410)
Other creditors	(200)	(283)	(291)	(300)
	1,300	994	1,024	1,055
<b>Other creditors</b>				
Corporation tax	(49)	(51)	(83)	(96)
Deferred tax	(46)	(76)	(111)	(138)
	(95)	(127)	(194)	(233)
<b>Net borrowings</b>				
Cash	0	1,196	911	(1,409)
'A' senior loan	(4,000)	(3,429)	(2,152)	(1,722)
'B' senior loan	(2,000)	(2,000)	(2,000)	(1,859)
'C' PIK mezzanine loan	(2,000)	(2,240)	(2,638)	(3,106)
'D' institutional loanstock	(4,590)	(5,049)	(5,554)	(6,110)
	(12,590)	(11,522)	(11,433)	(11,387)
<b>Net assets</b>	10	(621)	(1,028)	(1,447)
Ordinary shares	10	10	10	10
Reserves	-	(631)	(1,038)	(1,456)
	10	(621)	(1,028)	(1,447)



The presentation of the company's balance sheet above shows net assets as negative and decreasing from the end of year 1. An alternative presentation commonly used in the management accounts of private equity-backed companies shows the loanstock as if it were equity as shown in Table 4.11 below. This presentation highlights a fundamental feature of many private equity-backed transactions; the net assets of the business attributable to the equity holders remain broadly constant in the medium term as profits are used to service the funding structure put in place to acquire the business. In a quoted company context this would be conceptually similar to distributing all profits as dividends at the year end.

**Table 4.11: Alternative balance sheet presentation**

£m	Opening	Year 1	Year 2	Year 3
Net assets (Table 4.10)	10	(621)	(1,028)	(1,447)
Institutional loanstock	4,590	5,049	5,554	6,110
Net assets attributable to the shareholders	4,600	4,428	4,526	4,663
Increase/(decrease) in net assets		(172)	98	137

## 4.5 Taxation: how much tax is paid by private equity-backed companies?

The fact that the profit for tax purposes is materially different to the pre-tax profit recorded in the accounts is explained in detail below.

**Table 4.12: Restatement of profit for tax purposes**

£m	Year 1	Year 2	Year 3
Net profit/(loss) before tax (Table 4.7)	(398)	(42)	(10)
1. Depreciation	417	264	262
2. Writing down allowances	(438)	(391)	(355)
3. Disallowable interest	699	903	1,024
4. Goodwill amortisation	445	445	445
Taxable profit	725	1,179	1,364

**1&2. Depreciation and capital allowances:** depreciation is calculated differently for accounting and tax purposes. Typically, capital investment is allowed to be deducted more rapidly for corporation tax purposes than it is depreciated in a company's accounts, thus creating a positive tax incentive to invest in qualifying assets. This accelerated depreciation is achieved by adding back depreciation and replacing it with writing down allowances. This is common to all companies. The timing difference between recognising depreciation and writing down allowances may give rise to a deferred tax asset/liability. This lies outside the scope of this discussion, but reflects future tax charges, not current ones. The calculation of writing down allowances is illustrated in Table 4.13.

**Table 4.13: Illustration of capital allowances impact on taxation**

£m	Year 1	Year 2	Year 3
Pool of allowances brought forward	1,250	1,313	1,172
Capital expenditure in the year	500	250	250
	1,750	1,563	1,422
Writing down allowances @ 25%	(438)	(391)	(355)
Pool of allowances carried forward	1,313	1,172	1,066

**3. Interest accrued but not paid:** interest is generally allowed to be deducted when it is accrued in the company's accounts, but there are a number of regulations that are designed to prevent the artificial creation of timing differences between when interest is paid and when it is accrued. As the interest on the mezzanine loan and PIK debt is not paid within a year of the date that it is accrued, in this example it is assumed that it would not be allowed to be deducted for tax purposes.

**Thin capitalisation and the arm's-length test:** in tax terms a UK company may be said to be thinly capitalised when it has excessive debt in relation to its arm's-length borrowing capacity, leading to the possibility of excessive interest deductions. Since March 2005, interest on loans from connected parties that are not on arm's-length commercial terms is not allowed to be deducted. In some countries there is a strict

limit imposed which defines the amount of debt on which interest is allowed to be deducted against corporation tax. In the UK HMRC often uses rules of thumb relating to debt/equity and interest cover, but there is no strictly defined limit.

In this example, the debt capacity of the business is fully utilised to support the funding from the bank and mezzanine provider. It is therefore assumed that no third-party bank would provide the loanstock on the terms provided by the private equity investor and therefore it is assumed that the interest would not be allowed to be deducted. This is generally the case in highly leveraged transactions.

**Table 4.14: Calculation of goodwill**

	£m
Purchase of 100% of shares	11,000
Transaction costs & associated tax*	600
	11,600
Net assets acquired	(2,705)
Balance = Goodwill	8,895

\* Under IFRS 3, *Business Combinations*, published January 2008, all acquisition-related costs are to be recognised as period expenses and generally written-off.

4. **Goodwill deductibility:** the calculation of the value of goodwill is illustrated in Table 4.14. Accounting conventions specify that goodwill should be written off over a maximum of 20 years, or sooner when it is 'impaired' ie, worth less than was paid for it. In this example, the goodwill is written down in 20 equal annual instalments of £445m. When (qualifying) assets are acquired rather than shares, some or all of the goodwill may be deductible against corporation tax. However when shares are acquired goodwill amortisation is not allowed to be deducted against corporation tax and is added back to calculate the tax charge.

For most companies, the payment of corporation tax is due nine calendar months and one day after the end of the accounting period. Large companies (typically, those which have profits of over £1.5m) must pay their tax by quarterly instalments. The first of these is due six months and 13 days from the start of the accounting period. Therefore three payments are made before or immediately after the accounting year end and one three months later.

When shares are acquired the purchaser is responsible for the payment of outstanding tax relating to the prior year but in most cases the acquisition price is adjusted to reflect this.

## 4.6 Summary of corporation tax impact

The detailed worked example is intended to illustrate a number of important facts about the taxation of UK corporations, including buy-outs:

- writing off goodwill may materially reduce reported profits/ increase reported losses, but does not reduce corporation tax where shares are being acquired;
- not all interest in leveraged buy-outs is deductible against corporation tax, only arm's-length interest is deductible;
- as a result of these disallowances, even companies reporting a pre-tax loss may nevertheless still pay significant UK corporation tax;
- when a strategy is implemented that improves profitability, generally more corporation tax will be paid, even in highly leveraged structures; and
- corporation tax paid by a company may be materially different to the tax liability recorded in its profit and loss account. This difference is disclosed in the notes to the audited accounts of all larger companies.

To appreciate fully the impact on UK tax revenues it is necessary to track the cash paid to advisers and bankers by the new company. The strength of the UK banking and professional services industry in private equity makes it likely, but not certain, that the UK receives a high proportion of the tax revenues generated by interest and fees.

## 4.7 Due diligence and sensitivity analysis

Prior to any transaction, a wide array of sensitivity analyses will be undertaken on the financial projections to ensure that the financing structure is robust to all reasonable outcomes.

Sensitivities in the particular example above might include:

- failure to achieve or a delay in the planned asset sales at the assumed price;
- delay or failure to reduce overheads or greater costs of restructuring;
- greater sales loss due to increased prices, or failure to achieve higher pricing resulting in failure to achieve enhanced gross profit margins;
- delay in or failure to achieve improved working capital management; and
- a combination of any or all of the above timing differences and changes in outcome.

An alternative approach is to test the financing package by finding the limits at which the business is unable to service its capital structure. For instance, one might analyse by how much sales can reduce before the banking covenants are breached: or, conversely, by how much sales can grow within the working capital facilities of the structure.

It can be seen even in this relatively simple stylised model, that there are a wide variety of potential outcomes against which a financial structure needs to be stress tested. This process entails a lot of effort by the various advisers to the transaction (for example accountants, industry specialist consultants and market researchers) and the outputs of the analyses will form a key part of the negotiation between the private equity investors, the management and the bankers.

