
The contribution of asset management to the UK economy

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Executive summary

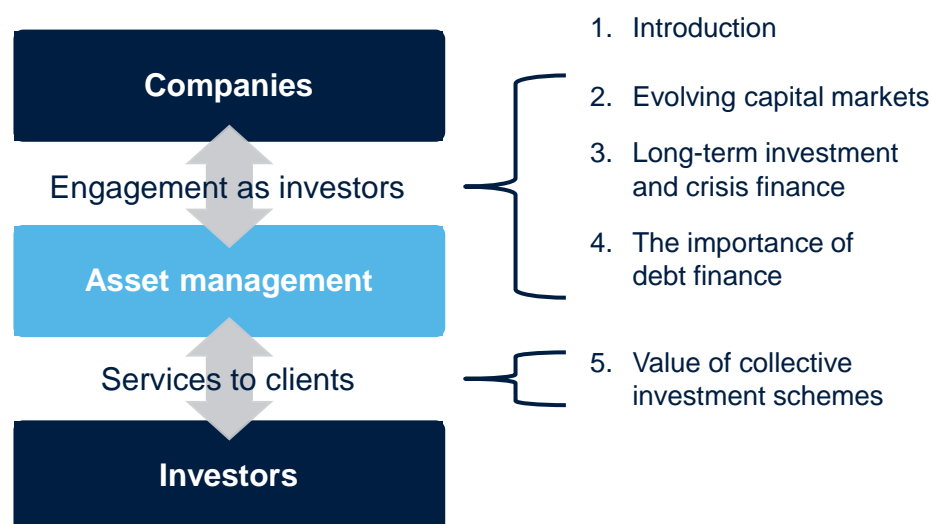
Asset managers are responsible for managing assets for pensions, insurance and other long-term savings products. With over £5trn of assets under management in the UK, asset management makes up a large part of the capital markets.¹ Asset managers also generate significant net exports for the UK, as some £2.2trn of these assets are managed for overseas investors.²

Much of the academic and public debate about asset management has focused on the size of the industry, in terms of gross value added or number of employees, or its performance relative to the market average.³ There has been less focus on the role that asset management plays in channelling new capital to public and private companies. It is the connection between this underlying investment and the services to clients that makes the asset management industry an important intermediary in the financial system, with implications for both growth within the economy and returns to millions of savers and investors. There is therefore a need for a better understanding of the role that asset management plays in primary markets.

The Investment Association (IA) commissioned Oxera to assess the contribution of asset management services to the UK economy. In particular, Oxera was asked to consider how the activities of professional asset managers contribute both to the efficient allocation of capital and to the efficient pooling of savings on behalf of savers and investors.

Supported by quantitative and qualitative findings, this study explores the role of asset managers through the savings and investment value chain, as summarised in the figure below.

Structure of the report in terms of the relationships between companies, asset managers and investors



Source: Oxera.

¹ Total assets under management in the UK grew from just over £2trn in 2003 to some £5.5trn at the end of 2014, which is over three times UK GDP. See The Investment Association (2015), 'Asset Management in the UK 2014-2015: The Investment Association Annual Survey', September.

² The asset management sector contributes a net £5.2bn to the UK's trade balance.

³ For example, compared with a market index, which represents a frictionless benchmark without any transaction costs.

Asset managers and funding of the UK economy

The report contains the following five **key messages** about asset managers and economic funding.

- 1. Capital allocation.** The capital allocation function of asset management firms is a significant facilitator of UK company funding, and thereby contributes to long-term productivity growth. This capability is broad, extends across multiple asset classes and funding structures, and supplies funds over the economic cycle.

The study finds that asset managers are responsible for purchasing the majority of new corporate bond issues in the UK (around 60–70% of total issuance in recent years), and are a significant source of equity capital for IPOs (around 40% of total issuance), rights issues and placings (representing around half of the total capital). This funding contribution in equity markets is in excess of overall ownership, which stands at around a third of domestic market capitalisation.

- 2. Long-term holding periods.** Successful capital allocation is facilitated by the potential for long-term holdings, which allows for long-term engagement with companies.

Asset managers (including those using both active and passive investment strategies) hold UK equities for around six years on average, which is longer than their own clients hold investments in pooled funds (around five years on average).

- 3. Stewardship and role in crisis finance.** Research in this area has focused increasingly on the role of asset managers in stewardship and engagement. This study adds another perspective, by showing how long-term relationships can facilitate the supply of new finance. It reviews one period in particular: the significant issuance of shares in the form of rights issues in 2009 in response to the financial crisis (and, in particular, the contraction in bank lending).

In 2009, around £80bn was raised through rights issues and share placings, most of which was used to reduce leverage. The case studies described in this report illustrate the role that asset managers played in response to the challenging market conditions.

- 4. Shift to debt finance.** The role of asset managers is frequently seen through the lens of the equity-dominated cycle of the 1980s to 1990s, whereas in recent years the role of asset managers as debt investors has become more important in the context of the changing landscape of capital markets. This has helped companies to maintain access to new capital and to reduce their cost of capital by switching from bank lending to cheaper bond financing.

From 2009 to 2013, total net bond issuance was £64bn, which is approximately equal to the contraction in net bank lending over roughly the same period. As bond yields fell relative to bank lending rates, the shift was estimated to be worth approximately £1bn annually for the companies that switched to bond finance from 2009 to 2013. Such a reduction in the cost of debt is estimated to have reduced the overall weighted average cost of capital (WACC) by approximately 30 basis points.

- 5. Diverse financing channels.** This investment in debt extends beyond public corporate debt markets to alternative forms of debt finance and through a variety of infrastructure projects, including social housing.

Private placements of debt by UK companies grew significantly over the five years to 2014, to £7bn. There has also been significant growth in infrastructure investment and, in 2014–15, capital markets accounted for approximately 60% of the £6.8bn of new funding secured by housing associations.

Benefits for investors

The report contains three **key messages** about asset managers and their benefits for investors.

- 1. Widespread exposure to asset management.** The majority of UK households draw on asset management services in some form or another, which includes their provision of investment vehicles, portfolio diversification, and access to a wide range of asset classes and investment strategies. While much of the debate on the benefits of asset management has focused on the financial performance of funds relative to a set of standard benchmarks, this study explores the economic value of the fundamental functions of asset management services.

Approximately 75% of households have occupational or personal pension wealth (which will typically involve asset management), and around 14% of gross household financial wealth is held in retail investment funds, compared with only 9% of wealth held directly in UK shares (without the involvement of an asset manager).

- 2. Access to asset classes and diversification of risk.** Investment vehicles run by asset managers, pooled and segregated, provide portfolio diversification. However, for individuals investing directly in capital markets without the use of asset management services, this is often not the case. Asset managers also provide access to a broad range of asset classes, including overseas equities, fixed income, property, and commodity-based investments, where it would be costly or not feasible for an individual investor to build a diversified portfolio.

Diversification across asset classes is estimated to reduce portfolio volatility by between 11% and 23% compared with a portfolio confined to one asset class. Diversification within asset classes also delivers benefits to investors, as many individuals investing directly in shares fail to diversify their portfolios. Patterns of individual share ownership observed in the USA suggest that the average portfolio exhibits volatility some 32% higher than a well-diversified portfolio.

- 3. Economies of scale.** The core aggregation function provided by asset management products—whether index-tracking or more actively managed—delivers economies of scale to UK savers and investors even before the costs of the time and skill required to build a diversified portfolio are considered.

Based on an illustration of building a domestic large cap equity portfolio, a one-off investment of greater than £50,000 is required before an individual retail investor can efficiently construct their own portfolio without asset management services. Such an investment is greater than most would invest in a single asset class, and this estimate takes no account of the time and skill required to construct a diversified portfolio, nor the accessibility of other asset classes.

These significant benefits partly explain the wide use of collective schemes administered by asset managers, along with more traditional institutions such as occupational pension schemes.

1 Introduction

The Investment Association (IA) commissioned Oxera to assess the contribution of asset management services to the UK economy, and, in particular, to consider how the activities of professional asset managers affect investors, businesses and the wider economy outside the financial services sector. This study provides new evidence on the extent of the role and impact of asset management, supported by quantitative and qualitative findings, including case studies.⁴

Performance in terms of returns has been widely studied;⁵ this report is not a response to that debate, nor does it present a view on these issues. The focus here is on the role of asset management in financial intermediation, as this has not received the same degree of attention.

1.1 Overview of the role of asset management

Asset management is a major industry in the UK. Asset managers provide services to institutions such as insurance companies, pension funds, charities and government, and to individuals. Most UK households receive asset management services through one route or another, whether through personal savings products such as ISAs or through their membership of private pension schemes—14% of adults hold stocks & shares ISAs, and 75% of UK households are members of private pension schemes.⁶

At a microeconomic level, professional asset managers run portfolios on behalf of clients on an agency basis, helping these clients to manage their own capital. This sets asset managers functionally apart from banks or insurance companies.

At a macroeconomic level, asset managers provide an important investment channel between investors and financial markets. This link is critical for well-functioning capital markets, which are characterised by:⁷

- efficient allocation of capital across different uses, and the proper pricing of risk;
- cost-effective pooling of funds for investors of different size and sophistication, taking advantage of economies of scale;
- the creation of a liquid market in securities to allow cost-efficient trading of securities in both small and large blocks;
- providing a cost-effective way of mitigating information asymmetry between companies and different types of investor;

⁴ Oxera used a range of data sources to conduct the analysis in the study. Primary data was collected from a number of large asset managers on their investment in the primary and secondary bond and equity markets. In addition, Oxera interviewed asset management firms, investment banks and corporations to collect qualitative views. For a description of the data sources used and the discussions with stakeholders, see Appendix A1.

⁵ For a review, see Ang, A., Goetzmann, W.N. and Schaefer, S.M. (2010), 'The efficient market theory and evidence: implications for active investment management', *Foundations and Trends in Finance*, 5:3; Observatoire de l'Épargne Européenne (2011), 'The Importance of Asset Management to the European Economy'; and Musto, D.K. (2011), 'The economics of mutual funds', *Annual Review of Financial Economics*, 3:1, pp. 159–72.

⁶ See Office for National Statistics Wealth & Assets Survey, 2010–12 data; and Office for National Statistics Individual Savings Account statistics, April 2015.

⁷ A number of intermediaries contribute to the effective functioning of capital markets. For example, significant infrastructure is required (such as exchanges and central counterparties), which facilitates activities *between* intermediaries (such as between brokers, trading across an exchange, or moving dematerialised securities between accounts in a central securities depository, CSD). Asset managers use these services, but do not tend to provide them themselves.

- the provision of a wide variety of savings and investment products to end-investors, with differing levels of risk, return and maturity.

This study therefore focuses on the following key roles that asset managers play:

- **participating in the primary and secondary markets**, buying and selling securities on behalf of clients based on a given investment strategy;
- **channelling funds to businesses** that need additional funding to undertake new investment;
- **providing investment management services** to clients (the investors), including cost-effective access to a range of investment strategies and asset classes, as well as diversification across different geographies.

There is a clear interaction between these roles. The services to end-investors provide the main mechanism by which current prices reflect the fundamentals of asset values, leading to efficient price formation. This feeds through into efficient capital allocation decisions in the primary markets, and delivers benefits to the wider economy in terms of investment in real productive capacity. This study therefore takes a broader focus of the role of asset management activities than has traditionally been described and analysed.

1.1.1 Focus on 'long-only' asset management

A range of activities observed in capital markets could be described as being 'asset management'. This study focuses on traditional long-only asset management. This excludes trading activities often associated with hedge funds, market makers and high-frequency traders. The study also excludes the investment activities of venture capitalist and private equity houses, which typically have a more direct role in the management of the firms.

The activities of asset managers described here are in line with the distinction made by the IA (the Investment Management Association at the time) in its response to the Kay Review:

a distinction should be drawn between those who mainly trade shares (for example, banks and other proprietary traders) and those, like asset managers, that invest. Proprietary and principal traders that buy or sell equities with their own capital, including hedge funds and those with high portfolio turnover such as 'high frequency traders', tend to be driven by short-term market trends and turn their portfolios over rapidly. They will not tend to analyse underlying performance. Those that invest also buy and sell equities but tend to hold them for the long-term based on their analysis of a company's prospects and underlying performance⁸

For the sake of clarity, from here on all references to 'asset managers' refer to long-only asset managers, rather than any particular institutional structure that creates entities that are providers of professional asset management services to third parties (i.e. to end-investors).⁹

⁸ Investment Management Association (2011), 'The Kay Review of UK Equity Markets and Long-Term Decision Making, IMA Response', November, http://www.investmentuk.org/assets/files/consultations/2011/20111123_KayReview.pdf, accessed 8 July 2016.

⁹ The activities undertaken by very large investors (such as pension funds, insurers and sovereign wealth funds) that have brought professional asset management functions 'in house' are included as activities of asset managers relevant to this report. These very large investors are typically acting as agents for much smaller end-investors (such as pensioners, life insurance customers and other individuals), and often have asset management divisions within their corporate structures (most clearly in the case of large insurers).

1.2 Traditional metrics of economic contribution

A number of metrics have been used to measure the size of the asset management industry and its contribution to the economy. Such metrics also reflect more conventional approaches to industrial and services sector studies.

- Total assets under management in the UK that reached £5.5trn in 2014, well over three times the country's GDP.¹⁰
- The number of people employed by the industry, both directly by asset management companies and indirectly—i.e. through services such as auditing or custodians. Direct employment is estimated to be approximately 95,000 individuals across Europe¹¹ and 35,000 in the UK.¹² Estimates of indirect employment from the same sources are substantially higher, at around 410,000 individuals in Europe and 60,000 in the UK.
- The industry's value added as a percentage of total value added in the economy—i.e. its contribution to GDP. A 2014 study found that the gross value added of the European fund management industry represents 0.35% of European GDP, based on the industry's profits, staff costs and taxes paid.¹³ In the UK, this figure is estimated to be closer to 1.0%, in part reflecting the international nature of the UK as an asset management services centre.
- The value of exports. UK asset managers are providing services to non-UK clients, and are therefore a significant ('invisible') export industry. The UK asset management industry manages some £2.2trn of assets (39% of the assets managed in the UK) for overseas investors, generating UK exports of asset management services of £6.1bn in 2014.¹⁴ Subtracting UK imports of such services, the asset management industry contributed a net £5.2bn to the UK's trade balance.

However, these estimates of the extent and cost of the economic activities of asset management do not show the value of the wider interconnection of those services with other sectors of the economy. In the case of the asset management industry, this interconnectedness is critical, but not widely studied.

This report therefore examines the value of the economic activities of asset management from the perspective of businesses and end-investors, rather than from the perspective of the amount of activity that is being undertaken. This requires looking for evidence of benefits to the wider economy that might not

¹⁰ The Investment Association industry statistics, <http://www.theinvestmentassociation.org/investment-industry-information/research-and-publications/asset-management-survey/duplicate-of-the-industry-figures.html>, last accessed 18 July 2016. In comparison, €19trn of assets were managed in Europe in 2014, corresponding to 124% of European GDP. See EFAMA (2015), 'Asset Management in Europe: 8th Annual Review', April 2015, http://www.efama.org/Publications/Statistics/Asset%20Management%20Report/150427_Asset%20Management%20Report%202015.pdf, last accessed 18 July 2016.

¹¹ EFAMA (2015), op. cit.

¹² The Investment Association industry statistics, <http://www.theinvestmentassociation.org/investment-industry-information/research-and-publications/asset-management-survey/duplicate-of-the-industry-figures.html>, last accessed 18 July 2016.

¹³ Hagendorff, J. (2014), 'Societal and economic impacts of the European asset management industry', report prepared for EFAMA.

¹⁴ According to the Office for National Statistics 'Pink Book', the UK is a net exporter of asset management services, with net exports of £5.2bn in 2014. See Office for National Statistics (2015), 'The Pink Book 2015, Part 1: Current Account'.

have been delivered in the absence of professional asset managers, such as evidence of economies of scale reducing the cost of investment activities.¹⁵

1.3 Structure of the report

The report is structured as follows:

- **section 2: evolving capital markets and the role of asset managers** explores how the role of asset management in capital markets has changed over time in response to changing patterns of ownership and financing channels;
- **section 3: long-term investment and crisis finance** focuses on the role that asset management played in supplying new equity to companies following the global financial crisis;
- **section 4: the importance of debt finance** examines the role of asset management in debt finance;
- **section 5: the value of collective investment schemes** assesses the services provided by asset managers to investors.

¹⁵ Economies of scale could result in a reduction in investment activity (in terms of cost), but an increase in benefits for the wider economy.

2 Evolving capital markets and the role of asset managers

Fundamentally, the role of capital markets is to channel funds from end-investors to companies in need of capital. Asset managers are important in this process as they aggregate funds from investors and offer funding options varying in maturity and size. From the perspective of the wider economy, and in particular from the perspective of businesses, this role in financial intermediation is one of the key functions of asset managers.

This section first explores how the role of asset management in capital markets has changed over time in response to changing patterns of ownership and financing channels, including the shift from bank lending to public debt since the global financial crisis (section 2.1). Using primary data, and drawing on information from asset managers, the analysis shows that in recent years asset managers funded around 60–70% of total corporate bond issuance and 40% of equity for initial public offerings (IPOs) (section 2.2).

2.1 The changing landscape of capital markets

Taking a long-term historical perspective, the role of institutional investors (and therefore asset management) has changed markedly since the 1960s. Especially with the growth in fixed-income securities (such as bonds) and holdings of overseas assets, and the widening role of alternatives and private markets, there has been a significant increase in institutional investors' exposure to an ever more diverse asset class base. These changes have reflected issues on both the demand side (the needs of investors) and the supply side (the needs of companies).

2.1.1 Long-term trends in demand

The increasing diversity of asset holdings is most apparent in data on the asset allocation of pension funds over time, presented in Table 2.1.

