Financing Change

PRIVATE EQUITY DEMYSTIFIED
An explanatory guide
Second edition

John Gilligan and Mike Wright
The first edition of *Private Equity Demystified – An Explanatory Guide* was published in August 2008, as the first report to be issued 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.

Since the publication of the first edition of *Private Equity Demystified* the major economies have moved from growth to recession, the global banking community has experienced unprecedented turmoil and distress and we have all come to be familiar with the term ‘credit crunch’.

We have also seen the publication, in April 2009, of the European Commission’s proposed Alternative Investment Fund Managers directive which would cover private equity funds.

The second edition builds on the work of the first edition to reflect this recent turmoil and examines the way in which the banking market has changed its approach to private equity investments. It also includes more discussion of both mid-market buy-outs and the dynamics of the restructuring industry.

It remains the case that media coverage of private equity and some public commentary have frequently displayed a poor understanding of how private equity operates, yet these sources are frequently relied upon as fact. This guide provides an objective explanation of private equity, recognising that for public scrutiny to be effective it must be conducted on an informed basis.

This publication 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. For further information on the *Financing Change* programme please email 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.

The report, which includes a summary of academic studies and references, is also available to download from www.icaew.com/corpfinlac.

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Preface to the second edition

In 2007 the private equity industry came under intense public scrutiny including a House of Commons Select Committee enquiry. We published the first edition of Private Equity Demystified in August 2008 and since then the financial world has experienced unprecedented turmoil. We have therefore taken the opportunity to revisit the accusations laid at the feet of the private equity industry and our tentative support for the industry in the first edition of this guide with the benefit of hindsight. In summary we find the thesis that private equity created, spread or encouraged an increase in systemic risk to be almost wholly incorrect.

We argue that in contrast to the forecasts of the critics, private equity has acted to contain risk, not disseminate it; has created alignment between managers and shareholders, not a misaligned bonus culture; and provides important models for corporate governance and risk management that have a wider applicability.

Private equity has frequently and erroneously been likened to the activities of hedge funds and other so-called ‘shadow banking system’ members by many commentators and regulators. We drew attention to the differences between hedge funds, private equity funds and other fund types at length in the first edition and reiterate them here. We continue to encourage regulatory bodies to be mindful of the clear distinction between these investment forms and encourage all commentators to emphasise this distinction to aid public understanding and debate.

The idea of aligning interests lies at the heart of the rationale for the business model of the private equity industry. Where that alignment breaks down, for example as it appears to have done in the syndicated debt market, the problems associated with excessive leverage follow closely behind.

The corporate governance regime of public companies has been widely criticised for having weak non-executives, shareholders who sell shares rather than actively holding management to account and bonus-based reward systems that have no penalties for failure. The structures seen in private equity transactions often directly address each of these issues.

The belief in the enduring outperformance of the top fund managers is widely held and has some historical support in independent academic research. Given the excesses of the past few years, it seems likely that this assumption may be challenged in the future. However, it is unclear how the market will be able to adjust in the short term if the relationship breaks down.

The body of academic evidence is growing rapidly, but the quality of much research is hampered by poor data availability, for both quantitative and qualitative research. Two broad approaches have been adopted. In the first, large data sets are subjected to econometric analysis. These studies seek to identify significant differences between populations of buyouts and non-buy-out companies. In the second approach, small scale and detailed case studies are used to examine the themes within the academic literature. These studies are often reliant on the provision of data by private equity funds themselves and therefore are often viewed with suspicion by critics of the industry.

The academic work to date is broadly supportive of the idea of alignment that lies at the heart of the private equity investment thesis. Recent evidence particularly suggests that performance improvements are most marked in buyouts of divisions.

Overall we have found the following core strands in the analysis:

1. **Alignment**: private equity uses financial engineering to create exaggerated incentives and disincentives to achieve performance gains in corporations.

2. **Long term**: private equity funds are generally different in structure to other fund types primarily because they are long term and illiquid for the investors and have low bankruptcy risk.
3. **Low systemic risk:** as a result of this difference in fund structure, private equity funds did not contribute to the credit crunch directly and do not directly create systemic risk in financial markets.

4. **Early adopters:** private equity rarely creates new financial technologies but is an early adopter of financial innovation. Some of these financial innovations were implicated in the credit crunch and have changed the dynamics of the market both pre- and post-investment.

5. **Banking failure:** banks used new innovations to change their business models and as a result incentives were changed in a way that facilitated their failure. This was symptomatic of banking generally, not of private equity.

6. **Alternative asset managers:** the larger private equity funds are becoming multi-fund managers having more than long-term private equity funds under management. This model may corrupt the original private equity model based on the idea of alignment at all levels.

7. **Equity illusion:** management teams need to be wary of the equity illusion and focus on their cash returns not their notional equity percentage.

8. **Corporate governance:** the model of corporate governance used in private equity is materially different to that in public companies. The rewards for success are great, the penalty for under-performance clear. Shareholders are highly active in monitoring each investment. It can be credibly argued that the private equity governance model addresses many of the issues that have been implicated in the failures of public market accountability.

9. **Distress:** in distressed situations banks have the strongest hand but can only achieve a turnaround in conjunction with the ongoing management of the business. Leverage does increase the likelihood of distress, but not of failure.

10. **Syndication paradox:** wide syndication of debt has resulted in a potential paradox: Syndication is designed to mitigate risk, but once that risk crystallises the fact that debt is widely held makes restructuring more costly and problematic, which increases the risks to both the lenders and borrowers.

11. **Evidence:** there is an extensive, but as yet incomplete, body of peer-reviewed academic research regarding the impact of private equity. This research is broadly supportive of the hypothesis that private equity has, in aggregate, a positive influence on the economy by facilitating and accelerating restructuring, with all the pain that that may cause at an individual level.

12. **Outstanding questions:** the high levels of borrowing seen in the past decade may result in an increase in failures in buyouts. The number of funds in existence may reduce as some fail.

John Gilligan
Mike Wright
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About the authors

**John Gilligan** is a Corporate Finance Partner in PKF (UK) LLP. He has worked in the private equity and venture capital industry for over 20 years. He started his career in 1988 at 3i Group plc as a financial analyst. He joined what is now Deloitte in 1993 and was a partner from 1998 to 2003. He is a Special Lecturer at Nottingham University Business School and has also taught at Cranfield University Business School.

He has a degree in economics from Southampton University and an MBA in financial studies from Nottingham University.

**Professor Mike Wright** has been Professor of Financial Studies at Nottingham University Business School since 1989 and Director of The Centre for Management Buy-out Research since 1986. He has written over 25 books and more than 300 papers in academic and professional journals on management buy-outs, venture capital, habitual entrepreneurs, corporate governance and related topics.

He served two terms as an editor of *Entrepreneurship Theory and Practice* (1994–99) and is currently a joint editor of the *Journal of Management Studies*. He holds a BA (CNAA), MA (Durham), PhD (Nottingham) and an honorary doctorate from the University of Ghent and is the winner of the Academy of Management Entrepreneurship Division Mentor Award 2009.

**Contact details**

John Gilligan  
Partner  
PKF (UK) LLP  
Farringdon Place  
20 Farringdon Road  
London EC1M 3AP  
UK  
Tel: +44 (0)20 7065 0241  
Email: John.Gilligan@uk.pkf.com

Mike Wright  
Centre for Management Buy-out Research  
Nottingham University Business School  
Jubilee Campus  
Nottingham NG8 1BB  
UK  
Email: mike.wright@nottingham.ac.uk

and

Rotterdam School of Management  
Erasmus University Rotterdam  
Burgemeester Oudlaan 50  
3062 PA Rotterdam  
PO Box 1738  
300 DR Rotterdam  
The Netherlands  
Tel: +44 (0)115 951 5257
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Executive Summary

Objective of the report

This is the second edition of *Private Equity Demystified – An Explanatory Guide*. In the first edition we sought to contribute to a debate about the private equity industry by clarifying how the industry works. We provided a summary of the findings of a review of approximately 100 peer-reviewed academic papers which have examined aspects of the private equity industry over the past 25 years. This was the most comprehensive review of academic research in this area ever undertaken.

Since we wrote the first edition, there has been unprecedented market turmoil and financial distress across the global banking system. The analysis in this second edition expands on some of our earlier discussion in the light of this turmoil. We have also comprehensively updated the review of academic studies to incorporate the very latest work. Furthermore we have expanded our commentary to cover mid-market buy-outs in addition to the large buy-out market.

We also discuss the dynamics of a restructuring to shed further light on how the industry works.

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, to buy a business from its current owners.

A brief history of private equity in the UK

The private equity market grew from the venture capital and development capital industry that was established to serve the growth needs of UK businesses. Due to regulatory changes from 1981 onwards, a market evolved where buy-outs were increasingly important. The number and size of funds participating grew rapidly throughout the 1980s. At this time the market was dominated by 3i, which was then an investment company jointly owned by the UK government and clearing banks, and funds that were often part of banks and insurance companies; so-called captive funds. In the early 1990s the market was hit by recession and consequently by an increase in investment failures. The rise in failures led to a sharp contraction in the banking market and the associated withdrawal by some equity participants. During this period a large number of captive fund managers completed buy-outs of their own businesses and became independent. Furthermore, 3i, was floated as an investment trust on the stock market. By the end of the 1990s very few captive funds remained. Since the turn of the century, fund sizes have again grown rapidly and funds have become increasingly international and have, in some cases, diversified into other investment areas.

What do the critics of private equity say?

Any industry has its critics. Private equity has been criticised both for the way that it finances and operates individual investments and for the way that it operates its own business.

At the level of the individual investment, the criticisms include: using ‘excessive’ levels of debt to acquire corporations; using ‘complex’ structures to reduce or eliminate tax; aggressively managing businesses to reap ‘short-term’ profit at the expense of long-term performance; under-investment in new products and process; lack of consultation with workers prior to and after an acquisition.

At the level of the fund, the criticisms include: a lack of public information on the funds and their investors; criticisms of the compensation of partners and staff of the funds; concerns on the minimum regulatory capital requirement of fund structures; and reiteration of concerns regarding the use of ‘tax havens’.

Further concerns have been raised that are relevant to private equity transactions but are symptomatic of wider issues. For example, developments in the banking market have materially changed the incentives and alignment of the parties concerned.
In this report we examine both the logic of these criticisms and summarise, where available, the independent evidence regarding these claims.

Who are the parties 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 a buy-out, the bank proposing to lend money. Each of these parties has their own perceptions of risk and expectations of reward.

Typical participants in a leveraged buy-out

Economic theory, corporate governance 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. It has been argued that this lack of accountability of senior managers has allowed them to pursue projects that are either excessively risky or, conversely, excessively conservative. This is one of the central problems facing what is known as corporate governance: how do shareholders make managers accountable for their decisions? Private equity seeks to address this principal-agent 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. Some argue that private equity is an alternative long-term form of corporate governance to traditional public companies. Others see private equity as a type of transitional ‘shock therapy’ for under-performing companies. We expand upon this in the main body of the report.

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

Funds investing in quoted companies use publicly available information to purchase freely tradable shares. If they do not support the strategy of the management of the business they may either seek to influence the board composition or, far more frequently, they can sell the shares in the public market and invest elsewhere. They operate with low information and low influence but high liquidity.

Private equity funds differ in strategy, structure and objective 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. Prior to investing they conduct extensive due diligence and have unfettered access to the views of management. Thus private equity funds operate with much better information and stronger controls and influence over management than funds holding quoted equities.
The availability of information and ability to act on it enables private equity firms to operate a radically different model of corporate governance to a traditional public company.

To achieve this they forgo liquidity in the individual investments and may take on financial risk in each investment by the use of debt. They therefore operate with good information and strong influence but low liquidity.

**Information, management influence and ability to sell an investment**

The arrows indicate the market pressure on private equity and quoted equity to invest in assets that have lower liquidity using imperfect information to increase rewards at higher risk.

What are the differences between private equity funds and hedge funds?

Many commentators erroneously talk of the private equity and hedge fund industry as if they were the same thing or closely related. In fact hedge funds and private equity are better understood as being at two entirely different ends of the spectrum of investment structures and strategies aimed at achieving exceptional returns.

Hedge funds generally allow investors periodically to buy and sell units of investment in the fund. They also use borrowings within the fund structure itself to finance investments. They typically buy publicly quoted shares and bonds. They seek to achieve profits from a combination of a trading strategy (buying low, selling high) and, sometimes, shareholder activism through pushing for changes in a company’s strategy. Hedge funds are therefore businesses that use leverage within a fund to pursue a strategy based on trading.

Due to the borrowings in the fund and the ability of investors to seek repayment of their investment, hedge funds can, and do, fail.

Private equity funds are based on a model that generally has no leverage within the fund and provides no ability on the part of investors to seek repayment of their investment. Such funds therefore cannot generally fail. As noted above, the core skills of private equity are nothing to do with an ability to trade on a public market: once invested they are based upon a fundamentally different model of corporate governance creating alignment to address the principal-agent problem. The risks of private equity investments are ring-fenced in each individual investment which carries a unique financial risk tailored to the specific investment. Private equity funds are un-g geared funds that typically invest in unquoted assets to manage them actively to achieve capital gains.
Borrowings in a fund and shareholder/investor liquidity

The arrows illustrate the market pressure to increase borrowings and give investors more liquidity, which increases risk within the fund structure.

We believe that this distinction is important in understanding the market risks created by hedge funds and private equity funds and for informing regulatory responses to the systemic failures seen in the past few years. In particular the level of leverage needs to be understood by reference to the entire investment chain. We believe that the traditional private equity fund structure has operated to limit systemic risk by offering long-term, illiquid, unleveraged investment assets to investors with large diversified portfolios. There does appear to be pressure to increase leverage within funds and to provide liquidity to investors and this may increase systemic risk. We note however that the debt-free structure of a private equity fund is, in most European jurisdictions, a market-driven norm, not a regulatory requirement.

The contribution, if any, of the private equity industry to the market failures seen in 2007/2008 arose through failures in the associated acquisition finance banking market, not within the private equity fund structures. On this analysis the private equity industry was a (wholly willing) victim of a failure of the banking system, not a cause of the failure.

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 those 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. By far the largest investors in private equity are pension funds and insurance funds.

**Sourcing investments:** a private equity fund must source and complete successful transactions to generate profit and support the raising of 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:** private equity fund managers have become 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. This is the basis of the argument that private equity has become an alternative model of corporate governance.

**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. This exit horizon is the source of the criticism that private equity is a short-term investment strategy. The academic evidence (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. Indeed the average holding period has been increasing over time.

**How are private equity fund managers rewarded?**

Private equity fund managers are generally rewarded with a salary 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 3% 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. Critics have argued that as fund size has grown, the funds’ costs have grown less rapidly and therefore the profit from fee income has become material. It is argued that this income, which is effectively guaranteed, has created a misalignment between the partners in private equity funds and their investors. In essence a new principal-agent problem is said to have been created by the high levels of guaranteed income from fees.

- **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’. 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 to the extent of 20% of any excess. The hurdle rate (historically around 8% per annum) is calculated on the amounts actually invested. 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. However, in a long-term, illiquid investment business with low levels of transparency to new entrants, this process of realigning interests may take longer than in other industries.

Management fees can be structured as 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 less any income guaranteed from fees not spent on the costs of the fund.

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 parties and to incentivise and reward performance above a threshold level.
If alignment of interests is the central idea of private equity, does it ever fail?

The central assumption of private equity is that shareholders’ interests are the primary concern of the management of any company. While it may sound controversial to some, this is simply a restatement of the basic responsibilities of any director of a for profit limited company. The shareholders own the business and management are duty bound to act in the interests of the shareholders, subject to the constraint that they must not trade insolvently and must observe the various rights of employees, customers and other groups.

However, there are a number of circumstances where the interests of the various parties in a leveraged transaction may not be aligned.

As noted above, fees have become larger as funds have grown and the excess of fees over fund costs has grown in absolute terms providing a higher guaranteed income to the manager and therefore probably higher profit to its partners.

Transaction fees payable by investee companies to the fund ('arrangement fees') as opposed to fees payable to transaction advisers, represent inefficiency in the private equity market. Investors’ money is invested into a transaction and immediately repaid to the fund managers and/or the fund.

Management may suffer from the ‘equity illusion’. They may hold a significant proportion of the equity of the business (a large ‘equity percentage’) but have so much investment ranking ahead of them that they cannot realistically accrue any value in their apparent equity stake. In this scenario management are no longer aligned with the private equity sponsors. Similar misalignment arises where investors take a priority yield that may effectively appropriate equity value to the private equity fund. This is also seen in some ‘debt only’ deals where there is no private equity sponsor.

Management teams are typically interested in the absolute amount of capital gain whereas private equity funds target a return on their investment. This can create differences in exit strategy between shareholders and managers due to the time value of money.

Acquisitions often require further equity funding. Where this dilutes management equity or puts instruments that have a priority return to equity into the capital structure, incentives change.

Hedging techniques have created potentially perverse incentives for purchasers or holders of debt in distressed companies. Where loans are publicly traded, purchasers of loans that are ‘guaranteed’ using credit default swaps may be incentivised to bring about a loan default rather than avoid one. They may therefore be incentivised to induce failure.

How are private equity fund managers taxed?

Carried interest is typically a mix of capital profits, interest received, dividends and sometimes fees. Only the first element is taxed as a capital gain. Management 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 actual 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 independently to 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 had enduring out-performance. Most recently it has been speculated by the authors of these studies that this long-standing relationship is breaking down and that out-performance in many funds will no longer endure. In particular recent academic work suggests that, historically, most successful funds have become too large, too fast.

What is the failure rate in private equity investments?

Failure can mean company failure ie, receivership and liquidation, or investment failure, where the value of the investment is nil but the company continues to exist. There is no aggregate industry data on the number of failed investments. We are therefore only able to present comprehensive data on receiverships.

There are two ways of looking at failures: by year that the deal was done (vintage) and by year of failure.

<table>
<thead>
<tr>
<th>Year</th>
<th>% in receivership</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>60%</td>
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<tr>
<td>88</td>
<td>50%</td>
</tr>
<tr>
<td>89</td>
<td>40%</td>
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<td>90</td>
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<td>91</td>
<td>20%</td>
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<tr>
<td>92</td>
<td>10%</td>
</tr>
<tr>
<td>93</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: CMBOR/Barclays Private Equity.

More recent transactions clearly have had less time to fail.
The number of receiverships has increased due to the increasing population of buy-out companies and is correlated with the economic cycle. However, recent large scale evidence shows that MBOs and private equity-backed deals completed post-2003 are not riskier than the population of non-buy-out private firms if other factors are adjusted for.

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

Pension funds constitute the largest category of investors in private equity and venture capital funds and the largest proportion of funds raised are buy-out funds. Ultimately many of the investors are members of the wider public who contribute to pension schemes, 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 seek 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.

**How is private equity regulated?**

Regulation of financial services and financial markets in the European Union (EU) has generally been a matter for national governments under principles established at an EU level. In the UK managers are regulated by the FSA and in common with any other corporate entity have to comply with various provisions of company law. There have been calls for and proposals for international regulation. We believe that any regulation should be evidence based. The evidence presented within this report suggests that private equity is a distinct asset class that has not created systemic market risks.

**Can a private equity fund fail?**

Private equity funds generally use long-term commitments not short-term borrowings to fund their investment activities. They therefore generally do not have a risk of bankruptcy.
Traditionally a 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. Recently a number of funds have had to renegotiate the terms of their funds (or in some cases cease new investment) as their investors have been unable or unwilling to fund future new investment commitments.

In the main body of the report we present new evidence that points towards a market that is dynamic and increasingly competitive where the failure of fund managers has occurred with some regularity. Significantly, the failure of a fund manager does not generally result in the failure of its underlying investments. In contrast, the failure of a traditional holding company will result in the subsidiary undertakings being part of the resolution of the insolvency of their parent.

Similarly, unlike a corporate structure, the failure of one investment has no impact on the prospects of any of the other investments in a private equity portfolio. In this limited sense, private equity structures may reduce both systemic risk and the collateral damage of any single corporate failure.

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

Investors are taxed as if they had invested directly in the investee company rather than via a private equity fund; it is in this sense that the fund is said to be transparent for tax purposes.

Some 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 was 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 fell 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 less any losses. There is very little academic research around this change in banking incentives and the potential impact on risk and conflicts of interest within the arranging and syndications but it is clear that the model failed to operate during 2007/2008.

The arranger model relies on the ability to sell loans to other institutions. In late 2007 this market effectively stopped operating in what became known as the credit crunch. The inability to syndicate and sell loans prevented banks from being able to lend to, among other things, the leveraged finance market, which incorporates private equity.
How do banks spread risks through the financial markets?

Syndication through layers of CDOs

The broad syndication of loans throughout the financial market has had two major consequences: firstly the total risk is disseminated across many institutions, reducing, in recent times, 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 actually are held within the financial system. It is important to understand the operation of the collateralised debt obligation/collateralised loan obligation (CDO/CLO) market to understand how the largest private equity transactions (and other transactions) were financed.

What are collateralised debt obligations, collateralised loan obligations and structured investment vehicles and how do they operate in private equity?

Schematic of a CDO/CLO/SIV

When a bank requires more liquidity (cash), portfolios of loans may be packaged together and sold to other financial institutions. Banks profit from the difference between what the ultimate borrowers pay in interest and fees to the bank and the amount paid in interest and fees to the institution that has bought the loan portfolio. This has been happening since banking began, but grew dramatically in the 1990s as the wholesale finance market grew in response to the growth in global capital flows.
What was entirely new was the emergence of new institutions that among other things assisted in the growth of the leveraged finance market. CDOs/CLOs in Europe are on the whole different from their US counterparts. In the US the majority of these institutions traded mortgage and personal finance-backed securities (including sub-prime mortgages). In Europe the proportion of institutions that were active in the buy-out market was much higher.

These institutions participated in funding the debt of buy-outs and subsequently blended together assets from a number of deals with different risk profiles and sliced them to create new synthetic assets that are issued and traded on public markets. It is estimated by ratings agencies that 30–50% of large buy-out debt was funded by CDOs.

A number of larger private equity funds operate CDOs. The definitions and explanation are given in the main body of the report.

**Economic theory: the market for lemons, the banking market and the credit crunch**

Economic theory has long shown that markets can fail when buyers and sellers do not have the same information on which to form considered views. It is known as ‘the lemons problem’ after the Nobel Prize winner George Akerlof’s original paper highlighting the problem. The market fails when a buyer cannot tell a high quality asset from a similar asset that is of low quality (‘a lemon’), despite the fact that both the seller and buyer wish to trade at a fair price. As banks have accumulated increasingly complex synthetic assets, it has become impossible to relate the risk of those assets accurately to real economic risks, often for both the owner of the assets and any potential purchaser of it. This has resulted in two effects: firstly it has made valuing a bank’s asset for the purpose of its accounts and regulatory requirements extremely difficult and secondly it has caused the wholesale banking market to fail as banks were unwilling to trade these potential lemons with each other. It also led lenders to banks to withdraw their short-term facilities. Banks were faced with uncertain asset values and no short-term funding and therefore required emergency rescue funding to avoid becoming insolvent.

This resulted in the liquidity in the syndicated loans market drying up. Private equity relied on this market.

**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 or, 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.

**What is a cov-lite loan and why does it matter?**

Where the covenant arrangements are either 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 (also called ‘equity cure’), the loans are known as covenant light or ‘cov-lite’ loans. This is a transfer of risk from the company and private equity funds to the banks. When the market for leveraged loans was at its peak, it was argued that cov-lite allowed the private equity funds time to make changes to the business that would ensure that companies were able to trade through financing difficulties. The current economic downturn provides a stern test of this assertion.
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

![Diagram of 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 fund each separate newco that acquires a company. 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: it amplifies the underlying investment return.

What are the limits on the amount of debt?

The amount of debt available to fund a buy-out is a function of the bank's estimation of a 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. Over the past decade, capital gearing has increased as interest cover was broadly held constant: this led to increased levels of corporate borrowings.

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 vendors prior to investing;
• the management themselves, in a management buy-out;
• the results of extensive due diligence by accountants, lawyers and consultants etc 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:

• board representation;
• 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 (and elsewhere) 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 US 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 in successful buy-outs.

**How are management teams incentivised and rewarded?**

The academic evidence

Managers (and sometimes a wider employee group) in buy-outs are expected to invest personally 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.

This contrasts with the use of option schemes in some quoted companies. In an option scheme managers have significant incentives to grow value but no cost (except opportunity cost) in reducing shareholder value: it is a carrot-based system. In a buy-out there are both sticks and carrots.
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 extensive 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’ or MBI). Employment subsequently increases after an initial decline, especially in MBOs and the employment effect is more positive in buy-outs than following traditional acquisitions. Buy-outs and buy-ins typically 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.
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 but this sector of the market is excluded from this report.

The term ‘private equity’ has no consistently-applied definition and increasingly refers to any investor that is not themselves 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 failed 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. The failure of Baugur highlights the importance of organisational structure in controlling systemic risk and starkly highlights the risks of adopting a long-term investment strategy without an appropriate funding structure.

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 A brief history of private equity in the UK

Private equity emerged in the 1980s from, broadly, two pre-existing pools of funds: venture capital and development capital. Venture capital (VC) provides equity capital to early and emerging businesses. Development capital provides equity capital to expand existing businesses.

Companies Act 1981: prior to 1981 it was illegal to use the assets of a target company to give security to a bidder for that company. This was specifically designed to stop the asset stripping that had been seen in the late 1960s. However, an unintended consequence of this legislation was that it prevented the rescue of viable companies many of which were subsidiaries of larger failing businesses. These subsidiaries could not provide security to a purchaser’s bank that wished to lend money to help acquire and rescue a business. To reverse this unintended prohibition and to encourage the rescue of viable businesses, a change to the law was made in the Companies Act 1981. This allowed companies to give financial assistance under certain tightly controlled circumstances.

1980s buy-out boom: following the change in the Companies Act 1981, the number of buy-outs grew rapidly. Initially the UK market was dominated by 3i which at that time was jointly owned by The Bank of England and the major clearing banks. Other early participants were subsidiaries of banks that had historically focused on development capital and other financial investors with a background in venture capital.

‘Hands-off, eyes-on’: virtually all early funds were generalist investors who had skills in financial engineering and transactions but had little hands-on management input. Investors closely monitored their investments, but the underlying philosophy was passively to back management to manage.

Due to the relatively small size of the funds, the capacity of the buy-out market was severely limited and in consequence many transactions were syndicated between equity investors. To put the scale of the industry in context, a large buy-out during this period was generally defined as one in excess of £10m, in 2009 it might be defined as £0.5bn.
The returns earned by the early buy-out investors were very good. This led to a growth in the funds committed by existing investors and to the emergence of new funds raised by groups of investors who wished to enter the market. Many of these funds’ founder managers were from the relatively small pool of experienced investors, often they were ex-3i executives.

**Captives versus independents:** by the end of the first wave of buy-outs in the 1980s the industry was characterised by a split between so-called captive funds that were owned by a large corporate parent and independent firms that had taken the partnership form that we see as the commonest structure today, plus 3i.

Captive funds and 3i tended to be longer-term holders of an investment but demanded a higher yield from their investments. Independent firms were structured as 10-year funds (as we see today) and therefore were more focused on generating capital gains and had lower yield requirements.

At the end of the 1980s, mirroring the US experience, a number of large buy-outs were completed that subsequently either failed or resulted in significant losses to the equity investors. The largest of these was the £2.2bn buy-out of Gateway supermarkets.