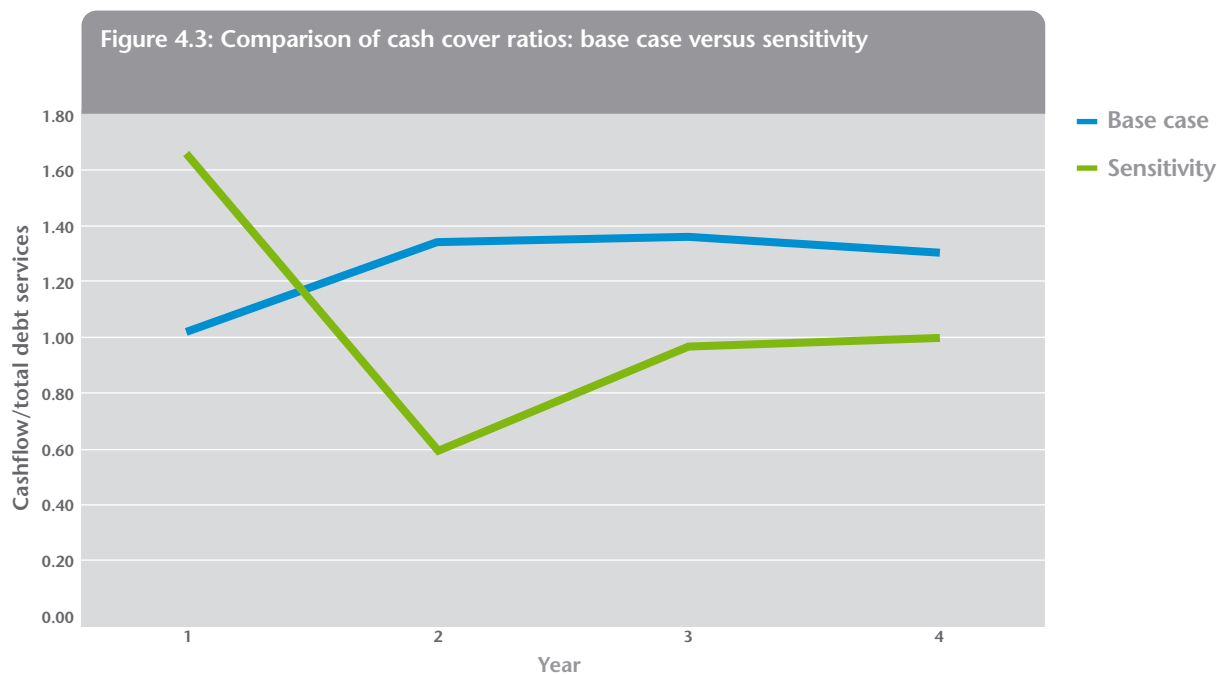
If the due diligence process results in material changes having to be made by the private equity investor to the assumed risks and returns there may be a renegotiation with the vendor. This may result in:

- a simple price reduction;
- deferring payment, possibly contingent upon achieving a certain outcome (eg, winning a particular revenue stream or selling a particular asset);
- the vendor co-investing alongside the funders to reduce the funding requirement and to share a portion of the risk identified; and
- a failure to complete the transaction.

To illustrate the risks of leverage we present a 'steady-state' sensitivity in Table 4.15. This sensitivity assumes that the business continues to perform post acquisition as it had done prior to completion, but still undertakes the sale and leaseback of the fixed assets as planned.

**Table 4.15: Summary of cash flows in a 'steady-state' sensitivity**

£m	Year 1	Year 2	Year 3	Year 4
EBITA	820	932	937	937
Capital expenditure	(500)	(250)	(250)	(250)
Depreciation	417	264	260	260
Working capital	–	–	–	–
Proceeds of sale of fixed assets	1,000	–	–	–
Operating cash flow	1,736	946	946	946
Interest	(474)	(454)	(396)	(366)
	1,263	492	550	580
Tax	(117)	(97)	(118)	(136)
Repayment of debt				
'A' senior loan	(571)	(1,184)	(449)	(449)
'B' senior loan	–	–	(123)	(123)
'C' PIK mezzanine loan	–	–	–	–
'D' institutional loanstock	–	–	–	–
Net inflow/(outflow)	574	(789)	(140)	(127)
Opening cash/(overdraft)	–	574	(215)	(354)
Closing cash/(overdraft)	574	(215)	(354)	(482)



In this 'steady-state' sensitivity the business would rapidly require the debt to be restructured in year 2 as it would break the cash cover covenant.

## 4.8 Exits and returns

In this final section, we illustrate the combined effects of financial engineering and value creation on the returns to the various participants in the transaction.

There are three questions to address:

1. How much is the enterprise value changed by the trading improvements within the company?
2. How much is the enterprise value changed by market conditions outside the company?
3. How is the value apportioned between the various participants in the transaction?

Table 4.16 below shows the projected value of the business each year on the assumption that it was sold on a debt free/cash free basis at a value calculated using an exit PE ratio of 12 (ie, 12 times forecast EBITA less a full tax charge).

**Table 4.16: Enterprise value and equity value assuming exit occurs in years 1-5**

£m	Year 1	Year 2	Year 3	Year 4	Year 5
Enterprise value	10,310	14,827	15,380	15,947	15,961
Less:					
'A' senior loan	(3,429)	(2,152)	(1,722)	(1,291)	(861)
'B' senior loan	(2,000)	(2,000)	(1,859)	(1,718)	(1,577)
'C' PIK mezzanine loan	(2,240)	(2,638)	(3,106)	(3,657)	(3,657)
'D' institutional loanstock	(5,049)	(5,554)	(6,110)	(6,721)	(7,393)
Cash/(overdraft)	1,196	911	1,409	1,984	1,972
Total net debt	(11,522)	(11,433)	(11,387)	(11,403)	(11,516)
Net equity value	(1,212)	3,393	3,994	4,544	4,445

**Table 4.17: Allocation of net equity value**

£m	Year 1	Year 2	Year 3	Year 4	Year 5
Management	n/a	339	399	454	445
Private equity investors	n/a	2,986	3,514	3,998	3,912
'C' PIK mezzanine loan	n/a	68	80	91	89
Net equity value	0	3,393	3,994	4,544	4,445

Initially the value of the enterprise decreases, primarily due to transaction costs. There is then a step change in the value of the enterprise if the business performs according to plan. As shown in Table 4.18 this can be analysed further to isolate the impact of operational performance improvements and the impact of the financial engineering. Other analyses can be undertaken to more fully understand the inter-connection of operating performance, external market conditions and financial engineering, but these are outside the scope of this report.

**Table 4.18: Reconciliation of the relative effects of operating performance and financial engineering on equity value at exit in year 3**

£m	Year 3
Decrease in EBITDA multiple	(1.87)
Increase in EBITDA from acquisition to end year 3	765
Increase in enterprise value	554
Decrease in net debt	46

£m	Year 3
Fall in value attributable to a change in EBITDA multiple	(2,386)
Increase in value attributable to an increase in EBITDA	5,766
Change in enterprise value	3,380
Change in enterprise value	3,380
Change in net debt	1,203
Change in equity value from acquisition to end year 3	4,584
% due to operating performance	74%
% due to financial engineering	26%
Total	100%

The analysis in Table 4.18 indicates that by year 3, approximately three quarters of the increase in value is attributable to an increase in enterprise value and one quarter to the effects of financial engineering. This is despite assuming a reduction in the exit EBITDA multiple when compared to the acquisition price.

**Table 4.19: Split of proceeds on exit**

£m	Year 1	Year 2	Year 3
Net bank debt (ie, excluding loanstock)	6,473	5,879	5,277
Private equity investor (loanstock and equity)	3,837	8,540	9,624
Management	0	339	399
Mezzanine warrant	0	68	80
Total enterprise value	10,310	14,827	15,380
Increase / (decrease) in enterprise value since acquisition	(1,690)	2,827	3,380

Table 4.19 summarises the projected capital returns to each party at the end of each of the first three years. At the end of year 1, management's equity has nil value but by the end of year 2 it has accrued value. However achievement of the projections thereafter does not significantly enhance their equity value. This is due to the fact that almost all the projected value increase after the bank has been serviced is appropriated by the mezzanine and loan stock interest roll-up. This position will either encourage management to exit after the achievement of the turn-around, or to create the incentives to take the business forward with a strategy that continues to generate above normal value, perhaps by acquisition or by new product development. Whichever route is chosen, the objective of the capital structure is to create the circumstances that will encourage both the creation and the realisation of value in the business with an acceptable level of risk.

**Table 4.20: Projected returns (IRRs) by participant**

Projected rates of return	
'A' & 'B' senior loans	8.5%
'C' PIK mezzanine loan	17.9%
Total private equity investment	26.7%
Management	355.0%

The project rates of return to the various participants based upon an exit in year 3 on a PE ratio of 12 are summarised in Table 4.20 above. The higher returns are correlated to the higher risks that each participant takes.

The final table shows the sensitivity of the returns to the private equity investor in this particular example to achievement of exit in a timely manner and highlights the performance against a target rate of return of 25%. Exit at a lower price or after a longer time period will have a significant impact on returns.

**Table 4.21: Private equity investor blended returns: sensitised by year of exit and exit PE ratio**

IRR sensitivities	Exit PE Ratio		
	10.00	12.00	14.00
Exit in year 3	15.2%	26.7%	36.4%
Exit in year 4	14.9%	22.7%	29.2%
Exit in year 5	13.2%	19.0%	23.8%





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## APPENDIX SUMMARIES OF STUDIES OF BUY-OUTS AND PRIVATE EQUITY



**Table 1: Pre-buy-out governance in P2Ps**

Authors	Country	Nature of transactions	Findings
Maupin (1987)	US	P2P MBOs	Ownership concentration, price/book value ratio, cash flow to net worth, cash flow to assets, P/E ratio, dividend yield and book value of assets to original costs distinguish P2Ps from comparable non-P2Ps.
Singh (1990)	US	P2P MBOs, LBOs	Prior takeover attempt, cash flow to sales and net assets to receivables predict likelihood of buy-out.
Eddey, Lee and Taylor (1996)	Australia	MBOs	Takeover threat strongly associated with going private.
Weir, Laing and Wright (2005a)	UK	MBO, MBI listed corporations	Firms going private have higher CEO ownership, higher institutional block-holder ownership, more duality of CEO and board chair but no difference in outside directors or takeover threats compared to firms remaining listed.
Evans, Poa and Rath (2005)	Australia	MBOs, Acquisitions of listed corporations	Firms going private have higher liquidity, lower growth rates, lower leverage pre-buy-out, and lower R&D. Free cash flow (FCF) is not significantly different. Takeover threat less likely to be associated with going private.
Weir and Wright (2006)	UK	MBO, MBI, Acquisitions of listed corporations	Firms going private have higher CEO ownership, higher institutional block-holder ownership, more duality of CEO and board chair but no difference in outside directors or takeover threats compared to firms subject to traditional takeovers.
Boulton, Lehn, Segal (2006)	US	Management and non-management led P2Ps	Firms going private under-performed but had more cash assets than industry peers, and had higher relative costs of compliance with Sarbanes-Oxley.
Cornelli and Karakas (2008)	UK	All P2Ps	No significant change in board size from pre- to post-P2P. Board representation by private equity firms changes according to private equity firm style and anticipated challenges of the investment; % of private equity firms on boards decreases slightly after exit