Table 2.1 UK pension fund asset allocation

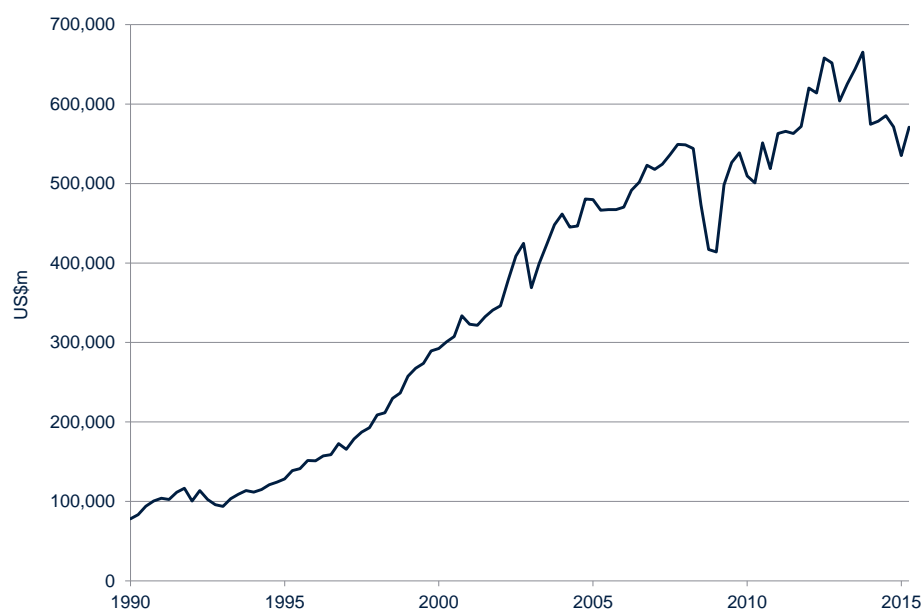
	1994	2004	2014
UK equities	56%	37%	16%
Overseas equities	22%	28%	27%
UK fixed income	10%	21%	31%
Overseas fixed income	2%	2%	6%
Property/alternatives	10%	12%	20%

Source: The Investment Association (2015), 'Asset Management in the UK 2014-2015: The Investment Association Annual Survey', September.

As can be seen from the table, in 1994 equities made up approximately 80% of holdings, falling to around 45% in 2014. UK fixed income has become much more important over this period. Since the mid-1990s, the UK sterling-denominated corporate bond market has grown steadily (see Figure 2.1), driven by demand from life insurers and pension funds.¹⁶

¹⁶ As described in Association of British Insurers (2001), 'The Development of the Non-Gilt Sterling Bond Market', A Research Report by Ruben Lee Oxford Finance Group, <http://www.oxfordfinancegroup.com/media/9819/ofg%20nongilt%20bond%20market%20dev%202001.pdf>, last accessed 18 July 2016.

Figure 2.1 Total value of outstanding corporate bonds of non-financial corporations, 1990–2015 (US\$m)



Source: Bank of International Settlements.

This shift is also apparent in the longer-term trends in UK equity ownership, presented in Table 2.2 below.¹⁷ Individual investors' ownership of equity steadily declined throughout the post-war period, while the role of institutional investors increased markedly. The 'other financial institutions' category includes asset managers acting on behalf of retail investors, as well as the growth of alternative forms of asset management, including hedge funds. It is also important to note that foreign ownership of UK equities increased substantially.

Ownership of UK equities by UK asset managers on behalf of the main UK institutional investors (pension funds and insurance companies) peaked in the late 1980s and early 1990s, due to their increase in assets under management and before the significant increase in the diversification of asset holdings really began.

Estimates from the IA suggest that UK-based asset managers now account for just under a third of UK domestic market capitalisation. This reflects activities undertaken for both UK clients and overseas clients across a range of product types.¹⁸

¹⁷ Table 2.2 also shows that the role of individual ownership of equity has steadily declined throughout the period. The role of institutional investors has increased markedly. The 'other financial institutions' category includes asset managers acting on behalf of retail investors (such as retail investment funds), as well as the growth of alternative forms of asset management, including hedge funds. This ONS data was constructed on a different basis to the IA data on asset ownership.

¹⁸ See The Investment Association (2015), 'Asset Management in the UK 2014-2015: The Investment Association Annual Survey', September, which estimated UK holdings at 32%.

Table 2.2 ONS data on ownership of UK equities (percentage of total)

	1963	1975	1989	1997	2004	2010	2012	2014
Individuals	54.0	37.5	20.6	16.5	14.1	10.2	10.1	11.9
Insurance companies and pension funds	16.4	32.7	49.2	45.7	32.9	14.4	10.9	8.9
Other financial institutions	11.3	10.5	1.1	1.3	8.2	12.3	6.6	7.1
Units and investments trusts	1.3	4.1	7.5	5.4	3.9	10.9	11.2	10.8
Banks	1.3	0.7	0.7	0.1	2.7	2.5	1.9	1.4
Rest of the world	7.0	5.6	12.8	28	36.3	43.4	53.2	53.8

Source: Office for National Statistics (2015), 'Ownership of quoted shares for UK domiciled companies, 2014', September.

2.1.2 Long-term trends in supply

There has been a decline in the importance of the stock market for UK companies, which has affected the demand for new equity finance.¹⁹ In particular, the number of publicly listed corporations on the main market of the London Stock Exchange has fallen significantly in the past 15 years, from 2,194 in April 1999 to 1,282 in May 2015 (a fall of more than 40%).²⁰

The growth of bond financing and the decline of equity financing have reflected both demand- and supply-side factors, including in particular:²¹

- regulation and accounting standards, which have been a key influence on pension fund and insurance company asset allocation decisions, encouraging increased demand for bonds (demand side);
- low long-term interest rates, which have encouraged companies to increase leverage by raising funds through bond issuance (rather than equity) (supply side);
- differential tax treatment of debt versus equity, where for the issuer debt interest is tax deductible while dividends are not, and which reduces the post-tax returns from equity relative to debt, thereby favouring debt as a funding instrument (supply side).

These long-term trends have continued in recent years, although they have also been significantly affected by the 2007/08 global financial crisis. The role of asset management in responding to these significant shifts (by expanding the investment products available to end-investors and developing new channels of funding to private forms of ownership) is a key focus of this report, as discussed below.

2.1.3 Role of asset management in recent financing trends

To understand the changing flows in and out of different forms of funding, the Bank of England and other commentators typically focus on *net issuance* of securities. This is equal to the *gross issuance* statistics of the amount of securities issued *minus* the amount of redemptions (such as bond redemptions

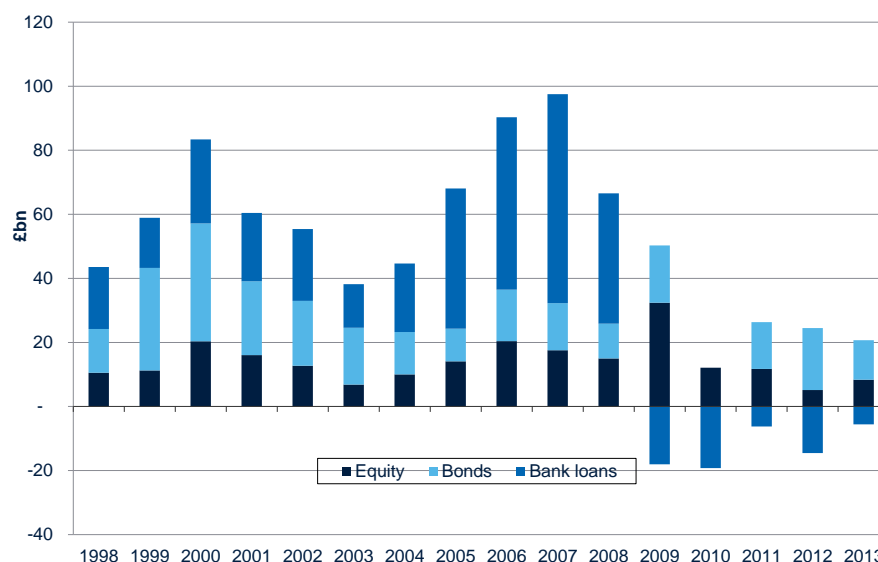
¹⁹ Kay, J. (2012), 'The Kay review of UK equity markets and long-term decision making', Final Report.

²⁰ London Stock Exchange statistics, available from <http://www.londonstockexchange.com/statistics/companies-and-issuers/list-of-all-companies.xls>, last accessed 18 July 2016.

²¹ Other factors may also have encouraged the change. For example, taxation is seen to favour bonds, as interest payments are corporate tax-deductible (unlike dividend payments).

and equity buybacks). Net issuance provides an indication of changes in the relative importance of funding channels.²² These trends are presented in Figure 2.2, which shows net issuance by private non-financial companies²³ of bonds, and net bank lending and gross issuance of equities since 1998.

Figure 2.2 Net issuance by private non-financial companies (UK, £bn)



Note: The figure shows net issuance for bonds and bank loans, and gross issuance for equity. For equity, data is collected from the London Stock Exchange. For bonds and bank loans net issuance from 2003, publicly available data from the Bank of England is used. For the period before 2003, data is taken from Pattani, A., Vera, G. and Wackett, J. (2011), 'Going public: UK companies' use of capital markets', *Bank of England Quarterly Bulletin*, 51:4, pp. 310–30. This data was compiled on a different basis to that published since January 2003. For more information, see Reynolds, H. (2004), 'Capital issuance statistics: changes to definitions and presentation', *Monetary & Financial Statistics*, October.

Source: Bank of England statistics, London Stock Exchange.

Figure 2.2 portrays the cyclicity of external financing sources for firms. Prior to the global financial crisis, external financing of firms was highly correlated with market performance across all the asset classes, reflecting the demand for capital for investment by businesses. For example, the rise in net issuance of securities and loans in 2000 coincided with the Internet bubble, and then shrank significantly in the downturn of 2001–03.

Of note was the rise in net bank lending prior to the financial crisis—this reached its peak in 2007, just before the global financial crisis. It coincided with relatively weak net issuance of bonds in the pre-crisis boom years. This might suggest that bank lending was exceptionally cheap at that point in time, relative to longer-term bond finance.

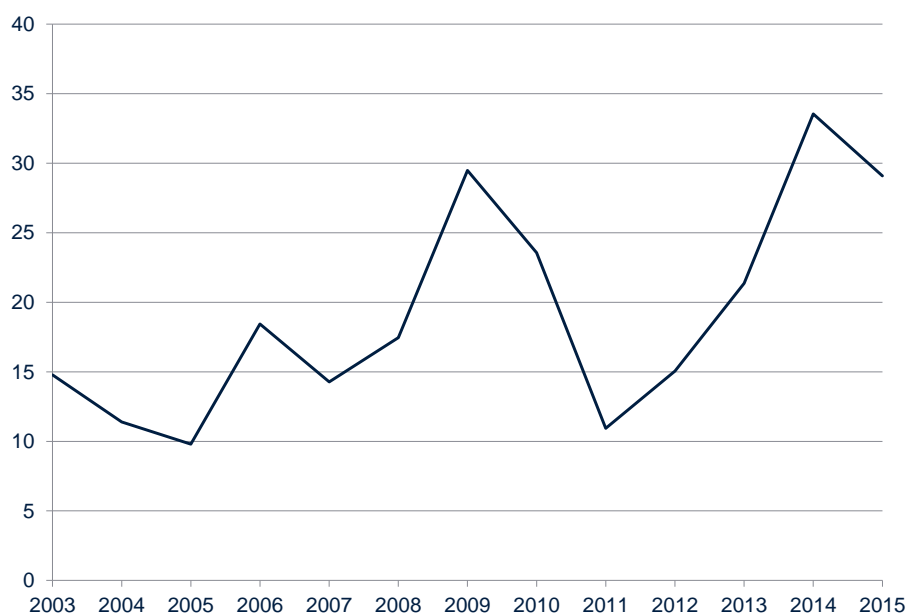
The severity of the financial crisis, particularly its impact on the banking sector, interrupted the pattern of cyclical fluctuations. Two trends apparent in Figure 2.2 are of particular interest for this study:

²² The appropriateness of the measure in capturing all the net flows of new money into businesses is open to some debate, however. In particular, net equity issuance may be open to question as the metric is net of equity buybacks, but not net of dividend payments, even though the effect of an equity buyback can be broadly the same as an extra dividend payment. For this reason, the analysis includes gross issuance of equity.

²³ This Bank of England data focuses on issuance by non-financial companies, as this is seen to better reflect trends in the wider economy and to be less affected by the capital flows between banks in particular.

- the decline in net bank lending by £72bn in the period 2009–14 (discussed in detail in section 4.1),²⁴ which was a result of the financial crisis and the subsequent tighter regulation brought about by the deleveraging of banks' balance sheets, and hence a reduction in their total lending capacity;
- the sharp increase in gross equity issuance in 2009 (discussed in detail in section 3.3). As shown in Figure 2.2 above, non-financial companies had issued a large amount of bond debt in the period 1999–2000.²⁵ Since a large part of the debt issued by corporate bonds had a ten-year maturity,²⁶ much of it was due to be paid in 2009 and 2010. Indeed, as shown in Figure 2.3, bond redemptions in 2009 were almost double what they were in 2007. Capital markets again facilitated the funding for these businesses and, indeed, the redemptions of those bonds, in the form of rights issues and placings (worth approximately £30bn for non-financial companies in 2009).²⁷

Figure 2.3 Bond redemptions of non-financial companies (£bn)



Note: Bond redemptions are calculated as the difference between the gross and the net issuance of bonds of non-financial companies.

Source: Bank of England.

Asset management has facilitated these significant changes in the flow of funds to companies in recent years, with the decline in bank lending and an increase in flows involving asset managers. Section 3 explores this involvement further with reference to the experience of the financial crisis.

2.2 Aggregate supply of funds channelled by the asset management industry

The role of asset managers in the primary market can be assessed through the total amount of funding that they channel to UK businesses. This relatively simple concept is not captured well by existing data, however, and this study therefore explores new data sources to understand the extent of the role.

²⁴ Source: Bank of England.

²⁵ Net bond issuance during the period 1998–2013 reached its peak during the years 1999–2000.

²⁶ Based on data on bond issuance from Dealogic, 44% of corporate bonds issued in 1999 had a ten-year maturity.

²⁷ Source: Bank of England.

Ideally, data would be available on the value of new funds flowing to businesses, via asset managers, less redemptions made by those businesses that are raising new capital. Such data is not available, however, as there is no record for companies that are simultaneously raising and redeeming funds. The official data on the net value of funds flowing to UK businesses (as presented in Figure 2.2 above) nets off the flows to companies raising funds with the redemptions of all other companies, thereby significantly understating the amount of new funds flowing to companies. The Bank of England provides gross issuance data (which does not net off redemptions), but neither this data, nor the net issuance data, is for funds channelled by asset managers (it is for all funding sources).

For these reasons, data was collected specifically for this study on the gross value of new funds channelled to UK businesses in the primary market, by asset managers, through the issuance of new bonds and equity. As described in detail in Appendix A1, data collected from nine asset managers, representing 37% of total assets under management of all IA member firms, was used to estimate the primary market activity of all UK asset managers in total.

This analysis estimates that, in 2013, asset managers in the UK purchased some £50bn of new sterling-denominated bonds issued by UK corporations (including some financial companies), which accounts for around 73% of all sterling-denominated bond issuance by these companies.²⁸ Similarly, they funded an estimated 35% of IPOs of UK corporates (which amounts to £3.2bn) and channelled approximately £4.5bn into rights issues and placings (which represents 33% of the total).²⁹

In 2014 purchases of bonds, as well as rights issues and placings, were of similar magnitude to those in 2013. At the same time, investment in IPOs increased by an estimated £1.2bn, covering 44% of the total issuance.

Table 2.3 Channelling of new funds to UK businesses by asset managers (IA members)

	Asset managers (£bn)	Total issuance (£bn)	Proportion of total (%)
Bonds			
2013	50	69	73
2014	52	89	58
IPOs			
2013	3.2	9.1	35
2014	4.4	10.1	44
Further issues			
2013	4.5	13.9	33
2014	4.6	9	51
Total			
2013	58	92	63
2014	61	108	56

Note: See Appendix A2 for an explanation of the methodology.

Source: Oxera.

The role of asset managers is therefore considerable—they channelled an estimated £61bn of new funds to businesses in 2014 through the public bond

²⁸ See Appendix A2 for further details. These estimates use Bank of England data for gross stand-alone and programme sterling bond issuance by all UK issuers, including financial institutions.

²⁹ Data on the total funds raised in IPOs and further issuances was obtained from the London Stock Exchange.

and equity markets.³⁰ To put this figure into context, it can be compared with the value of business investment:³¹ in 2014, £61bn was equivalent to around a third of total UK business investment (£169bn, in 2014).³²

An effectively functioning capital market should also be able to react efficiently to changes in circumstances in both the real economy and the financial services sector. This study finds that, since the 2007/08 financial crisis, asset managers have contributed significantly to offsetting the decline in net bank lending by £72bn in the period 2009–14, by facilitating the shift to public debt (as discussed in section 4). Asset managers can provide an efficient way of linking the financial and real economy, by reducing the costs to businesses of accessing capital, and responding effectively to changes in overall market conditions, as illustrated by the evolution of lending patterns since the financial crisis.

2.3 Summary: the role of asset management in channelling funds to businesses

Asset management has played a core part in the evolution of the flow of funds from end-investors to firms in need of new funding, as well as in influencing firm management in relation to the deployment of capital, with significant impacts on the wider economy. Based on data collected for this study, it is estimated that the new funds channelled to businesses by asset managers were equivalent to around a third of the value of total UK business investment in 2014.

Not only is the extent of the role of asset management in primary markets significant, but it is also evolving as transformations occur in the real economy. As illustrated by the evolution of lending patterns since the financial crisis, asset managers can provide an efficient way (for example, by reducing the costs of raising capital) of linking the financial and real economy when the market in the provision of financial services is itself undergoing significant transformation.

³⁰ This figure is based on data collected by Oxera from IA members. See Appendices A1 and A2 for a discussion.

³¹ This does not imply that all of these funds were used for business investment. Indeed, much of the funds could be used to pay off previous capital owners, notably private equity in the case of IPOs and often bank lending in the case of bond issuance (in recent years). The comparison with business investment is used instead to indicate relative magnitudes.

³² Office for National Statistics (2015), 'Business Investment, Q4 2015 Revised Results', Table G9.

3 Long-term investment and crisis finance

Section 2 presented new evidence on the role of asset managers in channelling equity and debt finance to UK corporates, highlighting the long-term shift from equity financing to bond financing, but also the continued relevance of equity issuance as indicated by the large spike in rights issues in 2009 as companies acted to reduce leverage.

This section develops the analysis further, looking in more detail at both the role that asset management played in 2009 in supplying new equity to companies following the financial crisis, and the long-term relationships that facilitated this role.

It begins by looking at the ownership of UK corporates by asset managers (on behalf of their clients), and the duration of their equity holdings (section 3.1). It then outlines the role of asset managers in engaging with companies as part of the stewardship function.

Section 3.2 examines the contribution of asset managers to equity funding in 2009, when a large number of companies needed to reduce their leverage through rights issues and share placings. Section 3.3 looks at the subsequent performance of these companies.