**Buy-outs of captive funds:** following the impact of the recession of the early 1990s, many of the captive funds were themselves bought out from their parent companies by their partners, virtually all rebranding themselves as private equity or buy-out firms and abandoning any pretension to venture capital activities. In this limited sense the partners of many private equity fund managers have taken the risks and earned the rewards of any manager in a buy-out.

**Table 1.1: Major UK private equity houses and their predecessor firms**

<table>
<thead>
<tr>
<th>Name of firm</th>
<th>Predecessor firm</th>
<th>Type of predecessor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permira</td>
<td>Schroder Ventures</td>
<td>UK parent captive</td>
</tr>
<tr>
<td>Apax Partners</td>
<td>Alan Patricoff Associates (Europe)</td>
<td>US affiliate independent</td>
</tr>
<tr>
<td>CVC Capital Partners</td>
<td>Citicorp Venture Capital (Europe)</td>
<td>US parent captive</td>
</tr>
<tr>
<td>Cinven</td>
<td>Coalboard Investment Managers Venture Capital</td>
<td>Public sector pension fund manager</td>
</tr>
<tr>
<td>3i Group</td>
<td>Industrial and Commercial Finance Corporation</td>
<td>Bank and public joint venture</td>
</tr>
<tr>
<td>Terra Firma</td>
<td>Nomura Principal Finance Group</td>
<td>Japanese captive</td>
</tr>
<tr>
<td>Charterhouse Capital</td>
<td>Charterhouse Development Capital</td>
<td>UK parent captive</td>
</tr>
<tr>
<td>Candover</td>
<td>Candover Advisers</td>
<td>None</td>
</tr>
</tbody>
</table>

Source: Gilligan and Wright analysis.

**Hands-on investors and sector specialisation:** as competition for transactions increased, the need to generate value in individual investments increased. This led to a variety of strategies aimed at increasing the success rate and the value of each success to funds. Investors generally became much more active in the management of each individual investment. Many investors began to focus on specific industries and sectors to gain an advantage over the generalist investors. Today most firms have a sector bias and an active investment style.

**Globalisation and the growth of global mega-funds:** in the late 1990s and after the turn of the century the market split in two: the largest private equity funds have become increasingly international in their outlook, while in the mid-market the businesses have become more focused on specific sectors or types of business. The trend in globalisation has lead to a growth in the number of non-UK investors based in London seeking UK and European transactions.

**Summary:** the private equity market began as a solution to the venture capital and development capital needs of domestic UK businesses. From 1981 onwards it evolved into a market where buy-outs were increasingly important. The number and size of participants grew rapidly throughout the 1980s. In the early 1990s the market was hit by recession and by high profile failures. This led to a contraction in the banking market and the withdrawal by some equity participants and to a large number of buy-outs by the fund managers themselves. By the end of the 1990s very few captive funds remained. Since the turn of the century the fund sizes have again grown rapidly and become increasingly international.
1.4 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 buy-outs where this disaggregated data is available. We include both the mid-market and the larger buy-out market.

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.

Figure 1.1: European private equity: new fund commitments, new investment

![Figure 1.1: European private equity: new fund commitments, new investment](chart)

Source: EVCA/PwC.

Figure 1.1 includes all private equity and VC funds across Europe. It illustrates both the overall growth in the private equity market and the cyclicality of the market. Following the dotcom boom the level of new funds raised declined. From 2005 onwards fund raisings grew dramatically peaking in 2006.

The UK market is the most mature in Europe. Looking at the mid-larger buy-out data for the UK gives a clearer picture of the cyclicality of the market and the importance of private equity in the overall market for control of corporations.

Figure 1.2: Number and value of UK private equity-backed buy-outs greater than £10m

![Figure 1.2: Number and value of UK private equity-backed buy-outs greater than £10m](chart)

Source: CMBOR/Barclays Private Equity.
As illustrated in Figure 1.2, the market for larger buy-outs is clearly cyclical. The data on number of transactions also shows a cyclical market around a growing trend throughout the period.

2008 saw the greatest fall in the value of the buy-out market yet seen, either in absolute or proportionate terms. This was due to the credit squeeze, as discussed elsewhere in the report, and the associated cessation of the mega-buy-outs. Private equity investment in buy-outs continued to fall in 2009, with first half value at £3.2bn, the lowest half-yearly figure since 1995.

It is possible to separate the buy-out growth from the overall M&A market. Looking at buy-outs as a proportion of total UK takeover activity in Figure 1.3 it is clear that private equity backed buy-outs over £10m account for a substantial share of all takeover transactions by both number and value: 15–20% of all acquisitions (excluding smaller deals) are buy-outs each year in the UK. The data on number of transactions is relatively stable across the past decade, indicating that the number of transactions has risen and fallen approximately proportionately to overall M&A activity.

The data on value shows that the proportion of UK M&A accounted for by the value of buy-outs has been rising for around 10-15 years but is volatile (due to the lumpy nature of large deals). The fall in buy-out activity in 2008 is clearly shown.

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

Source: CMBOR/Barclays Private Equity.
Other than the exceptional impact of the £11bn Alliance-Boots transaction in 2007, the overall average transaction size has remained broadly constant over the past decade.

1.5 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 £100m 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 but large buy-outs are a small fraction of the UK private equity market.

![Figure 1.5: Buy-outs over £100m share of UK market value by value (%)](source: CMBOR/Barclays Private Equity)

![Figure 1.6: Buy-outs over £100m share of UK market by number of transactions (%)](source: CMBOR/Barclays Private Equity)
1.6 What have been the biggest UK deals?

Table 1.2 shows the largest buy-outs in the UK to date.

### Table 1.2: Largest UK buy-outs

<table>
<thead>
<tr>
<th>Buy-out name</th>
<th>Year of acquisition</th>
<th>Value (£m)</th>
<th>Source</th>
<th>Exit</th>
<th>Year of exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alliance Boots</td>
<td>2007</td>
<td>11,100</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>MEPC</td>
<td>2000</td>
<td>3,488</td>
<td>P2P</td>
<td>Trade sale</td>
<td>2003</td>
</tr>
<tr>
<td>Saga &amp; AA</td>
<td>2007 est.</td>
<td>3,350</td>
<td>Secondary buy-out</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>EMI Group</td>
<td>2007</td>
<td>3,223</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>EMI Group</td>
<td>2007</td>
<td>3,223</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Saga &amp; AA</td>
<td>2007</td>
<td>3,350</td>
<td>Secondary buy-out</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>EMI Group</td>
<td>2007</td>
<td>3,223</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>EMI Group</td>
<td>2007</td>
<td>3,223</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Spirit Amber</td>
<td>2003</td>
<td>2,510</td>
<td>UK divestment</td>
<td>Trade sale</td>
<td>2006</td>
</tr>
<tr>
<td>Yell Group</td>
<td>2001</td>
<td>2,140</td>
<td>UK divestment</td>
<td>Flotation</td>
<td>2003</td>
</tr>
<tr>
<td>Unique Pub Company</td>
<td>2002</td>
<td>2,013</td>
<td>Secondary buy-out</td>
<td>Trade sale</td>
<td>2004</td>
</tr>
<tr>
<td>EMAF</td>
<td>2008</td>
<td>2,000</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>The AA</td>
<td>2004</td>
<td>1,900</td>
<td>UK divestment</td>
<td>Trade sale</td>
<td>2007</td>
</tr>
<tr>
<td>Debenhams</td>
<td>2003</td>
<td>1,720</td>
<td>P2P</td>
<td>Flotation</td>
<td>2006</td>
</tr>
<tr>
<td>Laurel Pub Company</td>
<td>2001</td>
<td>1,630</td>
<td>UK divestment</td>
<td>Trade sale</td>
<td>2004</td>
</tr>
<tr>
<td>Warner Chilcott</td>
<td>2005</td>
<td>1,614</td>
<td>P2P</td>
<td>Flotation</td>
<td>2006</td>
</tr>
<tr>
<td>United Biscuits</td>
<td>2006</td>
<td>1,600</td>
<td>Secondary buy-out</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>BUPA Hospitals</td>
<td>2007</td>
<td>1,440</td>
<td>UK divestment</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Avecia</td>
<td>1999</td>
<td>1,362</td>
<td>UK divestment</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>United Biscuits</td>
<td>2000</td>
<td>1,300</td>
<td>P2P</td>
<td>Secondary buy-out</td>
<td>2006</td>
</tr>
<tr>
<td>Brake Bros</td>
<td>2007</td>
<td>1,300</td>
<td>Secondary buy-out</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>NDS Group</td>
<td>2009</td>
<td>1,248</td>
<td>P2P</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Gala Clubs</td>
<td>2003</td>
<td>1,240</td>
<td>Secondary buy-out</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Source: CMBOR/Barclays Private Equity.

Of these deals:
- seven were divestments of divisions of larger corporations;
- ten were public to private transactions (P2P); 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 involved taking a company private, around half involve the acquisition of a division of a corporation and a fifth were 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, at the time of writing, 12 of these have fully exited, three have partially exited and four have floated. None to date has failed, although not all are successes.
1.7 What have been the biggest deals in the world?

Of the largest LBO bids ever made, nearly all took place at the height of the private equity boom that ended around July 2007 (Table 1.3). It is also notable that two of these bids did not complete: concerns were raised about the proposed debt burden in BCE. A third (Clear Channel) was only completed some two years after the initial agreement, following a legal dispute as the private equity backers placed pressure on the lenders to keep to their agreement to provide debt and negotiations to reduce the purchase price in the wake of the credit crisis.

Table 1.3: The world’s largest buy-out bids

<table>
<thead>
<tr>
<th>LBO</th>
<th>Year</th>
<th>Value ($bn)</th>
<th>Private equity backer</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCE Inc</td>
<td>2007 [did not complete]</td>
<td>32.6</td>
<td>Ontario Teachers Pension, Providence, Madison Dearborn</td>
</tr>
<tr>
<td>TXU</td>
<td>2007</td>
<td>31.8</td>
<td>KKR, TPG, GS Capital</td>
</tr>
<tr>
<td>First Data Corp</td>
<td>2007</td>
<td>26.4</td>
<td>KKR</td>
</tr>
<tr>
<td>Alltel Corp</td>
<td>2007</td>
<td>25.7</td>
<td>TPG, GS Capital</td>
</tr>
<tr>
<td>SLM Corp</td>
<td>2007 [did not complete]</td>
<td>25.6</td>
<td>JC Flowers, JP Morgan</td>
</tr>
<tr>
<td>RJR Nabisco</td>
<td>1989</td>
<td>25.1</td>
<td>KKR</td>
</tr>
<tr>
<td>Equity Office</td>
<td>2007</td>
<td>22.9</td>
<td>Blackstone</td>
</tr>
<tr>
<td>HCA Inc</td>
<td>2006</td>
<td>21.0</td>
<td>Bain, KKR, Merrill Lynch</td>
</tr>
<tr>
<td>Alliance Boots</td>
<td>2007</td>
<td>18.4</td>
<td>KKR</td>
</tr>
<tr>
<td>Clear Channel</td>
<td>2008</td>
<td>17.9</td>
<td>Bain, THLee</td>
</tr>
</tbody>
</table>


Note: Clear Channel buy-out was launched in 2006 for $19.4bn but completed in 2008.

1.8 What are the largest private equity funds in the world?

An indication of the largest private equity funds in the world that lead new investments is given in Table 1.4 below.

Table 1.4: Estimate of the world’s 25 largest private equity funds (by capital committed) 2007

<table>
<thead>
<tr>
<th>Name of firm</th>
<th>Country of origin</th>
<th>Offices</th>
<th>Capital raised 2002–2007 ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlyle Group</td>
<td>USA</td>
<td>Global</td>
<td>32.5</td>
</tr>
<tr>
<td>KKR</td>
<td>USA</td>
<td>Global</td>
<td>31.1</td>
</tr>
<tr>
<td>Goldman Sachs Capital Partners</td>
<td>USA</td>
<td>Global</td>
<td>31.0</td>
</tr>
<tr>
<td>Blackstone Group</td>
<td>USA</td>
<td>Global</td>
<td>28.4</td>
</tr>
<tr>
<td>TPG</td>
<td>USA</td>
<td>Global</td>
<td>23.5</td>
</tr>
<tr>
<td>Permira</td>
<td>UK</td>
<td>Global</td>
<td>21.5</td>
</tr>
<tr>
<td>Apax Partners</td>
<td>UK</td>
<td>Global</td>
<td>18.9</td>
</tr>
<tr>
<td>Bain Capital</td>
<td>USA</td>
<td>Global</td>
<td>17.3</td>
</tr>
<tr>
<td>Providence Private Equity</td>
<td>USA</td>
<td>Global</td>
<td>16.4</td>
</tr>
<tr>
<td>CVC Capital Partners</td>
<td>UK</td>
<td>Global</td>
<td>15.7</td>
</tr>
<tr>
<td>Cinven</td>
<td>UK</td>
<td>Europe/Asia</td>
<td>15.1</td>
</tr>
<tr>
<td>3i Group</td>
<td>UK</td>
<td>Global</td>
<td>13.4</td>
</tr>
<tr>
<td>Warburg Pincus</td>
<td>USA</td>
<td>Global</td>
<td>13.3</td>
</tr>
<tr>
<td>Terra Firma</td>
<td>UK</td>
<td>Global</td>
<td>12.9</td>
</tr>
<tr>
<td>Hellman &amp; Friedman</td>
<td>USA</td>
<td>USA/Europe</td>
<td>12.0</td>
</tr>
<tr>
<td>CCMP Capital</td>
<td>USA</td>
<td>Global</td>
<td>11.7</td>
</tr>
<tr>
<td>General Atlantic</td>
<td>USA</td>
<td>Global</td>
<td>11.4</td>
</tr>
<tr>
<td>Silver Lake Partners</td>
<td>USA</td>
<td>Global</td>
<td>11.0</td>
</tr>
<tr>
<td>EQT Partners</td>
<td>Sweden</td>
<td>Global</td>
<td>10.3</td>
</tr>
<tr>
<td>First Reserve Corporation</td>
<td>USA</td>
<td>USA/Europe</td>
<td>10.1</td>
</tr>
<tr>
<td>American Capital</td>
<td>USA</td>
<td>Global</td>
<td>9.6</td>
</tr>
</tbody>
</table>
Table 1.4: continued

<table>
<thead>
<tr>
<th>Name of firm</th>
<th>Country of origin</th>
<th>Offices</th>
<th>Capital raised 2002–2007 ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charterhouse Capital</td>
<td>UK</td>
<td>Europe</td>
<td>9.0</td>
</tr>
<tr>
<td>Candover*</td>
<td>UK</td>
<td>Europe</td>
<td>8.3</td>
</tr>
<tr>
<td>Fortress Investment Group</td>
<td>USA</td>
<td>Global</td>
<td>8.3</td>
</tr>
<tr>
<td>Sun Capital Partners</td>
<td>USA</td>
<td>Global</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* 2009 no longer active in new investments.

Source: Private Equity International 2007 analysed by Gilligan and Wright.

All fund of funds have been omitted from the data above. Eight of the top 25 funds originated from the UK. We note that Candover has suspended new investment activity. Only one of these fund managers is not from the UK or the USA.

The analysis reinforces the dominance of US/UK fund managers and the concentration of European private equity funds originating from the UK.

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

Public company acquisitions by private equity funds (‘public to privates’, or ‘P2Ps’) have attracted much scrutiny and comment. We suggest that there is an over emphasis on P2Ps in the press and academic literature due to a greater availability of data on public companies. 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 1.6 above, around a half of the largest UK buy-outs have been public to private buy-outs. Figure 1.7 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, as illustrated, P2Ps represent a relatively small proportion (by number) of the overall private equity market.

1.10 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 turnaround 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 of a quoted public company to report in a prescribed format on a quarterly basis and whole shareholders who are free to sell their investment at any time in a liquid market.
The private equity investor 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.

There is a debate in academia regarding the durability and sustainability of this form of private equity corporate governance. Some argue that the structure is a superior long-term alternative to the traditional public company model of governance. Others see it as a transitional structure that enables a change in strategic direction prior to a return to the public markets.

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

A number of academic studies have looked at companies pre-buyout and prices paid in P2Ps to attempt to assess the various conjectures about failures in corporate governance.

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.

1.11 To what extent do private equity deals involve buy-outs of distressed firms?

Recessionary periods have traditionally seen a marked increase in buy-outs of firms in receivership, both private equity-backed and non-private equity-backed (see Figure 1.8). These deals often involve the more viable parts of failed groups. There has been an increase in non-private equity-backed buy-outs from receivership in the current recession, primarily a reflection of the introduction of so-called ‘pre-pack’ deals. However, in contrast to previous recessions, lack of bank debt has contributed to only a modest increase in private equity backed buy-outs of firms in receivership.

Evidence from earlier recessions shows that buy-outs from receivership are followed by major restructuring activities to turn around the business, including extensive appointment of new directors, reduced debtor days, reductions in vehicle fleets. Average employment level falls but the majority of deals from this vendor source had not made job losses on buy-out. However, evidence from deals completed in the recession of the early 1990s shows that buy-outs of firms in receivership are more likely to fail again than buy-outs from other vendor sources.
Source: CMBOR/Barclays Private Equity.
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 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 and their respective advisers. 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 vendor and 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 typically represented by independent financial advisers and, in a quoted company buy-out, the independent 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 in 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

Private equity fund

• 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 most 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 exists only to allow its partners to act collectively.

Each partnership:

- has a finite life usually of 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 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 the general partner of 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 an appropriate structure.

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 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 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 those 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. By far the largest investors in private equity are pension funds and insurance funds.

**Sourcing investments:** a private equity fund must source and complete successful transactions to generate profit and support the raising of 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:** private equity fund managers have become 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. This is the basis of the argument that private equity has become an alternative model of corporate governance.
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. This exit horizon is the source of the criticism that private equity is a short-term investment strategy. The academic evidence (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. Indeed the average holding period has been increasing over time.

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

Funds that invest in public companies operate using different business models (Table 2.1). 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** |
| **Control and influence** | |
| Private equity funds usually own a substantial or controlling stake in the business. | Funds investing in quoted companies usually acquire small minority stakes, which offer no control and no special rights. |
| 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. | Institutional shareholders may be influential, but have no contractual control over day-to-day management decisions or strategy. |
| **Financial structure of individual investments** | |
| 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 within a private equity fund’s individual investments. | 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 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. | 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. |
| **Information prior to investment** | |
| 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. |
| **Information and monitoring while invested** | |
| 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. |
| **Liquidity in underlying investments** | |
| 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. |
| **Rewards to fund managers** | |
| 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. |
Table 2.1: continued

<table>
<thead>
<tr>
<th>Private equity funds</th>
<th>Quoted equity funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rewards to the managers of the company acquired/invested in</strong></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Fund structure and fund liquidity**

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. Earnings are distributed not retained. Private equity funds do not have leverage within the fund. 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. 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).

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

<table>
<thead>
<tr>
<th>Private equity funds</th>
<th>Trading groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control and influence</strong></td>
<td></td>
</tr>
<tr>
<td>In principle, similar.</td>
<td></td>
</tr>
<tr>
<td><strong>Financial structure of individual investments</strong></td>
<td></td>
</tr>
<tr>
<td>Borrowings are ring-fenced within each investment without recourse to the private equity fund. Profits and losses in each investment are taxed separately from other investments and therefore interest cannot be offset against profits in other investments.</td>
<td>Any borrowings are often cross-guaranteed by all companies in a trading group. 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.</td>
</tr>
<tr>
<td><strong>Information prior to investment</strong></td>
<td></td>
</tr>
<tr>
<td>In principle similar, but private equity firms, as professional acquirers with less sector knowledge, use more external advisers than a corporate acquirer during due diligence.</td>
<td></td>
</tr>
<tr>
<td><strong>Information and monitoring while invested</strong></td>
<td></td>
</tr>
<tr>
<td>In principle similar, although private equity firms are known for their tight monitoring of cash flow and performance against budget.</td>
<td></td>
</tr>
<tr>
<td><strong>Rewards to the managers of the company acquired/invested in</strong></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>Managers are employees whose rewards are a function of their employment contracts and parent company policy. In a quoted group, managers are likely to own shares possibly through a share option scheme or other share incentive scheme.</td>
</tr>
<tr>
<td><strong>Liquidity in underlying investments</strong></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td><strong>Rewards to fund managers/corporate managers</strong></td>
<td></td>
</tr>
<tr>
<td>Fund managers share in the net performance of the investment portfolio over the life of the fund and are incentivised to realise capital gains.</td>
<td>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.</td>
</tr>
</tbody>
</table>
Table 2.2: continued

<table>
<thead>
<tr>
<th>Fund structure and fund liquidity</th>
<th>Trading groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usually private equity funds have a limited life of 10 years. If they 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. Earnings are distributed not retained. Private equity funds do not have leverage within the fund.</td>
<td>If quoted, the shareholders (and option holders when options are exercised) can sell their shares in 'parcels' in the market. The organisation will fund itself by a mix of debt, equity and retained earnings.</td>
</tr>
</tbody>
</table>

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 of each individual investment, 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.

The differences in the risks of the traditional private equity fund model when compared to a highly geared corporate acquirer were seen in the rapidity of the failure of Baugur. Baugur was an acquisitive Icelandic corporate that acquired a number of UK companies with a particular focus on retailers. Baugur used debt within each of its investments and further debt within its own balance sheet to generate high levels of risk and potential reward. Furthermore it was a major shareholder in a number of its lending banks. Following the collapse of the Icelandic banks, Baugur was declared bankrupt on Friday 13 March 2009. It failed due to the use of excessive levels of debt in each layer of its business creating systemic risk. Private equity structures explicitly eliminate this type of risk.

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 (Table 2.3). 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 become more globally integrated and liquid, the returns earned from pure arbitrage by hedge funds have diminished. These funds therefore have 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

<table>
<thead>
<tr>
<th>Private equity funds</th>
<th>Hedge funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment strategy</strong></td>
<td>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.</td>
</tr>
<tr>
<td>Private equity funds are skilled in using transactions and active management to generate profits outside the quoted markets.</td>
<td></td>
</tr>
<tr>
<td>Control and influence</td>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
**Table 2.3: continued**

<table>
<thead>
<tr>
<th>Private equity funds</th>
<th>Hedge funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial structure of individual investments</strong></td>
<td></td>
</tr>
<tr>
<td>Private equity investments have borrowings within the investee, but generally no borrowings in the private equity fund.</td>
<td>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.</td>
</tr>
</tbody>
</table>

| Information prior to investment | |
| 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 assets, 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. |

| Information and monitoring while invested | |
| 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 assets 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. |

| Liquidity in underlying investments | |
| 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 assets 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. |

| Rewards to fund managers | |
| 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. |

| Fund structure and fund liquidity | |
| 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 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 create a mismatch of assets with liabilities. Since this observation was made in the first edition a large number of hedge funds have indeed failed or been required to restructure due to the liquidity provided to their investors.

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 different types of fund structures. As funds have grown in size, a number of the largest private equity fund managers have diversified into areas that are outside the traditional model of private equity investing. Similarly investors in hedge funds, investment banks and other institutions have moved into private equity investing. Essentially we have seen the emergence of ‘alternative asset’ fund managers and advisers.

Table 2.4: Selected other activities of the world’s largest private equity investors (as at 2008)

<table>
<thead>
<tr>
<th>Name of firm</th>
<th>Country of origin</th>
<th>Venture capital</th>
<th>Property/Infrastructure</th>
<th>Quotes shares</th>
<th>CDOs</th>
<th>Hedge funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlyle Group</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>KKR</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Goldman Sachs Capital Partners</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Blackstone Group</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>TPG</td>
<td>USA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Permira</td>
<td>UK</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Apax Partners</td>
<td>UK</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Bain Capital</td>
<td>USA</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Providence Private Equity</td>
<td>USA</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CVC Capital Partners</td>
<td>UK</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3i Group</td>
<td>UK</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Warburg Pincus</td>
<td>USA</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Terra Firma</td>
<td>UK</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hellman &amp; Friedman</td>
<td>USA</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CCMP Capital</td>
<td>USA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>General Atlantic</td>
<td>USA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Silver Lake Partners</td>
<td>USA</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>EQT Partners</td>
<td>Sweden</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>First Reserve Corporation</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>American Capital</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Charterhouse Capital</td>
<td>UK</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Candover</td>
<td>UK</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Fortress Investment Group</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sun Capital Partners</td>
<td>USA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Gilligan and Wright analysis.

Table 2.4 shows a high-level analysis of the 25 largest private equity funds in the world and their wider portfolio management activities. Very few are involved in the early stage venture capital market. A significant minority (44%) of the managers own hedge fund managers. Over 50% have fund management teams that operated CDOs. Only a very small minority of these largest fund managers are focused purely on private equity investment. Noticeably this focus on pure private equity is seen to a much greater extent in UK-based funds than their US counterparts. This may reflect the relative maturity of the UK versus the US private equity market.

We suggest that an examination of the hedge fund industry would similarly find that the largest hedge funds have started to become active in the private equity market whether as equity investors or as providers of debt and mezzanine to support buy-outs.
It is clear that the boundaries of the various alternative investors are blurring. One possibility is that private equity will respond to this competitive threat by taking on greater risks either in pricing and structuring investments or by changing the underlying long-term commitment model and introducing leverage into the fund structures. If such a trend were to emerge, our conclusion regarding the absence of systematic risk in private equity would need to be reviewed.

2.2.8 Where do private equity fund managers operate?

The US private equity market is substantially the largest in the world. In 2007 US funds raised $302bn in new fund commitments and invested $106bn.

Outside the US, the UK is the largest industry in terms of both investment and funds raised in 2007.
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 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. Both RBS and HBOS have been major lenders to the private equity market. The strategy of these banks going forward will have an impact on the mid-market. 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. There has been increasing national and international pressure to increase the regulation of private equity in eg, the EU, US etc. The impact of this on the London market is as yet unclear.

**Taxation environment:** the objective of any fund manager is to maximise the returns to its 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 from 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 October 2008 EVCA/KPMG report, *Benchmarking European Tax and Legal Environments*, the relative attractiveness of the UK to private equity funds has declined over the past five years. (*For the first time the UK fell out of the top three countries, displaced by a rising Belgium*).

The report argues that the overall European environment for private equity had been improving in the past but that ‘the gap between Europe’s most and least favourable tax and legal environments has widened considerably.’ Figure 2.7 illustrates their assessment of the evolution of the UK’s relative position in recent years.
In summary, the necessary infrastructure and services to support private equity 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 can be an advance on carried interest, not in addition to the share in capital growth.

2.2.11 Management/advisory fee

![Figure 2.7: Evolution of EVCA/KPMG index of British tax and legal environment for private equity 2003–2008*](image)

* The survey was not carried out in 2005 or 2007.

Source: derived from EVCA/KPMG.

![Figure 2.8: Illustrative relationship between fund size and fee income](image)
During the investment phase, the management fee will typically be 1.5%–3% 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 (Figure 2.8).

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.

It has been argued that the growth in fund size has resulted in the creation of a new principal-agent problem within private equity funds. As illustrated, the larger funds generate fees that may result in substantial profits to their partners. These profits accrue whether or not the fund itself is successful. This challenges the central idea of alignment of interest driving value creation as the partners are receiving a risk-free return if they can raise a large fund. The evidence regarding historic sustained out-performance by the best funds has prevented new entrants from competing away the profit from fee income.