**Table 2: Financial returns to private equity and leveraged and management buy-outs**

Authors	Country	Nature of transactions	Findings
Kaplan (1989)	US	LBOs	Investors in post-buy-out capital earn a median market-adjusted return of 37%.
Ljungqvist and Richardson (2002)	US	VC and LBO funds	Mature funds started 1981-1993 generate IRRs in excess of S&P 500 returns net of fees; returns robust to assumptions about timing of investment and portfolio company risk; buy-out funds generally outperform venture funds, these differences partially reflect differences in leverage used in investments; sample from one LP with disproportionate share of (larger) buy-out funds.
Jones and Rhodes-Kropf (2003)	US	VC and LBO funds	LBO funds have a value-weighted IRR of 4.6% and VC funds have a value-weighted IRR of 19.3%, commensurate with factor risks borne by investors; considerable variation in fund returns.
Cumming and Walz (2004)	US, UK, Continental Europe, (39 countries)	MBO/MBI, LBO, and VC	Private returns to investors in relation to law quality, fund characteristics and corporate governance mechanisms.
Kaplan and Schoar (2005)	US	VC and buy-out funds	LBO fund returns gross of fees earn returns in excess of S&P 500 but net of fees slightly less than S&P 500; unlike mutual funds is persistence in returns among top performing funds; higher returns for funds raised in 1980s; acknowledge that average returns potentially biased as do not control for differences in market risk and possible sample selection bias towards larger and first-time funds; funds raised in boom times less likely to raise follow-on funds and thus appear to perform less well.
Knigge, Nowak and Schmidt (2006)	Multi-country	VC and buy-out funds	In contrast to VC funds, the performance of buy-out funds is largely driven by the experience of the fund managers regardless of market timing.
Groh and Gottschalg (2006)	US and non-US	MBOs	Risk adjusted performance of US buy-outs significantly greater than S&P index.
Froud, Johal, Leaver and Williams (2007); Froud and Williams (2007)	UK	Mid and large-size funds	General partners in successful mid-sized funds can expect carried interest to generate £5-15 million pounds on top of their salaries while general partners in large, successful funds can expect \$50-150 million.

**Table 2:** continued

Authors	Country	Nature of transactions	Findings
Lerner, Schoar and Wongsunwai (2007)	US	VC and LBO funds	Early and later stage funds have higher returns than buy-out funds in funds raised 1991-98; considerable variation in returns by type of institution; presence of unsophisticated performance-insensitive LPs allows poorly performing GPs to raise new funds.
Philappou and Gottschalg (2007)	US and non-US	LBO funds	After adjusting for sample bias and overstated accounting values for non-exited investments, average fund performance changes from slight over-performance to underperformance of 3% p.a. with respect to S&P 500; gross of fees, funds outperform by 3% p.a.; venture funds under-perform more than buy-out funds; previous past performance most important in explaining fund performance; funds raised 1980-2003.
Ljungqvist, Richardson and Wolfenzon (2007)	US	LBO funds	Established funds accelerate investments and earn higher returns when opportunities improve, competition eases and credit conditions loosen; first-time funds less sensitive to market conditions but invest in riskier deals; following periods of good performance funds become more conservative.
Driessen, Lin and Phalippou (2007)	US	VC and buy-out funds	Data from 797 mature private funds over 24 years shows high market beta for venture capital funds and low beta for buy-out funds, and evidence that private equity risk-adjusted returns are surprisingly low. Higher returns larger and more experienced funds mainly caused by higher risk exposures, not abnormal performance.
Nikoskelainen and Wright (2007)	UK	MBOs	Private returns to investors enhanced by context-dependent corporate governance mechanisms.
Metrick and Yasuda (2007)	US	VC and LBO funds	Buy-out fund managers earn lower revenue per managed dollar than managers of VC funds; buy-out managers have substantially higher present values for revenue per partner and revenue per professional than VC managers; buy-out fund managers generate more from fees than from carried interest. Buy-out managers build on prior experience by raising larger funds, which leads to significantly higher revenue per partner despite funds having lower revenue per dollar.
Diller and Kaserer (2008)	Europe	VC and MBO	Highly significant impact of total fund inflows on fund returns. Private equity funds' returns driven by GP's skills as well as stand-alone investment risk.

**Table 3: Employment, wage and HRM effects**

Authors	Country	Unit of analysis	Nature of transactions	Findings
<b>Panel A: Employment effects</b>				
Wright and Coyne (1985)	UK	Firm	MBOs	44% of firms shed employees on buy-out; 18% of pre-buy-out jobs lost subsequent re-employment but below pre-MBO levels.
Kaplan (1989)	US	Firm	LBOs	Small increase in employment post-buy-out but falls after adjusting for industry effects.
Wright, et al. (1990a)	UK	Firm	MBOs	25% of firms shed employment on buy-out.
Smith (1990)	US	Firm	LBOs	Small increase in employment post-buy-out but falls after adjusting for industry effects.
Lichtenberg and Siegel (1990)	US	Plant	LBOs, MBOs	8.5% fall in non-production workers over three-year period; production employment unchanged.
Muscarella and Vetsuypens (1990)	US	Firm	Reverse LBOs	Median number of employees fell between LBO and IPO but those LBOs without asset divestment reported median employment growth in line with top 15% of control sample; divisional LBOs more likely to increase employment than full LBOs.
Opler (1992)	US	Firm	LBOs	Small increase in employment post-buy-out.

**Table 3:** continued

Authors	Country	Unit of analysis	Nature of transactions	Findings
<b>Panel A: Employment effects</b>				
Wright, Thompson and Robbie (1992)	UK	Firm	MBOs, MBIs	Average 6.3% fall in employment on MBO but subsequent 1.9% improvement by time of study.
Robbie, Wright and Thompson (1992); Robbie and Wright (1995)	UK	Firm	MBIs	38% reduced employment.
Robbie, Wright and Ennew (1993)	UK	Firm	MBOs in receivership	Over three-fifths did not effect redundancies on buy-outs, a sixth made more than 20% redundant and that the median level of employment fell from 75 to 58.
Amess and Wright (2007a)	UK	Firm	MBOs and MBIs	Employment growth is 0.51 of a percentage point higher for MBOs after the change in ownership and 0.81 of a percentage point lower for MBIs.
Wright et al. (2007)	UK	Firm	MBOs, MBIs	On average, employment initially falls but then grows above pre-buy-out level in MBOs; in MBIs, employment falls after buy-out; majority of MBOs and MBIs experience growth in employment.
Amess and Wright (2007b)	UK	Firm	MBOs, MBIs, private equity and non-private equity-backed	After controlling for endogeneity in selection of buy-outs, difference between employment effects of private equity versus non-private equity backed buy-outs not significant.
Work Foundation (2007)	UK	Firm	MBIs, MBOs	Based on same data as Wright et al. (2007) and Amess and Wright (2007a), MBOs increased employment. MBIs tended to cut it. Remaining workers often experienced significantly less job security. Employment cuts may have been planned pre-buy-out.
Cressy, Munari and Malipiero (2007)	UK	Firm	Private equity backed and non-private equity-backed and companies	Employment in buy-outs falls relative to control group for first four years but rises in fifth; initial rationalisation creates basis for more viable job creation.
Davis et al. (2008)	US	Firm & establishment	Matched private equity-backed and non-private equity-backed firms and establishments	Employment grows more slowly in private equity cases than in control pre-buy-out and declines more rapidly post-buy-out but in fourth to fifth year employment mirrors control group; buy-outs create similar amounts of jobs to control and more Greenfield jobs.
Amess, Girma and Wright (2008)	UK	Firms	LBOs, MBOs, MBIs, acquisitions, private equity and non-private equity-backed	Private equity-backed LBOs have no significant effect on employment. Both non-private equity-backed LBOs and acquisitions have negative employment consequences.
<b>Panel B: Wages</b>				
Lichtenberg and Siegel (1990)	US	Plant	MBOs, LBOs	Decline in relative compensation of non-production workers.
Amess and Wright (2008)	UK	Firm	MBOs, MBIs	Average wages in both MBOs and MBIs are lower than their non-buy-out industry counterparts.
Wright et al. (2007)	UK	Firm	MBOs, MBIs	Wages grow post-buy-out compared to pre-buy-out year; the majority of MBOs and MBIs showed growth in wages.
Amess, Girma and Wright (2008)	UK	Firms	LBOs, MBOs, MBIs, acquisitions, private equity and non-private equity-backed	Employees gain higher wages after acquisitions but lower after LBO.