The main conclusion is that asset managers are long-term holders of UK companies, and have contributed when these companies are in need of financing.

3.1 Timescales and size of equity stakes

The Kay Review identified the timescales and size of investments as being important for encouraging engagement between owners and the management of listed companies, particularly where there was no controlling shareholder.³³ This is also relevant for the supply of new equity capital, as asset managers with significant long-term holdings are likely to be more involved in companies' rights issues, and to engage more intensively, than short-term and smaller investors.³⁴ This section examines the duration and size of equity investments by asset managers.

3.1.1 Duration of equity investments

Asset managers are relatively long-term holders of assets, and the evidence described below suggests that they hold UK equity for longer periods than other types of investor, and also for longer than the average holding periods of their own clients who are investing in retail investment funds.

There are a number of possible approaches to measuring average holding periods. For the purposes of assessing the length of time for which asset managers hold the stock of companies, the ideal measure of average holding periods would, arguably, be a measure of the period in which an investor remains invested in particular companies, without being unduly affected by small adjustments to the size of the holding over time. But without having access to the detailed composition of investor portfolios, average holding periods need to be estimated using data on transactions that take account of all changes in

³³ One of the headline proposals was to 'Increase incentives to such engagement by encouraging asset managers to hold more concentrated portfolios judged on the basis of long-term absolute performance'. Kay, J. (2012), 'The Kay review of UK equity markets and long-term decision making', Final Report, p. 9.

³⁴ See McCahery, J.A., Sautner, Z. and Starks, L.T. (2011), 'Behind the scenes: The corporate governance preferences of institutional investors', AFA 2011 Denver Meetings Paper.

holdings even if the overall exposure of the investor to the company is not materially changed.³⁵ Moreover, research has shown that overall continuity of exposure to individual companies is likely to be masked by aggregate turnover calculations.³⁶

Recognising this limitation, average holding periods can be estimated for asset managers and other types of investor (such as hedge funds, individuals, and sovereign wealth funds) in UK equity using data on stamp duty receipts.³⁷ This data suggests that estimated average holding periods for UK equity are significantly longer for asset managers than for other types of investor that are paying stamp duty. Over 2011–14, the average holding period was estimated to be 6.3 years for asset managers³⁸ (including both active and passive strategies), and 3.8 years for all other investors liable for stamp duty.³⁹

The holding periods of asset managers are also longer, on average, than the investment horizons of their own clients. Clients of asset managers, including retail investors and pension funds, can buy and sell their holdings in mutual funds, just as direct investors buy and sell holdings of equity. Data on the holding periods of investors in retail investment funds⁴⁰ suggests that they have average holding periods of around four years across all retail funds, rising to an estimated 5.5 years for UK equity funds (presented in Figure 3.1 below).⁴¹

³⁵ For example, suppose that an asset manager bought and held stock in a company for ten years, but in addition increased the holding by 10% of the original amount each year as the fund grew. From the perspective of engagement, the asset manager owned stock for ten years, so the holding period is ten years. However, the approach used here based on stock transactions suggests that the average holding period is 7.5 years, as it takes account of the stock purchased after the initial purchase.

³⁶ For further discussion and illustration of this point, see Investment Management Association (2012), 'Understanding equity turnover data: initial findings from IMA research submitted to the Kay review'.

³⁷ Asset managers pay stamp duty of 0.5% on purchases of UK equities. The amount of purchases of UK equities can therefore be estimated from stamp duty payments. Average holding periods can then be estimated as the average holding of UK equity in the given year divided by the equity purchases in that year. So, for example, if an asset manager holds £100 of equity on average, and buys £50 of equity in the year, the holding period is, on average, estimated to be two years. This methodology is described in detail in Appendix A3. The methodology focuses only on UK equity where stamp duty is paid on purchases.

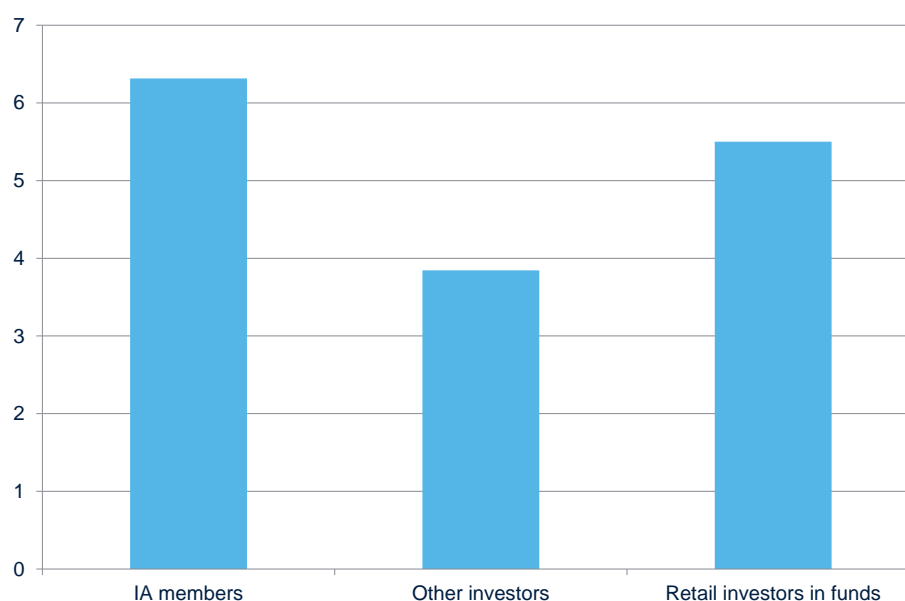
³⁸ There is considerable variation in estimated holding periods across funds and over time. Similar analysis conducted by the IA using non-public data for a much larger number of funds (c. 340) found a similar result of around six years for the average holding period of UK equity funds, including both active and passive strategies.

³⁹ Other investors liable for stamp duty include individuals, companies and other institutional investors directly holding shares. By using stamp duty receipts to estimate holding periods, the analysis effectively excludes liquidity providers (often large banks) and high-frequency traders, who are exempt from stamp duty. Since April 2014, stamp duty has not been applied to transactions in companies listed on AIM (the Alternative Investment Market of the London Stock Exchange) or the High Growth Segment of the Main Market of the London Stock Exchange. However, this change does not affect the data presented in this report, which covers periods before this date.

⁴⁰ Calculated according to the rate of redemptions in the fund, divided by the size of assets under management.

⁴¹ This finding might suggest that asset managers increase the holding periods of the investments beyond what the end-investors currently choose to do themselves. However, the holding periods of retail investors are affected by other intermediaries, such as financial advisers. Jenkinson et al. (2013) looked at the impact of intermediaries on the choice of fund managers by pension funds. See Jenkinson, T., Jones, H. and Vicente Martinez, J. (2013), 'Picking winners? Investment consultants' recommendations of fund managers', University of Oxford, working paper. One asset manager noted that the holding periods of retail investors who held funds directly on a self-execution platform without influence from financial advisers are longer than the average holding period for asset managers. (Public data is not available to verify this premise.)

Figure 3.1 Average holding periods (years) for UK equity



Note: The holding period is estimated by averaging across the estimated holding periods for the years 2011 to 2014.

Source: Oxera analysis using data from Morningstar; HMRC; Thompson Reuters; Investment Management Association (2014), 'Asset Management in the UK 2013-2014: the IMA Annual Survey', September; and Bryant, C. and Taylor, G. (2012), 'Fund Management Charges, Investment Costs and Performance', IMA Statistics Paper 3, May.

Asset managers' holding periods also vary according to the investment strategy being pursued. The average holding period for an equity index tracker fund is typically much longer than that for an active fund, as the component companies of these indices do not tend to change significantly over time. However, actively managed investment funds can also hold the stock of the chosen companies for very long periods.⁴²

3.1.2 Size of investment

Very often, long-only asset managers are among the largest shareholders of listed companies.⁴³ The extent to which asset managers have large holdings of companies ('blocks' of shares) can be identified using Bloomberg data on the largest shareholdings of leading asset managers.⁴⁴ This data provides estimates of the proportion of the shares held in the company by the asset manager.

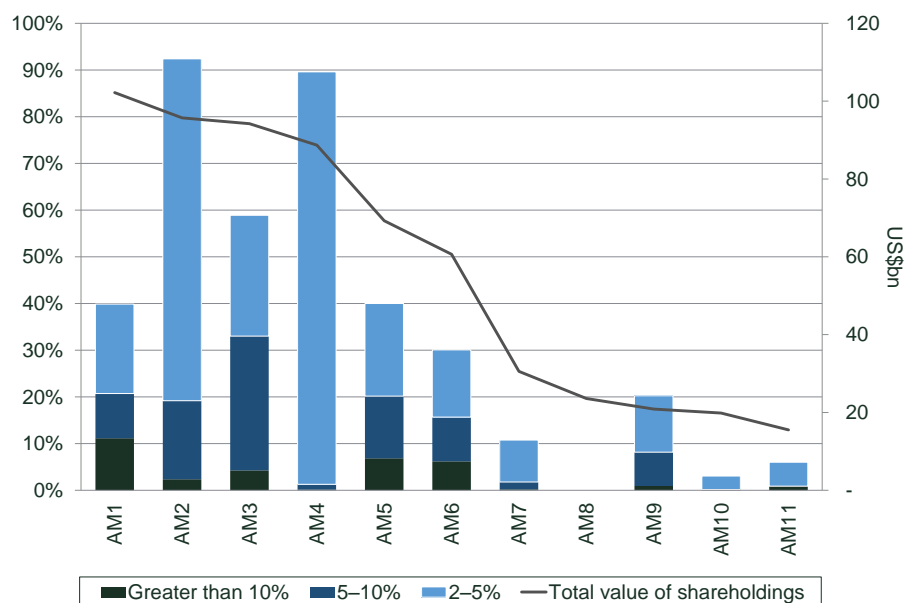
Figure 3.2 presents data on the sizes of blocks held by a selection of asset managers. For example, 73% of all the listed equity holdings of the asset manager labelled 'AM2' are of a block size of between 2% and 5% of the total market capitalisation of those individual companies; another 17% of their holdings are held in companies where their stake averages between 5% and 10%; and 3% is held in the form of stakes larger than 10%.

⁴² If a fund adjusts its position in a business, this would contribute to a higher turnover (and hence lower average holding period), but the fund is still invested in the company (so there is no change to the holding period). For further discussion and illustration of this point, see Investment Management Association (2012), 'Understanding equity turnover data: initial findings from IMA research submitted to the Kay review'.

⁴³ This will include some alternative investment management firms, such as Lansdowne Partners or Marshall Wace, which would typically be classified as hedge funds, but also take large and long-term positions in UK businesses.

⁴⁴ See Appendix A4 for a description of the methodology.

Figure 3.2 Profile of the size of equity holdings of selected asset managers (defined in terms of the proportion of market cap), as at December 2014



Note: AM1 to AM11 indicate different asset managers. The analysis required some important assumptions, which are explained in Appendix A4. The area above each bar, up to 100%, indicates the proportion of holdings where the block size is less than 2% of market capitalisation. For example, about 9% of asset manager AM2’s individual holdings amount to a stake smaller than 2% of the company invested in.

Source: Oxera analysis based on Bloomberg data, as explained in Appendix A4.

Figure 3.2 shows that there is considerable variation among asset managers in terms of the degree of ownership concentration—i.e. the extent to which they hold large stakes in the companies in which they invest. Typically, asset managers who focus on passive strategies have relatively small percentage stakes in the companies that they invest in, and there is little variability in the size of their stakes. Other asset managers have much more concentrated holdings of companies and much greater variability in stake size.

The statistics suggest that a small number of asset managers own a significant share of FTSE 250 firms, or indeed FTSE 100 firms. For example, the 11 asset managers included in the analysis for Figure 3.2 owned approximately 15–20% of large FTSE 100 companies such as BP, Shell, Rio Tinto and GlaxoSmithKline. A group of asset managers, acting together, are likely to be able to influence the funding strategy of a company. This is illustrated in Box 3.1 in the case of the Cookson Group, where the large shareholders managed the refinancing of the company.⁴⁵

3.2 Asset managers as stewards of companies

As agents acting and investing on behalf of end-investors, asset managers also have a key role to play in engaging with businesses, monitoring the performance of the management team, and influencing capital allocation decisions. The main motivation for asset managers to engage with companies is to maintain and

⁴⁵ The Kay Review highlighted the risk of herding behaviour among asset managers. This was also emphasised by Andy Haldane, Chief Economist and Executive Director of Monetary Analysis and Statistics, Bank of England, in his speech, ‘The age of asset management?’, 4 April 2014, <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech723.pdf>, last accessed 18 July 2016.

enhance value for shareholders, and in the UK there has been increasing awareness since the introduction by the Financial Reporting Council of the Stewardship Code, and evidence of an increasing resource dedicated to stewardship.⁴⁶ Moreover, stewardship can help to build trust between companies and asset managers, which in turn may contribute to the ability of companies to raise new capital.⁴⁷ From the point of view of businesses, maintaining these relationships with asset managers is seen to be important, especially in times of financial distress, as discussed in more detail in section 3.3.

Collective engagement—i.e. collaboration with other investors—can help to increase the impact. In particular, small holdings can act as a barrier to engagement, and then a collective approach can achieve critical mass and make companies aware that some concerns are shared among shareholders.⁴⁸ Some stakeholders have concerns that collective engagement could be constrained by rules regarding acting in concert, market abuse and antitrust laws. The asset management industry has established an Investor Forum that aims to facilitate collective engagement while overcoming these potential regulatory impediments.

There are many individual examples where stewardship and engagement by investors has had an impact on company decisions, as can be observed in asset managers' public reporting on such activities. However, there is still an academic and wider debate on the overall effectiveness of this role of the asset management industry as a whole. The evidence of the impact is complex and provides mixed findings, but there is a widespread perception of it having the potential to deliver value to both investors and companies.⁴⁹

There are a range of themes in this debate. Some researchers have focused on the importance of large shareholders,⁵⁰ while others maintain that many public companies have become 'ownerless corporations'⁵¹ since shareholdings are small and dispersed. Stewardship can be exercised through several mechanisms including *voice*, *escalation*, *voting* and *exit*, which have been defined as follows:⁵²

Voice in the normal course, shareholders may wish to attempt to exert influence over the board and encourage them to reconsider the course being adopted. Given the likely sensitivity of the topics and the need to build mutual trust, it is generally appropriate for this dialogue to be private

Escalate by the same token, depending on the nature of the problem, it may be appropriate to escalate engagement activities, for example by coordinating with a wider group of shareholders

⁴⁶ Investment Association (2015), 'Stewardship Survey', chapter 4, p. 15, <http://www.theinvestmentassociation.org/investment-industry-information/research-and-publications/stewardship-survey.html>, last accessed 18 July 2016.

⁴⁷ Cronin, C. and Mellor, J. (2011), 'An investigation into Stewardship – Engagement between investors and public companies: Impediments and their resolution', Euro Capital Markets, Foundation for Governance Research and Education, June.

⁴⁸ Investment Association (2015), 'Adherence to the FRC's Stewardship Code', <http://www.theinvestmentassociation.org/assets/files/surveys/20150526-fullstewardshipcode.pdf>, last accessed 18 July 2016.

⁴⁹ For a discussion on this potential role, see, for example, Gifford, J. (2010), 'Effective shareholder engagement: the factors that contribute to shareholder salience', *Journal of Business Ethics*, **92**, pp. 79–97.

⁵⁰ Wong, S.C.Y. (2010), 'Why Stewardship is Proving Elusive for Institutional Investors', *Journal of International Banking and Financial Law*, July/August, pp. 406–11.

⁵¹ This term was coined to point to the issue of 'double agency'.

⁵² Hirschmann, A.O. (1970), *Exit, voice and loyalty. Responses to Decline in Firms, Organizations, and States*, Harvard University Press. Shareholders may also exert governance through the threat of exit, rather than only actual acts of exit and voice. For evidence on the impact of the threat of exit, see Bharath, S.T., Jayaraman, S. and Nagar, V. (2013), 'Exit as governance: An empirical analysis', *The Journal of Finance*, **68**:6, 2515–47.

Vote depending on the result of these activities, shareholders may wish to express disagreement with the board by voting against resolutions at a general meeting. They may also wish to propose their own resolutions

Exit having reviewed changes to a strategy or governance model that they consider detrimental to shareholders' interests, they may choose to sell shares.

A survey⁵³ of 143 institutional investors around the world found that institutional investors consider the option of voice and the option of exit in equal measure. Extreme channels such as legal measures and publicly criticising the portfolio company are used only infrequently. In certain cases, if an issue raised privately with the company has not been resolved, shareholders may escalate engagement activities by coordinating with a wider group of shareholders.⁵⁴

A number of industry surveys shed more light on how stewardship works in practice.⁵⁵ These describe in detail the process of engagement for specific case studies, covering asset managers' objectives, the nature of the dialogue with companies, the corresponding voting decisions, and the outcome of all this activity.

Much of the academic research on the effectiveness of engagement has focused on 'voice' and, in particular, on the impact of shareholder activism (including all types of institutional investors) on the firm's value, earnings, operations and corporate governance.⁵⁶ The conclusions of the research are mixed, although some recent studies have shown a clearer link between engagement and corporate performance, as discussed below.

For example, early work found limited evidence that it improved firm performance, while one study showed that shareholder proposals by active pension funds led to asset sales, restructurings and redundancies, but had no effect on stock or accounting performance.⁵⁷ A study synthesising all the relevant research on shareholder activism up to 2001⁵⁸ concluded that large shareholders can indeed bring about small changes in companies' corporate governance structure, but that the impact on shareholder value and earnings is negligible. Another survey that reviewed corporate voting and elections concluded that 'the success of institutional investor activism to date appears limited.'⁵⁹

A more recent assessment of shareholder activism in the UK,⁶⁰ on 270 shareholder activism events in the period 1998–2008, did not find a significant

⁵³ McCahery, J.A., Sautner, Z. and Starks, L.T. (2011), 'Behind the scenes: The corporate governance preferences of institutional investors', AFA 2011 Denver Meetings Paper. Approximately half of the respondents in the survey indicated that they worked for asset managers, 21% for mutual funds, 12% for pension funds, and 4% for hedge funds. Moreover, the respondents represented large investors (more than one-third had assets under management of more than \$100bn).

⁵⁴ Association of British Insurers (2013), 'Improving Corporate Governance and Shareholder Engagement'.