As fund performance has been impacted by the economic downturn, the balance of power between LPs and GPs (investors and managers) has begun to alter. There is much discussion within the LP community regarding fee levels. Some argue that publicising fees would result in economic efficiencies.

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.

The origin of the 2/20 (fee/carried interest) fund model has been the source of some academic investigation. It seems to be no more than a ‘sticky’ industry norm. Its resilience is underlined by the fact that it appears to stem from medieval Venetian trading contracts between ship owners and merchants.

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% 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 increase the overall rewards of the private equity fund managers.

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

Moreover, the economic impact of the array of fees charged is unclear. If a Newco borrows to pay fees to its lenders, what profit has been made? The allocation and levying of transaction fees gives rise to further potential principal-agent issues between LPs and GPs.
LPs and management need to be aware of the impact of the proliferation of fees to funders on both returns and, importantly, incentives.

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 on page 45, 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 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 generally 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 1987 in a memorandum agreed between HM Revenue & Customs (HMRC) and the BVCA, and again in 2003. These memoranda were published by HMRC. This treatment is based upon the principle 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, some of the carried interest may be received as dividend, fees and interest 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.

Carried interest is taxed at 18% since 6 April 2008. Since income is taxed (in the upper band) at 40% (50% from April 2010), there is a significant incentive 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. This section illustrates the favourable treatment of generating and realising capital gains in the UK tax environment.

It has been quoted that ‘Private equity investors pay less tax than their cleaners’. This statement is misleading. Anybody who earns capital gains rather than a salary will have a lower tax rate than a basic rate tax payer because the basic rate of taxation is higher than the capital gains tax rate. The absolute amount of tax paid will of course depend on how big the capital gains are. As all private equity partners must also earn an economic salary taxed at the higher rate of 40% as part of the HMRC/BVCA agreement, even those who make no gains pay more than their cleaners.

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

1 http://www.hmrc.gov.uk/shareschemes/bvca_and_fb2003_carried_interest.pdf
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’ 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 (Figure 2.8):

![Figure 2.9: Changing CGT rate of higher rate taxpayers on business assets 1998–2008](image)

Source: Gillian and Wright analysis.

As Figure 2.9 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 he or she lives. The concept broadly encompasses the idea of where an individual is ‘actually from’ and is confusingly different from 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 domicile 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.

### 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.

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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.

New funds often offer investors preferential founder investor rights to invest in subsequent funds. These may also include preferential rights to share in carried interest. These preferential rights fall away if an investor does not support a particular fund raising.

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.

Since the start of the recent credit crunch a number of investors (LPs) have been unable to fund potential future commitments to some private equity funds. This has led to a number of funds having to renegotiate the terms of the investment agreement between the investors and the withdrawal from the new investment market of some private equity funds. When fund managers fail to raise new funds they typically manage their existing investments to maturity, but cease to make new investments. Private equity managers therefore fail by a slow process rather than by an acute liquidity crisis as seen in a traditional trading business or bank.

A number of fund managers have been taken-over or merged when future funding has not been available.

As we have emphasised above, it is important to understand that the failure of a fund does not mean that its investments will also fail unlike in most corporate structures. There is no guarantee from the investments to the fund. There may be adverse impacts due to a lack of follow-on funding for example, but the private equity fund structure acts to contain, not disseminate, risk.

In extremis the investment agreement usually has a ‘divorce clause’ that allows investors to terminate the agreement if (typically) 75% by value of the committed investors agree to do so.

There is virtually no evidence in academic studies regarding the failure rates of private equity fund managers. In order to provide some broad estimate of fund creation and destruction we have looked at the membership numbers of the BVCA (British Private Equity and Venture Capital Association) since it was founded in the mid 1980s (Table 2.5).

Table 2.5: Reconciliation of BVCA membership from 1985–2008

<table>
<thead>
<tr>
<th>Number of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening members in 1985</td>
</tr>
<tr>
<td>New members from 1985 to 2008</td>
</tr>
<tr>
<td>Members ceasing to be a member from 1985 to 2008</td>
</tr>
<tr>
<td>Number of members in 2008</td>
</tr>
</tbody>
</table>

Source: Gilligan & Wright analysis of BVCA data.

Note that the data includes all investors who were full members of the BVCA ie, it includes every type of fund from venture capital to large buy-out funds but excludes banks and advisers.
Figure 2.10 shows the total number of full members of the BVCA. While not all investors have been or are members, most private equity firms are. The two waves of growth in the late 1980s and since the turn of the century can be seen.

When we examine the number of new entrants and memberships of the BVCA that lapse, we see a proxy for the volatility at the margins of the private equity industry.

Figure 2.11 shows a process of creative destruction underlying the total number. There have been significant periods of withdrawal from the trade association alongside significant new entrants. While not all those who exited were failures (some were taken over or merged), a significant number of funds have failed, especially in the early 1990s and following the dotcom bust. This data is consistent with a view that the failure of private equity funds has been happening without any major economic consequence for decades.
2.3 Investors in private equity funds

2.3.1 Who are the investors in private equity funds?

Figure 2.12 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 (Table 2.11). The wider public are therefore indirectly investors in the private equity industry through these international collective investment vehicles.

Elsewhere in this report we summarise the findings on investment performance by private equity funds. We report that research indicates that pre-fees funds on average out-performed the market but that post-fees and carried interest they did not. We are not aware of any research that does a similar analysis of fund of funds.

Table 2.6: Top 20 fund of funds investors in global private equity 2007

<table>
<thead>
<tr>
<th>Name of the firm</th>
<th>Committed to private equity (as at 2007) ($bn)</th>
<th>Headquarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlpInvest Partners</td>
<td>42.3</td>
<td>Netherlands</td>
</tr>
<tr>
<td>AXA Private Equity</td>
<td>34.9</td>
<td>France</td>
</tr>
<tr>
<td>AIG Investments</td>
<td>24.6</td>
<td>USA</td>
</tr>
<tr>
<td>Goldman Sachs Private Equity Group</td>
<td>24.0</td>
<td>USA</td>
</tr>
<tr>
<td>Pantheon Ventures</td>
<td>22.6</td>
<td>UK</td>
</tr>
<tr>
<td>Pathway Capital Management</td>
<td>20.6</td>
<td>USA</td>
</tr>
<tr>
<td>Capital Dynamics</td>
<td>20.0</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Partners Group</td>
<td>19.6</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Lehman Brothers*</td>
<td>19.0</td>
<td>USA</td>
</tr>
<tr>
<td>HarbourVest Partners</td>
<td>17.8</td>
<td>USA</td>
</tr>
<tr>
<td>PCG Asset Management</td>
<td>15.0</td>
<td>USA</td>
</tr>
<tr>
<td>Credit Suisse Customized Fund Investment Group</td>
<td>14.0</td>
<td>USA</td>
</tr>
<tr>
<td>Adams Street Partners</td>
<td>12.0</td>
<td>USA</td>
</tr>
<tr>
<td>Horizon21 Alternative Investments</td>
<td>11.5</td>
<td>Switzerland</td>
</tr>
<tr>
<td>LGT Capital Partners</td>
<td>10.9</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Standard Life Investments</td>
<td>9.3</td>
<td>UK</td>
</tr>
</tbody>
</table>

* Now NB Private Equity Partners.

Source: Preqin (formerly known as Private Equity Intelligence).
46 Who are the participants in a private equity transaction?

Who are the participants in a private equity transaction?

Source: EVCA/Thompson Financial/PWC.

Figure 2.13 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. Accurate data on the identity of the sources of funds used by private equity investors is not publicly available. As a consequence of this lack of clarity about sources of funds, it is neither possible to assess the risks of concentration of funders within a fund, nor to assess the risk of the failure of any LP to be able to fund its commitments going forward.

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 these may be at a premium or discount 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.
As the organisations have grown and as their investment portfolios have become larger and more valuable, there has been a growth in gearing within certain 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 2.7 shows the pooled returns in 94 mid-large European buy-out funds from survey data provided by the BVCA. Later in 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 2.7: Pooled returns in larger buy-outs 1996–2003

<table>
<thead>
<tr>
<th>Year fund raised</th>
<th>No of funds</th>
<th>IRR (%)</th>
<th>Distributed value %</th>
<th>Unrealised value %</th>
<th>Total value %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>11</td>
<td>17.8</td>
<td>186</td>
<td>1</td>
<td>187</td>
</tr>
<tr>
<td>1997</td>
<td>12</td>
<td>15.4</td>
<td>169</td>
<td>8</td>
<td>177</td>
</tr>
<tr>
<td>1998</td>
<td>12</td>
<td>12.8</td>
<td>168</td>
<td>3</td>
<td>171</td>
</tr>
<tr>
<td>1999</td>
<td>15</td>
<td>17.4</td>
<td>119</td>
<td>87</td>
<td>206</td>
</tr>
<tr>
<td>2000</td>
<td>12</td>
<td>22.8</td>
<td>153</td>
<td>49</td>
<td>202</td>
</tr>
<tr>
<td>2001</td>
<td>16</td>
<td>30.6</td>
<td>146</td>
<td>55</td>
<td>201</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td>36.3</td>
<td>144</td>
<td>48</td>
<td>192</td>
</tr>
<tr>
<td>2003</td>
<td>10</td>
<td>35.4</td>
<td>75</td>
<td>100</td>
<td>175</td>
</tr>
</tbody>
</table>

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 International Valuations Private Equity Board, 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 2.14 below.

Figure 2.14: Return to mid-large buy-outs: distributed versus unrealised value
The returns to investors in 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 Why do private equity funds value unrealised investments?

Since private equity funds own assets that are not quoted, there is no market price with which to value investments. This creates both accounting and wider commercial issues that are relevant to the debate on disclosure by private equity fund managers. As a number of commentators have remarked, the only value that ultimately matters to a limited partner (or the fund manager) is the difference between the total cash invested in the fund and the total received back once the fund has closed, and so the theoretical value attributed to an investment prior to its ultimate exit may be considered to be of limited practical use.

However, since funds are 10-year commitments with a five-year investment horizon, new funds are always being raised before existing funds are fully realised. Therefore the valuation of recent unrealised investments is a material piece of information to both the fund manager and potential investors in any fund being raised, and it is common practice for managers to carry out quarterly valuations as part of the reporting process to investors.

This ongoing valuation is particularly important in private equity due to the challenge to the historical finding that the best funds have systematically outperformed the market. The first sign of a breakdown in this finding will be seen in portfolio valuation falls.

2.3.5 How do private equity funds value unrealised investments?

Figure 2.15: Valuation decision tree

Detailed guidelines intended to represent current best practice on the valuation of private equity investments are published in ‘International Private Equity and Venture Capital Valuation Guidelines’ (the Guidelines). In summary the Guidelines identify six different ‘most widely used’ methods available to value an investment. Within each method there are a number of variables that require a decision on the part of the valuer.

48 Who are the participants in a private equity transaction?
1. **Price of a recent investment**: when a recent investment has been made in a company, the implied market value of the company in that investment round may be used to value any instrument. In first investments, this means that they are valued at cost. In further investments (for example a development capital or a rescue) the total investment (including any earlier rounds) might be valued at the price of the latest investment.

2. **Earning multiple valuations**: these are commonly used for profitable investments. There is an array of alternative methods including:
   - PE ratios: Equity value/profit after tax.
   - EBIT multiples: Enterprise value/earning before interest and tax.
   - EBITDA multiples: Enterprise value/earning before interest, tax, depreciation and amortisation.

   Each calculation can be performed using historical, current or projected data.

   It is usual to use comparable ratios derived from the quoted markets and/or relevant recent transactions. Having decided which of the potential comparable market ratios to use, it is normal to apply a discount to the quoted market ratio to reflect both the prudence principle in accounting and a liquidity discount. This discount may be reduced if a fund manager believes a sale or flotation to be imminent.

3. **Net asset valuation (NAV)**: where a business is not profitable or carries out an activity that is essentially involved with purchase and management of assets (such as a property investment company) they may be valued by reference to their net tangible assets. Goodwill created by the acquisition should normally be excluded along with certain other intangible assets. As in an earnings valuation based on market comparators, a discount is typically applied to the tangible asset valuation.

4. **Discounted cash flows (DCF) in the company**: economic theory tells us that the present value of any asset is the value of its future cash flows discounted to reflect the time until the cash is received and the risk that the cash flow will vary. DCF, therefore, have the strongest theoretical underpinning. However, in practical use they are extremely sensitive to the assumptions made regarding discount rates and timing of cash receipts. Furthermore, there is a requirement to estimate the value of the business at the end of the discrete period for which cash-flow estimates are available. This is itself a valuation estimate.

5. **Discounted cash flows from the investment**: where an investment generates most or all of its returns from reasonably predictable cash payments and relatively little (or none) of its return from a terminal payment on sale, DCF may be an appropriate valuation method. Loan stock, mezzanine and preference share investments are more suitable to this approach than most equity instruments.

6. **Industry benchmarks**: some industries have commonly quoted metrics that are not based on cash generation or profitability. Multiples of sales are often quoted for companies that are either loss making or where profits are not disclosed. Similarly the growth of new subscriber businesses was characterised by the use of ‘value per subscriber’. All of these methods are proxies for the future cash generation that will accrue from the business. In general the further the valuation metric moves away from being based upon future cash generation, the greater the likelihood that it will be proved to be inaccurate.

   Where the selected methodology results in an estimate of the enterprise value (EV) of the underlying business (for example EBIT/EBITDA multiples or DCF), the EV is apportioned between the holders of debt and equity instruments in accordance with the respective claims of those instrument holders (having due regard to the impact of any ratchet arrangements and/or outstanding options) assuming a sale of the business at its estimated EV.
2.3.6 Understanding private equity portfolio valuation movements

When looking at the movement in the valuation of any private equity portfolio, there are three classes of variable that contribute to the change in the portfolio value:

Changes in valuation method + Changes in company performance + Change in external market comparators.

The first element is almost always relevant to funds in their early stages. All first investments in any fund are normally initially valued at cost. Once the first audited accounts after the investment are received, the fund manager will generally revalue based on the investment performance. Note that the audited accounts relate to the prior period and may therefore have a limited relevance to current trading. This creates significant timing lags if only audited accounts are used. If unaudited management accounts are used to adjust for this timing lag, a lack of external verification of the data used to underpin valuations arises.

The basis of valuation therefore fundamentally changes from one based on the actual price paid to some proxy for an external market value.

Many private equity investments are based on an investment thesis that a business requires restructuring or realignment: ‘one step backwards to take two steps forwards’. In such cases the actual performance of the business, and its lagged valuation, may fall before the benefits of any repositioning emerge.

Furthermore, the significant costs and transaction taxes paid in completing a deal must be recovered before any value accrues to the equity holders. Other things being equal, it might therefore be expected that the value of an investment would fall after completion (by at least the amount of the costs) before recovering as a result of the planned restructuring or realignment.

This timing effect is compounded by the widespread belief that ‘Lemons ripen faster than plums’: failures (lemons) emerge quickly whereas successes (plums) take longer to fully emerge.

2.3.7 Valuation of limited partner holdings: the J curve

In addition to the change in the valuation of the portfolio of investments, the value of a limited partner’s holding will be further impacted by the timing differences between fees paid to the manager and any value growth, realisations and yield from the investment portfolio. As noted above, management fees are higher during the investment phase of any fund and generally decline when the fund closes to new investments and is concentrated on realising the investments made. Therefore, with investments valued at cost, the investors will generally see a decline in the return of their investment due to fees in the early years of any particular fund.

When accounting for the total return from an investment portfolio the effects of all revenues including fees, valuation movements and realisations are brought together and the movement in the portfolio at value calculated.

Total return = Revenue profit/(loss) + Realised profit/(loss) over valuation + Valuation increase/(decrease).

The cash flows of the fund are obviously initially negative as investments are made and will become positive once the investments generate yield and are realised. This, coupled with the fees noted above results in the cash flow profile known as the J curve, as illustrated below (Figure 2.16). The difference between the total return and the cumulative cash flow will, in all probability, be further exaggerated as the total return statement should include a discount for non-marketability, whereas the realised cash flows include the actual realised value of the investments, which, other things being equal, should be higher. By the close of the fund the cumulative cash flows equal the cumulative total return.
Various measures are applied to monitor and adjust for the timing differences between total return and receipt of cash flows. One of the simplest trend measures is the value per £1.00 invested both at valuation and including realisations as illustrated in Figure 2.17. This measure captures the trends in value appreciation in the portfolio as it matures.

* In the example above all investments are realised smoothly at 2 x cost four years after investment. The J curve effect is the cumulative cash flow line. The effect of valuation on total returns is also illustrated using the assumption that initial valuation is at cost and thereafter value accrues equally to each investment in years two, three and four. The post-fee portfolio IRR is 22.2%.
2.3.8 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 2008, covering periods up to 31 December 2007 and are summarised in Figure 2.18 and Figure 2.19. 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 2.18: Distribution of returns to mid-large buy-out funds: total value per £ invested](image)

Source: BVCA/Pwc.

![Figure 2.19: Distribution of returns to mid-large buy-out funds: cash distributed per £ invested](image)

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 had 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 has 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.


- 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 the BVCA 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% pa 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. It is an outstanding question as to whether this finding endures.

2.3.9 How can individual investors invest in private equity funds?

There are retail funds and venture capital trusts 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 (e.g., 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 debt in buy-outs 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. During the most recent buy-out boom in the period, larger loan facilities frequently had many different ‘layers’, some of which were structured to be sold through global capital markets via a CDO as described below.

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

2.4.2 What is leveraged lending?

As with many loosely defined financial terms, there is no hard and fast definition of what is and is not leveraged lending. In one sense all lending is leveraged as the use of any debt magnifies the returns (both positive and negative) when compared to financing with only permanent equity.

However the industry generally defines leveraged lending with reference to either the post transaction debt: total assets ratio (the ‘gearing ratio’ in the UK, the ‘leverage ratio’ elsewhere), or the ratio of EBITDA: total debt (the EBITDA multiple).

Where total debt is over 50% of total assets or borrowings exceed around 3 x EBITDA, most banks would define and manage the relationship as a leveraged finance loan. Other definitions might include the credit rating of a traded bond or the margin on a particular loan. Whichever definition is used, the term attempts to capture the fact that a leveraged loan is deliberately structured with higher risks and rewards than a ‘non-leveraged loan’. This contrasts with distressed loans that are loans that become higher risk rather than being structured as such.

2.4.3 How did the banking market change?

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 the past decade banks changed and began to act as arrangers of loans rather than primarily as lenders. The proportion of loans held by the arranging or ‘lead’ bank after a transaction fell throughout the late 2000s. 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) such as CDOs.

To achieve a wide syndication a loan must either be actively sold to the market by a syndication team within a bank or alternatively sold to the public markets as a rated bond issue. In the former process the bank gives a limited number of banks access to its due diligence. The appraisals it has carried out are made available usually including the opportunity to meet the management of the company prior to investing in the loan issue.

In the latter process a credit rating agency will be retained by the lead issuer and will undertake its own credit assessment and grade the loan according to market norms. The arrangement between the rating agency and the issuer has come under some scrutiny. The rating agency’s fees are paid by the sponsor of the bond being issued. They are therefore incentivised to give a rating that is consistent with the issuer’s own assessment, or better. The constraint on this favourable incentive was argued to be reputational risk: rating agencies would not favourably rate due to the perceived risk to their reputation. This argument now looks hollow. Rating agencies are indemnified against the risk of errors arising from poor or inaccurate data by the sponsors.
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. In the first edition of this report we noted that 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. Since we wrote that edition, it has become apparent that the conflicts we alluded to within the arranger model led to systematic risk in the banking market that manifest itself in the credit crunch.

Bank covenants: if a business with borrowings does not perform to plan, a series of monitoring tools 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 sections 3 and 4.

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 (‘equity cure’), the loans are known as covenant light or ‘cov-lite’ loans. Post-credit crunch, cov-lite has disappeared from the banking market. However, there are a significant volume of cov-lite loans in existence and they therefore continue to change the risk allocation in favour of the borrowers and against the lenders.

2.4.4 Why did the banking market change?

Syndication has advantages to both the arrangers of the syndication and the participants in the syndication. For the arrangers a new business model began to emerge that generated higher returns on assets than had been achievable in the traditional banking model. Lead arrangers not only generated lucrative fees from arranging the loans and underwriting the facilities prior to syndication, they were also able to force cross-selling of other banking services to the borrowers. It is often a condition of a loan arrangement that certain other banking services are taken with the arranger – hedging, insurance or other lucrative broad advisory services. Conversely, the largest corporate borrowers often force banks to participate in their bond issues if they wish to provide other banking services. It is noticeable, for example, that the largest private equity funds often have limited partners whose core business includes being participants in the leveraged finance market. Such mutuality of interest and influence is of no great surprise.

In buy-outs, by taking the underwriting risk on the whole debt package, lead banks are able to capture both the underwriting profit and a significant portion of the overall banking business of the buy-out group. This further enhances the returns generated by banks minimising the amount of capital tied into any particular loan package post-syndication.

The syndication model therefore allowed banks with origination teams to increase their ability to sell a broad range of services whilst reducing the amount of capital permanently tied up in the provision of any particular facility.

For syndicate members the process also has advantages. Firstly it allows smaller financial institutions whose balance sheets are too small to allow them to participate in lending to the largest borrowers to gain access to this market. Secondly it allows institutions to diversify their portfolio to include markets within which they have no origination teams. This was a particularly important incentive when global yields on bonds were low and therefore investors generally, including banks, were seeking to achieve higher yields.

The market therefore allowed institutions of all sizes to gain exposure to a wide array of risks.

2.4.5 What are the risks of leveraged lending?

There are generally six recognised risks in leveraged (or indeed any other) lending:

1. Credit risk arises in any loan and represents the risk to capital and income of the lender due to the risk of the borrower's inability to pay. This includes the underwriter's risk prior to the syndication.

2. Liquidity risk arises when a bank mismatches the term of its assets and liabilities. Where it has short-term borrowings supporting long-term loans a liquidity crisis can cause a bank to collapse.
3. Price risk arises in underwritten syndications because the terms to the borrower are agreed prior to syndication. Where the market assesses the risks to be different to the underwritten assessment of the lead bank, the price paid for any particular bond may fall and the underwriter will incur a loss.

4. Reputational risks are the effect of adverse public perception on the prospects of an institution. In leveraged finance this includes the particular reputational damage that can occur when complex structures are put in place that are perceived to be designed to avoid moral obligations, such as the creation of offshore special purpose vehicles that are characterised (often inaccurately) as tax avoidance schemes.

5. Strategic risks include an organisation’s ability to manage its exposure to the particular market and the changes within the market that it operates. This might include, for example, having an organisation structure that effectively monitors and reports on a loan portfolio to enable decisions to be made in a timely and informed manner.

6. Compliance risks arise when new and innovative financial products are developed that have not previously been specifically considered by the regulator of a market. The issuer of any syndication will take responsibility for the legality of the transactions that are being completed. They have a risk that any syndicate participant will pursue them for damages in the event that an arrangement is misrepresented or is illegal.

In the credit crunch many institutions experienced a variety of these risks.

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

Figure 2.20: Schematic of a CDO/CLO/SIV

While not the only new participant 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 loan obligations, thereby increasing capital efficiency and returns on capital, but grew in significance dramatically in the last few years.

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.
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 were 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.

2.4.7 What went wrong?

Syndication: the broad syndication of loans throughout the financial market has had two major consequences. First, the total risk is disseminated across many institutions, reducing the impact of any one corporate default or failure. Second, it has become increasingly difficult for observers of the markets to establish where the risks are actually held within the financial system. Figure 2.20 below simplifies the flows to illustrate how risk is disseminated from the original lenders to a wide variety of institutions and how that risk can flow back to the originating banks.

It shows that a risk that is securitised through a CDO or a SIV enters the global bond market ‘wrapped’ in a credit rating issued by a rating agency. Where the issuer is a CDO or a SIV, the bond will be a synthetic amalgam of various loans held within the issuer’s portfolio.

Figure 2.21: Flow of risks from original lenders through securitisation to bond markets
During the period prior to the credit crunch, it was argued that this dispersal of risk through the enlarged global financial system reduced systemic risk. We now know this to be incorrect. The lack of transparency created by the process of securitisation created a market in which a sharp fall in confidence resulted in a dramatic reduction in liquidity in the wholesale banking market.

This happened because institutions were unable to confidently price the synthetic products created by the securitisation process. When the pricing mechanism fails, free markets fail to clear. This in turn created short-term funding crises in the banks and other financial institutions that were reliant on wholesale funding for their day-to-day operations. In essence, the greater the reliance on wholesale funds, the greater the bankruptcy risk caused by the market failure attributable to the lack of accurate information.

Many leveraged loans took advantage of the growth in the number of participants in the bond market that had grown largely on the back of the US housing market. As the sub-prime market grew there was increased liquidity at its margins that the arrangers of leveraged loans took advantage of. They used the same process as was employed in the mortgage market to distribute loans widely. Lead banks increasingly used rating agencies to issue traded bonds either directly in the largest buy-outs or in the upper-mid market by a process of securitisation undertaken within CDOs and similar special purpose vehicles (SPVs).

Key to the ability to achieve this dispersement of risk is the rating agencies’ ability to accurately rate the commercial paper issued so that the market prices it appropriately. This ability appears to have been seriously compromised.

2.4.8 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 €58bn 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.5

Banks’ exposures are also increasingly complex with enhanced use of mezzanine, bridge and payment-in-kind (PIK) 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.

2.5 Advisers and other service providers

2.5.1 Who are the advisers and service providers in the private equity market?

Private equity funds outsource many functions. Unlike larger banks, few private equity funds have in-house accountants and lawyers, and most outsource as much as possible. These outsourced service and advisory relationships fall into three broad categories:

Outsourced services

These are providers to the fund management business providing day-to-day support to management and reporting of the funds business. They are in principle no different to any other business.

Transactions advisers

Transaction advisers generally include investment bankers, accountants and lawyers.

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5 FSA 2006 DP06/6, Private equity: a discussion of risk and regulatory engagement.
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 (i.e., syndication) when advising the private equity funds. Thus in Figure 2.22 an investment bank may be providing advisory services to the Newco and private equity fund at the same time as underwriting the banking and arranging the syndication of the transaction debt. This creates a complex series of incentives: The corporate finance and syndication fees are, on the whole, payable only if a transaction completes. However, if a transaction that is not attractive to the market is arranged, the underwriting arm of the bank will be left holding the majority of the transaction debt. The incentives are therefore to maximise the transaction flow subject to the limitation of the appetite of the syndication market for debt. The bubble of the late 2000s in the secondary banking market released the normal action of this constraint and allowed the almost unrestrained growth in the size and scale of buy-outs prior to the credit crunch.

Furthermore the lucrative fees for advising and arranging the subsequent sale or flotation of the business will depend to some degree on the reputation for quality that an organisation or individual builds up.

**Accountants:** provide due diligence and taxation advice on transactions. The corporate finance advisory businesses of the accountants also provide similar advisory services to those of the investment banks in the mid-market. The accountancy firms argue that they provide advice that is independent of the distribution capacity that is provided by the investment banks. However, the accountancy firms sometimes provide both advisory and due diligence services to the same transaction. Where this is the case the relative size of the fees for these services needs to be considered to avoid the perception or actuality of a conflict of interest.