**Table 3:** continued

Authors	Country	Unit of analysis	Nature of transactions	Findings
<b>Panel C: HRM effects</b>				
Wright et al. (1984)	UK	Firm	MBOs	65% of firms recognized unions before buy-out, falling to 60% afterwards; 40% of firms recognised one union; 8% of firms involved wider employee share ownership after buy-out.
Bradley and Nejad (1989)	UK	Division	National Freight Corporation MEBO	Employee share ownership had greater effect on 'cooperation' than on performance but did improve employee cost consciousness.
Wright, et al. (1990a)	UK	Firm	MBOs	58% of firms recognised unions before buy-out, 51% afterwards; 52% of firms recognised one union; 14.3% of firms involved wider employees in share-holding; 6% had share option scheme pre-buy-out, 10.4% afterwards.
Pendleton, Wilson and Wright (1998)	UK	Firm and employees	Privatised MEBOs	Shareholding and participation in decision making associated with feelings of ownership; perceptions of employee ownership significantly associated with higher levels of commitment and satisfaction.
Bacon, Wright and Demina (2004)	UK	Firm	MBOs, MBIs	Buy-outs resulted in increased employment, adoption of new reward systems and expanded employee involvement; 'Insider' buy-outs and growth oriented buy-outs had more commitment-oriented employment policies.
Bruining, Boselie, Wright and Bacon (2005)	UK and Holland	Firm	MBOs	MBOs lead to increases in training and employee empowerment. These effects were stronger in the UK than in the Netherlands.
Amess, Brown and Thompson (2006)	UK	Firm	MBOs	Employees in MBO firms have more discretion over their work practices.
Bacon, Wright, Demina, Bruining and Boselie (2008)	UK and Holland	Firm	MBOs, MBIs, Private equity and non-private equity-backed	Insider buy-outs show greater increase in high commitment practices; buy-outs backed by private equity firms report fewer increases in high commitment management practices.
Work Foundation (2007)	UK	Firm	MBOs, MBIs	Based on data in Wright et al. (2007) and Amess and Wright (2007a), in the case of MBIs, significant cuts in wages generally took place.

**Table 4: Effects on debt holders, taxation**

Authors	Country	Nature of transactions	Findings
<b>Effects on debt holders</b>			
Marais et al. (1989)	US	LBOs	No evidence of wealth transfer from pre-buy-out bondholders.
Asquith and Wizman (1990)	US	LBOs	Small average loss of 2.8% of market value to pre-buy-out bondholders. Bonds with protective covenants had a positive effect, those without experience negative reaction.
Cook et al. (1992)	US	LBOs	Bondholders with covenants offering low protection against corporate restructuring lose some percentage of their investment.
Warga and Welch (1993)	US	LBOs	Bondholders with covenants offering low protection against corporate restructuring lose some percentage of their investment.
<b>Taxation effects</b>			
Jensen, Kaplan and Stiglin (1989)	US	LBOs	Total amount of taxes collected by government does not decrease as a result of LBOs.
Kaplan (1989b)	US	LBOs	Tax savings account for small fraction of value gains in LBOs; significant correlation between estimated tax savings and buy-out bid premium.
Schipper and Smith (1988)	US	LBOs	Tax savings account for small fraction of value gains in LBOs; significant correlation between estimated tax savings and buy-out bid premium.
Muscarella and Vetsuypens (1990)	US	Reverse LBOs	Few control sample firms had lower tax rates than buy-outs.
Newbould, Chatfield and Anderson (1992)	US	LBOs	LBOs would have paid significantly more tax depending on tax structure; significant proportion of premia paid on LBO appears to be caused by reduction in taxes due to additional tax shields from debt; after Tax Reform Act 1986 less than 50% of premium paid on LBO can be attributed to reduction in taxes.

**Table 5: Longevity**

Authors	Country	Nature of transactions	Findings
Kaplan (1991)	US	LBOs	Heterogeneous longevity. LBOs remain private for median 6.8 years. 56% still privately owned after year 7. LBOs funded by leading private equity firms no more likely to stay private than other buy-outs; no difference in longevity of divisional or full LBOs.
Wright et al. (1993)	UK, France, Sweden, Holland	MBOs	State of development of asset and stock markets, legal infrastructures affecting the nature of private equity firms' structures and the differing roles and objectives of management and private equity firms influence timing and nature of exits from buy-outs.
Wright et al. (1994)	UK	MBOs	Heterogeneity of longevity influenced by managerial objectives, fund characteristics and market characteristics; larger buy-outs and divisional buy-outs significantly more likely to exit more quickly.
Wright et al. (1995)	UK	MBOs, MBIs	Heterogeneous longevity. Greatest exit rate in years 3-5; 71% still privately owned after year 7. MBIs greater rate of exit than MBOs in short term consistent with higher failure rate of MBIs. Exit rate influenced by year of deal (economic conditions). To achieve timely exit, private equity firms are more likely to engage in closer (hands-on) monitoring and to use exit-related equity-ratchets on management's equity stakes.
Strömberg (2008)	Worldwide	Private equity-backed buy-outs	58% of deals exited more than five years after initial transaction; exits within two years account for 12% and have been decreasing.



**Table 6: Asset sales and disposals**

Authors	Country	Nature of transactions	Findings
Bhagat et al. (1990)	US	LBOs	43% of assets in hostile LBOs sold within three years.
Muscarella and Vetsuypens (1990)	US	Reverse LBOs	43% of reverse LBOs divested or reorganised facilities; 25% made acquisitions; divestment activity greater among full LBOs.
Kaplan (1991)	US	LBOs	34% of assets sold within six years of buy-out.
Liebeskind et al. (1992)	US	LBOs	LBOs show significantly greater reduction in number of plants than control sample of matched public corporations and divested significantly more businesses in terms of mean employees, revenues and plants but not in terms of median revenue and plants; LBO managers downsized more lines of businesses than in the control group.
Wright, Thompson and Robbie (1992)	UK	MBOs	18% sold surplus land and buildings; 21% sold surplus equipment.
Seth and Easterwood (1993)	US	Large LBOs	5/32 firms were complete bust-ups, all involving buy-out (private equity) specialists; 14/32 firms refocused by divesting unrelated lines; 21/32 firms engaged in business focus by divesting related lines and 9/32 in market focus.
Easterwood (1998)	US	LBOs	The average abnormal returns to publicly listed bonds of LBOs around asset sales depends on whether firm experiences financial distress; distressed firms experience negative and significant wealth effects, no distressed firms experience positive and significant returns; evidence is consistent with returns being determined by whether divestment price exceeds, equals or is below expected price for the anticipated divestment.
Wright et al. (2007)	UK and Europe	MBOs, MBIs	Partial sales of subsidiaries or divisions of buy-outs accounted for 1/3 of total realised in the UK in 2001 but accounted for 1/4 in 2005; number of partial sales generally ranges between 70 and 100 per annum; euros 9 billion was raised through partial sales in UK in 2005; in continental Europe partial sales accounted for less than 1/20 of total exit value in 2005.

**Table 7: Post-exit effects**

Authors	Country	Nature of transactions	Findings
Holthausen and Larcker (1996)	US	Reverse LBOs	Leverage and management equity fall in reverse buy-outs but remain high relative to comparable listed corporations that have not undergone a buy-out. Pre-IPO accounting performance significantly higher than the median for the buy-outs' sector. Following IPO, accounting performance remains significantly above the firms' sector for four years but declines during this period. Change is positively related to changes in insider ownership but not to leverage.
Bruton et al. (2002)	US	Reverse LBOs	Agency cost problems did not reappear immediately following a reverse buy-out but took several years to re-emerge.
Jelic, Saadouni and Wright (2005)	UK	Reverse MBOs, MBIs	Private equity-backed MBOs more under-priced than MBOs without venture capital backing but perform better than their non-VC backed counterparts in the long run. Reverse MBOs backed by more reputable VCs exit earlier and perform better than those backed by less prestigious VCs.
Cao and Lemer (2007)	US	Reverse LBOs	For a sample of 526 RLBOs between 1981 and 2003, three- and five-year stock performance appears to be as good as or better than other IPOs and the stock market as a whole, depending on the specification. There is evidence of a deterioration of returns over the time.
Von Drathen and Faleiro (2007)	UK	LBO backed and non-LBO-backed IPOs	For a sample of 128 LBO-backed IPOs and 1,121 non-LBO backed-IPOs during 1990-2006 LBO-backed IPOs outperform non-LBO-backed IPOs and a stock market index; percentage of equity retained by buy-out group post offering drives out-performance.



**Table 8: Distress, failure and recovery**

Authors	Country	Nature of transactions	Findings
Bruner and Eades (1992)	US	LBOs	Given REVCO's debt and preference dividend obligations and its context, low probability could have survived the first three years.
Kaplan and Stein (1993)	US	LBOs	Overpayment major cause of distress.
Wright et al. (1996)	UK	MBOs, MBIs	Failed buy-outs more likely than non-failed buy-outs to be more highly leveraged, have lower liquidity ratios, be smaller and have lower labour productivity.
Andrade and Kaplan (1998)	US	LBOs	Net effect of high leverage and distress creates value after adjusting for market returns.
Citron, Wright, Rippington and Ball (2003)	UK	MBOs, MBIs	Secured creditors recover on average 62% of loans in failed buy-outs.
Citron and Wright (2008)	UK	MBOs, MBIs	Multiple secured creditors does not lead to inefficiency in the distress process but lead secured creditors obtained significantly higher recovery rates than other secured lenders.
Strömberg (2008)	Worldwide	Private equity backed-buy-outs	No significant relationship between bankruptcy and deal size; divisional buy-outs significantly less likely to end in distress; private equity-backed deals somewhat more likely to go bankrupt; no major difference in probability of bankruptcy across time periods; buy-outs of distressed firms significantly more likely to fail.