⁵⁵ Investment Association (2015), 'Stewardship Survey', Detailed Practical Examples section, <http://www.theinvestmentassociation.org/investment-industry-information/research-and-publications/stewardship-survey.html>, last accessed 18 July 2016.

⁵⁶ Improvements in corporate governance have been shown to lead to stronger operating performance and higher returns. For example, see Gompers, P., Ishii, J. and Metrick, A. (2003), 'Corporate Governance and Equity Prices', *The Quarterly Journal of Economics*, **118**:1, pp. 107–56; Bebchuk, L., Cohen, A. and Ferrell, A. (2009), 'What matters in corporate governance?', *Review of Financial Studies*, **22**:2, pp. 783–827; and Association of British Insurers (2008), 'Governance and performance in corporate Britain: Evidence from the IVIS colour-coding system', ABI research paper 7.

⁵⁷ Del Guercio, D. and Hawkins, J. (1999), 'The motivation and impact of pension fund activism', *Journal of Financial Economics*, **52**:3, June, pp. 293–340.

⁵⁸ Karpoff, J.M. (2001), 'The impact of shareholder activism on target companies: A survey of empirical findings', presented at the Corporate Governance I praksis: Internasjonalt Seminar, September.

⁵⁹ Yermack D. (2010), 'Shareholder voting and corporate governance', *Annual Review of Financial Economics*, **2**, pp. 103–25.

⁶⁰ Filatotchev, I. and Dotsenko, O. (2013), 'Shareholder activism in the UK: types of activists, forms of activism, and their impact on a target's performance', *Journal of Management and Governance*, **19**:5, pp. 5–24.

impact of shareholder activism on the target firm's performance, but did find that this impact depends on the form of activism, type of investor, and investor demands. For example, shareholder proposals will be more effective when put forward in a shareholders' vote than when they are channelled through a public debate. At the same time, a review by ShareAction⁶¹ of academic and industry reports documented both an increase in stewardship by institutional investors (particularly after the financial crisis) and a link between environmental, social and governance engagement and corporate performance.

Overall, the academic literature provides a rather mixed picture on both the extent and effectiveness of engagement. However, an inherent limitation relates to the qualitative aspect of the engagement with companies that cannot easily be captured, not least because it mainly involves private discussions that are not observable to outsiders.⁶² As such, analysis of the impact, and particularly establishing causality, is challenging. An additional hurdle is that where stewardship takes place, it is impossible to observe the counterfactual so as to demonstrate exactly what value could have been added or the value lost from not taking these actions.

In addition, there can sometimes be barriers to effective engagement. These may relate to the significant cost and time required to engage and monitor all companies,⁶³ or to regulatory or market constraints. For example, diversification requirements may prevent shareholders from obtaining a large enough stake in a company—a UCITS⁶⁴ may not invest more than 5% of its assets in transferable securities issued by a single entity.⁶⁵ A small holding may negatively affect companies' responsiveness to engagement, and so lessen the degree of influence of an asset manager. At the same time, where share ownership is dispersed, if the asset manager prioritises overweight holdings and companies prioritise dialogue with their largest shareholders, it can be hard to coordinate effective dialogue even if both parties are in principle willing to engage. An additional challenge could be the presence of a dominant block holder controlling a large share of the company, which might discourage smaller investors from engaging.⁶⁶

3.3 Rights issues in 2009

Overall, then, asset managers have relatively long term holdings, their holdings are often significant in size, and, collectively, they can hold a large proportion of the stock of both large and small companies. Consequently, when companies have a significant and urgent need for new equity funding, the success of the process can rely on asset managers. The discussions with asset managers highlighted that, in terms of their engagement in fund raising, they prioritise situations where businesses are in a state of change, such as when requiring funds for restructuring or investment, or when they are in financial distress.⁶⁷

⁶¹ Ivanova, M. (2016), 'ShareAction: The Case for Active Ownership', <https://shareaction.org/wp-content/uploads/2016/04/TheCaseForActiveOwnership.pdf>, last accessed 18 July 2016.

⁶² An interesting exception where researchers have access to behind-the-scenes information is Bauer, R., Clark, G.L. and Viehs, M. (2013), 'The geography of shareholder engagement; evidence from a large British institutional investor', <http://ssrn.com/abstract=2261649>, last accessed 18 July 2016.

⁶³ Investment Management Association (2012), 'Adherence to the FRC's stewardship code at 30 September 2011'.

⁶⁴ An Undertakings for the Collective Investment of Transferable Securities (UCITS) is a public limited company that coordinates the distribution and management of unit trusts among countries within the EU.

⁶⁵ Investment Management Association (2012), 'Authorised funds: a regulatory guide', March.

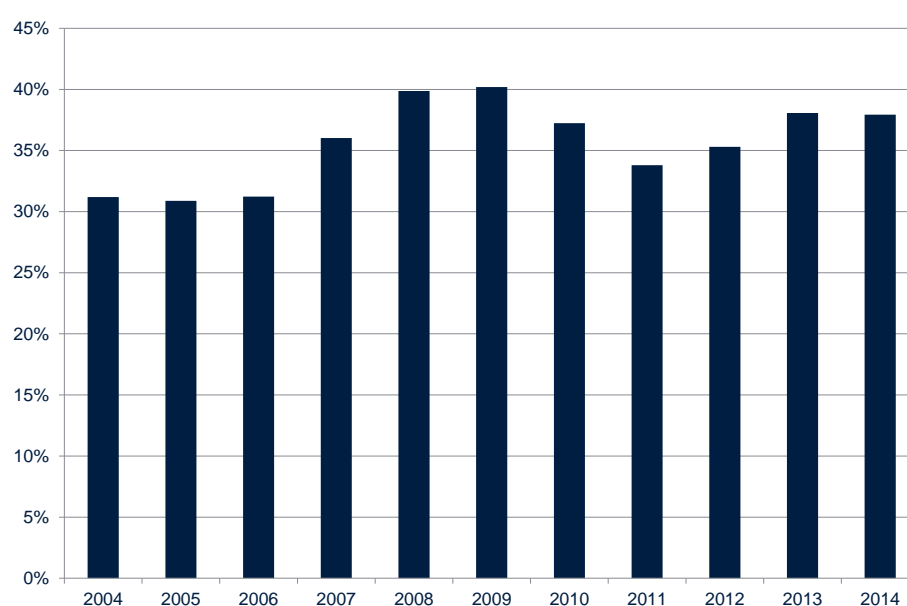
⁶⁶ Edmans, A. (2014), 'Blockholders and corporate governance', working paper.

⁶⁷ For example, a study of a UK-based asset manager found that the investor used a 'priority list' of firms that included all firms for which engagement was of the highest importance to the asset manager's institutional clients (and their corresponding clients). See Bauer, R., Clark, G.L. and Viehs, M. (2013), 'The geography of shareholder engagement: Evidence from a large British institutional investor', working paper.

To explore this in more detail, this section considers the rights issues during 2009, when a relatively large number of companies were in financial distress and/or needed to reduce debt levels. 2009 was an exceptional year for the UK and global economy, when other important sources of funds (most notably banks) were constrained by the financial crisis.

The aftermath of the financial crisis saw many businesses with excessive gearing. Prior to 2009, businesses had generally been increasing debt levels over time due to low interest rates. As shown in Figure 3.3, average debt levels rose sharply from around 30% in 2004 to 40% in 2008. The combination of high levels of debt and deteriorating market conditions found that some of these businesses were over-leveraged and in need of urgent new equity financing to avoid violating debt covenants, or even default.

Figure 3.3 Gearing ratios for FTSE 100 non-financial services companies

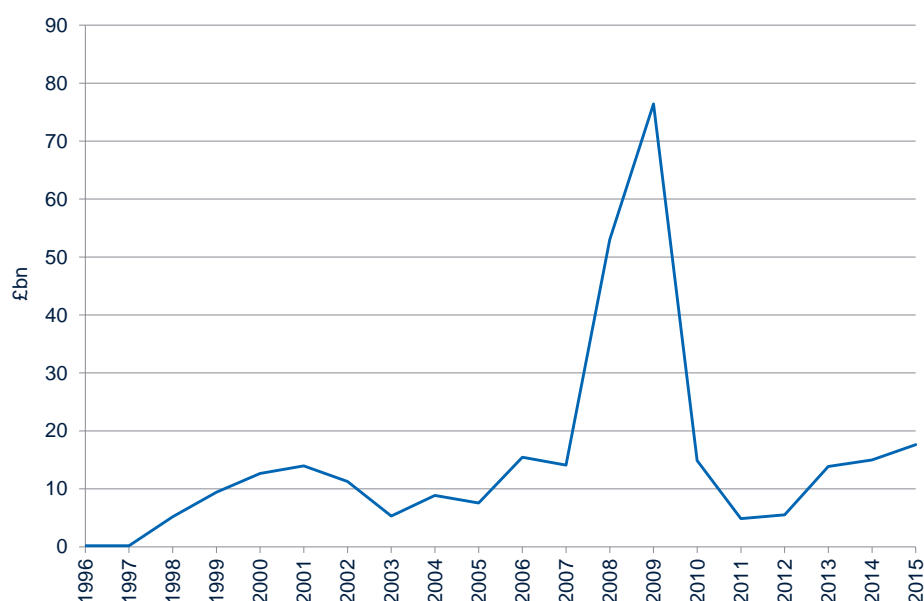


Note: Gearing ratio is defined as the ratio of net debt to the sum of net debt and shareholder equity. The analysis excludes financial services companies.

Source: Oxera calculations based on Thompson Reuters.

The new equity funding came in the form of rights issues and share placings with a total value of approximately £80bn, as shown in Figure 3.4 below; the new funding was concentrated in companies in the construction, mining and financial services/banking industries. The contribution of capital from asset managers in 2009 made up a substantial proportion of the amount raised; this was particularly important at a time when bank lending was severely constrained.

Figure 3.4 Rights issues and share placings, 1996–2015 (£bn)



Source: London Stock Exchange.

Of the almost £80bn raised in rights issues and placings in 2009, around £30bn related to non-financial services firms. Table 3.1 describes a selection of the larger rights issues outside the financial services sector, which accounted for around one-third of the total (£10.4bn).

Table 3.1 Selected non-financial rights issues, 2009

Company	Sector	Money raised (£m)	Take-up rate	Discount
Rio Tinto	Mining	7,342	97%	49%
Land Securities Group	Real estate	785	95%	52%
Wolseley	Support services	781	98%	75%
Hammerson plc	Real estate	609	99%	62%
National Express Group	Travel and leisure	375	90%	70%
Ladbrokes	Travel and leisure	286	95%	48%
Rexam	General industrial	150	95%	46%
Northgate	Support services	84	98%	41%

Source: Oxera analysis of Thompson Reuters data.

The rights issues included businesses from a range of sectors. They involved a high degree of take-up by shareholders and were priced at considerable discount to the prevailing share prices, which can be an indication of distress. In most cases, the share price had fallen significantly in the months preceding the rights issue.

In each case, asset managers played an important role in funding these issues due to their role as significant shareholders. Media reports at the time provide a description of asset managers' role in fund raising. For example:

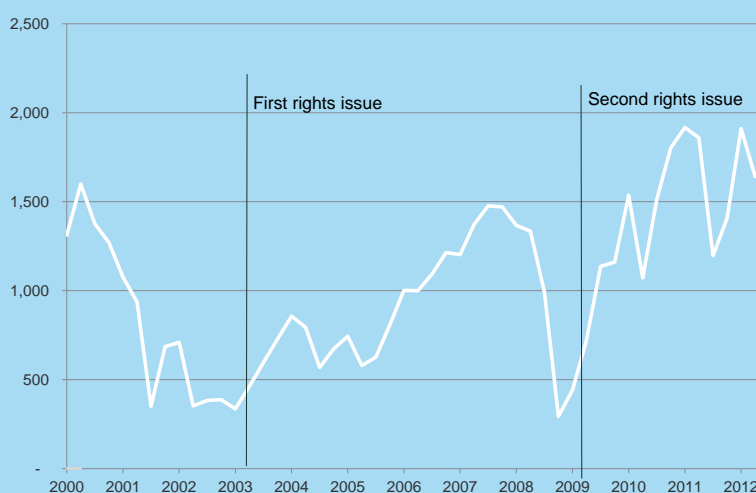
- asset managers put pressure on Rio Tinto not to raise private funding, which could dilute public equity, but instead to raise funds through a public rights issue (which it did);⁶⁸
- there were concerns that the significant number of real estate and building companies seeking equity funding in 2009 could lead to a shortage of capital—in the end, however, companies such as Land Securities, Wolseley, Hammerson and British Land (not included in Table 3.1) were able to raise nearly all the required funds;⁶⁹
- National Express was able to gain the support of all major investors (primarily asset managers) for a major rights issue.⁷⁰

The involvement of asset managers in rights issues is explored in greater detail in the case studies of Cookson Group (Box 3.1) and Barratt Developments (Box 3.2). These case studies involve companies with a need to reduce leverage. This was achieved through engagement with their largest shareholders, either large institutional investors or intermediaries such as asset managers.

Box 3.1 Case study: Cookson Group

After amassing £750m in debt in 2002, Cookson Group, an industrial materials company, raised £290m from a rights issue in the same year. It did not underwrite the issue, and initially there was insufficient interest from investors. Eventually, large asset managers stepped in and bought up the new issue.¹ The asset managers that increased their share stakes were Standard Life, Fidelity (from 3% to 15%), Hermes, and Edinburgh Investors. Cookson Group launched a second rights issue in January 2009 for £240m owing to debt caused by its takeover of rival, Foseco, in 2007, and deteriorating market conditions. It again received support from investors, with 95% of its shareholders taking up the issue. Its market value increased by around 130% in the period after the rights issue up to December 2012, when it demerged to form Vesuvius and Alent Group.

Cookson Group: market capitalisation (£m)



Note: ¹ *The Telegraph* (2002), 'Market Report: Standard Life marks "sea change" in Cookson plight', 20 August, <http://www.telegraph.co.uk/finance/markets/marketreport/2771199/Market-Report-Standard-Life-marks-sea-change-in-Cookson-plight.html>, last accessed 18 July 2016.

⁶⁸ *The Guardian* (2009), 'Shareholders start fight against Rio Tinto's \$20bn Chinese bail-out', 12 February, <http://www.theguardian.com/business/2009/feb/12/rio-china-mining>, last accessed 18 July 2016.

⁶⁹ *The Telegraph* (2009), 'Land Securities announces £755m rights issue', 19 February, last accessed 18 July 2016.

⁷⁰ *The Evening Standard* (2009), 'National Express gets £360 million rights issue away', 15 December, <http://www.standard.co.uk/business/national-express-gets-360-million-rights-issue-away-6784568.html>, last accessed 18 July 2016.

Citywire (2002), 'Cookson finds support from top recovery investors', 29 October, <http://citywire.co.uk/money/cookson-finds-support-from-top-recovery-investors/a243273>, last accessed 18 July 2016. Source: Oxera analysis based on Thompson Reuters data.

Box 3.2 Case study: Barratt Developments

Residential property company, Barratt Developments, paid £2bn to buy rival Wilson Bowen, financed partly by bank and private placement debt. The company was then put under pressure following the downturn in the housing market in 2008–09 due to the financial crisis. The company had £1.3bn of debt in early 2009, which it needed to reduce to be able to take advantage of the expected recovery in the housing market. Barratt announced a £545m rights issue in September 2009, as well as placing shares worth £175m at a 10% discount.⁷¹ In addition, institutional investors, including M&G, supported the company through direct lending. The company has performed well since then, as indicated by market capitalisation in the chart below.

Barratt market capitalisation, 2006–15 (£m)



Note: See *The Treasurer* (2010), 'Rebuilding Barratt', December, <https://www.treasurers.org/ACTmedia/DecJan10TTBarratt24-25.pdf>, last accessed 18 July 2016.

Source: Oxera, based on Thompson Reuters data.

3.4 Performance of companies following rights issues

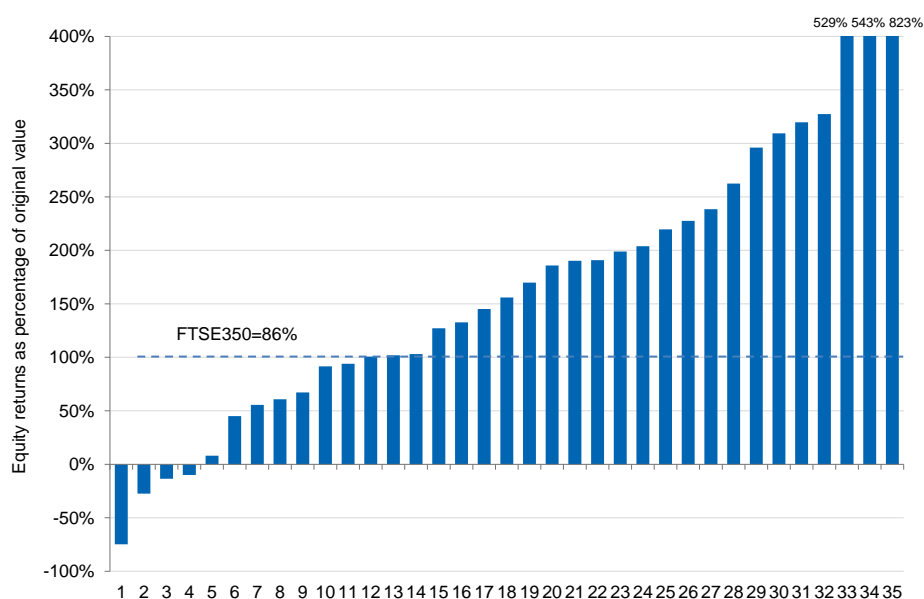
To assess the economic contribution of the role of asset managers in rights issues would require an assessment of whether the purpose of the new funding added to the company's overall value—i.e. whether it had a positive net present value. While it would be very difficult to isolate the value of the incremental funding in the form of a rights issue, it is possible to assess the subsequent performance of the whole company after the rights issue. While the share prices of most of the companies fell sharply before the rights issue, one would expect the share price to have found a new equilibrium level shortly after the rights issue, and from then on the performance can be compared to the market. A negative performance compared with a suitable benchmark would be consistent with the assumption that the rights issue was invested in an underperforming investment.