Many larger private equity funds have sought to maximise the incentive of their due diligence advisers to be objective by forging long-term relationships with one or two providers. In these arrangements it is argued that the volume of transactions that any active private equity fund pursues will compensate the due diligence providers for the losses associated with those that do not complete successfully.

On-going audit and tax advice may also be provided to individual investee companies, the funds and the partners of the funds (subject to independence regulations). Some of the large accountancy firms also operate fund placement businesses that assist in raising private equity funds.

**Lawyers:** providers of legal and tax advice on transactions and fund raising and structures. Each party to each contract in a transaction will generally have a legal adviser.
Fund raising advisers

Placement agents are used by many funds. These are specialist advisers who provide assistance in raising funds and provide advice and access to potential investors in private equity funds globally. As the market for private equity has matured, the role of placing agents has migrated from being one that primarily consisted of broking investments by potential limited partners, to both broking and project managing the process of fund raising.

Potential investors are naturally keen to have comprehensive information on the track record of general partners and to have access to the key people behind whom they are potentially investing. These key individuals also have to manage the portfolio and new business activities of their funds. As funds have grown in size a fund raising specialism has emerged both within the funds themselves and outside the funds to efficiently manage the time-consuming process of fund raising.

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. Recent US plant level data show that employment grows more slowly in private equity cases pre-buy-out and declines more rapidly post buy-out but in the fourth or fifth year employment mirrors that in non-buy-out control group firms. Existing buy-out plants create similar amounts of jobs to control group forms while greenfield buy-out plants create more jobs. Early firm level UK evidence relating to the 1980s suggested that job losses occurred most substantially at the time of the change in ownership and then began to rise. 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 recent data also indicates that employment in MBOs dips initially after the buy-out but then increases, 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 optimally 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. Recent US evidence suggests that private equity accelerates both job destruction and job creation resulting in productivity gains.

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. Recent pan-European evidence from managers finds that private equity investment results in negligible changes to union recognition, membership density and attitudes to trade union membership. Managers in firms recognising unions after private equity buy-outs do not report reductions in the terms and conditions subject to joint regulation. Under private equity ownership more firms report consultative committees, managers regard these as more influential on their decisions, and indicate increased consultation over firm performance and future plans. Comparing industrial relations changes in different social models in Europe, the recent evidence suggests private equity firms adapt to national systems and traditional national industrial relations differences persist after buy-out.

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 three separate items: reduced corporation tax in the borrower company due to interest deductibility, increased corporation tax payable by lenders who receive interest income and increased corporation tax due to improved performance (Figure 2.23). Furthermore, in order to trace fully the tax impacts of a leveraged structure, it is necessary to trace the complex recipients of 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 2.23: 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?
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. Others report a small average loss of market value however those original bonds with protective covenants showed a positive effect.

Findings 2.6: What are the effects of private equity on taxation?
The academic evidence

As buy-outs typically substitute debt for equity they tend to reduce corporate tax liabilities of the investee company but this tax saving generally accounts for only a small fraction of the value gain in buy-outs (Appendix Table 4). Recent UK evidence indicates no significant relationship between pre-P2P tax to sales ratios and shareholder wealth gains (premia) on announcement of P2P but bidders appear willing to pay higher premia for firms with lower debt-to-equity ratios which proxies for the tax advantage of additional interest deductibility and for the ease of financing the takeover operation. Post-P2P, tax paid is significantly below the industry average in each year post going private but is not statistically different in the year prior to going private. However, lower tax may be a function of the lower profitability reported post-P2P rather than from the tax shield element of going private.

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 2.24, as investment values have increased, so the value of exits rose until the dislocation of 2007 impacted. The commonest exit is a trade sale to a third party.
Great care is needed in analysing the data above, but it is clear that new routes to exit emerged over the past decade:

- secondary buy-out/sale to another private equity fund;
- leveraged recapitalisation/repayment of loans and preference shares; 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 crystalise increases in value; some investments are written off.

Figure 2.25 shows the value of amounts written off by private equity investors between 1997 and 2008 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. The difficulties that began in 2007 are clearly shown by the rise in the value of write offs of investments which were at an absolute high in 2008, albeit at a lower proportion of total return than in 2001/2002.

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

Figure 2.26 shows the UK exit numbers by type of exit.
As shown in Figure 2.26 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, from 2001–2007, 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

![Figure 2.27: Secondary buy-outs by number and value](image)

Source: CMBOR/Barclays Private Equity.

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. From 2001–2007 it was common, accounting for about a third of larger buy-out exits (Figure 2.27). 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 anomaly 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%.

There is little academic research regarding the effect of recaps on investment performance. Recaps arise for one of, or a combination of, three reasons:

1. re-borrowing debt that has previously been repaid;
2. increasing the amount of debt because the performance of the business has improved; and
3. increasing the amount of debt because the banks are prepared to lend more debt at the same performance level.

During the credit boom the appetite of banks to lend was exceptionally high. This resulted in a sharp increase in leveraged recaps.

To the extent that a business is able to replace more expensive capital with less expensive senior debt these transactions can be seen as enhancing efficiency. The corollary is that financial risk increases with the level of senior debt.

The impact on a fund’s performance is to accelerate cash returned from any investment, thus increasing the IRR of the fund. However, this increase comes at the cost of reinstating financial risk in the portfolio.

The maximum amount that can be repaid without a profit being created will generally be the amount of the investment at cost (plus any PIK interest – see section 4). To the extent that there is greater borrowing capacity typically a dividend will be paid equal to the excess of borrowings and the cost of the investment. This raises complex tax issues as the dividend will be received as income, not capital gain.

There is therefore a series of trade-offs to be calculated: how much borrowing is it prudent to have? What is the impact on fund returns and risks? What is the tax implication of receiving dividends rather than capital gains? Finally management’s position requires consideration. To the extent that they receive no benefit from a recap, management’s risk is increased with no reward. This needs careful and considered negotiation before any deal is structured.

Findings 2.7: 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 2.28). The most common timing of exit for those deals that have exited since 2000 is in the range of four to five years.
Findings 2.8: 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 £4.3bn 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 £7.5bn compared to a total buy-out value of over £26bn.

Findings 2.9: 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 underpriced 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.
2.9 How did the private equity industry respond to the public interest shown in it?

In 2007, at the request of the BVCA, a committee was established to review disclosure by private equity firms and companies controlled by private equity firms. The Walker Guidelines were published in 2007 and the Guidelines Monitoring Group was established to report annually on compliance with the guidelines.

2.9.1 What are the Walker Guidelines?

The intention of the guidelines is to bring greater transparency to the private equity industry’s largest investments and investors.

The guidelines are a voluntary code of practice. They prescribe principles and practices that are intended to increase transparency and openness in the private equity (and so-called ‘private equity-like’) industry. They are designed to apply only to the largest investments and firms involved in making and controlling these larger investments.

They are monitored by the Guidelines Monitoring Group consisting of a chairman, two independent representatives from industry and/or the trade unions and two representatives from the private equity industry. The Group is currently assisted by PricewaterhouseCoopers who perform an independent compliance check.

2.9.2 Which companies do they apply to?

Since 2009, portfolio investee companies that had an enterprise value of £500m at acquisition (or £300m in the case of companies that were quoted prior to acquisition) and have 50% or more of their business in the UK have been covered by the guidelines. They also apply to companies employing over 1,000 people in the UK.

Any private equity firm that has invested in a business covered by the guidelines is then required to make disclosures about itself. A private equity firm that does not have relevant investments is not covered by the guidelines.

2.9.3 How many companies and investors are covered by the guidelines?

Table 2.8: Investee company compliance to the Walker Guidelines

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required to conform</td>
<td>27</td>
<td>45</td>
</tr>
<tr>
<td>Companies voluntarily conforming</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Total number of investee companies covered by the code</td>
<td>54</td>
<td>60</td>
</tr>
</tbody>
</table>

This represents a relatively small proportion, by number, of the total population of companies that have been invested in by the private equity industry. According to the BVCA and Ernst & Young (BVCA Annual Report on the Performance of Companies 2009), the original cost of the investments was £82bn, funded by £26bn equity and £56bn of debt. The oldest investment is six years old although most are between two and four years old. This amount represents a significant proportion of the total amount invested by private equity firms in the UK between 2004 and 2008. We estimate it is perhaps as much as 70% of the total amount invested over the period and accounts for around 20–30% of the total amount of capital committed (but not necessarily invested) by limited partners in the UK over the past five years.

Table 2.9: Private equity firm compliance with the Walker Guidelines

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVCA members</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Private equity firms that are not BVCA members</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Private equity-like firm</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total number of investee companies covered by the code</td>
<td>32</td>
<td>34</td>
</tr>
</tbody>
</table>

The BVCA represents some 230 private equity and venture capital and venture capital firms. Excluding pure venture capital firms, we estimate that around 20–25% of private equity firms active in the UK are required to be in compliance with the Walker Guidelines. Many others voluntarily follow the guidelines on disclosure but are not required to adhere to them or to be reported on by the Guidelines Monitoring Group.
2.9.4 What do portfolio companies have to do to comply with the guidelines?

The guidelines broadly require that companies provide the same kind of information to the public that would be provided if the companies were publicly traded, covering ownership, board composition and key executives and a business review of the same type as publicly traded companies. All this information should be published within six months of the year end and be prepared having regard to the economic substance of the company rather than the form of the guidelines. Therefore, essentially the companies’ annual reports are very similar to those of any quoted company in the UK and none of the requirements exceed the disclosure required by a quoted company.

In addition to this data, that is made publicly available, the companies voluntarily provide detailed financial and trading information to the BVCA to form the basis of an annual review of private equity performance (currently undertaken by Ernst & Young as noted above).

2.9.5 What do private equity investors have to do to comply with the guidelines?

There are two separate audiences for specific information on the private equity funds themselves under the guidelines being the fund’s own investors and the wider public.

With respect to communication with investors, the guidelines simply reinforce existing practice in reporting to investors and reiterate that valuations should follow existing international guidelines as set out in section 2.3. This reflects the argument that current communication practices have generally been seen to be satisfactory by both limited partners and general partners.

The new element has been the requirement to communicate more broadly with any and all interested parties. The information required is included in an annual review published on the private equity fund’s website. It is not required to (and generally does not) contain accounting or investment performance data. It seeks to identify who the individuals are within the private equity fund and what investments they hold. Limited information on intended investment duration and limited partner type (but not identity) is also given. Case studies are suggested as a means to illustrate their activities.

Further data provision to the BVCA for their annual report is also required that does include high-level financial data including the amount of capital raised, number and value of investments made and fees paid to advisers.

Data that analyses the source of investment performance in exited investments is also sought to enable the annual review to be completed.

2.9.6 If they are voluntary, do firms comply?

In the first report by the Guidelines Monitoring Group compliance by private equity funds was not complete.

For the purposes of the second report in 2009, PwC sampled 32 companies out of the total population of 60 companies. The results of this sample showed that while compliance improved, it continued to ‘vary significantly within the sample’ in 2009. However, based on their analysis, PwC concluded that ‘all 32 portfolio companies reviewed by the group this year have met the guidelines’
3. EVALUATING, STRUCTURING AND RESTRUCTURING 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 general 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 (P/E ratios) measure the equity value divided by post-tax profits (note that as published, P/E 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 earnings (profit) before interest and tax (EBIT) or earnings (profit) before interest, tax, depreciation and amortisation (EBITDA) and reflects the estimate of the value of the business regardless of how it is financed.

- **Asset value** the net book value of a business’ assets represents the value at which they are carried in a company’s books less any debt. It rarely has relevance to the calculation of the enterprise value which is primarily based upon an estimate of future earnings.

**Figure 3.1: Enterprise value, enterprise value and asset value**

The calculations are illustrated in Table 3.1 below.

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

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

72 Evaluating, structuring and restructuring a private equity investment
Table 3.1: continued

<table>
<thead>
<tr>
<th>Profit and loss account</th>
<th>£m</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA</td>
<td>25</td>
<td>Earnings (profit) before interest, tax, depreciation and amortisation</td>
</tr>
<tr>
<td>Depreciation &amp; amortisation</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>EBIT</td>
<td>20</td>
<td>Earnings (profit) before interest and taxation</td>
</tr>
<tr>
<td>Interest</td>
<td>(10)</td>
<td></td>
</tr>
<tr>
<td>NPBT</td>
<td>10</td>
<td>Net profit before tax</td>
</tr>
<tr>
<td>Tax</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>PAT</td>
<td>7</td>
<td>Profit after tax</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pricing statistics</th>
<th>£m</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE ratio</td>
<td>14.29</td>
<td>Equity value/profit after tax</td>
</tr>
<tr>
<td>EV/EBIT</td>
<td>10.00</td>
<td>Enterprise value/EBIT</td>
</tr>
<tr>
<td>EV/EBITDA</td>
<td>8.00</td>
<td>Enterprise value /EBITDA</td>
</tr>
</tbody>
</table>

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 3.2: 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. The private equity fund will invest in a mix of preferred equity and either unsecured loanstock and/or preference shares (depending on the tax regime this split has varied over time). 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.

3.1.3 How do you design and build financial instruments?

In principle creating financial instruments is very similar to painting: there are a fixed number of primary colours and there are a fixed variety of financial characteristics. As these characteristics are blended together they create a huge spectrum of financial instruments with a wide array of risks/rewards.

There are however only two basic sources of financial return: yield (or income) and capital gains (or wealth creation/loss).

Figure 3.3: The basic building blocks of financial engineering

Yields can either be a contractual fixed obligation, that is payable no matter what happens (fees and/or interest) or they can be payable only out of profit earned (dividends). Dividends can be a fixed amount per year (a fixed dividend) or a proportion of after tax profits (participating dividends). Dividends can be payable only to one class of shares (a preferred dividend) or to all classes (an ordinary dividend).

The date of the actual payment may also vary: the amount might be payable in cash as the liability is incurred or it might ‘roll up’ and be owed today but paid at some later date. Interest may vary with market rates or be fixed for some or all of the term of the loans.

A particular financial instrument will have a priority in the capital structure: it will be repaid before some instruments and after others. Senior debt, for example, is ‘senior’ as it has the first priority when capital is repaid (see section 3.2).

Not all instruments stand to make a capital gain. Only instruments with an equity interest share in the increase in value of a business (hence being called shares).
With these simple rules we can begin to create financial instruments with tailored risks and rewards as illustrated in Table 3.2 below:

Table 3.2: Creating a hierarchy of financial instruments by varying risk and reward

<table>
<thead>
<tr>
<th>Type of instrument</th>
<th>Investor</th>
<th>Secured</th>
<th></th>
<th></th>
<th></th>
<th>Shares in capital growth?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Interest paid</td>
<td>Dividends paid</td>
<td>Capital repaid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secured loan</td>
<td>Banks</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Unsecured loan</td>
<td>Private equity house</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Redeemable preference share</td>
<td>Private equity house</td>
<td>No</td>
<td>No</td>
<td>Yes: fixed as ½ of cost</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Participating preferred ordinary share</td>
<td>Private equity house</td>
<td>No</td>
<td>No</td>
<td>Yes: participating and/or fixed</td>
<td>Greater of cost or value</td>
<td></td>
</tr>
<tr>
<td>Ordinary share</td>
<td>Management</td>
<td>No</td>
<td>No</td>
<td>Possibly</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Gilligan and Wright original analysis.

Financial engineers therefore blend together a series of rights and obligations to create the desired mix of risk, reward and control. As we illustrate in section 3.4, the effect of these rights is important in defining the relative negotiating strengths of each party if a situation requiring a change in the capital structure arises.

The ‘best’ instrument is one that ticks all the boxes in our table above, being secured and entitled to interest, dividends, return of capital and a share of capital gain. However, some of the entitlements are mutually exclusive. An instrument that paid both interest and dividends would find that the interest element was treated as a dividend by most tax authorities, for example. Therefore, this hybrid asset having the benefit of the characteristics of a loan and the returns of a share is created by investing the majority of the private equity investment in a loan instrument paying a running yield and a small amount in preferred equity that benefits from capital gains.

It is important to understand that this structure may materially advantage the private equity investor to the partial detriment of management who rank behind them. Management are only investing in the highest return strip of a capital structure to the extent that the instruments ranking ahead of them do not appropriate all the gains. If the yield on the loan notes or preference shares is greater than the growth of enterprise value, all equity growth flows to the private equity fund. We call this situation the ‘equity illusion’. Management have a high percentage of an asset that has low value in all reasonable scenarios.

Having looked at how financial engineering tailors risk and reward for investors and the company, 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.

3.1.4 What is a ‘Newco’?

**Figure 3.4: 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.

3.1.5 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 in the UK:

- **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 not capital gain; 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.

3.1.6 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.

As noted earlier, the most effective way to reduce transaction risk is to reduce the price paid. Conversely, rising prices will, other things being equal, depress investment returns and, if inappropriately funded by unsuitable debt levels, increase investment risk. If acquisition prices are generally rising, other things being equal, two outcomes (in aggregate) are likely to occur going forward:

- higher risk, through increased borrowings; or
- lower returns.
3.1.7 A financeable offer

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

1. How much debt can, and should, 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 What is debt?

It is worth pausing to look at this seemingly trivial question. Most of the problems in the financial markets in recent times have been caused by the debt markets and innovations used within them. Debt is a contractual obligation to pay an amount to a lender on given dates.

Debt may be secured or unsecured. If it is secured then if a borrower does not pay an amount due the lender will have the right to seize certain assets. If the security is a fixed charge, the assets will be identified, if it is a floating charge the security will include assets that change from time to time.

Unsecured lenders have no right to seize assets and these loans are inherently riskier than secured loans. For example, credit card debts are unsecured and therefore pay interest at much higher rates than secured mortgages.

3.2.2 What is senior debt, junior debt and subordinated debt?

Senior debt is the name given to the debt that has priority over all other debt when it comes to receiving interest or to receiving the proceeds from asset sales in insolvency. This seniority gives banks the ability to heavily influence the negotiations if a borrower is unable to service its debts.

Loans that rank after the senior debt are junior loans and those that rank last (but still have some claim to any residual assets) are subordinated loans.

3.2.3 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?

3.2.4 How much debt? Cash flow lending

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 are 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 3.5 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.

Prior to the credit crunch the private equity market took full advantage of the availability of cheap credit emanating from the global bond markets, resulting in a surge in the size of facilities that were written and a growth in the size of buy-outs being observed. In our view these were symptoms of the problems in the debt market exuberance, not the cause.

3.2.5 How much debt? Security and cost of funds

The security available to a lender varies significantly from one situation to the next. At a simple level a lender might look at the total assets (value) of a company and assess a loan-to-value ratio, in much the same way as a mortgage lender will. Of course in reality a more sophisticated approach is applied and each major item in the company’s balance sheet should be assessed to establish the security value.

Each line of the balance sheet’s assets will be looked at to ascertain the probable security value if a company becomes troubled. One common hierarchy of assets is illustrated in Figure 3.6 below.
If we compare two situations with the same total assets and the same loan-to-value assumptions but a different make up of the asset base, it can be illustrated how risk varies between different industries (Table 3.3).

Table 3.3: Stylised comparison of security in a retailer and a manufacturer

<table>
<thead>
<tr>
<th>Type of asset</th>
<th>Realisable value</th>
<th>Manufacturer</th>
<th>Retailer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>100%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Land</td>
<td>70%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Freehold property</td>
<td>60%</td>
<td>150</td>
<td>90</td>
</tr>
<tr>
<td>Trade debtors</td>
<td>50%</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Machinery &amp; plant</td>
<td>40%</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>Finished goods</td>
<td>30%</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Work in progress</td>
<td>10%</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Stocks</td>
<td>5%</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Goodwill</td>
<td>0%</td>
<td>50</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>300</td>
<td>125</td>
</tr>
<tr>
<td>Total security/Total assets</td>
<td></td>
<td>42%</td>
<td></td>
</tr>
</tbody>
</table>

Despite having assets with the same net book value from an accounting perspective, the security values are materially different. This reflects the different loan-to-value ratios applied to each class of assets and the difference in the asset base of the different businesses.

Generally the more assets that are available in the higher loan-to-value categories, the more secure any loans will be. As the loans are more secure, the risk is lower to the banks providing the loans and therefore the cost to the borrower should be lower. As the cost is lower, the amount that can be serviced by any given level of projected cash flows is higher. This is a significant factor in the second buy-out boom. High property prices gave the impression of high levels of security. This increased the amount of low cost debt available which in turn allowed the total amount of debt to increase.

As the analysis above suggests, when buy-outs began to emerge in the 1980s, they were originally focused on businesses with strong asset backing and predictable cash flows that enabled banks to lend with high levels of confidence and relatively low risk.

High and seasonal security variations may create potentially perverse incentives for banks. Where a business is struggling but a bank has full enforceable security, a banker may be disinclined to lend further. They have the option to call the loan in the knowledge that they will recover all their outstanding debt. For example, in retailers who have significant dependence on Christmas trading the cash balance of the company will often be maximised on Christmas Eve. For this reason, it is not uncommon for retailers to fail close to this Christmas cash maximum.

3.2.6 How did banks increase the levels of borrowing in buy-outs?

Capital holidays and bullet loans

Prior to the credit crunch banks competed to win the lead arranger mandates both by minimising the price and by attempting to maximise the quantity of debt available. As explained above, in a normal loan paying interest and repaying capital in cash each year, the amount of debt can be increased by either extending the term or reducing the cost.

To increase the amount of debt available beyond what can be funded on an ongoing basis from cash flows debt structures routinely include a second tranche with a so-called bullet repayment. (A tranche is the term given to each loan in an overall package.) Tranches are usually identified by letters: tranche A, tranche B etc, where each layer is usually senior to the next, so that tranche A takes priority over tranche B and so on.

Prior to the credit crunch tranche A loans were typically seven-year amortising loans. Amortising is the term for a loan that repays capital according to some pre-agreed schedule, in the same way as a repayment mortgage does.
Capital holidays are periods when interest only is paid. Figure 3.7 illustrates the impact on the cash requirement of any loan of using a variety of capital holidays.

A bullet loan (typically a tranche B) is the special case of a loan with a full capital holiday that repays the capital in a single repayment at the end of the loan. It is analogous to an interest-only mortgage. Because the capital is not repaid until the end of the loan period, cash is preserved in the business over the life of the loan as long as either the cash retained in the business generates sufficient cash to repay the bullet repayment, or the business is able to refinance the tranche B loan at maturity. The use of a bullet loan increases gearing and therefore equity returns.

Prior to the credit crunch a typical leveraged loan package might consist of a variation around the ‘standard’ leveraged loan package:

1. Seven-year ‘A’ senior amortising loan: a loan repaid in instalments over seven years.
2. 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.

In general the cash flow requirements of any loan can be sculpted to fit the projected cash flows of a business by using a series of tranches with different capital holiday periods. The key to establishing the risks of any debt structure created is to understand fully the underlying cash dynamics of the business being lent to i.e., how vulnerable and volatile cash flows are.

In addition to using capital holidays to defray debt repayments the available debt was increased further by using loans that either rolled up interest to be paid later, or paid no interest at all during their life but paid it all at the end: payment in kind (PIK) debt (see section 3.2.7 below).

The margins above LIBOR of the different debt tranches in buy-out deals have fluctuated markedly over the last five years, reflecting the easing and subsequent tightening of credit conditions (Figure 3.8).
3.2.7 How did banks increase the levels of borrowings in buy-outs?

Payment in kind debt

Another 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.

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. Many equity-release mortgages operate on this basis (plus having a share in any property value increase).

For the lender the attraction is that PIK loans pay higher nominal interest rates than normal cash interest loans. This was especially attractive when investors were seeking higher yield investments prior to the credit crunch. 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. PIK debt was often seen as tranche C or D in a debt structure.

3.2.8 Why did banks increase the amount of debt?

In the second buy-out boom of the late 2000s, a number of factors came together to increase the banks’ willingness to lend to buy-outs. Some were the result of changes in the extent of the market for debt; others were the result of changes in the underlying assumptions regarding volatility and stability within the market. In essence, as noted in the description of advisers’ roles above, the constraints on banks’ lending failed to operate normally.

The reasons for the growth in the bond market are outside the scope of this report as they relate to globalisation and savings rate differentials between countries and are nothing to do with the private equity industry per se. However, the impact of this growth was to create the opportunity for banks to change their business models in the buy-out market to reduce the proportion of debt held on their own balance sheets and to generate the majority of their income from fees for arranging and syndicating loans. The banks’ overall incentives were to maximise the amount lent and syndicated subject to the constraint that the loans must be acceptable to the primary syndications market.

Well-managed banks separate their credit functions from their origination functions. Within a bank the origination staff were largely incentivised to find and lend to new opportunities. The role of the credit function should be to constrain the origination function from making loans that are too risky or too cheap (or both). With the growth in syndications, the credit question was subtly altered. It was no longer, ‘How much should my institution lend to company X?’ It became ‘How much can we expect to syndicate to other institutions who wish to lend to company X?’ The availability of syndication opportunities therefore increased the appetite of existing participants in the buy-out market to lend at finer margins and in greater amounts.
Essentially the lead banks were calculating that the bubble in the debt market would allow them to off-load the majority of their risk, even if it was finely priced.

The emergence of CDOs designed specifically to service the buy-out market introduced the phenomenon of ‘slicing and dicing’ risk in buy-out loans to be rated and sold on into the wider markets. CDOs provided up to 50% of the debt to larger buy-outs. The incentive of a CDO manager is complicated and changes over time. As the number of new CDOs increased the number of market participants incentivised to take marginal risks also increased and the exposure of banks to bridging these risks also increased. This is a microcosm of the wider changes in the bond markets.

As asset prices, in particular property prices, increased the security of loans also apparently increased allowing banks to lend at lower margins. The low interest rates and low margins enabled more to be borrowed per £1 of project cash flow. Furthermore, the assumption of long-term stability and low volatility encouraged banks to fund more lending.

The banks therefore found a ready market for loans that were riskier than would have been written had they had to hold the loans on their own balance sheets and accordingly were prepared to underwrite more debt at keener prices. The constraint on imprudent lending essentially failed to operate because the perceived incentives were misaligned.

3.2.9 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.

Mezzanine therefore typically uses capital holidays and contingent repayments but charges a premium for the risk associated with the deferrals of repayment.

Findings 3.1: 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.

Recent evidence comprising the population of private firms in the UK finds that after taking into account a large range of financial and non-financial factors, companies with higher leverage, whether a buy-out or not, are significantly more likely to fail. Controlling for other factors including leverage, buy-outs have a higher failure rate than non-buy-outs with MBIs having a higher failure rate than MBOs which in turn have a higher failure rate than private equity-backed buy-outs. However, MBOs and private equity-backed deals completed post-2003 are not riskier than the population of non-buy-out private firms if these other factors are controlled for.
3.2.10 Can Newco repay the borrowings?

The ability of Newco to repay borrowings is usually reflected in the ratio of **EBITDA to total borrowings.**

\[
\text{EBITDA} = \text{Earnings (profits) before interest, tax, depreciation and amortisation.}
\]

This ratio measures, approximately, the amount of ongoing 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.

As we noted in the first edition, 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.

3.2.11 What security will the banks have?

As discussed in section 3.2.5 the ratio of realisable assets to total borrowings is an indication of bank security.

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.

3.2.12 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 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.

3.2.13 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.

The appropriate application of accounting policies is a matter for review by the auditors of the business.

3.2.14 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 the 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.

3.2.15 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.