**Table 9: Operating performance changes post-buy-out**

Authors	Country	Nature of transactions	Findings
Kaplan (1989)	US	LBOs	Profits and cash flows increase post-buy-out; operating income/assets up to 36% higher for LBOs compared to industry median.
Muscarella and Vetsuypens (1990)	US	Reverse LBOs	Operating income/sales increases by more than all of control sample firms; Improvements in operating performance compared to control sample mainly due to cost reductions rather than revenue or asset turnover improvements.
Smith (1990)	US	LBOs	Operating cash flow per employee and per dollar of operating assets improves post-buy-out; working capital improves post buy-out; changes not due to lay-offs or capex, marketing, etc. expenditures; cash flow to employees 71% higher than industry median.
Singh (1990)	US	Reverse LBOs	Revenue growth post-buy-out, working capital management and operating income better than industry comparators, especially for divisional LBOs.
Opler (1992)	US	LBOs	Operating cash flow/sales ratio increased by 16.5% on average three years post buy-out.
Wright, Thompson and Robbie (1992)	UK	MBOs, MBIs	68% showed improvements in profitability; 17% showed a fall; 43% reduced debt days and 31% increased creditor days.
Bruining (1992)	Holland	MBOs	Buy-outs display significantly higher than industry average cash flow and return on investment.
Smart and Waldfogel (1994)	US	LBOs	Median shock effect of buy-out [correcting for forecast performance] of 30% improvement in operating income/sales ratio between pre-LBO year and second post-LBO year.
Chevalier (1995)	US	LBOs	Consumers may face higher prices in supermarkets subject to LBO.
Wright, Wilson and Robbie (1996)	UK	Matched MBOs and non-MBOs	Profitability higher for MBOs than comparable non-MBOs for up to five years.
Desbrieres and Schatt (2002)	France	MBOs, MBIs	Accounting performance changes depend on type of vendor.
Cressy, Munari, Malipero (2007)	UK	MBOs, MBIs	Operating profitability of private-equity backed buy-outs greater than for comparable non-buy-outs by 4.5% over first three buy-out years.
Guo, Hotchkiss and Song (2007)	US	P2Ps	Returns to pre- or post-buy-out capital significantly positive except for firms ending in distressed restructuring. Returns to post-buy-out capital greater when deal financed with a greater proportion of bank financing, or when there is more than one private equity sponsor.

**Table 10: Productivity changes in buy-outs and private equity**

Authors	Country	Unit of analysis	Nature of transactions	Findings
Lichtenberg and Siegel (1990a)	US	Plant	Divisional and full-firm LBOs and MBOs of public and private companies	Plants involved in LBOs and MBOs are 2% more productive than comparable plants before the buy-out; LBOs and especially MBO plants experience a substantial increase in productivity after a buy-out to 8.3% above; employment and wages of non-production workers at plants (but not production workers) declines after an LBO or MBO; no decline in R&D investment
Amess (2002)	UK	Firm	MBOs	MBOs enhance productivity; marginal value added productivity of labour is significantly higher than in comparable non-buy-outs.
Amess (2003)	UK	Firm	MBOs	MBOs have higher technical efficiency two years pre-MBO and lower technical efficiency three or more years before than comparable non-buy-outs; MBOs have higher technical efficiency in each of four years after buy-out but not beyond four years than comparable non-buy-outs.
Harris, Siegel and Wright (2005)	UK	Plant	Divisional and full-firm LBOs and MBOs of public and private companies	Plants involved in MBOs are less productive than comparable plants before the buy-out; they experience a substantial increase in productivity after a buy-out; plants involved in an MBO experience a substantial reduction in employment.

**Table 11: Strategy, investment, R&D and control system changes in buy-outs**

Authors	Country	Unit of analysis	Nature of transactions	Findings
Wright (1986)	UK	Firm	MBOs	Divisional MBOs reduce dependence on trading activity with former parent.
Bull (1989)	US	Firm	MBOs, LBOs	Evidence of both cost reduction but greater managerial alertness to opportunities for wealth creation more important.
Malone (1989)	US	Firm	Smaller LBOs	Major changes in marketing and NPD; cost control given greater importance.
Kaplan (1989)	US	Firm	LBOs	Capex falls immediately following LBO.
Smith (1990)	US	Firm	LBOs	Capex and R&D fall immediately following LBO.
Muscarella and Vetsuypens (1990)	US	Firm	Reverse LBOs	Capex declines compared to pre-LBO.
Lichtenberg and Siegel (1990)	US	Plant	LBOs, MBOs	LBOs typically in low R&D industries. R&D fall both pre- and post-buy-out not statistically significant; R&D fall may be accounted for by divestment of more R&D-intensive divisions.
Wright et al. (1990b)	UK	Firm	MBOs, MBIs	Divisional buy-outs reduce trading dependence on former parent by introducing new products previously prevented from doing.
Wright, Thompson and Robbie (1992)	UK	Firm	Divisional, and full-firm MBOs of private companies	MBOs enhance new product development; 44% acquired new equipment and plant that would not otherwise have occurred.
Jones (1992)	UK	Firm	MBOs	Buy-outs result in better match between accounting control systems and context, with increased reliance on management control systems influenced by pressure to meet targets.

**Table 11:** continued

Authors	Country	Unit of analysis	Nature of transactions	Findings
Green (1992)	UK	Firm	MBOs	Buy-out ownership allowed managers to perform tasks more effectively through greater independence to take decisions. Managers had sought to take entrepreneurial actions prior to buy-out but had been prevented from doing so because of the constraints imposed by parent's control.
Long and Ravenscraft (1993)	US	Division	LBOs and MBOs	LBOs result in a reduction in R&D expenditure but LBOs typically in low R&D industries; R&D intensive buy-outs outperform non-buy-out industry peers and other buy-outs without R&D expenditure.
Seth and Easterwood (1993)	US	Firm	LBOs	Buy-outs focus strategic activities towards more related businesses.
Wiersema and Liebeskind (1995)	US	Firm	Large LBOs	Large LBOs reduce lines of business and diversification.
Lei and Hitt (1995)	N/A (theory paper)	N/A	N/A	LBOs may lead to a reduced resource base for organisational learning and technology development.
Phan and Hill (1995)	US	Firm	LBOs	Buy-outs focus strategic activities and reduce diversification.
Zahra (1995)	US	Firm	MBOs	MBOs result in more effective use of R&D expenditure and new product development.
Robbie and Wright (1995)	UK	Firm	MBIs	Ability of management to effect strategic changes adversely affected by asymmetric information, need to attend to operational problems and market timing.
Bruining and Wright (2002)	Holland	Firm	Divisional MBOs	MBOs result in more entrepreneurial activities such as new product and market development.
Bruining, Bonnet and Wright (2004)	Holland	Firm	MBOs	MBOs result in introduction of more strategic control systems that allow for entrepreneurial growth.
Brown, Fee and Thomas (2007)	US	Firm	Suppliers to LBOs and leveraged recapitalisations	Suppliers to LBO firms experience significantly negative abnormal returns at announcements of downstream LBOs but not the case for leveraged recapitalisations. Suppliers who have made substantial relationship-specific investments more negatively affected. Suggests increased leveraged without accompanying change in organisational form does not lead to improved bargaining power.
Lerner, Strömberg and Sørensen (2008)	Worldwide	Firm	Private equity-backed buy-outs	Buy-outs increase patent citations after private equity investment but quantity of patenting unchanged, maintain comparable levels of cutting-edge research, patent portfolios become more focused after private equity investment.

**Table 12: Drivers of post-buy-out changes**

Authors	Country	Nature of transactions	Findings
Malone (1989)	US	Smaller private equity-backed LBOs	Management equity stake important driver of post-buy-out changes.
Thompson, Wright and Robbie (1992)	UK	MBOs, MBIs returning to market	Management team equity stake by far larger impact on relative performance of returns to equity investors from buy-out to exit than leverage, equity ratchets, etc.
Denis (1994)	US	LBO and leveraged recapitalisation	Gains in LBO greater than in leveraged recapitalisation attributed to more important role of equity ownership and active investors in LBOs.
Phan and Hill (1995)	US	LBOs of listed corporations	Managerial equity stakes had a much stronger effect on performance than debt levels for periods of three and five years following the buy-out.
Robbie and Wright (1995)	UK	Smaller MBIs	Private equity firms less closely involved; debt commitment and covenants important trigger for corrective action.
Cotter and Peck (2001)	US	LBOs	Active monitoring by a buy-out specialist substitutes for tighter debt terms in monitoring and motivating managers of LBOs. Buy-out specialists that control a majority of the post-LBO equity use less debt in transactions. Buy-out specialists that closely monitor managers through stronger representation on the board also use less debt.
Cressy, Munari and Malipero (2007)	UK	MBOs, MBIs	Industry specialisation, but not buy-out stage specialisation, of private equity firm adds significantly to increase in operating profitability of private equity-backed buy-outs over first three buy-out years.
Meuleman, Amess Wright and Scholes (2008)	UK	Divisional, family and secondary buy-outs	Private equity firms' experience significant driver of higher growth in divisional buy-outs.

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# Glossary

Source: Adapted from: <http://www.evca.eu/toolbox/glossary.aspx?id=982>

**Absolute return:** The return an asset achieves over time, without comparison to the overall market, other assets or benchmarks.