Oxera therefore examined the performance of 35 non-financial-services businesses that raised £17bn in rights issues in 2009 (over 50% of the total of rights issues and placings), to see how their performance after the rights issue

⁷¹ See *The Treasurer* (2010), 'Rebuilding Barratt', December/January, <https://www.treasurers.org/ACTmedia/DecJan10TTBarratt24-25.pdf>, last accessed 18 July 2016.

compared to that of the market as a whole.⁷² The performance of the market index serves as an approximate benchmark to measure what might have happened ('the counterfactual') if the funds had been invested with a zero net present value. Since the rights issues, the total returns for these businesses were around 110% of the market capitalisation at the beginning of the period. 24 of the companies delivered returns of more than 100%, while only four did not offer positive returns (see Figure 3.5). This compares to an increase in the FTSE 350 total returns index over the same period (Q3 2009 to Q4 2015) of approximately 86%.

Figure 3.5 Total returns of companies following 2009 rights issues



Note: The figure presents the increase in the total return index for the 35 companies over the period from two weeks after the rights issue in 2009 to November 2014. The three companies on the right of the chart produced total returns growth greater than 400% of the original market value, and the bars for those companies have been cut short for presentational purposes.

Source: Oxera analysis based on Datastream data.

Although it cannot be concluded that such equity injections are positive net present value investments, the evidence suggests that, taken as a group, the companies that raised these funds performed relatively well in the subsequent period.

3.5 Summary: the role of asset managers in the fundraising process

Asset managers are found to be relatively long-term holders of assets, and there is considerable variation in the degree to which they hold significant stakes in the companies they invest in. Asset managers can actively engage when companies go through difficulties and are in need of new equity funding. A review of one period in particular—the significant issuance of additional shares (i.e. rights issues) by many companies in 2009 in response to the need to reduce leverage (and in particular bank lending)—showed that around £80bn was channelled through rights issues and share placings, most of which were used to reduce leverage. This example highlights the role that engagement by asset managers

⁷² The analysis calculated the increase in the weighted average of the total returns index for these companies from two weeks after the rights issue (to avoid the volatility in share prices that can occur around rights issues) to November 2014. The weights used were each company's market value two weeks after the rights issue. This was then compared with the increase in the total returns index for the FTSE 350 for the period starting in the third quarter of 2009 and ending in the fourth quarter of 2014.

can play in response to challenging market circumstances, while also acting in the interests of their clients, the investors.

4 The importance of debt finance

There has been a tendency to over-focus on equity finance when considering the role of asset management. This may be a reflection of the historical role of asset managers, which was primarily associated with public equity. However, as shown in section 2.2, the vast majority of recent asset management involvement in the primary funding of companies is in debt finance.

This section further explores the role of asset management in debt finance, by looking at:

- the impact of the shift in debt financing to companies since the financial crisis, to better understand its relevance to the wider economy (section 4.1);
- the increasingly diverse range of debt financing channels that involve asset managers (section 4.2).

4.1 Impact of the shift in debt financing since the financial crisis

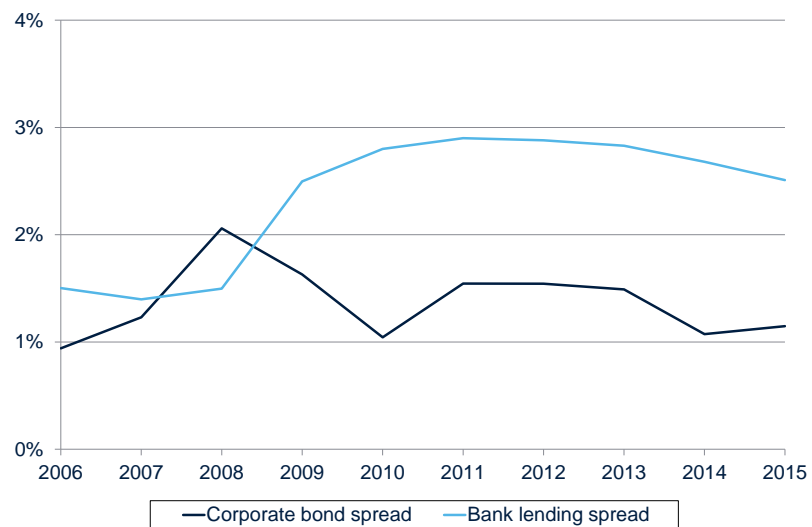
As detailed in section 2.1, the role of banks in providing debt financing has shrunk significantly since the financial crisis. Net bank lending to non-financial corporations fell into negative territory in 2009 and was still negative in 2014, as banks issued less in new loans to businesses than loans repaid. At the same time, net bond issuance remained positive, resulting in a shift from bank lending to bond finance (with the latter channelled mainly through asset managers).⁷³

From the perspective of businesses, the shift from bank lending to bond finance made sense: after 2008 the costs of bond finance fell relative to the costs of bank lending, as the spread between bank lending rates and the official base rate widened, while the average corporate bond spread (relative to UK gilts) shrank and returned to pre-crisis levels (see Figure 4.1 below).⁷⁴ While corporate bond spreads for ten-year investment-grade bonds remained 1–2% in the period 2008–13, bank lending spreads jumped from approximately 1.5% to almost 3%.

⁷³ The financial crisis caused a reduction in the overall demand for external financing, brought about by weak business confidence about future economic conditions. Many companies cut costs and scaled back new investment during this period, thereby accumulating large cash balances. See Breedon, T. (2012), 'Boosting finance options for business', Taskforce report of industry-led working group on alternative debt markets.

⁷⁴ These spreads indicate the additional cost of lending relative to the estimate of the 'risk-free' lending rate for the relevant maturity of loan. Here, bank lending is assumed to be priced mainly according to short-term rates (and hence compared with the Bank of England base rate), while corporate bonds are treated as having an average maturity of ten years, and hence are compared with ten-year UK gilts.

Figure 4.1 Corporate bond and bank lending spreads

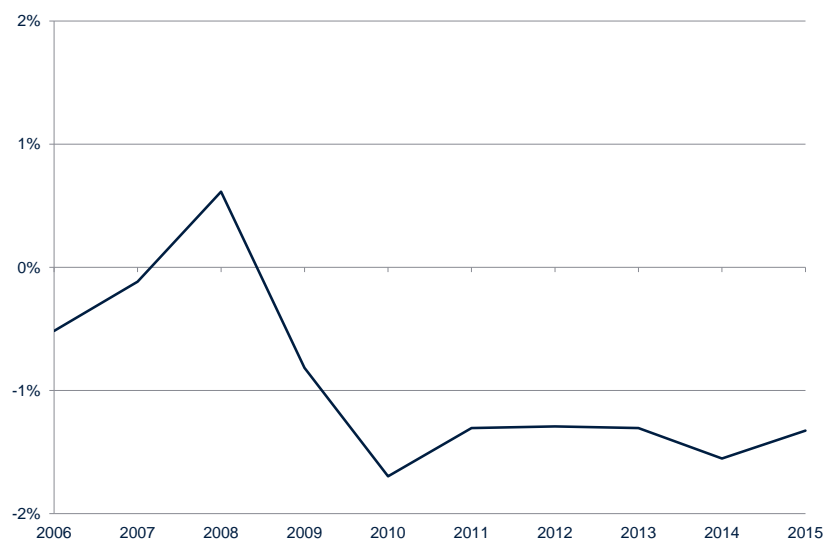


Note: The corporate bond spread is calculated by taking the spread of ten-year investment-grade bonds (as an average across bonds with credit rating AA, A and BBB) over the ten-year gilt. The bank lending spread is the spread of the average commercial bank lending rate over the Bank of England base rate. For the period 2006–11, the lending rate is taken from the December 2011 Bank of England Financial Stability report. For the period 2012–15, data is used from the Bank of England report on the lending rate for secured loans (Table G1.4).

Source: Oxera analysis based on data from Thompson Reuters and Bank of England.

Consequently, the overall cost differential between bond financing (which incorporates the corporate bond spread and the issuance fees) and bank lending has shifted in favour of bonds. As shown in Figure 4.2, before the crisis this differential was small, averaging 0.3%. Since the peak of the crisis (looking at the 2009–13 period), the differential has averaged 1.3%. This suggests that, relative to bank lending, bond finance has been cheaper since 2009 by around one percentage point.

Figure 4.2 Price of corporate bonds relative to bank lending



Note: The cost differential is calculated by taking the difference between the cost of corporate bonds and the cost of bank lending. The cost of corporate bonds is equal to the sum of the bond spread and the gross fees, divided by ten, as the annual cost of a ten-year bond is being measured.

Source: Oxera.

These trends suggest that the shift from bank lending to bond finance brought about a reduction in the overall cost of capital (compared with continuing with bank lending). The change in the cost differential can be used to provide a broad-brush estimate of the savings that companies might have made by switching from bank lending to bond finance in 2009–13, as described in Box 4.1 below. While such estimates should be treated as only indicative due to the simplifying assumptions involved, they do suggest a significant reduction in the cost of capital for companies. This shift was facilitated, to a large extent, by asset managers, which provided some 60–70% of the new funds into bond finance and around 40–50% into equity finance (see section 2.2).

Box 4.1 Estimating the cost of capital impact of the shift from bank lending to bond finance

The estimates of the cost differential between bank lending and bond finance were used to obtain an approximation of the reduction in the cost of capital resulting from firms switching from bank lending to bond finance. This reduction was calculated as follows:

- taking the period 2006–07 as the benchmark, the difference in the average cost differential between bond finance and bank lending in the two periods 2009–13 and 2006–07 was equal to 0.97%;
- this difference was applied to the amount of financing that was shifted to bonds each year. This was equal to £12.8bn (which is the total net issuance of £64bn, divided by five to obtain the annual amount of new bonds raised);
- on average, firms saved around £120m in annual interest payments on the financing that was switched from bank lending to bond finance (based on £12.8bn times 0.97%). On the assumption of these savings being maintained over the lifetime of a benchmark ten-year bond, the present value of those savings, using a discount rate equal to the average bond yield over that period, is equal to approximately £1bn.

This suggests that firms that switched from bank lending to bond finance, in a one-year period, saved a net present value of approximately £1bn by doing so. This is a broad-brush estimate based on a number of simplifying assumptions (in particular, it ignores many other differences between the two funding sources); however, it provides an indication of magnitude.

The reduction in the cost of debt finance can also be considered in terms of the impact on the overall cost of capital. The reduction can be calculated by using the equation for the weighted average cost of capital (WACC). Specifically, the reduction in the WACC can be estimated as the product of:

- the cost of debt differential calculated above (0.97%);
- the gearing ratio in the period 2009–13, which is estimated to be 0.45;
- 1 minus the corporate tax rate in that period, which averaged 26%.

This calculation yields a reduction in the WACC of approximately 0.3 percentage points. Again, this is an indicative estimate only.

Source: Oxera analysis, drawing on information provided in *The Economist* (2014), ‘Special Report on International Banking: Shadow and Substance’, May, www.economist.com/sites/default/files/20140510_international_banking.pdf, last accessed 18 July 2016.

However estimated, even small changes in the cost of debt financing can deliver significant impacts on company finances due to the scale of debt financing.

4.2 Increasing diversity of debt financing channels

The channelling of funds to companies is not a static process, and there are considerable variations over time, both in the amount of primary market funding and in the relative importance of different funding channels (which in turn depend to a great extent on macroeconomic conditions). While most companies still raise funding predominantly in the public bond and equity markets—where asset managers are very prominent—other channels are increasingly being used, including private bond and debt markets. Although there is limited data on

their actual involvement, discussions with asset managers for this study suggest that they are increasing their interest and activity in these markets.

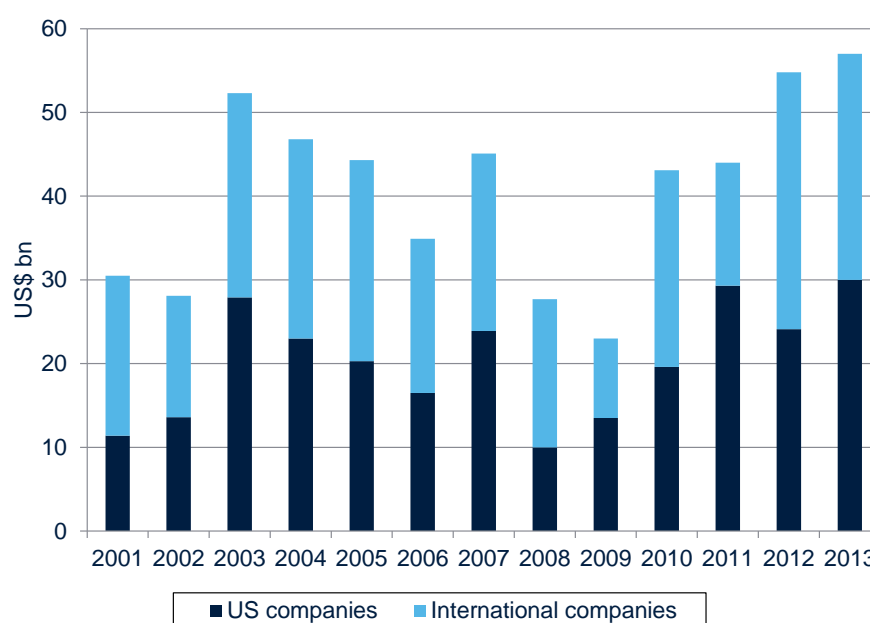
The main channels of investment in the private debt market, considered in turn below, are private placements; direct lending; and infrastructure investment.

4.2.1 Private placement of debt

In a private placement of bonds or notes, the business issues an unlisted debt security to a small number of intermediaries who represent end-investors. Businesses approach these intermediaries through an investment bank or go directly to those investors with whom they have a long-standing relationship. This form of issuance does not require a credit rating for the business to be in place, and can be suitable for raising a smaller amount than is typical for a listed bond issue, or a bond structured in a particular way that is not suitable for public bond markets.⁷⁵

There is a large private placement market in the USA (supported by both US and international investors), where many non-US firms (including UK businesses) raise money (see Figure 4.3).⁷⁶ Private placements of debt in the UK and Ireland by UK companies (using the US market) grew significantly over the five years to 2014, as shown in Figure 4.4.

Figure 4.3 Private placement of debt issuance in the USA (US\$bn)

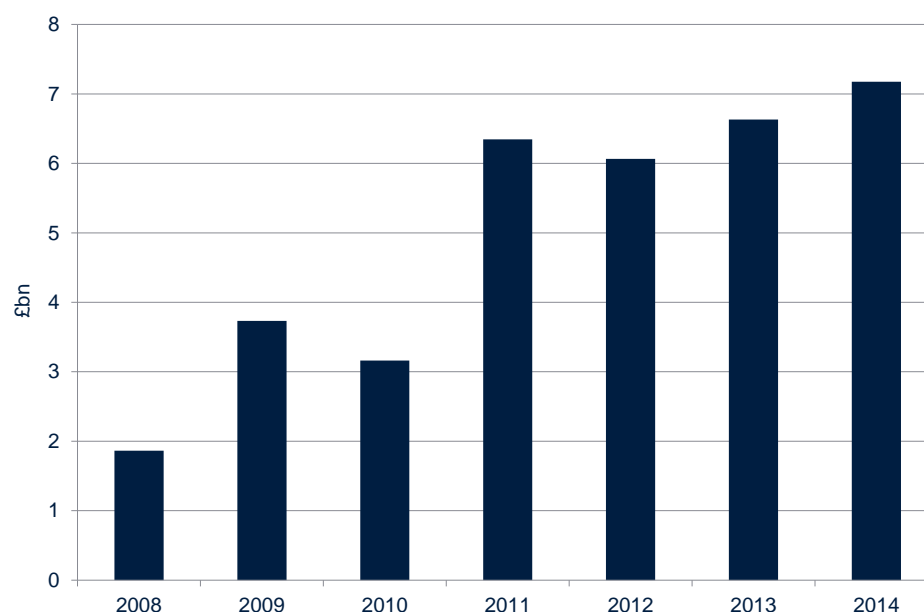


Source: M&G Investments (2013), 'Borrowing without banks', <http://www.mandg.co.uk/institutions/-/media/Literature/UK/Institutional/Borrowing-without-banks.pdf>. It is understood that this source is based on Private Placement Monitor data, <http://www.privateplacementmonitor.com/>, last accessed 24 February 2016, for 2014 data.

⁷⁵ M&G Investments (2013), 'Borrowing without banks: How companies raise finance now', <http://www.mandg.co.uk/institutions/-/media/Literature/UK/Institutional/Borrowing-without-banks.pdf>, last accessed 18 July 2016.

⁷⁶ While privately placed bonds are purchased by both asset managers and large institutional investors (such as pension funds), there is no data on the breakdown between the two. Oxera's conversations with corporates that issued private bonds in the USA suggest that the majority of private bond investors are private investors or large insurance companies (often acting through their asset management arm).

Figure 4.4 Private placement of bonds in the UK and Ireland (£bn)



Note: The share of Irish private placements is considerably smaller than in the UK. In 2013, for which data on UK private placements was available (M&G Investments, 'Borrowing without banks', 2013), the share of Irish private placements was approximately 1%.

Source: M&G Investments (2013), 'Borrowing without banks', <http://www.mandg.co.uk/institutions/-/media/Literature/UK/Institutional/Borrowing-without-banks.pdf>; and Private Placement Monitor, <http://www.privateplacementmonitor.com/>, last accessed 24 February 2016.

Private placement transactions are typically costlier than the equivalent public bonds.⁷⁷ However, they have certain advantages that make them appealing to issuers. First, direct communication with a small number of intermediaries representing investors allows companies to build a relationship with those investors who are willing to develop an understanding and take a long-term interest view of the business. This is particularly useful for businesses in niche markets where there may be a lack of comparator businesses with publicly listed bonds (for price-setting purposes).

Second, as the terms of the bond are negotiated on a bilateral basis, they can be structured to suit the needs of both parties in the transaction. Since private placement bonds tend to be long-term and illiquid, they are usually attractive to asset managers looking for (and able to invest in) securities that offer a liquidity premium in the interest rate, and these managers will tend to be acting for investors with long-term liabilities (such as insurance companies or pension funds). Indeed, in the UK, large insurance companies (via their asset managers) appear to be the most active investors in private placements.⁷⁸

For example, one of the companies interviewed by Oxera said that, in a recent bond issuance, the flexibility offered by the private placement market allowed it to refinance its debt in a cost-effective manner. It wanted to issue debt that met its financing profile and collateral requirements precisely, but this would not have

⁷⁷ While data on the rates carried by private placement bonds is lacking, this statement was confirmed through Oxera's discussion with both issuers of private placement bonds and asset managers.