3.2.16 What are propco/opco structures? A special case

In the early years of the buy-out market most investors would not invest in businesses that generated most of their returns from property investment or development. The precise boundary of what constituted a property-based business was never entirely clear but in the early 1990s following the collapse in UK property prices, a wave of innovative transactions involving properties were completed. The earliest transactions involved companies operating pubs – following changes brought about by the competition authority’s investigation into the pub and brewery industry.

Figure 3.9: Illustration of the restructuring into a propco/opco structure
The target company’s balance sheet was carefully dissected into a company that owned properties and a company that operated businesses in the properties. A lease was then put in place between the two companies. The property company (propco) was structured and financed to appeal to investors seeking property exposure and the operating company (opco) was separately financed (Figure 3.8). The structure capitalised on the different appetites for risk in property investors and non-property investors. Effectively the companies sold and leased back property assets with investment companies owned by their own shareholders.

The structures enabled the group to access separate pools of investment for property assets and to isolate property assets from trading companies at the low point of the property market. As with many innovations seen in private equity, there was nothing particularly new in the ideas behind the structures: The real innovation was the creation of a market for finance to efficiently fund this type of structure.

Once these structures had been created and perfected, markets rapidly utilised the precedent in an array of different situations. It is a general characteristic of the private equity industry that it is an early adopter of many financial innovations that were actually created elsewhere, such as securitisation, propco/opco, CDOs etc.

Findings 3.2: 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. More recent US and UK evidence from P2Ps, finds significant increases in liquidity but not profitability. Recent UK evidence from other vendor sources provides mixed evidence regarding post buy-out return on assets but demonstrates that divisional buy-outs in particular show significant improvements in efficiency. Intensity of private equity firm involvement is associated with higher levels of profitability.

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. More recent US evidence shows that private equity-backed firms increase productivity post-transaction by more than control group firms and that this increase is in large part due to more effective management and private equity being more likely to close under-performing establishments.

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, show 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 3.3: 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. Private equity firms also contribute to the development of management control systems that facilitate strategic change in different types of buy-outs. 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. More recent evidence shows that higher levels of private equity firm experience and intensity of involvement are associated with higher levels of growth, especially in divisional buy-outs.

To what extent is replacement of management important?

Larger deals’ out-performance is often associated with significant replacement of CEOs and CFOs either at the time of the deal or afterwards and the leveraging of external support.

Findings 3.4: 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 that 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, and that private equity buy-outs result in increased patent citations and more focused patent portfolios.

3.2.17 Asset stripping and financial assistance

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, prior to October 2008, it was illegal for a private company to give financial assistance for the purchase of its own shares, unless it went through a process established in the Companies Act 1981 and commonly known as the ‘whitewash’ 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 whitewash, 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 whitewash 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.
3.2.18 What protection exists 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 90% of shareholders (by value) have accepted the offer, since the remainder of the shares are then capable of being compulsorily acquired (or ‘squeezed out’). Alternatively, a scheme of arrangement may be used as a mechanism to secure 100% control subject to a vote of qualifying shareholders being supported by a 75% majority by value and 50% majority by number.

For this reason, leveraged offers for public companies are often conditional upon achieving at least 75% acceptances and may even require 90% 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.

The costs of undertaking a P2P that fails to be completed can be high. Obtaining irrevocable commitments to support the bid from key shareholders can alleviate some of the uncertainties associated with the bid process. Irrevocable commitments are explicitly recognised in UK corporate law and the UK’s City Code on Takeovers and Mergers which includes restrictions on the number of shareholders that can be approached to obtain irrevocable commitments and prohibits the favourable treatment for those offering irrevocable commitments. It also requires the disclosure of the detailed terms of irrevocable commitments. The announcement of substantial irrevocable commitments may make other potential bidders less likely to enter the contest with an alternative bid. If they do, a competing bid may have to be made within 21 days of the posting of the offer documents to avoid the irrevocable commitments becoming binding offer acceptances. It may, however, be difficult for an alternative buyer to complete due diligence within the required time. Existing shareholders may have the incentive to give irrevocable commitments as they may be able to negotiate conditions that enable them to sell their shares to a new bidder offering a higher price (so-called ‘soft’ commitments).

3.2.19 The risks of leverage: financial covenants and events of default

Figure 3.10: 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.
3.2.20 Incurrence covenants and maintenance covenants

As part of the debt package, the bank will agree a set of covenants that have to be periodically met. These covenants can be simply that on a particular day the interest and capital due are paid. These are incurrence covenants found in all term loan agreements. In leveraged loans it is market practice to also see maintenance covenants that 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.

3.2.21 One-to-one cash cover 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.

3.2.22 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.

3.2.23 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.

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 if things go wrong.

3.2.24 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 as soon as 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 when the assets of the company are realised to repay the debt.

3.2.25 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.

However, as we shall see when we examine the equity structuring dynamics below, there are also strong incentives for management to produce an optimistic plan to increase the projected value of the equity and therefore their share of that equity. Furthermore equity sponsors will get higher debt and/or cheaper offers if more positive plans are used by the bankers to the transaction. Untangling the outcome of these powerful but contradictory incentives is a key feature of good due diligence.
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 interest 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 3.5: What proportion of buy-outs fail? Industry data**

Since 1979 there have been some 15,400 UK buy-outs of which around 13% have (at the date of writing) entered receivership. The historic pattern of receiverships is shown in Figure 3.11. 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. It is of course possible that larger companies do not fail but that their investors lose some or all of their investment. This would occur when a business was sold for a loss (or a nominal amount) but did not enter any kind of insolvency procedure. This is discussed further in section 4. 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 3.11: Percentage of UK buy-outs ending in receivership: by value range and vintage year**

Source: CMBOR/Barclays Private Equity.
Findings 3.6: 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.

3.3 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 and short termism

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.

Returns have historically generally been measured and talked about as internal rates of return (IRRs). An IRR is the annualised return on an investment. As illustrated in Table 3.4 (where we have highlighted the area of targeted market norms) and Figure 3.12, IRRs are very sensitive to time.

Table 3.4: IRRs calculated at varying exit years and varying exit multiples of original investment

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<thead>
<tr>
<th>Years invested</th>
<th>Multiple of original investment</th>
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When investments are rapidly turned, IRRs tend to be higher but when investments are held longer IRRs tend to a stable long-term rate.

It is a fact that maximising IRRs does not necessarily maximise the return from an investment portfolio. If, for example, the alternative investments available to the partners in a particular fund have lower than projected returns than the assets that they currently hold, returns are maximised by holding the current investment, even if the IRR declines as a result. In general maximising the present value of a portfolio is not the same as maximising the IRR of each individual investment.

The impact of using IRR as a measure is therefore to give undue weight to the speed with which returns are realised and may in extremis result in severely sub-optimal allocation of resources. In reaction to this, and cynics have argued, the general fall in returns seen in funds, the private equity industry also increasingly uses a cruder measure of ‘cash-on-cash’. This is analogous to the value per £1 invested we discussed in the valuation section 2.3.5. Returns of three times original investment are often quoted in buy-outs.

Table 3.5: Multiple of money calculated at varying years of exit and IRRs

<table>
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<tr>
<th>IRR</th>
<th>15.0%</th>
<th>17.5%</th>
<th>20.0%</th>
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<th>27.5%</th>
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<th>32.5%</th>
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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 3.4 this equates to an IRR of 26%. Trebling the value of an investment in five years equates to an IRR of 25%.
The analysis above ignores the effect of both fees and yields on returns. In general an IRR can be decomposed into two elements:

\[ \text{IRR} = \text{Yield to maturity} + \text{Annual capital growth} \]

Thus if an investment yields 10% (on cost) per annum and grows in value by 15% (compound) per annum, the IRR will be 25%. Continuing yield is clearly more certain than unrealised capital gain. Private equity funds will therefore seek to maximise their yield, consistent with the banking structure and investment plans of the business.

Where a cash yield cannot be paid it has become common for private equity funds to specify a preferred yield on their equity that is accrued but not paid until exit. This effectively guarantees a certain annual return to the private equity fund ahead of management. Where the yield is greater than the annual growth in capital value, this mechanism will appropriate capital from management to the private equity fund. Management and their advisors need to be very wary of structures that have a high yield accruing.

While a high yield may appropriate value, a continuing yield also reduces the required capital gain to generate the target IRR, as illustrated in Table 3.6, which may be to the advantage of management.

**Table 3.6: Impact of varying yields on the capital gain required to generate an IRR of 25%**

<table>
<thead>
<tr>
<th>Years invested</th>
<th>25.0%</th>
<th>22.5%</th>
<th>20.0%</th>
<th>17.5%</th>
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<td>1.63</td>
<td>2.06</td>
<td>2.59</td>
<td>3.25</td>
<td>4.05</td>
<td>5.02</td>
<td>6.19</td>
<td>7.61</td>
<td>9.31</td>
</tr>
</tbody>
</table>

It is somewhat paradoxical that the impact of fees on returns is not treated consistently when calculating IRRs. From the perspective of the borrower a fee can be regarded as no different to an advanced payment of interest. Therefore all fees should be included in the calculation of the cost of funds. Private equity funds however generally exclude fees received from the calculation in their models. In part this reflects the different treatment of fee income in different funds.

Arguably the most appropriate measure should be to calculate present values using the hurdle rate of return of the fund for the carried interest calculation. Maximising this value would achieve maximised profit over the life of the fund and the personal rewards of the general partners and staff in the carried interest scheme.

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: total equity is used by many commentators as a measure of the aggregate financial risk in the buy-out market.

As illustrated in Figure 3.3, the amount of debt usually rises as interest rates fall (and vice versa).
Findings 3.7: Has the debt: equity ratio been increasing in private equity deals? The evidence

During 2007 and subsequently, some quarters expressed concern that amount of debt being raised by the largest leveraged buy-outs could pose risks to both the borrowers and lenders of the debt. (See, for example, HOC Select Committee Report.)

Buy-out leverage has been found to be unrelated to the leverage of matched public firms. Rather, the economy-wide cost of borrowing and availability of debt largely drives leverage in buy-outs.

Despite these concerns and the subsequent banking crisis and recession, to date there has been no catastrophic failure by any of the largest buy-outs. The degree of leverage in private equity-backed deals has fallen sharply since 2007.

3.3.4 Are the largest leveraged buy-outs failing during the recession?

Some transactions will have met plan and prospered despite the recession, whereas others will have under-performed. Of the 10 largest receiverships of private equity-backed buy-outs in the UK, five occurred in 2008 and the first half of 2009 (Table 3.7). However, to date, the only £1bn private equity-backed buy-out to have gone into receivership in the UK is McCarthy & Stone. It needs to be borne in mind that many companies that have no contact with private equity have also filed for protection from their creditors. However, an increasing number of debt for equity swaps have been introduced to avoid firms entering receivership.

Table 3.7: Largest private equity-backed receiverships

<table>
<thead>
<tr>
<th>Buy-out</th>
<th>Buy-out year</th>
<th>Deal value (£m)</th>
<th>Receivership year</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCarthy &amp; Stone (Mother Bidco)</td>
<td>2006</td>
<td>1105.3</td>
<td>2009</td>
</tr>
<tr>
<td>BPC and Wathamoughs/Polestar</td>
<td>1998</td>
<td>737.5</td>
<td>2008</td>
</tr>
<tr>
<td>Magnet</td>
<td>1989</td>
<td>630.7</td>
<td>1992</td>
</tr>
<tr>
<td>Orchid Pubs</td>
<td>2006</td>
<td>571</td>
<td>2008</td>
</tr>
<tr>
<td>Lowndes Queensway</td>
<td>1988</td>
<td>446.8</td>
<td>1990</td>
</tr>
<tr>
<td>Greycoat/G2 Estates</td>
<td>1999</td>
<td>282.5</td>
<td>2004</td>
</tr>
<tr>
<td>XL Leisure/Excel Airways</td>
<td>2006</td>
<td>225</td>
<td>2008</td>
</tr>
<tr>
<td>First Leisure (Nightclubs)/Whizalha</td>
<td>2000</td>
<td>210.5</td>
<td>2004</td>
</tr>
<tr>
<td>Automotive Product Group</td>
<td>1995</td>
<td>181.2</td>
<td>2006</td>
</tr>
<tr>
<td>Finelist/Europe Auto Distribution</td>
<td>2000</td>
<td>159.2</td>
<td>2000</td>
</tr>
<tr>
<td>Landhurst</td>
<td>1990</td>
<td>157</td>
<td>1992</td>
</tr>
<tr>
<td>International Leisure Group</td>
<td>1987</td>
<td>155</td>
<td>1991</td>
</tr>
<tr>
<td>The Sweater Shop</td>
<td>1995</td>
<td>150</td>
<td>1998</td>
</tr>
<tr>
<td>Lambert Fenchurch/HLF Insurance/Heath</td>
<td>1999</td>
<td>130.9</td>
<td>2003</td>
</tr>
<tr>
<td>Tempo/KF Group</td>
<td>1999</td>
<td>130</td>
<td>2001</td>
</tr>
<tr>
<td>Ethel Austin</td>
<td>2004</td>
<td>122.5</td>
<td>2008</td>
</tr>
<tr>
<td>Holiss</td>
<td>1988</td>
<td>119.8</td>
<td>1991</td>
</tr>
<tr>
<td>Yardley (Old Bond Street Corporation)</td>
<td>1990</td>
<td>110</td>
<td>1998</td>
</tr>
<tr>
<td>Response Group</td>
<td>1988</td>
<td>102.8</td>
<td>1990</td>
</tr>
<tr>
<td>ESM/Wafer-Fab</td>
<td>1999</td>
<td>100</td>
<td>2002</td>
</tr>
</tbody>
</table>

Source: CMBOR/Barclays Private Equity.

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

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

- the residual claimant: the maximum a management team can get is what is left after all the other providers of finance have received their returns; or
- the motivational minimum: 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.
In most buy-outs where management do not hold equity prior to the transaction, the amount of money that management have to invest rarely has a significant influence on the amount of equity they receive. In many buy-outs, management are required to invest what is often called ‘hurt money’ ie, money that is material in the context of the individual’s wealth. 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 (whichever was greater).

In transactions where management have a significant equity stake pre-buy-out, the position is different. The key is again to understand the impact on incentives and alignment of interests. The private equity firm will not wish to see substantial ‘cash out’ for the manager/shareholders who are key to the ongoing achievement of the investment thesis. They will argue that this reduction in cash at risk reduces the incentives of the management team to maximise value growth.

Conversely management will often argue that taking ‘money off the table’ reduces their personal risk allowing them to pursue a higher risk/higher reward strategy with their remaining wealth to the mutual benefit of themselves and the new investors.

3.3.6 What is a ratchet?

Where agreement cannot be reached between the private equity 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 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 and is outside the scope of this report.

Findings 3.8: To what extent are managerial equity, leverage and private equity board 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, previous experience and 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 the 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. Private equity firms create active boards involving high levels of private equity firm interaction with executives during the initial 100-day value creation plan. Private equity firm board representation and involvement partly depends on style but is higher when there is CEO turnover and in deals that take longer to exit. Private equity boards lead strategy through intense engagement with top management, whereas plc boards accompany the strategy of top management.

4 See ERSM30520 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 ERSM90500 Post Acquisition Benefits from Securities.
3.4 Distress and restructuring

What happens when businesses do not achieve the plans upon which the investment structure was based? There are many books written on this subject and we will therefore describe the high-level mechanisms that are put in place in many private equity structures to anticipate and deal with distressed situations and highlight the tools and negotiating positions of the various parties.

Distress is the symptom; the cause is failure to meet the business plan projections. In this section we draw a distinction between ‘financial distress’ and ‘operating distress’ which we explain below.

3.4.1 What are the types of company distress?

The finances of a business are more complicated than, but in principle no different to the finances of a household. Distress arises because of three inter-connected but separate outcomes:

- **Operating distress** occurs when cash flows from day-to-day operation before financing are negative. This is due to loss making, absorbing working capital or investing in projects that do not generate cash. In household terms you spend more than you earn before finance costs. Unless rectified, operating distress leads inevitably to insolvency.

- **Financial distress** is a special case of operating distress. It occurs when a company generates positive cash flows in its day-to-day operations, but they are insufficient to service the cash requirements of its funding structure. In household terms, you have borrowed more than you can afford to repay.

- **Insolvency** occurs when a company cannot pay its debts as they fall due to be paid (or its assets are less than its liabilities). There is a legal obligation on directors of all companies not to trade if a business is, or may reasonably be expected to become, insolvent. Recalling the definitions of enterprise value and equity value in section 3.1.1, operating distress is the process that results in the enterprise value falling to zero. Where companies have significant borrowings, enterprise value may be positive but less than the value of the total borrowings. Financial distress is therefore when equity value is (or will become) zero or negative.

3.4.2 What are the early signs of financial distress?

In section 3.2.19 we described the structure of banks’ financial covenants and how they interact to provide an early warning system of impending financial problems. Within a company, the first signs of distress are therefore often either a reduction of headroom against a covenant or a breach of a particular covenant or series of covenants.

Where loans are cov-lite, this early warning mechanism may be non-existent or impaired in its operation.

One particular form of weakened covenant loan emerged in the past five years or so. These loans contain covenants but also have a so-called equity cure provision.

3.4.3 What is equity cure?

Equity cure is the name given to the right of a shareholder to address a covenant breach by injecting further equity capital into a business to redress the covenant breach. For example, we discuss earlier the importance of the one-to-one cash covenant. This covenant ensures that a business does not create new borrowings in order to pay its existing funders. If a company breaches the one-to-one cash covenant it must either renegotiate with its banks to increase borrowings or renegotiate with all of its funders to delay payments due on the overall financing package. As a covenant breach may be an event of default (which allows a bank to seek repayment of all their loans and/or charge penalty interest) the bank will have significant power to determine the outcome of those negotiations. Equity cure allows the shareholders to pre-empt that negotiation by having the right (but not the obligation) to invest money that will address the covenant breach, typically prior to, but sometimes immediately after, it occurring. The equity injection ‘cures’ the covenant breach and immunises the penalties that would have been available to the banks had the covenant been breached.

In effect the parties have pre-agreed a process to address financial distress.
3.4.4 What is financial restructuring?
Financial restructuring is the renegotiation of a company’s financial structure to allow it to alleviate financial distress. It consists of changing the financing structure of a company’s balance sheet to increase the possibility of generating positive cash flows. In many ways the questions being asked in a restructuring are exactly the same as those being asked in structuring a buy-out, “How much debt can prudently be borrowed?” “How much equity does a company need?” “Are the returns on the equity requirement satisfactory?”

However, the difference in the scenario lies in the dynamics of the negotiation. Restructuring is a process of renegotiation, not recalculation and the relative strengths of the negotiating positions are as significant as the financial arithmetic.

In a new investment each financier must compete to win the mandate to finance the investment opportunity within the constraint of an acceptable price demanded by the vendor. In a restructuring, in the absence of the option of selling their investment or simply getting another institution to refinance the position, the incumbent financiers must decide whether to invest further new money and how to re-price the existing investment to take account of the changed risks and rewards. They must therefore negotiate among themselves regarding the new financial structure that will enable the business to continue to pursue its strategic goals, or agree to a process of corporate failure.

3.4.5 When is financial restructuring possible?
Broadly speaking restructuring is possible when a company has a positive enterprise value but a negative (or falling) equity value ie, it is in financial distress but not in irreversible operating distress.

As was illustrated in the section on sensitivity analysis, prior to any investment much effort and resource is put into examining the range of possible outcomes in any investment. Similarly much due diligence is undertaken to attempt to verify the assumptions that underlie the business plan. However, no matter how much due diligence and sensitivity analysis is undertaken, a judgement on the likely variance around the company’s base plan may turn out to be incorrect.

Financial structures are engineered with an often implicit assumption about the range of possible future environments that they will have to withstand. If the world turns out to be more hostile, the structures will not operate efficiently. In general there is a trade off between flexibility (which is the ability to withstand volatility) and cost.

Typically distress arises from one, or a combination of, three reasons:

- the company’s internal inability to achieve its objectives;
- the external market for the company’s goods and services changes; or
- the external market for finance changes.

Similarly problems may manifest themselves along the spectrum between two extremes:

- failure to achieve a given target ie, ‘missing a target’; or
- a delay in the rate of progress towards achieving a target ie, ‘being too slow’.

Irrespective of which source of distress is manifested, the first step in addressing the problem is to prudently re-assess the business plan of the company and the available resources, including management resources.

3.4.6 What is a ‘hair cut’ and who bears it?
When a company fails to generate sufficient cash to service its trading liabilities it is in danger of being insolvent. Trading insolvency can only be rectified by rescheduling a company’s liabilities or by injecting new cash into the business. Generally banks will not lend money to rectify cash flow problems that arise from trading difficulties unless they can be persuaded that the shortfall has arisen because of a timing delay that will be rapidly rectified. Banks will normally expect the equity investors to make good any shortfall in operating cash flows by injecting new equity.
However, in many situations the complex interaction of incentives and threats results in a sharing of the cost of any shortfall thus decreasing their return. Those bearing these costs are said to have ‘taken a hair cut’.

### 3.4.7 What powers does a secured lender have?

In general, since banks have security over the assets of the company, nothing can be done to restructure a company with borrowings without agreeing the restructuring with the banks. They therefore hold an extremely strong negotiating position in any restructuring.

However, banks do not have the resources to actively manage the companies that have borrowed and they must therefore accommodate the reasonable aspirations and motivations of management who will manage the company out of distress.

Furthermore, as banks have traditionally been reliant on private equity firms for new transactions, the broader commercial inter-relationships must also be borne in mind by any bank during any restructuring.

There are a number of alternatives open to a bank with security:

**Receivership**

A secured lender whose loan is in default can seek to recover their debt by selling the assets over which they have security in a receivership. It is extremely rare that equity holders receive anything in a receivership. This is therefore the end of an attempt to restructure and effectively represents the failure of the business. The threat of receivership is, in most circumstances, more powerful than the actual receivership.

The banks’ decision to appoint a receiver will be driven by their perceptions of the prospects for the business and their assessment of the amount of their lending that is at risk if a receiver is appointed.

**Enforce priorities**

The layering of debt, mezzanine and equity were illustrated earlier. The agreements between the parties will contain provisions to ensure that if the lenders with the highest priority over the company’s cash resources (the senior secured lenders) are not receiving either their interest or capital repayments, then the lenders and investors that have lower priorities (or are ‘sub-ordinated’ to them) will also not be paid. Thus the financial pain of under-performance falls first upon the holders of financial instruments with the lowest priority.

However, as we have seen, in many buy-outs yield is rolled up and capital repayments on the least secure redeemable instruments (unsecured loans and redeemable preference shares) are made in a single bullet repayment after all the debt has been repaid. Therefore, there is no cash cost to the equity holders until the repayments are due. This leaves management in a position where the cost of the capital structure is increasing with no compensatory increase in their projected rewards. At some point the incentive of management will fall below the minimum necessary to retain and/or motivate them. In this scenario the equity illusion is stripped away and management are highly motivated to initiate a restructuring. The private equity investor continues to roll up yield throughout the negotiations, albeit that the yield may be written off as part of the restructuring.

**Increased cost of funds**

Where companies breach agreements, banks will always seek to increase the cost of funds to compensate for the increased risk. However, financial distress is characterised by an inability to service a capital structure and therefore increased interest costs may make the overall company situation more perilous.
3.4.8 What tools are available to restructure a balance sheet?

In Figure 3.13 we illustrate the various options that are available to restructure a balance sheet that has too much debt. In practice these are the limits of what could be achieved and most reconstructions would use a hybrid solution incorporating elements of each approach depending upon the judgement of the parties to the restructuring discussions of the individual circumstances and prospects of the company and, equally importantly, the balance of power within the negotiations.

Reschedule and re-price the existing debt

If a lender believes that a solution can be found it is possible to alleviate the cash burden of the higher cost of funds by rescheduling debt repayments. However, increasing the term of a loan further lengthens the duration of the risk that the lender is exposed to and the banks will therefore seek further compensation either in the form of fees or increased margins (or both). This re-pricing may include a so-called ‘equity kicker’. This is a mechanism (typically warrants or options to purchase equity) that allow the loans to earn a return that reflects the increased risks of the structure. Essentially a part of the debt package is re-priced as a mezzanine risk.

Inject new equity

It is unlikely that a private equity fund would simply invest new equity to reduce debt as illustrated, but if there is a plan that justifies new equity, or the banks require an increase in equity to continue to support the business, then this may be required. Recall that equity cure is simply a pre-agreed injection of new equity that enables a rapid restructuring to occur.

Debt for equity swap and ‘loan-to-own’

Where the bank perceives the risks that it is taking are closer to those of an equity investor than a bank, it is common to reschedule and re-price debt to include the conversion of a portion of the debt into equity. This will dilute the equity holding of the existing shareholders, including management and the impact on incentives requires careful consideration. The pricing of the equity will need to reflect the changed circumstances of the company. Ultimately, a bank may take control of the equity in the company with the private equity fund being completely removed from the ownership of business. The bank moves from being a lender to being a shareholder; so called ‘loan-to-own’.

Write off a portion of the loans

If a company simply has too much debt then at some point this will have to be recognised. In the traditional banking model where loans were held by the arranging banks and a few syndicate banks, the company and equity investors could negotiate with the banks to write off a portion of the debt as part of an overall restructuring. This will normally be accompanied by an injection of new equity or other such contribution from the other funders.
Summary

Any restructuring is a negotiation in which the debt holders have a strong influence. It will typically involve a series of questions, starting with the assessment of the prospects of the business in its changed circumstances. The parties to the restructuring will negotiate with each other to redistribute the changed risks and seek to receive an appropriate reward in the riskier environment.

3.4.9 What are the differences in restructuring publicly traded debt?

The paradox of syndication

As the banking model has changed to include the issuing of more publicly quoted bonds in support of buy-outs the number of participants in a restructuring has multiplied. Since any restructuring is a process of negotiation and creation of a revised consensus often against a severe time constraint, the proliferation of holders of debt in buy-outs makes any restructuring significantly harder to achieve. Even where there are designated syndicate leaders who represent and negotiate on behalf of all bond holders, they must influence the broad church of the syndicate members which often slows and complicates any renegotiation.

It is widely accepted that the growth in the issuance of publicly traded debt in larger buy-outs has made restructuring slower and more difficult to achieve.

Therefore, in widely syndicated transactions, especially those involving publicly traded debt, negotiating any form of restructuring can be significantly more time consuming and problematic. This has resulted in a paradoxical situation; wide syndication of debt is used as a risk mitigation mechanism for the lenders, who reduce their exposure to any one company, and borrowers, who reduce dependence on a single borrower. However, when the risks that are being mitigated start to crystallise, wide syndication makes timely response to those risks more difficult and costly, which in itself increases the risks to both the lender and the borrower.

3.4.10 Why is there a growing use of distressed debt funds?

There have always been specialist investment funds that only invest in distressed debt (and sometimes distressed publicly traded equity). In some cases these funds are based on a trading strategy that argues that the debt is under-valued. In others they adopt an ‘active value’ model whereby the fund actively engages in the negotiations to restructure the company. Following the credit crunch many private equity funds have either launched distressed debt funds or are actively evaluating the possibility of doing so. Many private equity funds have sought to acquire the debt that supported their own original buy-outs either through direct purchases of the debt or by setting up specialist distressed debt funds exclusively targeting under-performing loans.