**Acquisition:** The obtaining of control, possession or ownership of a company.

**Acting in concert:** Persons acting in concert are persons who, pursuant to an agreement or understanding (whether formal or informal), actively cooperate, throughout the acquisition by any of them acquiring shares in a company, to obtain or consolidate control of that company.

**Alternative Investment Market (AIM):** The London Stock Exchange's market for new, fast growing companies. AIM offers the benefit of operating both an electronic quote and order trading facility. It commenced trading in June 1995.

**Alternative investments/assets:** Investments covering among others private equity and venture capital, hedge funds, real estate, infrastructure, commodities, or collateralised debt obligations (CDOs).

**Anchor LP:** An investor in a private equity/venture capital fund that commits a significant amount of the total fundraising to the fund upfront.

**Arm's-length:** The relationship between persons (whether companies or not) who deal on purely commercial terms, without the influence of other factors such as: common ownership; a parent/subsidiary relationship between companies; existing family or business relationships between individuals.

**Asset allocation:** A fund manager's allocation of his investment portfolio into various asset classes (eg, stocks, bonds, private equity).

**Asset class:** A category of investment, which is defined by the main characteristics of risk, liquidity and return.

**Asset cover:** One of the indicators used by banks to calculate debt ceiling. It is the extent to which debt is secured against the company's assets. Banks apply different weighting factors to various classes of asset, depending on their liquidity and the typical reliability of the valuation.

**Asset deal:** A sale of assets not essential for the vendor's core business.

**Asset stripping:** Dismantling an acquired business by selling off operational and/or financial assets.

**Auction:** A process in which an investment bank or other corporate finance adviser invites several private equity houses to look at a particular company that is for sale and to offer a bid to buy it.

**Basis point or bps:** One hundredth of a percent (0.01%).

**Beauty parade:** An accepted mechanism for an investee company to select a provider of financial and professional services. The investee normally draws up a short list of potential providers, who are then invited to pitch for the business.

**BIMBO:** Buy-in-management-buy-out. A combination of a **management buy-in** (MBI) and a **management buy-out** (MBO).

**Bond:** A debt obligation, often secured by a mortgage on some property or asset of the issuer.

**Break fee:** A break fee (also referred to as an inducement fee) is a sum agreed between the offeror and the target company to be paid to the offeror by the target only if specified events occur which prevent the offer from proceeding or if the offer fails.

**Bridge financing:** Financing made available to a company in the period of transition from being privately owned to being publicly quoted.

**Bridge vehicle:** A fund raised by a GP on an interim basis, before launching a new fund. Bridge vehicles are often of a smaller size, compared to the normal fund.

**Broker:** One who acts as an intermediary between a buyer and a seller of securities.

**Business model:** The underlying model of a company's business operation.

**Business plan:** A document which describes a company's management, business concept and goals. It is a vital tool for any company seeking any type of investment funding, but is also of great value in clarifying the underlying position and realities for the management/owners themselves.

**Buy-and-build strategy:** Active, organic growth of portfolio companies through add-on acquisitions.

**Buyback:** A corporation's re-purchase of its own stock or bonds.

**Buy-out:** A transaction in which a business, business unit or company is acquired from the current shareholders (the vendor).

**BVCA:** British Private Equity and Venture Capital Association.

**Capital gains:** If an asset is sold at a higher price than that at which it was bought, there is a capital gain.

**Capital markets:** A market place in which long-term capital is raised by industry and commerce, the government and local authorities. Stock exchanges are part of capital markets.

**Capital under management:** This is the total amount of funds available to fund managers for future investments plus the amount of funds already invested (at cost) and not yet divested.

**Captive fund:** A fund in which the parent organisation of the management company contributes most of the capital ie, where the parent organisation allocates money to a captive fund from its own internal sources and reinvests realised capital gains into the fund.

**Carried interest:** A bonus entitlement accruing to an investment fund's management company or individual members of the fund management team. Carried interest becomes payable once the investors have achieved repayment of their original investment in the fund plus a defined **hurdle rate**.

**Cash alternative:** If the offeror offers shareholders of the target company the choice between offeror securities and cash, the cash element is known as the cash alternative.

**Cash flow:** EBITDA +/- Working Capital Movement – capital expenditure – taxation.

**Chinese walls:** Deliberate information barriers within a large company to prevent conflict of interest between different departments.

**Class of securities:** Classes of securities are securities that share the same terms and benefits. Classes of capital stock are generally alphabetically designated (eg, Class C Common Stock, Class A Preferred Stock, etc).

**Clawback option:** A clawback option requires the **general partners** in an investment fund to return capital to the **limited partners** to the extent that the general partner has received more than its agreed profit split. A general partner clawback option ensures that, if an investment fund exits from strong performers early in its life and weaker performers are left at the end, the limited partners get back their capital contributions, expenses and any preferred return promised in the partnership agreement.

**Closed-end fund:** Fund with a fixed number of shares. These are offered during an initial subscription period. Unlike **open-end mutual funds**, closed-end funds do not stand ready to issue and redeem shares on a continuous basis.

**Closing:** A closing is reached when a certain amount of money has been committed to a private equity fund. Several intermediate closings can occur before the final closing of a fund is reached.

**Club deal:** A deal where several buy-out houses pool their resources together when buying a company of significant size, which would be otherwise inaccessible for them alone, either due to the purchase price or fund investment restrictions.

**Co-lead investor:** Investor who has contributed a similar share with the lead investor in a private equity joint venture or syndicated deal.

**Collateral:** Assets pledged to a lender until a loan is repaid. If the borrower does not pay back the money owed, the lender has the legal right to seize the collateral and sell it to pay off the loan.

**Commercial paper:** An unsecured obligation issued by a corporation or bank to finance its short-term credit needs (eg, accounts receivable or inventory). Maturities typically range from 2 to 270 days.

**Commitment:** A **limited partner's** obligation to provide a certain amount of capital to a private equity fund when the **general partner** asks for capital.

**Competent Authority:** A term used within Directives produced by the European Commission to describe a body identified by a member state of the European Union as being responsible for specified functions related to the securities market within that member state. Areas of competence include: the recognition of firms permitted to offer investment services; the approval of prospectuses for public offerings; the recognition and surveillance of stock markets. A member state may nominate different Competent Authorities for different areas of responsibility.

**Completion:** The moment when legal documents are signed, normally, also the moment at which funds are advanced by investors.

**Compliance:** The process of ensuring that any other person or entity operating within the financial services industry complies at all times with the regulations currently in force. Many of these regulations are designed to protect the public from misleading claims about returns they could receive from investments, while others outlaw insider trading. Especially in the UK, regulation of the financial services industry has developed beyond recognition in recent years.

**Concert parties:** Any persons or parties acting in concert (**see definition of acting in concert**).

**Conditions precedent:** Certain conditions that a private equity firm may insist are satisfied before a deal is completed.

**Confidentiality agreement (or non-disclosure agreement):** An agreement in which an employee, customer or vendor agrees not to disclose confidential information to any third party or to use it in any context other than that of company business.

**Conflict of interest:** In a public to private transaction, a potential conflict of interest invariably arises if the directors of the target company are (or will be) directors of the offeror, in which case their support for the offer gives rise to a potential conflict with the interests of the shareholders of the target company.

**Connected persons:** Companies related by ownership or control of each other or common ownership or control by a third person or company, and individuals connected by family relationships or, in some instances, by existing business relationships (such as individuals who are partners).

**Contributed capital:** Contributed capital represents the portion of capital that was initially raised (committed by investors) which has been drawn down in a private equity fund.

**Conversion:** The act of exchanging one form of security or common stock equivalent for another security of the same company (eg, preferred stock for common stock, debt securities for equity).

**Convertible security:** A financial security (usually preferred stock or bonds) that is exchangeable for another type of security (usually ordinary shares) at a fixed price. The convertible feature is designed to enhance marketability of preferred stock as an additional incentive to investors.

**Covenant lite loan:** A loan with lighter or no covenants, providing the borrower more operational flexibility while limiting the lender's protection against strong changes in his/her financial performance.

**Covenants:** An agreement by a company to perform or to abstain from certain activities during a certain time period. Covenants usually remain in force for the full duration of the time a private equity investor holds a stated amount of securities and may terminate on the occurrence of a certain event such as a public offering. Affirmative covenants define acts which a company must perform and may include payment of taxes, insurance, maintenance of corporate existence, etc. Negative covenants define acts which the company must not perform and can include the prohibition of mergers, sale or purchase of assets, issuing of securities, etc.



**Credit spread:** The difference in **yield** between two securities that are identical (in maturity and duration) except for their credit quality. Often the credit spread is used to compare corporate bonds with government bonds.

**Cumulative dividend:** A dividend which accumulates if not paid in the period when due and must be paid in full before other dividends are paid on the company's **ordinary shares**.

**Cumulative preferred stock:** A form of preference shares which provide that, if one or more dividends is omitted, those dividends accumulate and must be paid in full before other dividends may be paid on the company's **ordinary shares**.

**Deal flow:** The number of investment opportunities available to a private equity house.

**Debenture:** An instrument securing the indebtedness of a company over its assets.

**Debt service:** Cash required in a given period to pay interest and matured principal on outstanding debt.

**Debt/equity ratio:** A measure of a company's leverage, calculated by dividing long-term debt by ordinary shareholders' equity.

**Defined Benefit Plans:** A pension plan that promises a specified benefit to be paid to the employee at retirement. In a Defined Benefit Plan the company bears the risk of the pension scheme being under funded. See Defined Contribution Plans.