⁷⁸ In December 2014, it was announced that Allianz Global Investors, Aviva, Friends Life, Legal & General, Prudential, and Standard Life intended to make investments, over the subsequent five years, of around £9bn in private placements and other direct lending to UK companies. See Investment Management Association (2014), 'IMA and its Members Respond Positively to Government's Exemption from Withholding Tax for Interest on Private Placements', <http://www.theinvestmentassociation.org/media-centre/press-releases/2014/press-release-2014-12-04.html>, last accessed 18 July 2016.

been possible using public debt markets, where other types of bond security are typical. The company funded the required bond from investors in the US private placement market (mainly large pension funds and insurance companies) that had the liabilities to match the proposed bond structure.

Furthermore, a relationship with a small group of intermediaries representing investors can prove beneficial for the company should the need arise to renegotiate the debt. For example, the residential property development company, Barratt, had issued a bond in the private placement market that was taken up by M&G. In 2007, Barratt had paid £2bn to buy another construction company, Wilson Bowen, financed partly by bank and private placement debt. Barratt was put under pressure following the financial crisis. Following talks with M&G, the private placement was amended, allowing Barratt to continue to operate through the difficult conditions.⁷⁹

4.2.2 Direct lending

Another area where institutional investors and asset managers are becoming increasingly active is in the provision of direct lending to companies.⁸⁰ Direct lending is particularly applicable to SMEs that are looking for an alternative to bank lending and do not have an external credit rating from a rating agency. M&G, one of the main providers of direct lending in the UK, sets out the following criteria for direct lending:⁸¹

- UK-based companies with turnover of c. £50m–£500m;
- loan size of £10m+;
- up to ten-year term;
- no external rating requirements.

While the rate offered tends to be higher than the rate charged for short-term bank lending,⁸² non-bank lending offers some advantages over bank loans. First, asset managers are able to provide long-term funding that may not be available from banks. This, in turn, reduces the need for refinancing and any subsequent costs and/or the risk that a short-term loan facility is not extended. These benefits are highlighted in the case of Hall and Woodhouse Brewery, described in Box 4.2.

⁷⁹ M&G Investments (2013), 'Borrowing without banks: How companies raise finance now', <http://www.mandg.co.uk/institutions/-/media/Literature/UK/Institutional/Borrowing-without-banks.pdf>, last accessed 18 July 2016.

⁸⁰ The terms 'private placement' and 'direct lending' are often used interchangeably. Private placements generally refer to a form of long-term, non-bank debt financing. Private placement of bonds refers to bonds offered to a small group of investors, typically mid- to large-cap companies, which may or may not have an external rating. Direct lending is targeted at medium-sized companies (with turnover below £500m) that do not have an external rating, and the bond is typically taken up by one asset manager. Moreover, while a number of asset managers are willing and able to purchase bonds in the private placement market, direct lending is usually performed by specialised funds, such as M&G's UK Companies Financing Fund.

⁸¹ M&G (2015), 'Direct lending criteria', <http://www.mandg.co.uk/directlending/criteria/>, last accessed 2 September 2015.

⁸² *The Economist* (2014), 'Shadow and Substance', Special Report on International Banking, 10 May, www.economist.com/sites/default/files/20140510_international_banking.pdf, last accessed 18 July 2016.

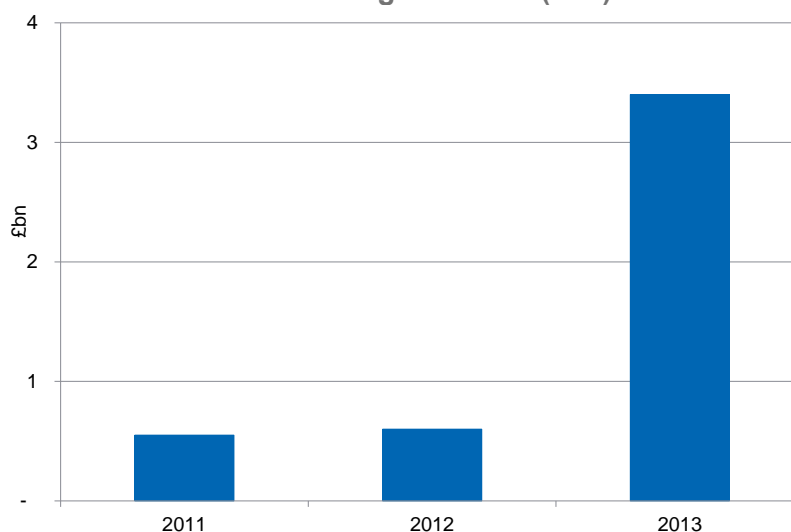
Box 4.2 Direct lending—the case of Hall and Woodhouse Brewery

Hall and Woodhouse Brewery had been a long-standing client of The Royal Bank of Scotland, with a regular line of credit for £50m. However, in 2010, when seeking to renew this credit, it was told that the line of credit would be reduced to three years from five, and at a higher interest rate. Rather than applying for a credit facility from another bank, the company reduced its bank borrowing and secured £20m of financing from M&G over a period of ten years. Although the arrangement with M&G is slightly more expensive and less flexible than the shorter-term bank credit, Hall and Woodhouse preferred it because of the saving in managers' time and because this credit allows it to plan for the long term.

Source: *The Economist* (2014), 'Special Report on International Banking: Shadow and Substance', May, www.economist.com/sites/default/files/20140510_international_banking.pdf, accessed 18 July 2016.

The market for asset managers providing funds for direct lending in the UK (and Europe in general)⁸³ is at an early stage of development.⁸⁴ According to a survey of market participants,⁸⁵ there was a sharp increase in direct lending in the UK in 2013 (see Figure 4.5). In an attempt to increase direct lending to SMEs, the UK government set up the Business Finance Partnership (BFP) between itself and fund managers. In September 2013 the government announced that more than £870m had been loaned to 18 mid-sized businesses (see Box 4.3 below).⁸⁶ Furthermore, in 2014 with the objective of boosting the private placement market, the Chancellor of the Exchequer announced that interest on private placements would be exempt from withholding tax. Following the announcement, five large insurers announced their intention to invest around £9bn in private placements and other direct lending to UK companies.⁸⁷

Figure 4.5 Level of direct lending in the UK (£bn)



Source: Standard & Poor's (2013), 'Midsize UK companies seek new funding sources to unlock growth', November.

⁸³ There is a significant German market for direct lending through the *Schuldschein* market. The *Schuldschein* is a fixed- or floating-rate instrument ranging from about €10m to €500m. The instruments are offered with maturities of between two and ten years.

⁸⁴ For a discussion, see The Association of Corporate Treasurers (2012), 'PP15+ working group on developing a UK Private Placement market: Interim report', December.

⁸⁵ Standard & Poor's (2013), 'Midsize UK companies seek new funding sources to unlock growth', November.

⁸⁶ HM Government (2013), 'Business Finance Partnership creates nearly £1 billion of new lending', 12 September, <https://www.gov.uk/government/news/business-finance-partnership-creates-nearly-1-billion-of-new-lending>, last accessed 18 July 2016.

⁸⁷ See Investment Management Association (2014), 'IMA and its Members Respond Positively to Government's Exemption from Withholding Tax for Interest on Private Placements', press release, <http://www.theinvestmentassociation.org/media-centre/press-releases/2014/press-release-2014-12-04.html>, last accessed 18 July 2016.

Box 4.3 Business Finance Partnership

The BFP was announced in November 2011¹ with a view to increasing the supply of capital through alternative (non-bank) channels. Overall, the Partnership was set to invest £1.2bn in increased lending, which was intended to be matched by a similar amount from private sector investors. Part of the reason why private sector co-investment was set to make up at least 50% of the overall investment was to comply with EU state aid rules. The BFP is operated by HM Treasury, but allows loan fund managers to make lending decisions autonomously, subject to companies' eligibility criteria.

The BFP can be divided into two schemes, which differ in scope, objectives and typology of funding channels:

1. the first consists of resources devoted to lending activities to medium-sized businesses with turnover of up to £500m;
2. the second is used to invest in fund managers and non-traditional lenders that provide loans to small businesses with turnover up to £75m.²

In the first scheme, six asset management companies were initially involved: Alcentra, Ares, Hayfin, M&G, Pricoa, and ICG. The first three were allocated £100m each; ICG was allocated £163m; and M&G and Pricoa were each given £200m.³ A total of £1.7bn was raised for this scheme, £1bn of which came from the asset managers.⁴

In September 2013 it was announced that more than £870m had been loaned to 18 mid-sized businesses that had average revenues of £80m per year and about 550 staff.⁵

The second strand of the BFP involved fund managers and non-traditional lenders,⁶ including Credit Asset Management Ltd (CAML). CAML was set up in 2011 to provide specialist asset finance to the SME market by purchasing critical business assets (similar to providing a collateral backed loan) and providing working capital loans to small businesses and professions. In December 2012, CAML was awarded £5m by the BFP.⁷ As at October 2013, £87m had been invested across the seven financing partners.⁸

Note: ¹ UK Parliament (2011), Commons Debate, 29 November, <http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111129/debtext/111129-0001.htm>, last accessed 18 July 2016. ² Department for Business, Innovation & Skills, The Rt Hon Matthew Hancock MP and HM Treasury (2012), 'Making it easier to set up and grow a business', <https://www.gov.uk/government/policies/making-it-easier-to-set-up-and-grow-a-business--6/supporting-pages/encouraging-private-sector-investment>, last accessed 18 July 2016. ³ City UK and Ares (2013), 'Alternative finance for SMEs and mid-market companies', October, p. 45. ⁴ City UK and Ares (2013), op. cit., p. 45. ⁵ HM Treasury (2013), 'Business Finance Partnership creates nearly £1 billion of new lending', <https://www.gov.uk/government/news/business-finance-partnership-creates-nearly-1-billion-of-new-lending>, last accessed 18 July 2016. ⁶ Other non-bank lenders include peer-to-peer lenders, online platforms and mezzanine loan specialists. ⁷ British Business Bank (2014), 'Business Finance Partnership Lender – Credit Asset Management Limited (CAML)', <http://british-business-bank.co.uk/partners/credit-asset-management-limited/>, accessed 18 July 2016. ⁸ City UK and Ares (2013), 'Alternative finance for SMEs and mid-market companies', October.

4.2.3 Infrastructure investment

Direct investment in large public and private infrastructure projects is another area in which asset managers are becoming increasingly active, acting in an agency role on behalf of their clients. Investments include large utility projects such as the upgrading and expansion of water, energy, transport and communications networks, as well as building projects such as student accommodation and hospitals. For example, in December 2013, six insurance companies with investment management arms (Legal & General, Prudential, Aviva, Standard Life, Friends Life, and Scottish Widows) signed an agreement with the UK government to invest £25bn in UK infrastructure.⁸⁸

The role of asset managers in channelling funds to infrastructure projects is highlighted by the different forms that such financing can take, including:

⁸⁸ *Financial Times* (2013), 'Insurers to promise £25 billion for infrastructure', 4 December, <http://www.ft.com/cms/s/0/1f74e176-5c41-11e3-b4f3-00144feabdc0.html#axzz3LVsn7eAz>, last accessed 18 July 2016.

- investment by specialised infrastructure funds, provided by large asset managers or smaller specialised asset managers—for example, Amber Infrastructure offers its London Energy Efficiency Fund (LEEF), a £100m fund that provides competitively priced finance for energy efficiency retrofit projects in existing private and public sector buildings in London;⁸⁹
- financing of infrastructure debt by specialised funds such as GCP Infrastructure Investments;⁹⁰
- financing through a public–private partnership (PPP). An example is the construction of the Royal Liverpool Hospital, a hospital scheme that will cost £429m, including demolition of the current hospital, construction of the new hospital, and landscaping. Alongside European Investment Bank (EIB) support of £90.5m,⁹¹ a further £118m of funding was provided by the Royal Liverpool and Broadgreen University Hospitals Trust and the Department of Health. Remaining funds came from private lenders including Legal & General Investment Management, Lloyds TSB, and Scottish Widows Investment Group. Another example is the recently agreed Bracknell regeneration partnership, which aims to regenerate Bracknell Town Centre and provide new retail, leisure and residential developments within landscaped public spaces. The project is a 50:50 joint venture between Legal & General Capital (LGC) and Schroder UK Property Fund (SPF), together with Bracknell Forest Council;⁹²
- social housing investment. Figure 4.6 below shows that capital markets have constituted a greater source of funding relative to banks. In 2014–15, capital markets accounted for approximately 60% of the £6.8bn of new funding secured by housing associations.

The increasing diversity of debt financing channels supported by asset managers, like the broadening of their offerings in portfolio investment (discussed in section 5), illustrates the changing role of asset management in financial intermediation.

The diversity of funding channels can provide companies with greater choice, and also requires different types of engagement between companies and asset managers. For example, direct lending involves investments that are not quoted and therefore not easily traded, so there is less opportunity for exit. This forces the asset manager into a longer-term investment and therefore requires more in-depth engagement with companies.

This diversity of options can be expected to provide benefits to companies, if it allows them to access forms of financing that better meet their specific needs.

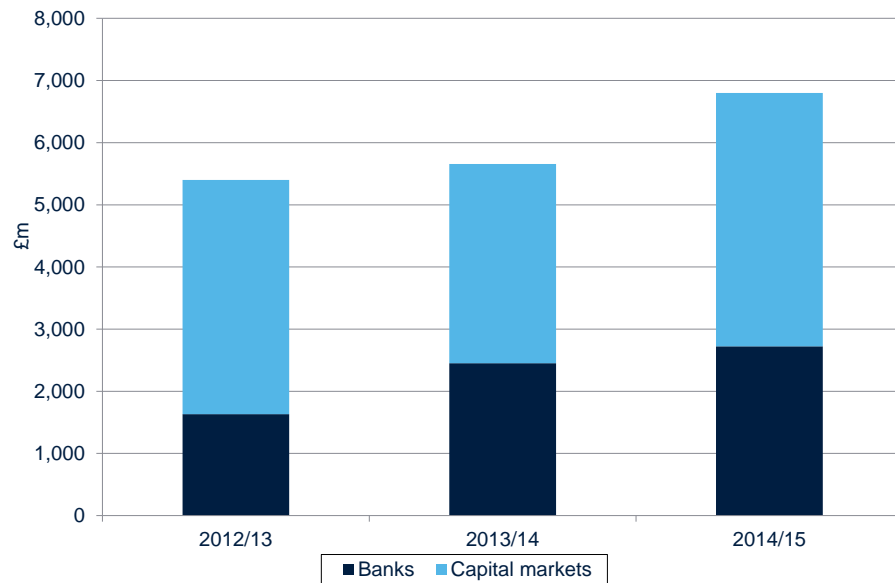
⁸⁹ See Amber Infrastructure, 'London Energy Efficiency Fund (LEEF)', <http://www.amberinfrastructure.com/our-funds/leef>, last accessed 18 July 2016.

⁹⁰ See 'GCP Infrastructure Investments Ltd', <http://www.gcpuk.com/gcp-infrastructure-investments-ltd>, last accessed 18 July 2016.

⁹¹ European Investment Bank (2013), 'European Investment Bank provides £90.5m support for construction of new Royal Liverpool hospital', 16 December, http://europa.eu/rapid/press-release_BEI-13-235_en.htm, last accessed 18 July 2016.

⁹² See Legal & General Group (2014), 'L&G and Schroders commit to £200m regeneration of Bracknell', <http://www.legalandgeneralgroup.com/media-centre/press-releases/2015/lgim-pressrelease2015-lgp-igandschroderscommittobracknell.html>, last accessed 18 July 2016.

Figure 4.6 Housing association financing (£m)



Source: Housing association accounts.

4.3 Summary: the importance of debt finance

Asset management has played a key role during the shift in debt finance from bank lending to non-bank lending since the 2007/08 financial crisis. From the perspective of companies, this shift has made sense as the cost differential between bond financing and bank lending has shifted in favour of bonds. Even small changes in the cost of debt financing can deliver significant impacts on company finances due to the scale of debt financing, and hence this function of asset management delivers significant benefits for the wider economy.

The diversity of debt funding channels facilitated by asset management also delivers benefits to the wider economy, by creating access to forms of financing that meet the specific needs of companies. Direct lending can also result in different forms of interaction between investors and the companies that they are investing in, perhaps encouraging a longer-term perspective. The growing proportion of company finance that comes from non-bank lending points towards the importance of this role for asset management also increasing further in the future.

5 The value of collective investment schemes

The majority of UK households draw on asset management services in some form or another: 75% have a private pension fund, and around 14% of gross household financial wealth is held in retail investment funds, compared with only 9% of wealth held in UK shares directly without the involvement of an asset manager.⁹³ What are the services that asset managers provide to investors, and how might they deliver benefits?

Much of the debate on the benefits of asset management has focused on the financial performance of funds relative to a set of standard benchmarks, and assesses the value delivered by stock-picking activities, market timing, etc. In particular, research on whether asset management delivers benefits has focused on:

- a comparison of the returns from actively managed funds with those from passively managed funds, to assess whether active stock-picking delivers greater results;⁹⁴
- a comparison of actively managed funds' returns with index returns which, in the pre-Retail Distribution Review UK retail environment, measures total cost of ownership including distribution and advice against a frictionless return;⁹⁵
- analysis of the risk associated with different investment strategies, comparing the performance of risk management approaches with the counterfactual of a simple market portfolio. Within the industry itself, there has recently been particular focus on 'smart beta' strategies;⁹⁶
- assessment of what additional benefits are created by the growth of exchange-traded funds (ETFs) as a form of collectivisation.⁹⁷

This report does not aim to examine such literature and provide a view on these research topics, as they have been covered extensively already. Instead, the focus here is on an area which, while a fundamental function of professional asset management, has been less well covered by commentators and researchers—i.e. the delivery of economies of scale, access to different asset classes, and risk diversification, particularly for savers with smaller sums to invest.

This section is structured as follows. It first considers the needs of end-investors, and the degree to which households have access to asset management (section 5.1). It then reviews the benefits that asset management can deliver (section 5.2), with a focus on the achieved economies of scale (section 5.3).

⁹³ Institute for Fiscal Studies (2015), 'The evolution of wealth in Great Britain: 2006-08 to 2010-12', November. See, in particular, Table 3.2.

⁹⁴ For a review, see Ang, A., Goetzmann, W.N. and Schaefer, S.M. (2010), 'The efficient market theory and evidence: implications for active investment management', *Foundations and Trends in Finance*, 5:3; Observatoire de l'Épargne Européenne (2011), 'The Importance of Asset Management to the European Economy'; and Musto, D.K. (2011), 'The economics of mutual funds', *Annual Review of Financial Economics*, 3:1, pp. 159–72.