The growth of traded buy-out bonds has also resulted in the emergence of new mechanisms to reduce debt for individual companies. In particular it has become possible for companies to buy back publicly traded debt at values below par using free cash and/or an equity injection. For example, Alliance Boots, the largest ever UK buy-out, reported that it had repurchased £468m of its debt at prices below 70p in the pound financed by a mixture of cash generated by the business and £60m of new shares issued to the investors.7

3.4.11 What are credit default swaps? A perverse new set of incentives

Credit default swaps (CDS) are a form of hedging instrument. They allow a lender to swap their risk of default with another party. They are often described as a form of insurance that will pay out if the original borrower defaults on the loan agreement. However, despite being described as a form of insurance, there are significant differences in both the operation and regulation of a CDS. As with most financial terminology, the term CDS covers an array of different contractual arrangements and each situation is potentially different.

A CDS is actually closer to a third-party guarantee of a loan agreement than a hedge policy. The guarantor receives a guarantee fee and underwrites the default risk but is not regulated, financed or accounted for like an insurance company.

However, one of the important differences between CDS and insurance for the restructuring market is the fact that CDS are tradable securities. In a genuine insurance contract the insured must be able to show a loss to receive a pay out. With CDS institutions can trade their positions with those who have no risk of loss. In effect it allows institutions to hedge against losses that they will not incur.

This creates the opportunity to acquire CDS cover and to frustrate the restructuring of otherwise viable companies. For example, any holder of a loan benefiting from a credit default swap with a strong counterparty may have more incentive to seek the default on the loan it holds than to agree to a restructuring that may require debt holders to take a hair cut. To complicate matters further, a restructuring itself may be defined in the CDS as an event of default.

As noted earlier, restructurings are often time critical and a failure to achieve a restructuring may result in the evaporation of confidence in an organisation making a previously viable company fail. The existence of CDS positions has created concerns that the time taken to negotiate with those who hold these guaranteed positions may stop otherwise agreed restructurings. There may be many market participants who have a perverse incentive to seek a bankruptcy rather than rescue a business, whether it is viable or not.

3.4.12 Equity investors: the impact of distress

The first impact of financial distress should be recognised in the valuation of the investment within the fund. We illustrated the valuation decision tree in Figure 2.15 and highlighted the effect of writing down the value of investments on fee income receivable. A reduction in portfolio value generally reduces fee income.

The second impact of falling valuations is to reduce the pro-forma returns of the fund (ie, the returns to date based on current valuations). This will make any contemporaneous fund raising, which will be based among other things on the latest fund returns, proportionately more difficult.

It should also be appreciated that falling investment valuations reduce the prospective value, or increase the risks to the value, of any carried interest. Where an investment is a material part of the fund's portfolio value this can be a severe impact on the ability to recruit and retain key people, especially readily marketable non-partners who will see their share of any carried interest reduce.

There are therefore a strong set of incentives to restructure any investment to recover value both in the short and longer term.

3.4.13 Equity investors: what are the options?

As active investors private equity funds have the contractual ability to make changes to the company that bankers generally do not have. Banks may have strong negotiating positions as a result of their security arrangements and the threat of receivership, but the private equity investors have contractual levers that are readily available to effect rapid change in management and/or strategy.

In any restructuring, it is universally recognised that something must change. Businesses that are failing to perform to plan stretch their funding packages and if the under-performance is outside the tolerances of the scheme design then either the company must be changed to fit the capital structure or vice versa, or a combination of the two.

3.4.14 Change the company

Changing the company may mean the same people adopting a new strategy, but it also often means changing elements of the management team. Private equity funds will actively replace management team members, including chief executives and chairmen, and replace them with people who are believed to have turnaround expertise.

This process has created an entirely new market in professional company doctors whose careers are a series of either part-time non-executive roles or full-time turnaround roles for private equity-backed companies. Incentivising the new management and realigning the incentives of any existing management is a key part of any restructuring proposition.

Similarly they will use external consultants and advisers to evaluate the options going forward. The investment agreement will allow the costs of these external analyses to be charged to the company rather than being borne by the fund or the manager.

3.4.15 Change the finance structure

Inject new equity: if a business simply has too much debt, it may be reasonable to inject new equity and restructure the banks’ debt. Since the existing equity structure will have been predicated on a required return (and an assumption of risk) there will need to be at least one of:
• an increase in the equity stake of the investors, or equivalently a reduction in
management’s equity;
• an increase in the preferred yield of the investment; or
• an increase in the expected value of the business at exit.

The first two will, other things being equal, reduce the return to management and may create
significant disincentive effects that need to be managed. The latter is unlikely to be a key
driver due to the dynamics of the negotiation. It is difficult to argue successfully that the
terminal value of a company in distress has increased since the original investment.

Purchasing the debt: debt purchase has been more common in the current recession than ever
before. This reflects two unrelated facts: firstly there is more publicly traded LBO debt in larger
buy-outs, and secondly the unrelated failure and distress of many banks active in the buy-out
market has provided unprecedented opportunities to acquire debt in even mid-market buy-
outs. Debt repurchases can be achieved in two different ways: either the company can use its
own resources to buy in and cancel debt or the investors, through a separate fund, can buy
debt. When debt is bought by the company and cancelled the full costs and benefits of
purchasing the debt accrue to the company and all of its shareholders.

In the case of a separate fund purchase the costs and benefits are more complicated.
Purchasing debt at the fund level can be preferable to injecting new equity into the company
to purchase debt as the private equity fund gains access to the security of the existing senior
debt, becoming part of the banking syndicate. They can therefore influence the behaviour of
the debt syndicate directly. They will of course also benefit from any uplift in the value of the
debt acquired. However, unless the debt is cancelled or restructured, no benefit accrues to
the company.

There are, therefore, potentially significant conflicts of interest where investors in an equity
fund are not minded to become investors in a distressed debt fund designed to acquire debt
in existing equity investments. The control of this type of potential conflict is a matter for the
fund agreement.

Re-price the equity: irrespective of how the restructuring is undertaken, it would normally be
expected that the equity would be re-priced using the tools noted above ie, a higher equity
stake or a higher preferred yield.

3.4.16 What is the position of management in a restructuring?

We have explained above that in any restructuring the bank will almost always have very
significant influence over the outcome. Furthermore, if the private equity investor is to invest
further equity this will generally have a higher cost than the existing equity, either in yield or
equity percentage or both.

We have also explained earlier that management’s equity stake is determined as either the
residual amount available after the private equity fund has achieved a satisfactory return
or as the minimum necessary to retain and motivate key people.

Furthermore we have argued that to change the company it is often necessary to change the
management team or its strategy.

In these circumstances management’s negotiating position is apparently weak. However, the
commercial position depends upon whether or not the individuals concerned are part of
the plan to turn the business around or if they going to leave the company as part of the
restructuring.

If management are to stay (or, in the case of new management, join) the position is essentially
a repetition of the position at the date of the original investment, adjusted for the new risks.

Given the equity return requirements outlined above it is not uncommon to see extremely
high risk/reward structures in rescues, often with very aggressive ratchets to strongly reward
recovery and generation of value.

If management are to leave, there will almost always be a ‘good leaver/bad leaver’ clause in
the original shareholders’ agreement.
3.4.17 What is good leaver/bad leaver?

It is normal in a private equity deal that there will be a clause in the contract that will state that if a key person leaves the business they must sell their shares back to the company. The contract will go further and state that a ‘good leaver’ will receive market value for their shares, whereas a ‘bad leaver’ will receive the lower of cost or market value. The definition of a bad leaver is negotiated as part of the initial transaction but will typically, at a minimum, include both some definition of dishonesty and lack of competence. Therefore, in contrast to many public companies, in the vast majority of private equity-backed companies there are no golden parachutes for senior managers who do not perform as expected.

There is no academic research examining the effect of this difference in the risk profile of senior management between public and private equity-backed companies. It is however a material and important difference in the corporate governance model.
4. A DETAILED WORKED EXAMPLE OF A LEVERAGED BUY-OUT AND A RESTRUCTURING

In section four we present a detailed fictional example illustrating how and why a financing structure is created.
4.1 Case study: illustrative operating projections

This section presents a detailed, but fictional, worked example of a transaction structure. It is intended to illustrate a financial structure and explain both the logic of the tailoring of the financial package and the complicated tax impacts of financial engineering. Our intention is to give an insight into the typical questions asked and the analyses undertaken prior to and during an investment.

4.1.1 Operating profit projections

The operating projections of the target company are summarised in Table 4.1 and Figure 4.1 below. The fictional business plan of a company is evaluated by a private equity investor and bankers. The actual figures represent the performance in the year prior to the proposed investment. The subsequent years are forecasts.

Table 4.1: Operating profit projections

<table>
<thead>
<tr>
<th>£000s</th>
<th>Actual</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>167,250</td>
<td>158,888</td>
<td>163,654</td>
<td>168,564</td>
</tr>
<tr>
<td>Cost of goods</td>
<td>(91,988)</td>
<td>(87,388)</td>
<td>(83,463)</td>
<td>(85,968)</td>
</tr>
<tr>
<td>Gross margin</td>
<td>75,263</td>
<td>71,500</td>
<td>80,191</td>
<td>82,596</td>
</tr>
<tr>
<td>Overheads</td>
<td>(62,500)</td>
<td>(60,938)</td>
<td>(61,547)</td>
<td>(63,393)</td>
</tr>
<tr>
<td>Lease costs</td>
<td>0</td>
<td>(400)</td>
<td>(800)</td>
<td>(800)</td>
</tr>
<tr>
<td>EBITDA</td>
<td>12,762</td>
<td>10,162</td>
<td>17,844</td>
<td>18,403</td>
</tr>
<tr>
<td>Depreciation</td>
<td>(5,000)</td>
<td>(4,167)</td>
<td>(2,639)</td>
<td>(2,616)</td>
</tr>
<tr>
<td>Restructuring costs</td>
<td>0</td>
<td>(3,500)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EBITA</td>
<td>7,762</td>
<td>2,495</td>
<td>15,205</td>
<td>15,787</td>
</tr>
<tr>
<td>Growth in turnover</td>
<td>-5.0%</td>
<td>3.0%</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>Gross margin</td>
<td>45.0%</td>
<td>45.0%</td>
<td>49.0%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Overhead inflation</td>
<td>-2.5%</td>
<td>1.0%</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>4.6%</td>
<td>6.4%</td>
<td>10.9%</td>
<td>10.9%</td>
</tr>
<tr>
<td>EBIT</td>
<td></td>
<td>1.6%</td>
<td>9.3%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

Figure 4.1: Actual and forecast sales and profit

- Sales fall due to increased pricing and stock clearances at lower prices
- Gross margins rise after stock clearances due to increased pricing
- Lease charges arise from the sale and leaseback of properties
- Restructuring costs of £3.5m reduce overheads by £1.5m per annum
- EBITDA falls due to falling sales and restructuring
- EBITDA increases due to rising margins
Note
In this example any valuation completed at the end of year 2 based upon an earnings multiple
or net assets would result in a reduction in the valuation of the initial investment and therefore
a reduction in the fee income of the private equity fund manager. It may be argued therefore
that, contrary to the earlier discussion of valuations in section 2, this investment should be
carried at cost to reflect the planned nature of the changing performance. The example
highlights the difficulties that valuations can create when any particular investment represents
a material part of the fund’s investment portfolio.

4.1.2 Cash flow projections
In Table 4.2 the actual figures represent the performance in the year prior to the proposed
investment and the subsequent years are forecasts. The cash flows of the business reflect
one-off costs and gains, followed by the ongoing cash generation of the restructured business.
The one-off costs and gains are:

- the restructuring of overheads;
- the inflow from the sale and leaseback of £10m of freehold properties; and
- material changes in the working capital profile of the business.

The ongoing changes in cash flows include both the resulting changes in margins and the
costs associated with the new lease arrangements put in place as part of the sale and leaseback.

Table 4.2: Actual and forecast operating cash flows

<table>
<thead>
<tr>
<th>£000s</th>
<th>Actual</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT</td>
<td>7,762</td>
<td>2,495</td>
<td>15,205</td>
<td>15,787</td>
</tr>
<tr>
<td>Ongoing Capex</td>
<td>(2,000)</td>
<td>(2,500)</td>
<td>(2,500)</td>
<td>(2,500)</td>
</tr>
<tr>
<td>One-off Capex</td>
<td>–</td>
<td>(2,500)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Depreciation</td>
<td>5,000</td>
<td>4,167</td>
<td>2,639</td>
<td>2,616</td>
</tr>
<tr>
<td>Working capital</td>
<td>(500)</td>
<td>3,262</td>
<td>(292)</td>
<td>(301)</td>
</tr>
<tr>
<td>Proceeds of sale of fixed assets</td>
<td>0</td>
<td>10,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>10,262</td>
<td>(14,924)</td>
<td>(15,052)</td>
<td>(15,602)</td>
</tr>
</tbody>
</table>

Figure 4.2: EBITDA and operating cash flows

- Operating cash flow before financing
- EBITDA
- EBIT

Cash inflow from asset sales
Benefits of restructuring from year 2
Impact of restructuring costs and reduced sales
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 leaseback of £10bn 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. Note that the depreciation charge falls in year 2 because of the sale of assets.

- **Overhead reduction**: there is a planned reduction of overhead costs by circa £1.6m (-2.5%) in year 1. It is assumed that the restructuring costs will be £3.5m 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 49% by increasing prices. This price rise is projected to result in a 5% fall in sales in year 1. Year 1 also includes a stock clearance sale that temporarily holds gross margin at 45% by changing the mix of products sold.

- **Increased investment**: to achieve efficiency gains, a one-off increase in capital expenditure of £2.5m is included to update the assets of the business.

- **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 and the stock clearance noted above.

Thereafter, both costs and revenues are forecast to grow at 3% pa and working capital grows proportionate to sales growth.

### 4.1.3 A profit bridge

A common analysis undertaken in most major restructurings is to construct what is known as a profit bridge. This seeks to isolate the impact of each of the various actions on overall profitability. It always needs to be appreciated that the arithmetic presentation necessarily disguises the interaction of the various factors: for example, restructurings impact morale which may impact the motivation and productivity of the people of a business in complex and unpredictable ways. No profit bridge can illustrate these interconnections, but it does show the financial implications of a restructuring and repositioning plan.

Recognising the limitations of the analysis, it is a very commonly used analysis by financial analysts, investors and accountants.

Table 4.3: Profit bridges

<table>
<thead>
<tr>
<th>£000s</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase/(decrease) in sales</td>
<td>(3,763)</td>
<td>2,145</td>
<td>2,406</td>
</tr>
<tr>
<td>Increase/(decrease) in gross</td>
<td>0</td>
<td>6,546</td>
<td>(0)</td>
</tr>
<tr>
<td>(Increase)/decrease in overheads including leases</td>
<td>1,163</td>
<td>(1,009)</td>
<td>(1,846)</td>
</tr>
<tr>
<td>Increase/(decrease) in EBITDA</td>
<td>(2,601)</td>
<td>7,682</td>
<td>559</td>
</tr>
<tr>
<td>(Increase)/decrease in depreciation</td>
<td>833</td>
<td>1,528</td>
<td>23</td>
</tr>
<tr>
<td>(Increase)/decrease in exceptional costs</td>
<td>(3,500)</td>
<td>3,500</td>
<td>0</td>
</tr>
<tr>
<td>Increase/(decrease) in EBITA</td>
<td>(5,267)</td>
<td>12,710</td>
<td>582</td>
</tr>
<tr>
<td>Opening EBITA</td>
<td>12,763</td>
<td>10,162</td>
<td>17,844</td>
</tr>
<tr>
<td>Increase/(decrease) in EBITA</td>
<td>(2,601)</td>
<td>7,682</td>
<td>559</td>
</tr>
<tr>
<td>Closing EBITA</td>
<td>10,162</td>
<td>17,844</td>
<td>18,403</td>
</tr>
</tbody>
</table>

- **One-off restructuring costs**
- **Step change in profit is driven by higher gross margins**
The profit bridge highlights the salient features of this investment proposal. The business is restructured to achieve higher gross margins. Thereafter it grows at a broadly inflationary rate. This is important in structuring the investment since the vast majority of value will be created by the implementation of the plan in the early years of the investment. Thereafter, unless a new strategy is put in place that will accelerate growth in profitability, value accrues more slowly.

4.2 Funding requirement

The task for an investor is to structure an investment proposal against these projections (and the sensitivities) and offer an assumed purchase price (enterprise value) of £100m to the shareholders, representing a ratio of enterprise value/EBIT of 12.9 times (Table 4.4). The purchaser must also fund ongoing periodic working capital requirements (overdrafts, letters of credit, hedging etc) and pay the costs of the funders and advisers. Furthermore, if UK shares are acquired, stamp duty will be payable at 0.5% of the value of the offer.

Table 4.4: Funding requirement

<table>
<thead>
<tr>
<th></th>
<th>£000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of 100% of shares</td>
<td>90,000</td>
</tr>
<tr>
<td>Refinance 100% existing debt</td>
<td>10,000</td>
</tr>
<tr>
<td>Enterprise value</td>
<td>100,000</td>
</tr>
<tr>
<td>Periodic working capital</td>
<td>2,500</td>
</tr>
<tr>
<td>Stamp duty @ 0.5%</td>
<td>450</td>
</tr>
<tr>
<td>Fees and expenses inc VAT</td>
<td>5,550</td>
</tr>
<tr>
<td>Total requirement</td>
<td>108,500</td>
</tr>
<tr>
<td>Enterprise value</td>
<td>100,000</td>
</tr>
<tr>
<td>Current EBITDA</td>
<td>7,762</td>
</tr>
<tr>
<td>EV/EBIT</td>
<td>12.9</td>
</tr>
<tr>
<td>Equivalent P/E ratio</td>
<td>17.9</td>
</tr>
</tbody>
</table>
4.2.1 What are the transaction fees and expenses for?

Transactions costs are a significant element in the funding requirement. These fall into a number of categories:

**Transaction taxes**

Any acquisition potentially creates a number of taxes that have to be paid at completion, the most common of which is, in the UK, stamp duty. In the UK stamp duty is a tax payable on all share purchases at 0.5%.

In addition to stamp duty there is VAT payable on many of the advisory fees that are discussed below.

**Investors and lenders fees**

- **Arrangement fees**: all lenders and investors generally charge fees as upfront payments when they invest. As discussed earlier these fees may result in changes in incentives and risk/reward profiles.

- **Monitoring fees**: many lenders and investors charge further ongoing fees to recover the costs of their ongoing monitoring of any investment or loans.

- **Underwriting fees**: where a lender or investor is prepared to temporarily take on the full amount of the loans and/or investment prior to a later syndication, this underwriter will charge an underwriters' fee.

From the perspective of the borrower all of these fees are simply costs of doing the transaction and in assessing the overall cost of funding the transaction should be treated in the same way as interest or any other costs.

**Advisers’ fees**

We saw in section 2 that there are a number of legal and financial advisers in any transaction. Each will require payment from the acquirer or vendor. The acquirer’s costs will be recharged to the Newco set up to make the acquisition.

4.2.2 What are contingent fee arrangements?

Contingent fees are fees that are only payable on the successful conclusion of a transaction. They transfer the risks (and rewards) of providing a particular service from the sponsors of a transaction to their advisers. They also reduce the fixed costs of the users of advisers, but increase their variable costs.

Where the advisers are retained to advise whether or not to pursue a particular investment, contingent fees create conflicts of interest for the advisers. The adviser has no incentive to advise against doing any particular deal, but strong incentives to act as a sponsor for a transaction. The constraint on sponsoring poor transactions is two-fold. Firstly there is a direct liability issue for poor advice. The limit of the liability of advisers who give poor advice is defined in the terms of their engagement with their client. Secondly there is the impact of reputational risk on the ability of an organisation to generate new business.

Over the years there has been a great deal of discussion between the professionals providing services and banks and private equity houses regarding contingency and the amount and form of the liabilities of advisers. The Auditing Standards Board, the ICAEW and other professional bodies place strict limits on the services that may be provided by their members on a contingent basis.

4.3 Funding structure

The funding structure needs to accommodate:

1. The purchase price of the shares.
2. The treatment of the proceeds from 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. The version presented here is illustrative only.

---

8 See APB Ethical Standard 5 (Revised), Non-Audit Services Provided To Audited Entities, April 2008 and Ethical Standards for Reporting Accountants, October 2006.
Sources of funds for the worked example are as follows:

**Table 4.5: Sources of funding**

<table>
<thead>
<tr>
<th>Funding structure</th>
<th>£000s</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>500</td>
<td>0.5%</td>
</tr>
<tr>
<td>Private equity investor</td>
<td>47,500</td>
<td>43.8%</td>
</tr>
<tr>
<td>Mezzanine</td>
<td>13,000</td>
<td>12.0%</td>
</tr>
<tr>
<td>Bank</td>
<td>47,500</td>
<td>43.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>108,500</td>
<td>100%</td>
</tr>
</tbody>
</table>

Around 44% of all funding in the example comes from the private equity investors. The same amount (including working capital facilities) comes from secured banking and the balance (12%) is in the form of mezzanine finance, which we assume is provided by the banks, but could be provided by a specialist mezzanine fund.

In section 3 we explained how the layers of finance are structured to take account of the available security and cash flows. Using these methods and analytical techniques a detailed structure of the transaction is given below. It is important to understand that there may be a number of different capital structures that are appropriate to the business and that there is no one right answer to this type of analysis. There is an intimate relationship between the capital structure chosen and, for example, the future strategy of the business, the expectations of the parties to the deal regarding the future volatility and growth in the external market and the appetite of all parties for risk.

Figure 4.5 shows the progression from the funding requirement to the detailed financial structure and finally the share: loan split. The graphic illustrates how risk is allocated between banks, mezzanine providers and equity investors, but nevertheless most of the invested monies are in loans, not shares.
The overall structure contains seven different layers of finance as explained below.

The banking and mezzanine package provides 55.8% 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 loan at an interest rate of LIBOR + margin generally with a flat repayment profile 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 flows in the particular period are applied to repaying the loan.

3. **'B' senior loan**: this is a loan that is repaid after the ‘A’ loan at a higher margin above LIBOR to reflect its longer term. For security purposes it ranks alongside the ‘A’ senior loan. Typically this would have been a ‘bullet loan’ ie, repayable in a single instalment after the ‘A’ loan, but in this example it starts to be repaid after year 3 reflecting the early repayment of part of the ‘A’ loan.

4. **'C' mezzanine PIK loan**: a long-term loan ranking after the ‘A’ and ‘B’ senior loans for security purposes, and repayable after the senior debt has been repaid. To reflect the increased risk of this loan, the interest rate is higher and the loan also has an equity warrant entitling the mezzanine providers to subscribe for 2% of the equity of the group.

The private equity fund provides funding in two layers:

5. **'D' PIK institutional loan stock**: this loan ranks after the senior debt and mezzanine, is unsecured and therefore carries significant risk. The loan is a PIK loan which, as explained in section 3, rolls up its interest by issuing further loan notes rather than paying interest in cash.

6. **Institutional ‘A’ preferred ordinary shares**: these shares will have preferential rights when compared to the other ordinary shares invested in by management.

As illustrated in section 3, the private equity fund is seeking to maximise the blended return on their total investment 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.

As noted in section 3.3.5 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. This is provided as:

7. **Ordinary shares**, having none of the preferred rights of the ‘A’ ordinary shares other than to share in capital gains.

---

1 See glossary for definition.
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 projected consolidated profit and loss accounts after funding

<table>
<thead>
<tr>
<th>Funding structure</th>
<th>Actual</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>167,250</td>
<td>158,888</td>
<td>163,654</td>
<td>168,564</td>
<td>173,621</td>
</tr>
<tr>
<td>EBITA</td>
<td>7,762</td>
<td>2,495</td>
<td>15,205</td>
<td>15,787</td>
<td>16,383</td>
</tr>
<tr>
<td>EBIT</td>
<td>7,762</td>
<td>(652)</td>
<td>12,057</td>
<td>12,640</td>
<td>13,235</td>
</tr>
<tr>
<td>Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘A’ senior</td>
<td>(1,440)</td>
<td>(1,200)</td>
<td>(763)</td>
<td>(572)</td>
<td></td>
</tr>
<tr>
<td>‘B’ senior</td>
<td>(715)</td>
<td>(715)</td>
<td>(715)</td>
<td>(655)</td>
<td></td>
</tr>
<tr>
<td>‘C’ mezzanine</td>
<td>(1,560)</td>
<td>(1,755)</td>
<td>(1,755)</td>
<td>(1,755)</td>
<td></td>
</tr>
<tr>
<td>‘D’ institutional loanstock</td>
<td>(4,520)</td>
<td>(4,972)</td>
<td>(5,469)</td>
<td>(6,016)</td>
<td></td>
</tr>
<tr>
<td>Overdraft cash on deposit</td>
<td>(800)</td>
<td>(8,118)</td>
<td>(8,625)</td>
<td>(8,677)</td>
<td>(9,033)</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>6,962</td>
<td>(8,770)</td>
<td>3,432</td>
<td>3,962</td>
<td>4,203</td>
</tr>
<tr>
<td>Tax</td>
<td>(1,950)</td>
<td>(1,750)</td>
<td>(3,371)</td>
<td>(3,751)</td>
<td>(4,039)</td>
</tr>
<tr>
<td>Deferred tax</td>
<td>(298)</td>
<td>(355)</td>
<td>(263)</td>
<td>(194)</td>
<td></td>
</tr>
<tr>
<td>Retained profit</td>
<td>5,012</td>
<td>(10,818)</td>
<td>(294)</td>
<td>(51)</td>
<td>(31)</td>
</tr>
</tbody>
</table>

As a further simplifying assumption all costs are treated as being recognised at completion. This would not normally be the case. Costs of issuing debt instruments are accounted for under IAS 39, and costs of issuing equity instruments are accounted for under IAS 32. All other costs associated with the acquisition must be expensed.

The business thus forecasts a fall in net profit before tax from £7m profit before tax in the year prior to the transaction to a £14.8m loss in year 1. However this apparent reversal of performance reflects both the accounting treatment of goodwill, transaction fees and costs and interest charges (both paid in cash and rolled up) which are summarised in Table 4.7 above, Table 4.8 and Figure 4.7 over.

10 All transaction fees have been omitted from the analysis.
Table 4.8: Reconciliation of interest charges

<table>
<thead>
<tr>
<th>Interest payment reconciliation</th>
<th>Actual</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit and loss charge</td>
<td>(800)</td>
<td>(8,118)</td>
<td>(8,622)</td>
<td>(8,694)</td>
<td>(9,077)</td>
</tr>
<tr>
<td>Interest rolled up and not paid</td>
<td>0</td>
<td>4,520</td>
<td>4,972</td>
<td>5,469</td>
<td>6,016</td>
</tr>
<tr>
<td>Cash interest paid</td>
<td>(800)</td>
<td>(3,598)</td>
<td>(3,750)</td>
<td>(3,225)</td>
<td>(3,060)</td>
</tr>
</tbody>
</table>

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 PIK interest increases as interest-on-interest is charged.

Figure 4.7: Difference between interest accrued and interest paid

The difference between accrued interest and interest paid is the amount of interest rolled up.

Figure 4.8: Cash flows: before and after finance costs

Proceeds from property sale
Effect of cash sweep after sales in year 1

A detailed worked example of a leveraged buy-out and a restructuring
The cash flows of the business are therefore materially different to the reported profits, as shown in Figure 4.8 and Table 4.9.