**Defined Contribution Plans:** A pension plan that does not promise a specific amount of benefits at retirement. Both employee and employer contribute to a pension plan, the employee then has the right to the balance of the account. This balance may fluctuate over the lifetime of the pension plan. See Defined Benefit Plans.

**De-listing:** The removal of a company from a listing on an exchange.

**Derivative or derivative security:** A financial instrument or security whose characteristics and value depend upon the characteristics and value of an underlying instrument or asset (typically a commodity, bond, equity or currency). Examples include futures, options and mortgage-backed securities.

**Dilution:** Dilution occurs when an investor's percentage in a company is reduced by the issue of new securities. It may also refer to the effect on earnings per share and book value per share if convertible securities are converted or stock options are exercised.

**Distribution:** The amount disbursed to the limited partners in a private equity fund.

**Dividend cover:** A ratio that measures the number of times a dividend could have been paid out of the year's earnings. The higher the dividend cover, the safer the dividend.

**DPI (Distribution to Paid-In):** The DPI measures the cumulative distributions returned to investors (limited partners) as a proportion of the cumulative paid-in capital. DPI is net of fees and carried interest. This is also often called the 'cash-on-cash return'. This is a relative measure of the fund's 'realised' return on investment.

**Drag-along rights:** If the venture capitalist sells his shareholding, he can require other shareholders to sell their shares to the same purchaser on the same terms.

**Drawdown:** When investors commit themselves to back a private equity fund, all the funding may not be needed at once. Some is used and drawn down later. The amount that is drawn down is defined as **contributed capital**.

**Due diligence:** For private equity professionals, due diligence can apply either narrowly to the process of verifying the data presented in a business plan/sales memorandum, or broadly to complete the investigation and analytical process that precedes a commitment to invest. The purpose is to determine the attractiveness, risks and issues regarding a transaction with a potential investee company. Due diligence should enable fund managers to realise an effective decision process and optimise the deal terms.

**Earn-out:** An arrangement whereby the sellers of a business may receive additional future payments for the business, conditional to the performance of the business following the deal.

**EBIT:** Earnings before interest and taxes – a financial measurement often used in valuing a company (price paid expressed as a multiple of EBIT).

**EBITDA:** Earnings before interest, taxes, depreciation and amortisation – a financial measurement often used in valuing a company (price paid expressed as a multiple of EBITDA).



**Envy ratio:** The ratio between the effective price paid by management and that paid by the investing institution for their respective holdings in the **Newco** in an **MBO** or **MBI**.

**Equity:** Ownership interest in a company, represented by the shares issued to investors.

**Equity kicker:** In a mezzanine loan, equity warrants payable on exit.

**Equity ratio:** One of the indicators used by banks to calculate debt ceiling. It consists of net equity divided by the company's total assets. Banks apply yardstick ratios for different industry sectors to arrive at a minimum level of funding that shareholders are required to contribute.

**EVCA:** European Private Equity and Venture Capital Association. European trade body representing the venture capital and private equity industry.

**Exercise price:** The price at which shares subject to a stock option may be purchased. Also known as the **strike price**.

**Exit:** Liquidation of holdings by a private equity fund. Among the various methods of exiting an investment are: **trade sale**; sale by **public offering** (including **IPO**); write-offs; repayment of preference shares/loans; sale to another venture capitalist; sale to a financial institution.

**Exit strategy:** A private equity house or venture capitalist's plan to end an investment, liquidate holdings and achieve maximum return.

**Expansion capital:** Also called development capital. Financing provided for the growth and expansion of a company. Capital may be used to: finance increased production capacity; market or product development; provide additional working capital.

**Financial secondaries:** A secondary deal involving a fund's portfolio of companies that are relatively mature (five to seven years old), with some exits already realised, but not all capital drawn down.

**Financial Services Authority (FSA):** A UK independent non-governmental body which exercises statutory powers under the Financial Services and Markets Act 2000. The FSA is the Competent Authority which regulates the securities industry in the UK.

**Free cash flow:** Free cash flow is defined as the after-tax operating earnings of the company, plus non-cash charges (eg, depreciation), less investment in working capital, property, plant and equipment, and other assets.

**Fund:** A private equity investment fund is a vehicle for enabling pooled investment by a number of investors in equity and equity-related securities of companies (investee companies). These are generally private companies whose shares are not quoted on any stock exchange. The fund can take the form either of a company or of an unincorporated arrangement such as a limited partnership.

**Fund-of-funds:** A fund that takes equity positions in other funds. A fund-of-funds that primarily invests in new funds is a primary or primaries fund-of-funds. One that focuses on investing in existing funds is referred to as a secondary fund-of-funds.

**Fund size:** The total amount of capital committed by the limited and general partners of a fund.

**Fundraising:** The process in which private equity firms themselves raise money to create an investment fund. These funds are raised from private, corporate or institutional investors, who make commitments to the fund which will be invested by the general partner.

**General partner (GP):** A partner in a private equity management company who has unlimited personal liability for the debts and obligations of the limited partnership and the right to participate in its management.

**General partner's commitment:** Fund managers typically invest their personal capital right alongside their investors capital, which often works to instil a higher level of confidence in the fund. The limited partners look for a meaningful general partner investment of 1% to 3% of the fund.

**Goodwill:** The value of a business over and above its tangible assets. It includes the business's reputation and contacts.

**Grandfather rights:** Special rights given to a limited partner to access a follow-on fund, after having been invested in the previous fund.

**Hedge fund:** An investment vehicle, where managers invest in a variety of markets and securities, to achieve the highest absolute return. Investments could be either made in financial markets, using stocks, bonds, commodities, currencies and derivatives, or by using advanced investment techniques such as shorting, leveraging, swaps and using arbitrage.

**Hedging:** An investment that is made to offset the risk of price movements of one security, by taking an opposite position in a different security, hence balancing the risk of the first investment. Examples are derivatives, such as options and futures, linked to a certain security.

**High yield bonds:** These play a similar role to **mezzanine finance** in bridging the gap between **senior debt** and **equity**. High yield bonds are senior subordinated notes not secured against the assets of the company, and which therefore attract a higher rate of interest than senior debt.

**Hurdle rate:** A rate of return that must be achieved before a PE fund manager becomes entitled to carried interest payments from a fund; usually set as an IRR (internal rate of return) but related to the risk free rate of return an investor could obtain in the same country as the fund is investing in.

**Independent fund:** One in which the main source of fundraising is from third parties.

**Information rights:** A contractual right to obtain information about a company, including, for example, attending board meetings. Typically granted to private equity firms investing in privately held companies.

**Institutional buy-out (IBO):** Outside financial investors (eg, private equity houses) buy the business from the vendor. The existing management may be involved from the start and purchase a small stake. Alternatively, the investor may install its own management.

**Interest cover:** One indicator used by banks to calculate debt ceiling. It consists of EBIT divided by net interest expenses. This ratio is a measure of the company's ability to service its debt.

**IPO (Initial Public Offering):** The sale or distribution of a company's shares to the public for the first time. An IPO of the investee company's shares is one of the ways in which a private equity fund can exit from an investment.

**IRR (Internal Rate of Return):** The IRR is the net return earned by investors (limited partners) from the fund, from inception to a stated date. The IRR is calculated as an annualised effective compounded rate of return using monthly cash flows to and from investors, together with the residual value as a terminal cash flow to investors. The IRR is therefore net ie, after deduction of all fees and carried interest. In cases of captive or semi-captive investment vehicles without fees or carried interest, the IRR is adjusted to create a synthetic net return using assumed fees and carried interest.

**J-curve:** The curve generated by plotting the returns generated by a private equity fund against time (from inception to termination). The common practice of paying the management fee and start-up costs out of the first **drawdowns** does not produce an equivalent book value. As a result, a private equity fund will initially show a negative return. When the first realisations are made, the fund returns start to rise quite steeply. After about three to five years the interim IRR will give a reasonable indication of the definitive IRR. This period is generally shorter for **buy-out** funds than for **early stage** and **expansion** funds.

**Junk bond:** A junk bond is a bond or company debt, which is rated as 'BB' or lower, indicating a higher risk of 'not' being repaid by the company. Junk bonds are also known as 'high-yield-bonds'. Within the private equity market, junk bonds are related to buy-out investments, when bonds of a transaction are rated as 'BB' or lower. See also **High yield bonds**.

**LBO (leveraged buy-out):** A **buy-out** in which the **Newco's** capital structure incorporates a level of debt, much of which is normally secured against the company's assets.

**Lead investor:** Investor who has contributed the majority share in a private equity joint venture or syndicated deal.

**Leverage loan market:** The market in which leverage loans are syndicated by a lead bank and hence sold on to other borrowers.

**Leveraged recapitalisation:** Transaction in which a company borrows a large sum of money and distributes it to its shareholders.

**LIBOR** See **London Inter-bank Offer Rate**.

**Limited partner (LP):** An investor in a limited partnership (ie, private equity fund).

**Limited partnership:** The legal structure used by most venture and private equity funds. The partnership is usually a fixed-life investment vehicle, and consists of a general partner (the management firm, which has unlimited liability) and limited partners (the investors, who have limited liability and are not involved with the day-to-day operations). The general partner receives a management fee and a percentage of the profits. The limited partners receive income, capital gains, and tax benefits. The general partner (management firm) manages the partnership using policy laid down in a partnership agreement. The agreement also covers, terms, fees, structures and other items agreed between the limited partners and the general partner.