⁹⁵ See Blake, D., Caulfield, T., Ioannidis, C. and Tonks, I. (2015), 'New Evidence on Mutual Fund Performance: A Comparison of Alternative Bootstrap Methods', working paper, The Pensions Institute, Cass Business School, October, <http://www.pensions-institute.org/workingpapers/wp1404.pdf>, last accessed 18 July 2016.

⁹⁶ For example, see Cazalet, Z., Grison, P. and Roncalli, T. (2014), 'The Smart Beta Indexing Puzzle', *The Journal of Index Investing*, 5:1, pp. 97–119.

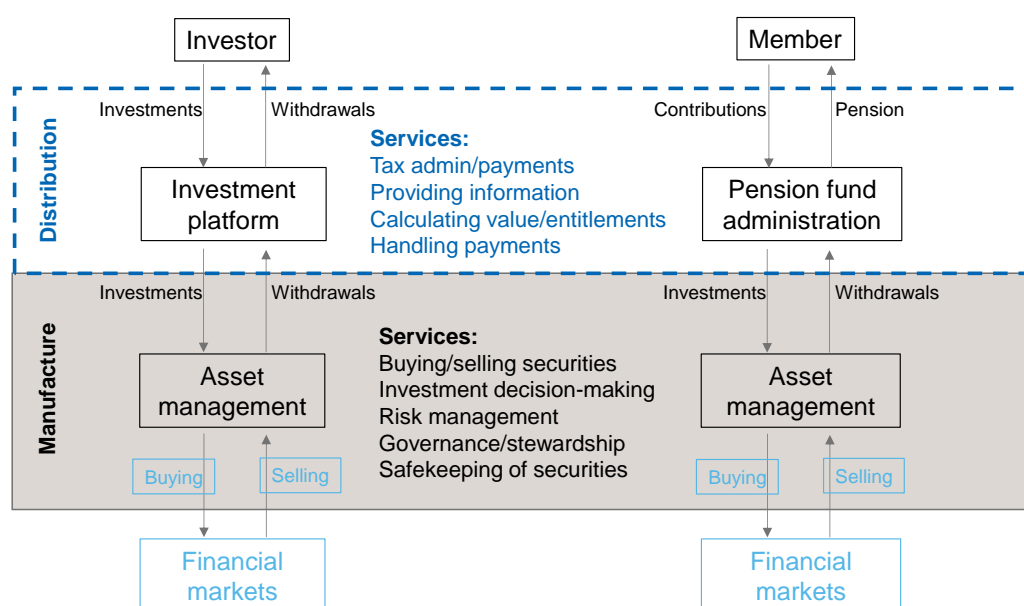
⁹⁷ For example, see Svetina, M. and Wahal, S. (2008), 'Exchange Traded Funds: Performance and Competition', 18 November, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1303643, last accessed 18 July 2016.

5.1 Forms of fund ownership

Asset managers offer professional services to investors and the owners of the assets, and these services are delivered through both retail and institutional channels, such as pension schemes, banks and insurance companies.

The focus here is on services delivered by the *collectivisation* of asset management, rather than its *distribution* functions. While the latter may vary considerably, and will also include other services (such as providing the systems and procedures for pension payments at retirement), the functions associated with the collectivisation of asset management are largely the same for retail investments as for pension funds (see Figure 5.1).

Figure 5.1 Stylised value chains for investment platforms and pension funds



Source: Oxera.

Investors hold financial assets in a variety of ways, many of which involve asset managers. Individual investors have four broad choices for how they hold their financial wealth over time:

1. cash deposits and other highly liquid, 'riskless', or low-risk assets;
2. direct holdings of a range of risk assets, such as shares in private or public companies or ownership of property;
3. holdings of products managed by asset managers, such as unit trusts;
4. contributions to funded pensions schemes and/or investment-linked insurance policies.

Table 5.1 below summarises the common forms of ownership of financial assets (excluding property wealth) and shows that, with the exception of shares held directly, the majority of UK households are drawing on asset management services in some form.

Occupational and personal pensions—by far the most common form of ownership of financial wealth—include more direct ownership of securities in the case of defined-contribution schemes, and less direct ownership in defined-

benefit schemes (where the scheme is the legal owner of the shares). However, for any funded pension scheme there is an underlying asset management function that is either run in-house or outsourced to an external asset manager. Furthermore, the importance of asset managers is growing over time, mainly due to the prevalence of private pension funds (as a proportion of households).

Table 5.1 Ownership of financial assets by UK households

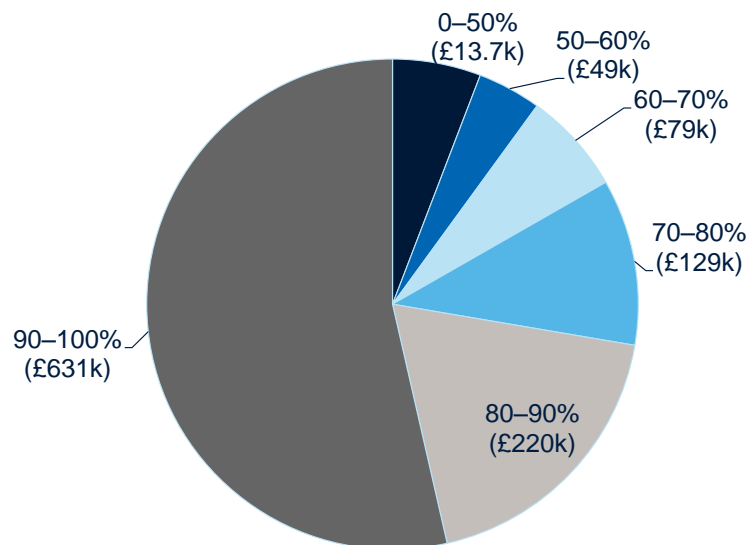
	Ownership (percentage of households that own some amount of each asset type)	
	2006/08	2010/12
Defined-benefit pension (not in payment)	27%	31%
Defined-contribution pension (not in payment)	26%	23%
Pension in payment	27%	30%
Total with occupational or personal pension	73%	76%
Stocks & shares ISAs	14%	14%
UK shares (directly held)	15%	12%
Life insurance products	10%	7%
Employee share options	7%	6%
Unit trusts (outside ISAs)	6%	5%

Note: Pension data is separated between funds currently paying out a pension ('in payment') and those where the individual has not yet started taking a pension ('not in payment'). There is considerable overlap between the types, given that many households hold multiple types of financial asset.

Source: Office for National Statistics Wealth & Survey, 2010-12 data; and Office for National Statistics (2015), Individual Savings Account statistics, April. Tables in Excel available at <http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-3/2010-2012/report--chapter-2--total-wealth.html#tab-Aggregate-total-wealth>, last accessed 18 July 2016.

The size of holdings of financial assets varies greatly, however, reflecting the wider distribution of wealth in society. The majority of financial assets are held by households in the top 10% of the wealth distribution. This holds for both pension and non-pension assets. For example, the top 10% of the wealth distribution own 54% of the pension assets, which equates to an average holding per person of £631,000. In contrast, the bottom 50% of the wealth distribution own only 6% of the pension assets, which equates to an average holding per person of £13,700. See Figure 5.2 for the distribution of pension assets.

Figure 5.2 Distribution of pension assets by size of individuals' wealth

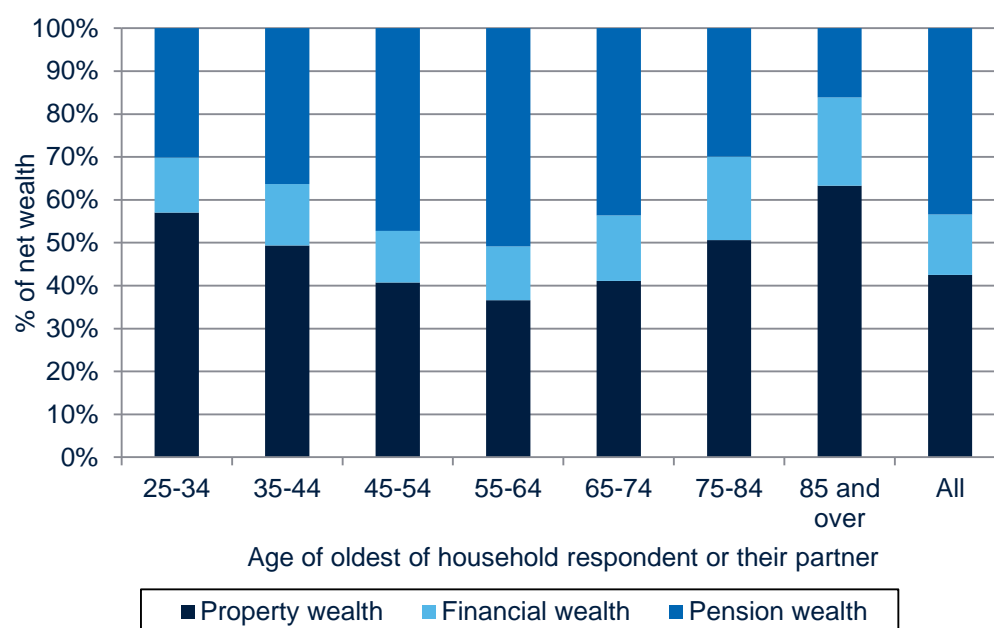


Note: Figures in brackets show the average pension wealth for the segment of the wealth distribution shown. For example, '80-90%' indicates those in the 9th decile of the wealth distribution, for which the average pension wealth is £220,000.

Source: Oxera calculations using data from the ONS.

In addition, the composition of wealth varies by age. Property wealth, net of mortgage debt, makes up the largest share of the wealth of younger and older age groups, while pension wealth is highest for those approaching retirement age. Figure 5.4 presents data from the IFS on the composition of wealth by age, split between property (house value less mortgage debt), financial (savings and investments less non-mortgage debt) and pension wealth (including imputed wealth for defined contribution pension entitlements). Some of the weighting of pension asset holdings towards the upper end of the distribution reflects the relatively large holdings of 55-64-year-olds, as well as unequal distribution of resources across different groups in society over time.

Figure 5.3 Composition of wealth by age



Source: Institute for Fiscal Studies (2015), 'The evolution of wealth in Great Britain: 2006-08 to 2010-12', November.

So, while there is considerable variation in the use of asset management services by individuals with different wealth levels, the vast majority of households use these services at some stage in their lifetime, and often for a significant proportion of their financial wealth.

5.2 What do asset managers deliver?

Investment management can be undertaken in segregated mandates, also known as separately managed accounts (as is often the case for pension funds) or through the collectivisation of investments (as is typically the case for retail investments). The collective vehicles are diverse in terms of structure (for example, they include unit trusts, open-ended investment companies, life and pension funds, and investment trusts).

In the UK, segregated mandates account for around 54% of total assets under management, while pooled investment vehicles account for the remaining 46%.⁹⁸

5.2.1 Basic services for collective investment vehicles

At the most basic level, asset managers manufacture investment vehicles (such as investment funds) that provide investors with access to capital markets while also taking care of related activities such as conducting transactions; receiving and distributing income (such as dividends), unit issues and redemptions; providing information for various purposes (including disclosure to the end-investor); handling tax matters; and arranging for oversight and safekeeping of securities.

This core asset management service means that retail and institutional clients can avoid performing it themselves. As discussed further in section 5.3, the potential value of outsourcing these basic activities is considerable, even before

⁹⁸ See The Investment Association (2016), 'Asset Management in the UK 2015-2016'.

the value of wider services such as risk management is considered. This is particularly the case for retail clients with smaller amounts to invest.

5.2.2 Investment strategies

Within these investment vehicles, asset managers provide an array of investment strategies to their clients.

'Passive' investment strategies typically seek to follow the returns of a given index, with the main benefit to the investor being cost minimisation, in terms of both the asset manager's charges and the costs of trading (typically, passive funds have low levels of trading). Some asset managers may seek to combine indexing with more quantitative value-added approaches (such as 'smart beta' strategies).

'Active' investment strategies for equities can include various investment styles such as:⁹⁹

- value-investing—selecting stocks that have performed relatively badly recently and are considered to be undervalued due to strong fundamentals (such as health financial metrics);
- growth-investing—selecting stocks on the basis of their future potential, even if current valuations are high;
- momentum-investing—focusing on stocks that are rising in value, in the hope that the increase continues;
- valuation-sensitive growth—focusing on well-run companies that are considered to be somewhat undervalued;
- quantitative strategies—investing based on quantitative research for financial characteristics that have been found to be correlated with subsequent growth in stock value.

The relative merits of different active investment strategies have been the subject of considerable debate, and are not a focus of this report.¹⁰⁰ However, as noted above, there is a tendency in the literature to focus on equity investment, in terms of its performance or its impact on the wider economy through stewardship and engagement.

The sections below draw attention to the need to define asset management—especially 'active' management—in a broader way than stock selection. This includes providing access to a wide range of individual asset classes, multi-asset investment, and a focus on client-specific needs that may include a variety of risk management tools and/or specific outcome targets.

There is also a growing focus, particularly in parts of the institutional market, on a broader form of engagement, based on Environmental, Social and Corporate Governance (ESG) principles that now find expression at international level through the UN Principles for Responsible Investment.

⁹⁹ Morningstar (undated), 'Understanding Mutual Fund Strategies and Fundamental Risk', <http://www.morningstar.com/Products/PDF/Subscription/Newsletters/FundSpyChap6.pdf>, last accessed 18 July 2016.

¹⁰⁰ For a review, see Ang, A., Goetzmann, W.N. and Schaefer, S.M. (2010), 'The efficient market theory and evidence: implications for active investment management', *Foundations and Trends in Finance*, 5:3; Observatoire de l'Épargne Européenne (2011), 'The Importance of Asset Management to the European Economy'.

5.2.3 Access to different asset classes

Asset managers provide investors with access to a broad range of asset classes, including overseas equities, fixed income, property, and commodity-based investments. For many of these assets, it would be difficult and/or costly for an individual investor to build a diversified portfolio, and asset management offers the only realistic channel for doing so. For example, some asset classes are not directly available to many investors because of their scale (for example, infrastructure or commercial property), restricted availability (for example, private debt) or location (for example, emerging market securities). See Table 5.2.

Table 5.2 Access to asset classes

Asset class	Asset management access	Individual investor access
Domestic equities	Many investment funds available	Yes, widely accessible
Developed-country equities	Many investment funds available	Yes, but with higher costs and exchange-rate fees
Emerging-market equities	Many investment funds available	Restrictions for different countries and high costs in effect block access by individuals
Government bonds	Many investment funds available	Yes, through a number of channels
Corporate bonds	Many investment funds available	Limited availability ¹
Property	Growing number of investment funds available	Access in principle, but diversification challenging for small investors other than via funds or listed property companies
Infrastructure	Typically part of much wider investment pools	Not without significant resources
Private equity/venture capital	Typically part of wider investment pools, with a few investment funds available	Not without significant resources

Note: ¹ In the UK, the London Stock Exchange launched the electronic Order Book for Retail Bonds (ORB), in which individual retail investors can participate: <http://www.londonstockexchange.com/traders-and-brokers/security-types/retail-bonds/retail-bonds.htm>, last accessed 18 July 2016.

Sources: Oxera.

The access to different asset classes allows asset managers either to offer a range of specialist funds based on individual asset types such as bonds, or to manage multi-asset portfolios, investing across asset classes based on specific investment objectives. To achieve the desired degree of risk exposure, as well as to reflect expectations about the potential performance of different asset classes (in terms of returns), they allocate invested funds between different asset classes. Managers providing this service increasingly have return objectives linked to inflation or cash deposit rates (as opposed to a 'relative return' versus a market index), as they target a certain overall return, rather than trying to outperform a particular market benchmark.

5.2.4 Diversification of risk

Whether holdings are within a single asset class or a combination of asset classes, diversification of risk is a central part of the portfolio management. At the less sophisticated end of the spectrum, diversification means the management and reduction of risk of a carefully constructed portfolio whereby the volatility of one security can be partially offset by that of other securities. At

the more sophisticated end of the spectrum, a number of strategies, such as hedging and the use of options, can help to offset volatility and downside risk.

All investment vehicles run by asset managers, pooled and segregated, can be expected to provide some degree of portfolio diversification. Even the most concentrated, focused equity funds (with the lowest degree of diversification), which may have around 20–40 stocks in a portfolio,¹⁰¹ can be expected to offset most of the idiosyncratic component of volatility in individual stocks.¹⁰²

Achieving such a degree of risk diversification through a managed portfolio is particularly significant in the context of US research that suggests that most individuals who invest directly in company shares tend to have an inadequately diversified portfolio. A study of 40,000 US equity investment accounts found that the overwhelming majority were under-diversified.¹⁰³ The majority of the investors had no more than three stocks, resulting in estimated portfolio variance that was much higher than if they had held a diversified portfolio (see Table 5.3). The least diversified group of investors were found to earn 2.40% lower annual returns than the most diversified group, on a risk-adjusted basis.

Table 5.3 Observed levels of portfolio diversification

Number of stocks	Proportion of portfolios	Observed portfolio variance
1	28.2%	n.a.
2	18.6%	0.597
3	12.9%	0.451
4	9.2%	0.376
5	6.6%	0.329
6–10	15.4%	0.278
11–15	4.7%	0.226
15 and over	4.4%	0.201

Note: The portfolio variance estimates the variance in the value of the portfolio on an annual basis, based on the stocks held. The researchers did not estimate a variance for the one-stock 'portfolio', which will be greater than for the other portfolios.

Source: Goetzmann, W.N. and Kumar, A. (2008), 'Equity portfolio diversification', *Review of Finance*, 12:3, pp. 433–63, table on p. 438.