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

<table>
<thead>
<tr>
<th>Summary of projected cash flows</th>
<th>Actual</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITA</td>
<td>7,762</td>
<td>2,495</td>
<td>15,205</td>
<td>15,787</td>
<td>16,383</td>
</tr>
<tr>
<td>Capex</td>
<td>(2,000)</td>
<td>(5,000)</td>
<td>(2,500)</td>
<td>(2,500)</td>
<td>(2,500)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>5,000</td>
<td>4,167</td>
<td>2,639</td>
<td>2,616</td>
<td>2,596</td>
</tr>
<tr>
<td>Working capital</td>
<td>(500)</td>
<td>3,262</td>
<td>(292)</td>
<td>(301)</td>
<td>(310)</td>
</tr>
<tr>
<td>Proceeds of sale of fixed assets</td>
<td>0</td>
<td>10,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>10,262</td>
<td>14,924</td>
<td>15,052</td>
<td>15,602</td>
<td>16,169</td>
</tr>
<tr>
<td>Interest</td>
<td>(800)</td>
<td>(3,598)</td>
<td>(3,650)</td>
<td>(3,225)</td>
<td>(3,060)</td>
</tr>
<tr>
<td>Tax</td>
<td>9,462</td>
<td>11,326</td>
<td>11,401</td>
<td>12,378</td>
<td>13,109</td>
</tr>
<tr>
<td>Draw down/(repayment) of debt</td>
<td>(1,950)</td>
<td>(490)</td>
<td>(1,321)</td>
<td>(3,250)</td>
<td>(3,957)</td>
</tr>
</tbody>
</table>

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 4.9 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. Note that the definition used is adjusted to add back budgeted restructuring costs. It is not uncommon for the bank and company/private equity investors to negotiate the exact definition of each covenant, as well as the level at which it is set, so that it is tailored precisely to the individual assumptions that underlie the transaction.

**Figure 4.9: Forecast values of interest cover and cash cover**

EBITA adjusted to add back budgeted restructuring.

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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 analogous to loan-to-value ratios in a mortgage. It is summarised in Figure 4.10, showing each loan layered on the next separately. The bank ‘A’ and ‘B’ senior loans become progressively less risky as they are repaid.

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.

4.4.1 Restructured balance sheet

The output of the financial engineering process is a restructured balance sheet that is tailored to accommodate the plan of the business. The forecast balance sheet of the business is shown in Table 4.10 below. The rolled up PIK interest has been shown as an increase in the loanstock.

<table>
<thead>
<tr>
<th>£000s</th>
<th>Opening</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goodwill</td>
<td>62,950</td>
<td>59,503</td>
<td>56,055</td>
<td>52,608</td>
<td>49,160</td>
</tr>
<tr>
<td>Tangible fixed assets</td>
<td>25,000</td>
<td>15,833</td>
<td>15,694</td>
<td>15,579</td>
<td>15,482</td>
</tr>
<tr>
<td></td>
<td>87,950</td>
<td>75,336</td>
<td>71,749</td>
<td>68,187</td>
<td>64,642</td>
</tr>
<tr>
<td><strong>Working capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stocks</td>
<td>15,000</td>
<td>13,815</td>
<td>14,229</td>
<td>14,656</td>
<td>15,096</td>
</tr>
<tr>
<td>Trade debtors</td>
<td>20,000</td>
<td>18,565</td>
<td>19,122</td>
<td>19,695</td>
<td>20,286</td>
</tr>
<tr>
<td>Other current assets</td>
<td>2,500</td>
<td>2,375</td>
<td>2,446</td>
<td>2,520</td>
<td>2,595</td>
</tr>
<tr>
<td>Creditors</td>
<td>(22,500)</td>
<td>(22,246)</td>
<td>(22,913)</td>
<td>(23,600)</td>
<td>(24,308)</td>
</tr>
<tr>
<td>Other creditors</td>
<td>(2,000)</td>
<td>(2,771)</td>
<td>(2,854)</td>
<td>(2,939)</td>
<td>(3,028)</td>
</tr>
<tr>
<td></td>
<td>13,000</td>
<td>9,738</td>
<td>10,030</td>
<td>10,332</td>
<td>10,641</td>
</tr>
<tr>
<td><strong>Other creditors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation tax</td>
<td>(490)</td>
<td>0</td>
<td>(440)</td>
<td>(937)</td>
<td>(1,007)</td>
</tr>
<tr>
<td>Deferred tax</td>
<td>(460)</td>
<td>(758)</td>
<td>(1,113)</td>
<td>(1,376)</td>
<td>(1,571)</td>
</tr>
<tr>
<td>Reduced working capital requirement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sale of £10m property

A detailed worked example of a leveraged buy-out and a restructuring
Table 4.10: (continued)

<table>
<thead>
<tr>
<th>£000s</th>
<th>Opening</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net borrowings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'A' senior</td>
<td>(32,000)</td>
<td>(26,667)</td>
<td>(16,951)</td>
<td>(12,714)</td>
<td>(8,476)</td>
</tr>
<tr>
<td>'B' senior</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(11,905)</td>
<td>(10,809)</td>
</tr>
<tr>
<td>'C' mezzanine – PIK</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
</tr>
<tr>
<td>'D' institutional loanstock</td>
<td>(45,200)</td>
<td>(49,720)</td>
<td>(54,692)</td>
<td>(60,161)</td>
<td>(66,177)</td>
</tr>
<tr>
<td>Cash/overdraft</td>
<td>0</td>
<td>5,503</td>
<td>5,867</td>
<td>9,662</td>
<td>13,480</td>
</tr>
<tr>
<td></td>
<td>(103,200)</td>
<td>(96,884)</td>
<td>(91,776)</td>
<td>(88,117)</td>
<td>(84,982)</td>
</tr>
<tr>
<td><strong>Net assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3,200)</td>
<td>(12,568)</td>
<td>(11,550)</td>
<td>(11,913)</td>
<td>(12,276)</td>
</tr>
<tr>
<td>Ordinary shares</td>
<td>2,800</td>
<td>2,800</td>
<td>2,800</td>
<td>2,800</td>
<td>2,800</td>
</tr>
<tr>
<td>Reserves</td>
<td>(6,000)</td>
<td>(15,368)</td>
<td>(14,350)</td>
<td>(14,713)</td>
<td>(15,076)</td>
</tr>
<tr>
<td></td>
<td>(3,200)</td>
<td>(12,568)</td>
<td>(11,550)</td>
<td>(11,913)</td>
<td>(12,276)</td>
</tr>
</tbody>
</table>

The presentation of the company’s balance sheet above shows net assets as negative from completion. An alternative presentation commonly used in the management accounts of private equity-backed companies shows the loan stock as if it were equity as shown in Table 4.11 below. This presentation is justified because while the loan stock in isolation is a debt-like instrument, it is in fact part of the overall equity investment and has equity-like risks.

The 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 equivalent to distributing all profits as dividends at the year end.

Table 4.11: Alternative balance sheet presentation

<table>
<thead>
<tr>
<th>£000s</th>
<th>Opening</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net assets per the accounts</td>
<td>(3,200)</td>
<td>(12,568)</td>
<td>(11,550)</td>
<td>(11,913)</td>
<td>(12,276)</td>
</tr>
<tr>
<td>'D' institutional loanstock</td>
<td>45,200</td>
<td>49,720</td>
<td>54,692</td>
<td>60,161</td>
<td>66,177</td>
</tr>
<tr>
<td>Net assets attributable to shareholders</td>
<td>42,000</td>
<td>37,152</td>
<td>43,142</td>
<td>48,249</td>
<td>53,902</td>
</tr>
<tr>
<td>Increase/(decrease) in net assets</td>
<td></td>
<td>(4,848)</td>
<td>5,991</td>
<td>5,106</td>
<td>5,653</td>
</tr>
<tr>
<td>(Increase) in accrued value of 'D' loanstock</td>
<td></td>
<td>(4,520)</td>
<td>(4,972)</td>
<td>(5,469)</td>
<td>(6,015)</td>
</tr>
<tr>
<td>% of value accruing to loanstock</td>
<td></td>
<td></td>
<td>83%</td>
<td>107%</td>
<td>106%</td>
</tr>
</tbody>
</table>

4.4.2 PIK loan stock. What is ‘equity illusion’?

The representation of the balance sheet in Table 4.11 highlights a feature that has become increasingly common over the past decade: the growth in net assets is almost entirely paid to the holders of the PIK loan note, typically of the private equity investor.

Table 4.12: PIK debt and the equity illusion

<table>
<thead>
<tr>
<th>Alternative presentation of balance sheet</th>
<th>Opening</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net assets per the accounts</td>
<td>(3,200)</td>
<td>(12,568)</td>
<td>(11,550)</td>
<td>(11,913)</td>
<td>(12,276)</td>
</tr>
<tr>
<td>'D' institutional loanstock</td>
<td>45,200</td>
<td>49,720</td>
<td>54,692</td>
<td>60,161</td>
<td>66,177</td>
</tr>
<tr>
<td>Net assets attributable to shareholders</td>
<td>42,000</td>
<td>37,152</td>
<td>43,142</td>
<td>48,249</td>
<td>53,902</td>
</tr>
<tr>
<td>Increase/(decrease) in net assets</td>
<td>(4,848)</td>
<td>5,991</td>
<td>5,106</td>
<td>5,653</td>
<td></td>
</tr>
<tr>
<td>(Increase) in accrued value of 'D' loanstock</td>
<td></td>
<td>(4,520)</td>
<td>(4,972)</td>
<td>(5,469)</td>
<td>(6,015)</td>
</tr>
<tr>
<td>% of value accruing to loanstock</td>
<td></td>
<td></td>
<td>83%</td>
<td>107%</td>
<td>106%</td>
</tr>
</tbody>
</table>
In this type of structure management only benefit from a high equity percentage if the business can grow more rapidly than the PIK debt accrues interest. When businesses go ‘ex-growth’, value flows from the ordinary shareholders (ie, management) to the loanstock holders, (the private equity investors) due to the rolling up of interest-on-interest. This may be a deliberate trigger mechanism designed to force the earliest consideration of an exit, but in practice it can erode management incentives significantly if it is, or is perceived to be, inequitable.

This issue may also arise in secondary buy-outs where management rollover their original equity stake into a higher equity stake in the new company, but a layer of high cost PIK debt ranks ahead of that new equity. Integrated finance structures where one institution provides all the layers of capital are often characterised by high yield to the institution and higher equity stake to the management team. The structure increases the risks and rewards of management while protecting the institutional investor against some of the risks of the investment.

4.5 Taxation: how much tax is paid by a private equity-backed company?

It is of utmost importance for any commentator or analyst to clearly understand that there is almost always a difference between the profits reported in a company’s audited accounts and the profits calculated for taxation purposes. Failure to understand this results in misconceptions in the public understanding of how businesses are taxed and incentivised to act by the taxation system.

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

Table 4.13: Restatement of profit for tax purposes in a typical company

<table>
<thead>
<tr>
<th>Excess debt to be refinanced</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit before tax in accounts</td>
<td>(8,770)</td>
<td>3,432</td>
<td>3,962</td>
<td>4,203</td>
</tr>
<tr>
<td>1. Depreciation</td>
<td>4,167</td>
<td>2,639</td>
<td>2,616</td>
<td>2,596</td>
</tr>
<tr>
<td>2. Writing down allowances</td>
<td>(4,375)</td>
<td>(3,906)</td>
<td>(3,555)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

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 or capital 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 that have been deferred, not current ones.

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 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 for corporation tax.

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.

It is important for commentators and analysts to understand that the rules on interest deductibility have changed significantly in the past few years to reduce the deductibility of interest in most leveraged buy-outs.

4. **Goodwill deductibility**: in section 3 we explained that goodwill is the difference between the acquisition cost of a business and its net asset value. The calculation of the value of goodwill is illustrated in Table 4.14.

<table>
<thead>
<tr>
<th>Table 4.14: Calculation of goodwill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of 100% of shares</td>
</tr>
<tr>
<td>90,000</td>
</tr>
<tr>
<td>Net assets acquired</td>
</tr>
<tr>
<td>Goodwill</td>
</tr>
</tbody>
</table>
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 £3.1m. 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. Note that if a company’s goodwill is impaired, a company will report a loss in the year equal to the reduction in the value of the goodwill. A distressed company may therefore report both reduced trading profits and a significant increase in losses due to the one-off impairment in goodwill. This one-off impairment charge has no impact on taxation.

5. **Overseas profit and double taxation:** where profits have been earned and taxed in another country, there are treaties between countries that are designed to avoid the same income being taxed a second time.

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;
- 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; and
- when a strategy is implemented that improves profitability, generally more corporation tax will be paid, even in highly leveraged structures.

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 that the UK receives a high proportion of the tax revenues generated by interest and fees.
4.6.1 Due diligence

Due diligence is the process that is employed to check, to the extent that it is possible, that the assumptions that underpin the value of an offer are not incorrect. The private equity industry has been instrumental in the development of best practice in pre-acquisition due diligence. It is argued by some that these processes gave the industry a material advantage in the overall market for corporate control. The focus of pre-deal investigations on the cash flows of the target not only underpins a valuation, but also enables the private equity fund to avoid many expensive mistakes by withdrawing from deals that are not viable.

Due diligence will cover all material relationships, contacts and assets of the target company using a combination of legal, accounting, market, insurance, environmental and any other specialist advisers.

Typically full due diligence will take not less than three or four weeks to complete and will be a condition of any initial offer a private equity fund makes.

The outputs of the due diligence process will be extensive and have often enabled private equity purchasers to use their enhanced knowledge to negotiate from a position of strength after the completion of diligence. This may have contributed to the reputation of private equity buyers for ‘chipping’ the agreed price prior to completion.

4.6.2 What is vendor due diligence and how does it impact risks/rewards?

To address the problems that can arise if due diligence is allowed to be performed by the acquirer, it became increasingly common for vendors to commission due diligence on behalf of the purchasers – so-called vendor due diligence.

Vendor due diligence is provided and addressed to the acquirer by the authors once a headline transaction is agreed, but the initial scope of the review is set by the vendor who has the opportunity to review the reports before the acquirer does. It is argued that this reduces the risk of diligence backed price chips close to completion and, as it can be completed prior to agreeing a deal, enables the process to be streamlined by several weeks. The counter argument is that any purchaser will wish to choose their own advisers and the terms on which they are working, which may not be those that would have been chosen by the potential purchaser.

The use of vendor due diligence increased as market activity increased. It may be reasonable to expect it to decrease as transaction activity is low and the funders of acquirers, particularly banks, wish to use their own advisers rather than have them imposed by the vendors. This seems to be consistent with a view that vendor due diligence transfers risk to the purchaser or conversely captures a greater share of the rewards of a transaction for the vendor rather than the acquirer.

4.7 Sensitivity analysis

Sensitivity analysis is often completed by the providers of due diligence services, but it is strictly not a diligence activity as it relates to the impact of changing assumptions rather than the evaluation of the realism of those assumptions.

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.

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 4.14 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 a P/E ratio of 12 (ie, 12 times forecast EBITA less a full tax charge).

<table>
<thead>
<tr>
<th>Exit value</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBDIT</td>
<td>5,995</td>
<td>15,205</td>
<td>15,787</td>
<td>16,383</td>
<td>16,399</td>
</tr>
<tr>
<td>Notional tax charge</td>
<td>-1,679</td>
<td>-4,257</td>
<td>-4,420</td>
<td>-4,588</td>
<td>-4,592</td>
</tr>
<tr>
<td>P/E ratio</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Gross capitalisation</td>
<td>51,799</td>
<td>131,369</td>
<td>136,402</td>
<td>141,546</td>
<td>141,684</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'A' senior</td>
<td>(26,667)</td>
<td>(16,951)</td>
<td>(12,714)</td>
<td>(8,476)</td>
<td>(4,238)</td>
</tr>
<tr>
<td>'B' senior</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(11,905)</td>
<td>(10,809)</td>
<td>(9,714)</td>
</tr>
<tr>
<td>'C' mezzanine – PIK</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
<td>(13,000)</td>
</tr>
<tr>
<td>'D' institutional loanstock</td>
<td>(49,720)</td>
<td>(54,692)</td>
<td>(60,161)</td>
<td>(66,177)</td>
<td>(72,795)</td>
</tr>
<tr>
<td>Cash/(overdraft)</td>
<td>4,190</td>
<td>2,908</td>
<td>6,313</td>
<td>10,165</td>
<td>14,360</td>
</tr>
<tr>
<td>Net debt</td>
<td>(98,196)</td>
<td>(94,736)</td>
<td>(91,467)</td>
<td>(88,297)</td>
<td>(85,387)</td>
</tr>
<tr>
<td>Net equity value</td>
<td>(46,398)</td>
<td>36,633</td>
<td>44,935</td>
<td>53,248</td>
<td>56,298</td>
</tr>
<tr>
<td>Equity value as % of enterprise value</td>
<td>na</td>
<td>28%</td>
<td>33%</td>
<td>38%</td>
<td>40%</td>
</tr>
</tbody>
</table>

The equity value initially reduces sharply then is projected to rise due to operational improvements. Thereafter equity value grows slowly and is due primarily to the accumulation of cash surpluses and debt repayment.
### Table 4.16: Allocation of net equity value

<table>
<thead>
<tr>
<th>Split of proceeds</th>
<th>% Equity value</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>17.5%</td>
<td>0</td>
<td>6,411</td>
<td>7,864</td>
<td>9,318</td>
<td>9,852</td>
</tr>
<tr>
<td>Private equity investors</td>
<td>80.5%</td>
<td>0</td>
<td>29,490</td>
<td>36,174</td>
<td>42,865</td>
<td>45,320</td>
</tr>
<tr>
<td>'C' mezzanine</td>
<td>2.0%</td>
<td>0</td>
<td>733</td>
<td>899</td>
<td>1,065</td>
<td>1,126</td>
</tr>
<tr>
<td>Equity value</td>
<td>100%</td>
<td>0</td>
<td>36,633</td>
<td>44,935</td>
<td>53,248</td>
<td>56,298</td>
</tr>
<tr>
<td>Management % of enterprise value</td>
<td>na</td>
<td>0.0%</td>
<td>4.9%</td>
<td>5.8%</td>
<td>6.6%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

As we have emphasised throughout the analysis it is the blended return on the total amount invested that concerns the private equity fund, not the return on the equity element of their investment. The effect on incremental value growth of the total investment including the PIK loan stock is summarised below (Table 4.17).

### Table 4.17: Projected share of exit enterprise value by investor

<table>
<thead>
<tr>
<th>Split of proceeds</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>94%</td>
<td>31%</td>
<td>24%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Private equity fund</td>
<td>6%</td>
<td>64%</td>
<td>71%</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td>Management</td>
<td>0%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Total value</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

It can be seen that the absolute value and the proportion of value that accrues to the private equity fund increases over time due to a combination of the effects of increasing enterprise value, de-leveraging by repaying bank debt and the effect of the PIK roll-up on loanstock values.

The increase in value can be analysed further to isolate the impact of operational performance improvements and the impact of the financial engineering.

### Table 4.18: Reconciliation of the relative effects of operating performance and financial engineering on equity value at exit in years 2 and 3

<table>
<thead>
<tr>
<th></th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in multiple</td>
<td>5,469</td>
<td>6,356</td>
</tr>
<tr>
<td>Change in EBITDA</td>
<td>25,900</td>
<td>30,046</td>
</tr>
<tr>
<td>Change in enterprise value</td>
<td>31,369</td>
<td>36,402</td>
</tr>
<tr>
<td>Change in enterprise value</td>
<td>31,369</td>
<td>36,402</td>
</tr>
<tr>
<td>Change in net debt</td>
<td>8,464</td>
<td>11,733</td>
</tr>
<tr>
<td>Change in equity value</td>
<td>39,833</td>
<td>48,135</td>
</tr>
<tr>
<td>% due to operating performance</td>
<td>79%</td>
<td>76%</td>
</tr>
<tr>
<td>% due to financial engineering</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The analysis in Table 4.18 shows 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. There are further analyses that can be undertaken to more fully understand the interconnection of operating performance, external market conditions and financial engineering, but these are outside the scope of this report.

The majority of return comes from efficiency improvements not financial engineering.
Table 4.19: Split of proceeds on exit

<table>
<thead>
<tr>
<th>Split of proceeds</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net debt including mezzanine warrant</td>
<td>48,476</td>
<td>40,776</td>
<td>32,204</td>
<td>23,185</td>
<td>13,717</td>
</tr>
<tr>
<td>Private equity investor</td>
<td>3,322</td>
<td>84,182</td>
<td>96,334</td>
<td>109,042</td>
<td>118,115</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>6,411</td>
<td>7,864</td>
<td>9,318</td>
<td>9,852</td>
</tr>
<tr>
<td>Total value</td>
<td>51,799</td>
<td>131,369</td>
<td>136,402</td>
<td>141,546</td>
<td>141,684</td>
</tr>
<tr>
<td>Debt</td>
<td>94%</td>
<td>31%</td>
<td>24%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Private equity fund</td>
<td>6%</td>
<td>64%</td>
<td>71%</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td>Management</td>
<td>0%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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 forecasts 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 loan stock interest roll-up. This position will either encourage management to exit after the achievement of the turnaround, 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 (exit year 3, PE = 12)

<table>
<thead>
<tr>
<th>Projected rates of return</th>
<th>Projected rates of return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior debt</td>
<td>4.9%</td>
</tr>
<tr>
<td>Mezzanine</td>
<td>16.2%</td>
</tr>
<tr>
<td>Private equity investment</td>
<td>25.4%</td>
</tr>
<tr>
<td>Management</td>
<td>150.5%</td>
</tr>
<tr>
<td>Overall cost of capital</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

The projected rates of return to the various participants based upon an exit in year 3 on a P/E 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 (Table 4.21) 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 P/E ratio

<table>
<thead>
<tr>
<th>IRR sensitivities</th>
<th>Exit PE ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of exit</td>
<td>10.00</td>
</tr>
<tr>
<td>Exit in year 3</td>
<td>16.3%</td>
</tr>
<tr>
<td>Exit in year 4</td>
<td>16.2%</td>
</tr>
<tr>
<td>Exit in year 5</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

Investment ‘base case’ forecast returns
4.9 Closing remarks

In this section we have described in some detail the process and logic of a particular fictional, but nevertheless realistic, leveraged buy-out. We have attempted to illustrate the way that each of the financial parties to the transaction layers their investment and how the risk and returns increase as each layer is structured.

We have briefly discussed how due diligence is used to verify the assumptions behind the plan and how sensitivity analysis is used to stress test the financial structure.

We have provided a detailed example showing why loss making private equity-backed companies nevertheless often pay corporation tax. We highlight the fact that contrary to some less well informed commentaries, interest on buy-out debt is not all tax deductible, and the rules on tax deductibility have significantly tightened, mainly prior to the more recent interest in private equity.
APPENDIX
SUMMARIES OF STUDIES
OF BUY-OUTS AND
PRIVATE EQUITY
### Table 1: Pre-buy-out governance in P2Ps*

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maupin (1987)</td>
<td>US P2P MBOs</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Singh (1990)</td>
<td>US P2P MBOs, LBOs</td>
<td></td>
<td>Prior takeover attempt, cash flow to sales and net assets to receivables predict likelihood of buy-out.</td>
</tr>
<tr>
<td>Weir, Laing and Wright (2005a)</td>
<td>UK MBO, MBI listed corporations</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Evans, Poa and Rath (2005)</td>
<td>Australia MBOs, acquisitions of listed corporations</td>
<td></td>
<td>Firms going private have higher liquidity, lower growth rates, lower leverage pre-buy-out, and lower R&amp;D. Free cash flow (FCF) is not significantly different. Takeover threat less likely to be associated with going private.</td>
</tr>
<tr>
<td>Boulton, Lehn, Segal (2006)</td>
<td>US Management and non-management led P2Ps</td>
<td></td>
<td>Firms going private under-performed but had more cash assets than industry peers, and had higher relative costs of compliance with Sarbanes-Oxley.</td>
</tr>
<tr>
<td>Weir and Wright (2006)</td>
<td>UK MBO, MBI, acquisitions of listed corporations</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Wright, Weir and Burrows (2007)</td>
<td>UK PTPs</td>
<td></td>
<td>Irrevocable commitments for PTPs depend on extent of takeover speculation, value of the bid and level of board shareholding, the premium offered to other shareholders and how active the private equity-bidder provider was in this market, especially in MBOs less so in MBIs.</td>
</tr>
<tr>
<td>Cornelli and Karakas (2008)</td>
<td>UK All P2Ps</td>
<td></td>
<td>Decreased in board size from pre- to post-PTP especially for LBOs funded by experienced private equity firms.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaplan (1989)</td>
<td>US LBOs</td>
<td></td>
<td>Investors in post-buy-out capital earn a median market-adjusted return of 37%.</td>
</tr>
<tr>
<td>Ljungqvist and Richardson (2002)</td>
<td>US VC and LBO funds</td>
<td></td>
<td>Mature funds started 1981–1993 generate IRRs in excess of S&amp;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.</td>
</tr>
<tr>
<td>Jones and Rhodes-Kropf (2003)</td>
<td>US VC and LBO funds</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Kaplan and Schoar (2005)</td>
<td>US VC and buy-out funds</td>
<td></td>
<td>LBO fund returns gross of fees earn returns in excess of S&amp;P 500 but net of fees slightly less than S&amp;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.</td>
</tr>
<tr>
<td>Knigge, Novak and Schmidt (2006)</td>
<td>Multi-country VC and buy-out funds</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>
Table 2: continued

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driessen, Lin and Phalippou (2007)</td>
<td>US</td>
<td>VC and buy-out funds</td>
<td>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 in larger and more experienced funds mainly caused by higher risk exposures, not abnormal performance.</td>
</tr>
<tr>
<td>Froud, Johal, Leaver and Williams (2007); Froud and Williams (2007)</td>
<td>UK</td>
<td>Mid and large-size funds</td>
<td>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.</td>
</tr>
<tr>
<td>Lerner, Schoar and Wongsunwai (2007)</td>
<td>US</td>
<td>VC and LBO funds</td>
<td>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.</td>
</tr>
<tr>
<td>Ljungqvist, Richardson and Wolfenzon (2007)</td>
<td>US</td>
<td>LBO funds</td>
<td>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.</td>
</tr>
<tr>
<td>Metrick and Yasuda (2007)</td>
<td>US</td>
<td>VC and LBO funds</td>
<td>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.</td>
</tr>
<tr>
<td>Nikoskelainen and Wright (2007)</td>
<td>UK</td>
<td>MBOs</td>
<td>Private returns to investors enhanced by context-dependent corporate governance mechanisms.</td>
</tr>
<tr>
<td>Diller and Kaserer (2008)</td>
<td>Europe</td>
<td>VC and MBO funds</td>
<td>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.</td>
</tr>
</tbody>
</table>