**Listing:** The quotation of shares on a recognised stock exchange.

**London Inter-bank Offer Rate (LIBOR)** The interest rate that the largest international banks charge each other in the London inter-bank market for loans. This is used as a basis for gauging the price of loans outside the inter-bank market.

**Management buy-in (MBI):** A **buy-out** in which external managers take over the company. Financing is provided to enable a manager or group of managers from outside the target company to buy into the company with the support of private equity investors. Where many of the non-managerial employees are included in the buy-out group it is called a management/employee buy-out (MEBO)

**Management buy-out (MBO):** A **buy-out** in which the target's management team acquires an existing product line or business from the vendor with the support of private equity investors.

**Management fees:** Compensation received by a private equity fund's management firm. This annual management charge is equal to a certain percentage of investors' initial commitments to the fund.

**Market capitalisation (or market cap):** The number of shares outstanding multiplied by the market price of the stock. Market capitalisation is a common standard for describing the worth of a public company.

**Mezzanine finance:** Loan finance that is halfway between equity and secured debt, either unsecured or with junior access to security. Typically, some of the return on the instrument is deferred in the form of rolled-up payment-in-kind (PIK) interest and/or an equity kicker. A mezzanine fund is a fund focusing on mezzanine financing.

**Net debt:** Net debt is calculated as short and long-term interest-bearing debt minus cash (and equivalents) The concept of net debt is the same under cash and accrual-based financial reporting. High levels of net debt impose a call on future revenue flows to service that debt.

**Newco:** A generic term for a new company incorporated for the purpose of acquiring the target business, unit or company from the vendor in a **buy-out** transaction.

**Non Executive Director (NED or NXD):** A member of the board of directors of a company who has no management or executive function within the underlying company.

**Offer:** The offer (or bid) made for the target company by the Newco offeror established by the private equity provider and the participating directors of the target company (those directors who are part of the management buy-out team).

**Open-end fund:** A fund which sells as many shares as investors demand.

**Option:** A contractual right to purchase something (such as stock) at a future time or within a specified period at a specified price.

**Ordinary shares (or common shares/stock):** Owners of ordinary shares are typically entitled to vote on the selection of directors and other important issues. They may also receive dividends on their holdings, but ordinary shares do not guarantee a return on the investment. If a company is liquidated, the owners of bonds and preferred stock are paid before the holders of ordinary shares.

**P/E ratio:** Price/earnings ratio – the market price of a company's **ordinary share** divided by earnings per share for the most recent year.

**Payment in kind (PIK):** A feature of a security permitting the issuer to pay dividends or interest in the form of additional securities of the same class.

**Permanent establishment:** A permanent establishment is, according to the OECD definition, a fixed place of business through which the business of an enterprise is wholly or partly carried on. Within private equity, permanent establishment refers to the possibility that a limited partner, either owning or having a stake in a private equity or venture capital fund, is considered as a resident of that country and hence liable for the national taxation.

**Pillar one pension:** Pillar one refers to the public pension provisions, which are provided by the government.

**Pillar two pension:** Pillar two refers to the occupational pension provisions, which are provided by the employer.

**PIPE:** Generally referring to a private investment in public equity.

**Placement agent:** A person or entity acting as an agent for a private equity house in raising investment funds.

**Portfolio company (or investee company):** The company or entity into which a private equity fund invests directly.

**Preference shares (or preferred stock):** Shares which have preference over ordinary shares, including priority in receipt of dividends and upon liquidation. In some cases these shares also have redemption rights, preferential voting rights, and rights of conversion into ordinary shares. Venture capitalists generally make investments in the form of convertible preference shares.

**Primary loan market (or syndicated loan market):** Market in which a new loan is syndicated/sold. See **syndicated loan**.

**Public offering:** An offering of stock to the general investing public. For a public offering, registration of prospectus material with a national competent authority is generally compulsory.

**Public-to-private:** A transaction involving an offer for the entire share capital of a listed target company by a new company – Newco – and the subsequent re-registration of that listed target company as a private company.

**Quartile:** The IRR which lies a quarter from the bottom (lower quartile point) or top (upper quartile point) of the table ranking the individual fund IRRs.

**Ratchet/sliding scale:** A bonus where capital can be reclaimed by managers of investee companies, depending on the achievement of corporate goals.

**Recapitalisation:** Change in a company's capital structure. For example, a company may want to issue bonds to replace its preferred stock in order to save on taxes. Recapitalisation can be an alternative exit strategy for venture capitalists and leveraged buy-out sponsors.

**Redemption:** Repurchase by a company of its securities from an investor.

**Representations and Warranties ('Reps and Warranties'):** Declarations made by the seller of one or more target companies in relation to the financial, legal and commercial status of the target companies, the financial instruments (to be) issued, the assets owned or used and the liabilities due, and whereby such persons represent and warrant that such declarations are true and correct as of a certain date.

**Retail investor:** A non-institutional investor who purchases securities for his own account.

**Revolving facilities:** A committed loan facility allowing a borrower to draw down and repay amounts (up to a limit) for short periods throughout the life of the facility. Amounts repaid can be re-borrowed, thereby combining some of the flexibility of the overdraft facility with the certainty of a term loan.

**RVPI (Residual Value to Paid-In):** The RVPI measures the value of the investors' (limited partners') interest held within the fund, relative to the cumulative paid-in capital. RVPI is net of fees and carried interest. This is a measure of the fund's 'unrealised' return on investment.

**SEC:** Securities and Exchange Commission.

**Secondary investment:** An investment where a fund buys either a portfolio of direct investments of an existing private equity fund or limited partners' positions in these funds.

**Secondary loan market:** Market in which loans trade after their primary market syndication.

**Secondary market:** A market or exchange in which securities are bought and sold following their initial sale. Investors in the primary market, by contrast, purchase shares directly from the issuer.

**Secured debt:** Loans secured against a company's assets.

**Semi-captive fund:** A fund in which, although the main shareholder contributes a large part of the capital, a significant share of the capital is raised from third parties.

**Senior debt:** A debt instrument which specifically has a higher priority for repayment than that of general unsecured creditors. Typically used for long-term financing for low-risk companies or for later-stage financing.

**Share purchase agreement:** Agreement further to which one or more purchasers buy shares issued by one or more target companies from one or more sellers. The agreement will set out the type and amount of shares sold, the representations and warranties, the indemnification in the event of misrepresentation and may also include post-closing covenants (such as the obligation for the sellers not to compete with the purchasers).

**Squeeze-out:** Statutory provisions entitling an offeror who has acquired the support of a certain percentage of shareholders to acquire the balance of shares in the target company.

**Staple financing:** A pre-arranged financing package that a financial adviser or investment bank offers to the potential buyer in an auction process, when putting up a company for sale.

**Subordinated debt (junior debt):** Debt that ranks lower than other loans and will be paid last in case of liquidation.

**Subscription agreement:** Agreement further to which one or more investors undertake to subscribe for shares. The agreement will set out the type and amount of instruments to be issued, the representations and warranties, the indemnification in the event of misrepresentation and may also include post-closing covenants (such as further investment obligations or restrictions on the transfer of the instruments that will be acquired).

**Syndicated loan:** A very large loan in which a group of banks work together to provide funds for one borrower. There is usually one lead bank that takes a small percentage of the loan and syndicates the rest to other banks.

**Target company:** The company that the offeror is considering investing in. In the context of a public-to-private deal this company will be the listed company that an offeror is considering investing in with the objective of bringing the company back into private ownership.

**Tax transparency:** A fund structure or vehicle is tax transparent when the fund itself is not liable to taxation and the investment in an underlying company is treated as if it would be a direct investment for the initial investor (the LP), who is taxed only when the investment structure distributes its gains and revenues.

**Trade sale:** The sale of company shares to industrial investors.

**TUPE:** Transfer of Undertakings (Protection of Employment) Regulations 2006. UK legislation designed to protect employees interests when either assets are sold or operations are transferred by employers without selling a company's shares.

**TVPI (Total Value to Paid-In):** TVPI is the sum of the DPI and the RVPI. TVPI is net of fees and carried interest.

**Unsecured debt:** Loans not secured against a company's assets.

**Upper quartile:** The point at which 25% of all returns in a group are greater and 75% are lower.

**Vesting:** The process by which an employee is granted full ownership of conferred rights such as stock options and warrants (which then become vested rights). Rights which have not yet been vested (unvested rights) may not be sold or traded and can be forfeited.

**Vintage year:** The year of fund formation and first drawdown of capital.

**Warrants:** Type of security usually issued together with a loan, a bond or preferred stock. Warrants are also known as stock-purchase warrants or subscription warrants, and allow an investor to buy **ordinary shares** at a pre-determined price.

**Warranty:** Statement, usually contained in a share subscription or purchase agreement, as to the existing condition of the company which, if not true, supports a legal action for compensation by way of money damages.

**Weighted average cost of capital:** Weighted average cost of capital is a discount rate used in valuation models reflecting the opportunity cost of all capital providers, weighted by their relative contribution to the company's total capital.

**Write-down:** A reduction in the value of an investment.

**Write-off:** The write-down of a portfolio company's value to zero. The value of the investment in the portfolio company is eliminated and the return to investors is zero or negative.

**Write-up:** An increase in the value of an investment. An upward adjustment of an asset's value for accounting and reporting purposes.

**Yield:** The rate of return on a debt instrument if the full amount of interest and principal are paid on schedule. Current yield is the interest rate as a percentage of the initial investment.

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