Table 3: Employment, wage and HRM effects*

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Unit of analysis</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wright and Coyne (1985)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>44% of firms shed employees on buy-out; 18% of pre-buy-out jobs lost subsequent re-employment but below pre-MBO levels.</td>
</tr>
<tr>
<td>Kaplan (1989)</td>
<td>US</td>
<td>Firm</td>
<td>LBOs</td>
<td>Small increase in employment post-buy-out but falls after adjusting for industry effects.</td>
</tr>
<tr>
<td>Lichtenberg and Siegel (1990)</td>
<td>US</td>
<td>Plant</td>
<td>LBOs, MBOs</td>
<td>8.5% fall in non-production workers over three-year period; production employment unchanged.</td>
</tr>
<tr>
<td>Muscarella and Vetsuypens (1990)</td>
<td>US</td>
<td>Firm</td>
<td>Reverse LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Authors</td>
<td>Country</td>
<td>Unit of analysis</td>
<td>Nature of transactions</td>
<td>Findings</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
<td>------------------</td>
<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Panel A: Employment effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smith (1990)</td>
<td>US</td>
<td>Firm</td>
<td>LBOs</td>
<td>Small increase in employment post-buy-out but falls after adjusting for industry effects.</td>
</tr>
<tr>
<td>Wright, et al. (1990a)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>25% of firms shed employment on buy-out.</td>
</tr>
<tr>
<td>Robbie, Wright and Thompson (1992); Robbie and Wright (1995)</td>
<td>UK</td>
<td>Firm</td>
<td>MBIs</td>
<td>38% reduced employment.</td>
</tr>
<tr>
<td>Wright, Thompson and Wright (1992)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>Average 6.3% fall in employment on MBO but subsequent 1.9% improvement by time of study.</td>
</tr>
<tr>
<td>Robbie, Wright and Ennew (1993)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs in receivership</td>
<td>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.</td>
</tr>
<tr>
<td>Amess and Wright (2007a)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs and MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Amess and Wright (2007b)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs, private equity and non-private equity-backed</td>
<td>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.</td>
</tr>
<tr>
<td>Cressy, Munari and Malipiero (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>Private equity backed and non-private equity-backed and companies</td>
<td>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.</td>
</tr>
<tr>
<td>Work Foundation (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>MBIs, MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright et al. (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Amess, Girma and Wright (2008)</td>
<td>UK</td>
<td>Firms</td>
<td>LBOs, MBOs, MBIs, acquisitions, private equity and non-private equity-backed</td>
<td>Private equity-backed LBOs have no significant effect on employment. Both non-private equity-backed LBOs and acquisitions have negative employment consequences.</td>
</tr>
<tr>
<td>Davis et al. (2008)</td>
<td>US</td>
<td>Firm &amp; establishment</td>
<td>Matched private equity-backed and non-private equity-backed firms and establishments</td>
<td>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.</td>
</tr>
<tr>
<td>Jelic (2008)</td>
<td>UK</td>
<td>Firms</td>
<td>MBOs, MBIs</td>
<td>More reputable private equity firms associated with increases in employment in both post-buy-out and post-exit phases.</td>
</tr>
<tr>
<td>Weir, Wright and Jones (2008)</td>
<td>UK</td>
<td>Firms</td>
<td>PTPs</td>
<td>Private equity-backed deals experienced job losses in years immediately after going private but employment increased subsequently, non-private equity-backed buy-outs increased employment after the first year post-deal.</td>
</tr>
</tbody>
</table>
### Table 3: continued

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Unit of analysis</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel B: Wages</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lichtenberg and Siegel (1990)</td>
<td>US</td>
<td>Plant</td>
<td>MBOs, LBOs</td>
<td>Decline in relative compensation of non-production workers.</td>
</tr>
<tr>
<td>Amess and Wright (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>Average wages in both MBOs and MBIs are lower than their non-buy-out industry counterparts.</td>
</tr>
<tr>
<td>Wright et al. (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>Wages grow post-buy-out compared to pre-buy-out year; the majority of MBOs and MBIs showed growth in wages.</td>
</tr>
<tr>
<td>Amess, Girma and Wright (2008)</td>
<td>UK</td>
<td>Firms</td>
<td>LBOs, MBOs, MBIs, acquisitions, private equity and non-private equity-backed</td>
<td>Employees gain higher wages after acquisitions but lower after LBO.</td>
</tr>
<tr>
<td><strong>Panel C: HRM effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wright et al. (1984)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>65% of firms recognised 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.</td>
</tr>
<tr>
<td>Bradley and Nejad (1989)</td>
<td>UK</td>
<td>Division</td>
<td>National Freight Corporation MEBO</td>
<td>Employee share ownership had greater effect on ‘cooperation’ than on performance but did improve employee cost consciousness.</td>
</tr>
<tr>
<td>Pendleton, Wilson and Wright (1998)</td>
<td>UK</td>
<td>Firm and employees</td>
<td>Privatised MEBOs</td>
<td>Shareholding and participation in decision making associated with feelings of ownership; perceptions of employee ownership significantly associated with higher levels of commitment and satisfaction.</td>
</tr>
<tr>
<td>Wright, et al. (1990a)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Bacon, Wright and Demina (2004)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Bruining, Boselie, Wright and Bacon (2003)</td>
<td>UK and Holland</td>
<td>Firm</td>
<td>MBOs</td>
<td>MBOs lead to increases in training and employee empowerment. These effects were stronger in the UK than in the Netherlands.</td>
</tr>
<tr>
<td>Amess, Brown and Thompson (2006)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>Employees in MBO firms have more discretion over their work practices.</td>
</tr>
<tr>
<td>Work Foundation (2007)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Bacon, Wright, Demina, Bruining and Boselie (2008)</td>
<td>UK and Holland</td>
<td>Firm</td>
<td>MBOs, MBIs, private equity and non-private equity-backed</td>
<td>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.</td>
</tr>
</tbody>
</table>
### Table 3: continued

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Unit of analysis</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacon, Wright, Scholes and Meuleman (2009)</td>
<td>Pan-European</td>
<td>Firm</td>
<td>All private equity-backed buy-outs above €5m transaction value</td>
<td>Negligible changes to union recognition, membership density and attitudes to trade union membership; absence of reductions in terms and conditions subject to joint regulation; more firms report consultative committees, which are more influential on their decisions, and increased consultation over firm performance and future plans; private equity firms adapt their approaches to different social models and traditional national industrial relations differences persist.</td>
</tr>
<tr>
<td>Boselie and Koene (2009)</td>
<td>Netherlands</td>
<td>Firm</td>
<td>Single firm private equity-backed buy-out negotiation</td>
<td>In private equity-backed buy-out negotiations, aloof top management can have negative effect on employee commitment and trust, exacerbating uncertainty and rendering HR-change initiatives powerless; binding effect of informal management practices undermined by financial pressures that dominated senior management decision making; divisional HR managers focused on divisional responsibilities in context of increasingly politicised relationships between division and centre; important for top management to engage with the organisation and introduce realistic people management initiatives; HR acting as a business partner with line management led to tension between corporate and divisional HR levels, limiting ability of local HR to engage with proactive corporate people management initiatives.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marais et al. (1989)</td>
<td>US</td>
<td>LBOs</td>
<td>No evidence of wealth transfer from pre-buy-out bondholders.</td>
</tr>
<tr>
<td>Asquith and Wizman (1990)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Cook et al. (1992)</td>
<td>US</td>
<td>LBOs</td>
<td>Bondholders with covenants offering low protection against corporate restructuring lose some percentage of their investment.</td>
</tr>
<tr>
<td>Warga and Welch (1993)</td>
<td>US</td>
<td>LBOs</td>
<td>Bondholders with covenants offering low protection against corporate restructuring lose some percentage of their investment.</td>
</tr>
<tr>
<td>Schipper and Smith (1988)</td>
<td>US</td>
<td>LBOs</td>
<td>Tax savings account for small fraction of value gains in LBOs; significant correlation between estimated tax savings and buy-out bid premium.</td>
</tr>
<tr>
<td>Jensen, Kaplan and Stiglin (1989)</td>
<td>US</td>
<td>LBOs</td>
<td>Total amount of taxes collected by government does not decrease as a result of LBOs.</td>
</tr>
<tr>
<td>Kaplan (1989b)</td>
<td>US</td>
<td>LBOs</td>
<td>Tax savings account for small fraction of value gains in LBOs; significant correlation between estimated tax savings and buy-out bid premium.</td>
</tr>
<tr>
<td>Muscarella and Vetsuyens (1990)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>Few control sample firms had lower tax rates than buy-outs.</td>
</tr>
<tr>
<td>Newbould, Chatfield and Anderson (1992)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
</tbody>
</table>
Table 4: continued

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renneboog, Simons and Wright (2007)</td>
<td>UK</td>
<td>PTPs</td>
<td>No significant relationship between pre-P2P tax to sales ratio and shareholder wealth gains (premia) on announcement of P2P but bidders willing to pay higher premia for firms with lower debt-to-equity ratios which proxies for the tax advantage of additional interest deductibility and for the ease of financing the takeover operation.</td>
</tr>
<tr>
<td>Weir, Jones and Wright (2008)</td>
<td>UK</td>
<td>PTPs</td>
<td>Tax paid is significantly below the industry average in each year post going private but is not statistically different in the year prior to going private but lower tax may be a function of lower profitability reported post P2P rather than from the tax shield element of going private.</td>
</tr>
</tbody>
</table>

Table 5: Longevity*

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaplan (1991)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright et al. (1993)</td>
<td>UK, France, Sweden, Holland</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright et al. (1994)</td>
<td>UK</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright et al. (1995)</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Gottschalg (2007)</td>
<td>Worldwide</td>
<td>Early and late stage private equity</td>
<td>Average longevity of private equity investment five years; average length of private equity investment compares favourably with that of blockholders in public firms.</td>
</tr>
<tr>
<td>Jelic (2008)</td>
<td>UK</td>
<td>MBOs and MBIs</td>
<td>Average time to exit 46 months; smaller and private equity-backed deals take longer to exit; private equity-backed IPOs exit sooner; backing by more reputable private equity firms increases likelihood of IPO exit.</td>
</tr>
<tr>
<td>Strömborg (2008)</td>
<td>Worldwide</td>
<td>Private equity-backed buy-outs</td>
<td>58% of deals exited more than five years after initial transaction; exits within two years account for 12% and have been decreasing.</td>
</tr>
<tr>
<td>Caselli, Garcia-Appendini and Ippolito (2009)</td>
<td>Italy</td>
<td>Early and late state private equity</td>
<td>Duration of investment shorter than in US and UK; exit primarily by trade sale; IRR positively related to initial undervaluation, target firm risk, private equity firm experience; fund size, lock-up clauses, puttable securities and exit ratchets.</td>
</tr>
</tbody>
</table>
Table 6: Asset sales and disposals

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhagat et al. (1990)</td>
<td>US</td>
<td>LBOs</td>
<td>43% of assets in hostile LBOs sold within three years.</td>
</tr>
<tr>
<td>Muscarella and Vetsuyrens (1990)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>42% of reverse LBOs divested or reorganised facilities; 25% made acquisitions; divestment activity greater among full LBOs.</td>
</tr>
<tr>
<td>Kaplan (1991)</td>
<td>US</td>
<td>LBOs</td>
<td>34% of assets sold within six years of buy-out.</td>
</tr>
<tr>
<td>Liebeskind et al. (1992)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright, Thompson and Robbie (1992)</td>
<td>UK</td>
<td>MBOs</td>
<td>18% sold surplus land and buildings; 21% sold surplus equipment.</td>
</tr>
<tr>
<td>Seth and Easterwood (1993)</td>
<td>US</td>
<td>Large LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Easterwood (1998)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright et al. (2007)</td>
<td>UK and Europe</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
</tbody>
</table>

Table 7: Post-exit effects

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holthausen and Larcker (1996)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Bruton et al. (2002)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>Agency cost problems did not reappear immediately following a reverse buy-out but took several years to re-emerge.</td>
</tr>
<tr>
<td>Jelic, Saadouni and Wright (2005)</td>
<td>UK</td>
<td>Reverse MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Cao and Lemer (2007, 2009)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>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 time.</td>
</tr>
<tr>
<td>Jelic (2008)</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>Improvements in employment, leverage, sales efficiency and sales up to five years post-IPO, especially for more reputable private equity firms; no significant change in employment and efficiency following non-float exit.</td>
</tr>
<tr>
<td>Von Drathen and Faleiro (2008)</td>
<td>UK</td>
<td>LBO backed and non-LBO-backed IPOs</td>
<td>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.</td>
</tr>
</tbody>
</table>
### Table 8: Distress, failure and recovery*

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruner and Eades</td>
<td>US</td>
<td>LBOs</td>
<td>Given Revco’s debt and preference dividend obligations and its context, low probability could have survived the first three years.</td>
</tr>
<tr>
<td>Kaplan and Stein</td>
<td>US</td>
<td>LBOs</td>
<td>Overpayment major cause of distress.</td>
</tr>
<tr>
<td>Wright et al.</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>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.</td>
</tr>
<tr>
<td>Andrade and Kaplan</td>
<td>US</td>
<td>LBOs</td>
<td>Net effect of high leverage and distress creates value after adjusting for market returns.</td>
</tr>
<tr>
<td>Citron, Wright,</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>Secured creditors recover on average 62% of loans in failed buy-outs.</td>
</tr>
<tr>
<td>Strömberg</td>
<td>Worldwide</td>
<td>Private equity backed-buy-outs</td>
<td>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.</td>
</tr>
<tr>
<td>Demiroglu and James</td>
<td>US</td>
<td>PTP LBOs</td>
<td>Buy-outs sponsored by high reputation private equity firms are less likely to experience financial distress or bankruptcy ex-post. Buy-outs sponsored by high reputation private equity firms are less likely to experience financial distress or bankruptcy ex-post.</td>
</tr>
<tr>
<td>Wilson, Wright and</td>
<td>UK</td>
<td>MBOs, MBIs, private equity-backed buy-outs, non buy-outs</td>
<td>Buy-outs have a higher failure rate than non-buy-outs with MBIs having a higher failure rate than MBOs which in turn have a higher failure rate than private equity backed buy-outs/buy-ins.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Nature of transactions</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Kaplan (1989)</td>
<td>US</td>
<td>LBOs</td>
<td>Profits and cash flows increase post-buy-out; operating income/assets up to 36% higher for LBOs compared to industry median.</td>
</tr>
<tr>
<td>Muscarella and Vetsuypens (1990)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Singh (1990)</td>
<td>US</td>
<td>Reverse LBOs</td>
<td>Revenue growth post-buy-out, working capital management and operating income better than industry comparators, especially for divisional LBOs.</td>
</tr>
<tr>
<td>Smith (1990)</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Bruining (1992)</td>
<td>Holland</td>
<td>MBOs</td>
<td>Buy-outs display significantly higher than industry average cash flow and return on investment.</td>
</tr>
<tr>
<td>Opler (1992)</td>
<td>US</td>
<td>LBOs</td>
<td>Operating cash flow/sales ratio increased by 16.5% on average three years post buy-out.</td>
</tr>
<tr>
<td>Wright, Thompson and Robbie (1992)</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>68% showed improvements in profitability; 17% showed a fall; 43% reduced debt days and 31% increased creditor days.</td>
</tr>
<tr>
<td>Smart and Waldfogel</td>
<td>US</td>
<td>LBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Chevalier (1995)</td>
<td>US</td>
<td>LBOs</td>
<td>Consumers may face higher prices in supermarkets subject to LBO.</td>
</tr>
<tr>
<td>Wright, Wilson and Robbie (1996)</td>
<td>UK</td>
<td>Matched MBOs and non-MBOs</td>
<td>Profitability higher for MBOs than comparable non-MBOs for up to five years.</td>
</tr>
<tr>
<td>Authors</td>
<td>Country</td>
<td>Nature of transactions</td>
<td>Findings</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Desbrieres and Schatt (2002)</td>
<td>France</td>
<td>MBOs, MBIs</td>
<td>Accounting performance changes depend on type of vendor.</td>
</tr>
<tr>
<td>Cressy, Munari, Malipero (2007)</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>Operating profitability of private-equity backed buy-outs greater than for comparable non-buy-outs by 4.5% over first three buy-out years.</td>
</tr>
<tr>
<td>Guo, Hotchkiss and Song (2007)</td>
<td>US</td>
<td>P2Ps</td>
<td>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.</td>
</tr>
<tr>
<td>Bously, Theismar and Saer (2009)</td>
<td>France</td>
<td>LBOs</td>
<td>Post-LBO growth in sales, assets, productivity and jobs higher in industries that have insufficient internal capital.</td>
</tr>
<tr>
<td>Weir, Wright and Jones (2009)</td>
<td>UK</td>
<td>PTPs</td>
<td>Performance deteriorates relative to the pre-buy-out situation but firms do not perform worse than firms that remain public and there is some evidence that performance improves; private equity-backed deals have a negative effect on profitability relative to pre-buy-out; private equity-backed deals performed better than the industry average; non-private equity-backed buy-outs expenses lower after going private and profit per employee higher, z-scores improved.</td>
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<tr>
<td>Lichtenberg and Siegel (1990a)</td>
<td>US</td>
<td>Plant</td>
<td>Divisional and full-firm LBOs and MBOs of public and private companies</td>
<td>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&amp;D investment</td>
</tr>
<tr>
<td>Amess (2002)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>MBOs enhance productivity; marginal value added productivity of labour is significantly higher than in comparable non-buy-outs.</td>
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<tr>
<td>Amess (2003)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Harris, Siegel and Wright (2005)</td>
<td>UK</td>
<td>Plant</td>
<td>Divisional and full-firm LBOs and MBOs of public and private companies</td>
<td>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.</td>
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<tr>
<td>Davis et al. (2009)</td>
<td>US</td>
<td>Firm/ establishment</td>
<td>Matched private equity-backed and non-private equity-backed firms and establishments</td>
<td>Private equity-backed firms increase productivity in two years post-transaction on average by 2% more than controls; 72% of increase due to more effective management; private equity firms more likely to close underperforming establishments as measured by labour productivity; private equity-backed firms outperformed control firms before buy-out.</td>
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<tr>
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<tr>
<td>Wright (1986)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>Divisional MBOs reduce dependence on trading activity with former parent.</td>
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<tr>
<td>Bull (1989)</td>
<td>US</td>
<td>Firm</td>
<td>MBOs, LBOs</td>
<td>Evidence of both cost reduction but greater managerial alertness to opportunities for wealth creation more important.</td>
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<td>Kaplan (1989)</td>
<td>US</td>
<td>Firm</td>
<td>LBOs</td>
<td>Capex falls immediately following LBO.</td>
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<tr>
<td>Malone (1989)</td>
<td>US</td>
<td>Firm</td>
<td>Smaller LBOs</td>
<td>Major changes in marketing and NPD; cost control given greater importance.</td>
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<tr>
<td>Lichtenberg and Siegel (1990)</td>
<td>US</td>
<td>Plant</td>
<td>LBOs, MBOs</td>
<td>LBOs typically in low R&amp;D industries. R&amp;D fall both pre- and post-buy-out not statistically significant; R&amp;D fall may be accounted for by divestment of more R&amp;D-intensive divisions.</td>
</tr>
<tr>
<td>Muscarella and Vetsuypens (1990)</td>
<td>US</td>
<td>Firm</td>
<td>Reverse LBOs</td>
<td>Capex declines compared to pre-LBO.</td>
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<td>Smith (1990)</td>
<td>US</td>
<td>Firm</td>
<td>LBOs</td>
<td>Capex and R&amp;D fall immediately following LBO.</td>
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<td>Wright et al. (1990b)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs, MBIs</td>
<td>Divisional buy-outs reduce trading dependence on former parent by introducing new products previously prevented from doing.</td>
</tr>
<tr>
<td>Green (1992)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Jones (1992)</td>
<td>UK</td>
<td>Firm</td>
<td>MBOs</td>
<td>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.</td>
</tr>
<tr>
<td>Wright, Thompson and Robbie (1992)</td>
<td>UK</td>
<td>Firm</td>
<td>Divisional, and full-firm MBOs of private companies</td>
<td>MBOs enhance new product development; 44% acquired new equipment and plant that would not otherwise have occurred.</td>
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<tr>
<td>Long and Ravenscraft (1993)</td>
<td>US</td>
<td>Division</td>
<td>LBOs and MBOs</td>
<td>LBOs result in a reduction in R&amp;D expenditure but LBOs typically in low R&amp;D industries; R&amp;D intensive buy-outs outperform non-buy-out industry peers and other buy-outs without R&amp;D expenditure.</td>
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<tr>
<td>Seth and Easterwood (1993)</td>
<td>US</td>
<td>Firm</td>
<td>LBOs</td>
<td>Buy-outs focus strategic activities towards more related businesses.</td>
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<tr>
<td>Lei and Hitt (1995)</td>
<td>N/A (theory paper)</td>
<td>N/A</td>
<td>N/A</td>
<td>LBOs may lead to a reduced resource base for organisational learning and technology development.</td>
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<tr>
<td>Robbie and Wright (1995)</td>
<td>UK</td>
<td>Firm</td>
<td>MBIs</td>
<td>Ability of management to effect strategic changes adversely affected by asymmetric information, need to attend to operational problems and market timing.</td>
</tr>
<tr>
<td>Wiersma and Liebeskind (1995)</td>
<td>US</td>
<td>Firm</td>
<td>Large LBOs</td>
<td>Large LBOs reduce lines of business and diversification.</td>
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<td>Zahra (1995)</td>
<td>US</td>
<td>Firm</td>
<td>MBOs</td>
<td>MBOs result in more effective use of R&amp;D expenditure and new product development.</td>
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<tr>
<td>Bruining and Wright (2002)</td>
<td>Holland</td>
<td>Firm</td>
<td>Divisional MBOs</td>
<td>MBOs result in more entrepreneurial activities such as new product and market development.</td>
</tr>
<tr>
<td>Bruining, Bonnet and Wright (2004)</td>
<td>Holland</td>
<td>Firm</td>
<td>MBOs</td>
<td>MBOs result in introduction of more strategic control systems that allow for entrepreneurial growth.</td>
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<tr>
<td>Brown, Fee and Thomas (2007)</td>
<td>US</td>
<td>Firm</td>
<td>Suppliers to LBOs and leveraged recapitalisations</td>
<td>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.</td>
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<td>Ernst and Young (2007)</td>
<td>Europe</td>
<td>Firms</td>
<td>Exited larger private equity-backed buy-outs</td>
<td>Two-thirds of growth in EBITDA from business expansion, with organic growth most important; acquisitions also important.</td>
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<td>Gottschalg (2007)</td>
<td>International</td>
<td>Firms</td>
<td>Private equity-backed LBOs</td>
<td>Pure restructuring deals less frequent than growth oriented deals; combination of growth-oriented (acquisitions, new marketing and markets, new products, JVs, etc.) and restructuring-oriented (divestments, layoffs, cost-cutting, closure of non-core units, etc.) changes common; 43% had complete/partial replacement of management.</td>
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<td>Acharya, Hahn and Kehoe (2008)</td>
<td>UK</td>
<td>Firms</td>
<td>Private equity-backed LBOs</td>
<td>Significant replacement of CEOs and CFOs either at the time of the deal or afterwards and leveraging of external support important especially related to investee out-performance.</td>
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<td>Cornelli and Karakas (2008)</td>
<td>Asia, Europe, UK</td>
<td>Firms</td>
<td>Private equity-backed PTPs (LBOs and MBOs)</td>
<td>High CEO and board turnover during post-PTP restructuring.</td>
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<td>Lerner, Stromberg and Sørensen (2008)</td>
<td>Worldwide</td>
<td>Firm</td>
<td>Private equity-backed buy-outs</td>
<td>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.</td>
</tr>
<tr>
<td>Bloom, van Reenen and Sadun (2009)</td>
<td>Asia, Europe, US</td>
<td>Firms</td>
<td>Private equity-owned and other firms</td>
<td>Private equity management practices better than in other firms in terms of operational management, people-based management practices and evaluation practices.</td>
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<tr>
<td>Thompson, Wright and Robbie (1992)</td>
<td>UK</td>
<td>MBOs, MBIs returning to market</td>
<td>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.</td>
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<td>Denis (1994)</td>
<td>US</td>
<td>LBO and leveraged recapitalisation</td>
<td>Gains in LBO greater than in leveraged recapitalisation attributed to more important role of equity ownership and active investors in LBOs.</td>
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<td>Phan and Hill (1995)</td>
<td>US</td>
<td>LBOs of listed corporations</td>
<td>Managerial equity stakes had a much stronger effect on performance than debt levels for periods of three and five years following the buy-out.</td>
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<tr>
<td>Robbie and Wright (1993)</td>
<td>UK</td>
<td>Smaller MBIs</td>
<td>Private equity firms less closely involved; debt commitment and covenants important trigger for corrective action.</td>
<td></td>
</tr>
<tr>
<td>Cotter and Peck (2001)</td>
<td>US</td>
<td>LBOs</td>
<td>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 closely monitor managers through stronger representation on the board also use less debt.</td>
<td></td>
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<tr>
<td>Cressy, Munari and Malipero (2007)</td>
<td>UK</td>
<td>MBOs, MBIs</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Acharya, Hahn and Kehoe (2008)</td>
<td>UK</td>
<td>Private equity-backed LBOs</td>
<td>High levels of private equity firm interaction with executives during the initial 100-day value creation plan, creating an active board.</td>
<td></td>
</tr>
<tr>
<td>Cornelli and Karakas (2008)</td>
<td>UK</td>
<td>Private equity-backed PTPs (LBOs and MBIs)</td>
<td>Board representation and active involvement by private equity firms changes according to private equity firm style and anticipated challenges of the investment; board size falls less and private equity firm representation higher when is CEO turnover and for deals that take longer to exit.</td>
<td></td>
</tr>
<tr>
<td>Acharya, Kehoe and Reyner (2009)</td>
<td>UK</td>
<td>Board members of large private equity portfolio firms and PLCs</td>
<td>Value creation focus of private equity boards versus governance compliance and risk management focus of plc boards. Private equity boards lead strategy through intense engagement with top management, plc boards accompany strategy of top management. Almost complete alignment in objectives between executive and non-executive directors only in private equity boards. Private equity board members receive information primarily cash-focused and intensive induction during due diligence; plc board members collect more diverse information and undergo a more structured (formal) induction.</td>
<td></td>
</tr>
<tr>
<td>Demiroglu and James (2009)</td>
<td>US</td>
<td>PTP LBOs</td>
<td>Buy-outs sponsored by high reputation private equity pay narrower loan spreads, have fewer and less restrictive financial loan covenants, use less traditional bank debt, borrow more and at a lower cost from institutional loan markets, and have higher leverage; no direct effect of private equity firm reputation on buy-out valuations.</td>
<td></td>
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<tr>
<td>Leslie and Oyer (2009)</td>
<td>US</td>
<td>PTPs and PTPs that IPO'd</td>
<td>Private equity-owned companies use much stronger incentives for top executives and have substantially higher debt levels. Little evidence that private equity-owned firms outperform public firms in profitability or operational efficiency; compensation and debt differences between private equity-owned companies and public companies disappear over a very short period (one to two years) after the private equity-owned firm goes public.</td>
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<td>Meuleman, Amess, Wright and Scholes (2009)</td>
<td>UK</td>
<td>Divisional, family and secondary buy-outs</td>
<td>Private equity firms’ experience is a significant driver of higher growth in divisional buy-outs; private equity experience important influence on growth but not profitability or efficiency; intensity of private equity involvement associated with higher profitability and growth.</td>
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*Shading indicates new material added since the first edition.


KPMG/EVCA (2006), Benchmarking European Tax & Legal Environments.


References


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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 i.e., 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: An 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.


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 (e.g., 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 (e.g., 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:** For example, 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 (e.g., 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 private equity 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 i.e., 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 created a synthetic net return using assumed fees and carried interest.

Definition of IRR: An IRR is the value of r that satisfies this equation where Ct is the annual cash flow in year t and NPV is the net present value (equal to zero).

\[ \text{NPV} = \sum_{t=0}^{\infty} \frac{C_t}{(1 + r)^t} = 0 \]

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.