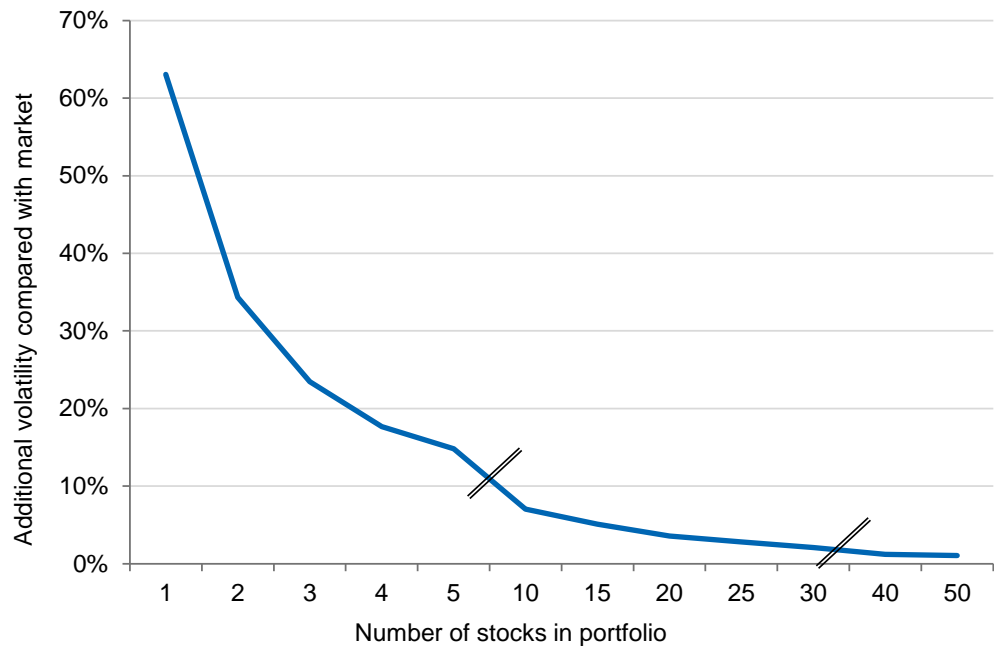
For the domestic equity market, Figure 5.4 presents the estimated average excess volatility of different sized portfolios of various sets of FTSE 100 constituents over the past five years. So, for example, a portfolio of only two randomly selected FTSE 100 shares was found to exhibit volatility some 34% in excess of a well-diversified portfolio, while a portfolio of 15 randomly selected FTSE shares had only 5% higher volatility than that of a well-diversified portfolio. Based on this data for excess volatility, the patterns of share ownership observed in the USA would suggest that the average portfolio exhibits volatility some 32% higher than a well-diversified portfolio.

¹⁰¹ MarketWatch (2009), 'Seeing focused funds more clearly', 14 August, <http://www.marketwatch.com/story/concentrated-stock-funds-put-risk-in-focus-2009-08-14>, last accessed 18 July 2016.

¹⁰² In a classic paper, Fisher and Lorie (1970) found that a randomly created portfolio of 32 stocks could reduce the excess volatility of returns by 95% compared with a portfolio of the entire New York Stock Exchange. Fisher, L. and Lorie, J.H. (1970), 'Some Studies of Variability of Returns on Investments in Common Stocks', *Journal of Business*, 43:2, pp. 99–134. More recent evidence suggests that 30 stocks would reduce idiosyncratic volatility by more like 85%. See Surz, R.J. and Price, M. (2000), 'The Truth about Diversification by the Numbers', *Journal of Investing*, Winter, 9:4, pp. 93–95.

¹⁰³ Goetzmann, W.N. and Kumar, A. (2008), 'Equity portfolio diversification', *Review of Finance*, 12:3, pp. 433–63.

Figure 5.4 Portfolio diversification and excess volatility: portfolios of FTSE 100 shares



Note: The analysis was conducted by randomly selecting portfolios containing different numbers of FTSE 100 shares, and then comparing the volatility with a portfolio of all of the FTSE 100 shares for the five years to 17 May 2016. The analysis used a Monte Carlo simulation that was run 1,000 times for each size of portfolio, and the average of the results on excess volatility are presented.

Source: Oxera analysis.

These findings suggest that diversification even within one asset class provided by asset management services can deliver significant value to investors through lower volatility. This is particularly the case if one considers that it would be difficult and costly for an individual investor to build a diversified portfolio that included (for example) property and infrastructure.

The benefit of this access can also be measured in terms of the reduction in volatility of a multi-asset-class portfolio compared with one that is restricted to the more readily available asset classes, such as domestic equities. This reduction in portfolio volatility can be estimated based on the historical performance of a range of asset classes, assuming that the past is a useful prediction for the future. Table 5.4 provides estimates of this benefit based on three data sources, as described in Appendix A5.

Table 5.4 Estimates of the reduction in volatility of a multi-asset-class portfolio versus a single asset class

Source	Period	Description	Reduction in volatility
Frontier Investment (2008)	1987–2007	Globally diversified portfolio of equity, bonds and property relative to a similar UK-only portfolio	23%
Goldman Sachs (2012)	2001–10	Nine asset classes compared with the average for one asset class	11%
Datastream (2014)	2005–14	22 global equity and corporate bond indices compared with the average for the indices	17%

Source: Frontier Investment Management LLP Research (2008), 'The benefits of portfolio diversification', January. Goldman Sachs (2012), 'The potential benefits of diversification', January. Oxera calculations using data collected from Datastream in December 2014.

The observations suggest that diversification across asset classes reduces portfolio volatility by between 11% and 23%, compared with a portfolio confined to one asset class. So, for example, if the volatility of the single asset class is assumed to be 15% going forward, this would suggest volatility of the multi-asset-class portfolio (assuming the same expected return) of around 11.6–13.4%.

The extent of the benefit that investors obtain from diversifying across asset classes depends on the degree of correlation between asset classes, as well as the expected return. If asset classes are closely correlated, the benefit of diversification will be less.¹⁰⁴ Alternative asset classes may also have different expected returns, or different charges and costs, which also has an impact on the benefits from wider diversification.

The evidence therefore suggests that investors benefit from asset management services through increased choice and consequently greater diversification of their portfolios, ultimately improving the risk–return trade-off in their investment choices.

5.2.5 Risk management strategies

In order to manage the level and nature of risk exposure, asset managers may also offer specifically defined risk management objectives, such as:

- hedging—for example, by taking a short position or using derivatives to reduce certain forms of risk (e.g. market risk);
- capital preservation of volatility reduction where a strategy may use asset allocation, derivatives, or a combination of techniques to deliver a specific outcome;
- liability-driven investment strategies (LDIs)—typically, for institutional investors (such as pension funds), LDI involves investing in assets that aim to match changes in the portfolio's liabilities. This involves aligning the volatility as well as the value of assets with those of liabilities, and usually requires the use of derivatives and hedging against interest rate and inflation risk.

¹⁰⁴ While the extent of this benefit has reduced over time due to increasing alignment of global markets, the potential reduction in volatility is still significant and of sufficient size as to provide a material improvement in the risk–return trade-off for the investor.

Asset managers are increasingly offering these forms of risk management strategy, both to institutional investors¹⁰⁵ and, in the retail market, through (for example) the increasingly popular absolute return funds.

5.2.6 Providing (liquid) access to illiquid securities

To improve the effective liquidity of investments in relatively illiquid securities (such as property, corporate bonds, or small-company equity), asset managers provide intermediate investment vehicles, both open-ended (such as investment funds and ETFs) and closed-ended (investment trusts). These vehicles allow end-investors, within certain and important limitations, to obtain and adjust their exposure to less liquid assets without trading in the underlying assets. While, ultimately, another investor is needed on the other side of the trade so that the investment vehicle can support redemptions, in normal times this can be expected to support liquidity at the fund level.¹⁰⁶

5.3 The importance of economies of scale

The previous section explored ways in which individual investors benefit from professional asset management. However, there is one factor that has been implied rather than explicitly referred to throughout: the economies of scale that can be achieved through asset management. Economies of scale are likely to be inherent in the collectivisation of many of the investment activities—for example:¹⁰⁷

- some scale is required for any well-diversified portfolio, particularly if this combines different asset classes;
- unit transaction costs for buying and selling securities are typically lower for large transactions;¹⁰⁸
- the administration of portfolios, such as taking care of relevant tax matters, compliance and oversight, involves not immaterial costs and is likely to be conducted more efficiently with scale.

This section carries out a thought experiment aiming at quantifying how (retail) end-investors may be benefiting from lower costs due to the use of collectivised asset management.

5.3.1 Investment activities and costs to end-investors

To assess whether end-investors benefit from lower costs through collectivisation, it is necessary to carefully analyse all of the costs involved in conducting investment activities for a retail fund. Table 5.5 below provides a

¹⁰⁵ One survey estimated that in 2014 the UK pension scheme liabilities hedged using LDI strategies stood at £0.66trn—i.e. approximately one-fifth of the total of all pension scheme liabilities in the UK. See KPMG (2015), 'Navigating the UK LDI Market: 2015 KPMG LDI Survey', <https://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Tax/uk-ldi-survey-2015.pdf>, last accessed 18 July 2016.

¹⁰⁶ There has been an ongoing debate about whether there is liquidity risk for corporate bond funds due to lack of liquidity for the underlying assets (corporate bonds). There are differing views on this question. See Adrian, T., Fleming, M., Shachar, O., Stackman, D. and Vogt, E. (2015), 'Has Liquidity Risk in the Corporate Bond Market Increased?', Federal Reserve Bank of New York, Liberty Street Economics, 6 October, <http://libertystreeteconomics.newyorkfed.org/2015/10/has-liquidity-risk-in-the-corporate-bond-market-increased.html#.VIX70Hlfzcs>, last accessed 18 July 2016.

¹⁰⁷ One exception would be stamp duty, which is applied as a proportion of the value.

¹⁰⁸ See Oxera (2011), 'Monitoring prices, costs and volumes of trading and post-trading services', <http://www.oxera.com/Latest-Thinking/Publications/Reports/2011/Monitoring-prices,-costs-and-volumes-of-trading-an.aspx>, last accessed 18 July 2016.

comprehensive list of investment activities and associated costs for two investment strategies:

- a DIY investment approach, in which the end-investor constructs a portfolio of UK equity using leading online investment platforms;
- a collectivisation approach, where the end-investor purchases a UK All Companies fund, using the same leading investment platforms as the DIY approach to make the investment.

The first three columns of Table 5.5 list the activities required for constructing and maintaining a portfolio of shares, conducted either by the end-investor themselves (in the DIY approach) or by the asset manager on behalf of the end-investor (in the collectivisation approach). The fourth and fifth columns then identify the associated costs for end-investors for the DIY approach and collectivisation approach respectively. The table includes estimates for the fees in each case (see Appendix A6 for further details).

The investment activities in the table are split between those activities required to provide access to market infrastructure, and those activities associated with the investment strategy, including the time and skill required to construct a diversified portfolio.

In general, the explicit costs associated with access to market infrastructure (such as fees for conducting share transactions) are more easily identified than either the implicit costs (arising from the bid/ask spread when buying financial securities) or the costs associated with the investment strategy (which relate to time and skill). These elements of the table are described further below.

Table 5.5 Investment activities and costs

Type of activity	Type of cost	Activities	Cost for DIY approach	Cost for collectivisation approach
Access to market infrastructure	Explicitly paid	Cost of providing online account	Monthly fee (c. £3–£5 per month)	Annual platform charge of c. 0.4% of assets per year
		Cost of platform transactions	Fees of c. £9–£12 per share transaction	
		Overheads/profits of the platform	Additional fees for transactions to rebalance portfolio	
		Cost of rebalancing portfolio		
		UK stamp duty	Stamp duty 0.5% of transaction value	
		Custody costs	Included in transaction/account fee	
	Admin for portfolio (tax, accounts, etc.)		Transaction costs 0.23% of assets per year, including brokers fees and stamp duty	
	Market costs experienced	Implicit costs of trading shares—bid/ask spread	Spread on platform (c. 0.1% of value of share transactions)	Spread for asset manager (unknown at aggregate level)
Investment strategy	Explicitly paid	Conducting activities to construct portfolio	Time cost	Annual management charge of firm, excluding the custody and admin costs (listed above). 0.69% of assets per year on average for UK All Companies funds
		Human capital of portfolio construction	Skill cost	
		Overheads/profits of asset manager	None	
		Oversight	None	

Source: Oxera.

For both the DIY and collectivisation approaches described in Table 5.5, the investor uses an investment platform, so it is necessary to compensate the platform for the services, which include the online account, conducting transactions on the platform, and the overheads and profits of the platform. This compensation comes from the monthly account fee and the share transaction fees in the case of the DIY portfolio, and from the annual platform charge in the collectivisation approach. The estimates provided in the table are drawn from three leading investment platforms (see Appendix A6 for details).

There are costs associated with the share trading required for the portfolio, including rebalancing the portfolio over time. These are the share transaction fees in the DIY case, and the transaction costs in the collectivisation approach. Data from the annual accounts of investment funds suggests that these transaction costs add up to a simple average of around 0.23% of the value of assets per year in the UK All Companies sector.¹⁰⁹

Other costs arise in constructing a portfolio, including custody costs and other administrative costs, related to tax and managing accounts. These costs are included in the transaction and account fees for the DIY approach, and in the total expense ratio of investment funds. As these costs arise for accessing market infrastructure, they are identified separately for the investment funds using information from annual reports.¹¹⁰

Investors also experience implicit costs from buying and selling shares, which arise from the bid/ask spread—at a given moment in time, the price at which investors can sell financial securities is typically less than the price at which one can buy the same securities, which creates an ‘implicit’ cost for the end-investor. These costs can be difficult to estimate and, given current data challenges, lie outside the scope of this study.¹¹¹

Finally, there are the costs associated with the time and expertise required to deliver the investment strategy. These costs are quite clear for the collectivisation approach, as they can be equated to being the total expense ratio of the investment fund, minus the costs for custody and administration. In the case of UK All Companies funds, they have been estimated as being in the order of 0.69% of assets per year on average across the various funds.¹¹² However, the investment strategy costs are much less clear for the DIY approach. These costs relate to the time and skill required of the DIY investor to implement the investment strategy. As described in section 5.3.2, investors can face significant challenges in constructing well-diversified portfolios, and it is difficult to estimate what would be required in most cases to create such a portfolio. This challenge is considered further below.

5.3.2 Comparison of the DIY and collectivisation approaches

The detail of activities and associated costs in Table 5.5 is useful for understanding the nature of costs in the two approaches.

To explore the overall costs involved, a thought experiment is carried out to compare the ‘explicitly paid’ costs of ‘access to market structure’ set out in Table

¹⁰⁹ Fitz Partners (2015), ‘Fund Transaction Fee and Portfolio Turnover Benchmarks’, press release, 29 April.

¹¹⁰ Ibid.

¹¹¹ The spread faced by retail investors for large-cap UK stocks on the investment platforms was noted as being around 0.1% of the value of the transaction. This does not suggest a significant cost for a ‘buy-and-hold’ type of strategy, and is significantly less than stamp duty at 0.5%.

¹¹² Fitz Partners (2015), op. cit.

5.5. This particular focus is due to the limited availability and, in some cases, inability to accurately estimate the cost data for the other elements.

The collectivisation approach is characterised by the average costs for UK All Companies investment funds, while the DIY approach involves the construction of a portfolio of UK equity with a similar level of diversification, which is then maintained with regular rebalancing in line with the typical rebalancing of the FTSE 100 index.¹¹³

The collectivisation approach—i.e. investment in funds—is commonly observed in reality. The DIY approach is much less common, partly due to two important limitations:

- in practice, many end-investors would struggle to create such a portfolio without professional advice. As discussed in section 5.2.4, individuals investing directly in shares often do not construct well-diversified portfolios, and so may suffer detriment from having high levels of volatility relative to returns (i.e. a poor trade-off between risk and return). The assumption used here is that the DIY investor constructs a well-diversified portfolio, while minimising transaction costs, which could be considered to be a rational DIY investment strategy;
- there is a minimum size to a well-diversified portfolio of shares due to the indivisible nature of shares. For example, individual shares in the FTSE 100 index cost up to £70 each, which suggests that even buying and holding a balanced portfolio of 50 FTSE 100 shares would require at least a few thousand pounds to be spent upfront.¹¹⁴ From the perspective of an end-investor investing a regular amount each month (for example, into a pension fund) instead of following a buy-and-hold approach, this would be a significant amount of money.

The focus here is on a comparison of costs rather than on the practicalities of DIY investing, in order to identify the benefits of economies of scale. The specific investment strategy considered involves:

- buying and holding a well-diversified portfolio of UK equities for a period of five years, which in turn comprises either:
 - a DIY portfolio of 50 or 100 shares from the FTSE 100 index;¹¹⁵ or
 - a UK All Companies investment fund;
- investing either £5,000, £10,000 or £50,000, to explore the economies of scale for different sizes of investment.¹¹⁶

Table 5.6 provides the key findings for this comparison, by presenting the reduction in the final returns to the end-investors due to the cost of access to market infrastructure over a five-year period. The table compares the results for

¹¹³ On average, two companies enter and two companies exit the FTSE 100 index each quarter. See 'History of companies joining and leaving the FTSE 100 Index since 1984', *The UK Stock Market Almanac 2016*, <http://stockmarketalmanac.co.uk/2014/02/history-of-companies-joining-and-leaving-the-ftse-100-index-since-1984/>, last accessed 18 July 2016.

¹¹⁴ The minimum size of the portfolio depends on its constituent parts, but a first-order estimation could be to assume that 50 lots of shares totalling £70 each is required, suggesting a £3,500 portfolio.

¹¹⁵ The analysis considers both 50 and 100 share portfolios, as many investment funds hold around 50 shares, while an FTSE 100 index tracking fund is likely to hold all 100 component shares of the FTSE 100 index.

¹¹⁶ It is assumed that few retail investors invest more than £50,000 in a single investment fund, and therefore the pricing of investment funds is based on investments up to this level. Above this level, alternative pricing may be adopted.

the three investment strategies (two DIY strategies of 50 and 100 shares, and one collectivisation approach based on the average UK All Companies investment fund).

Table 5.6 Impact of cost of access to market infrastructure over five years

Investment strategy	£5,000 investment	£10,000 investment	£50,000 investment
DIY: 100 shares	£3,215	£3,250	£3,530
DIY: 50 shares	£1,838	£1,873	£2,154
Collectivisation: UK All Companies fund	£234	£468	£2,339

Note: The impact on final returns is calculated as the difference between the final returns if there were no costs, and the final returns with costs. This difference is typically somewhat larger than the sum of the individual costs, due to the impact of costs on the accumulation of returns over time.

Source: Oxera illustrations.

The first key finding from this analysis is that the costs of DIY investing are relatively fixed irrespective of the size of the investment, as many of the key costs are fixed (for example, £9 to £12 per share transaction, irrespective of the size of the transaction). In contrast, the costs associated with the collectivisation approach rise in line with the size of the investment.

Consequently, there is a cut-off point when the costs of accessing market infrastructure are roughly equivalent between the DIY and collectivisation approaches. This depends on the extent of diversification in the DIY approach, but is found in this analysis to occur for investments above £50,000. As very few retail investors would invest more than this in a single investment fund or asset class, the numbers suggest that economies of scale are passed on to the large majority of end-investors. Only those retail investors with large amounts of assets could benefit from the DIY approach in terms of transaction costs, but this is clearly only one part of the process, given that the value of a professionally managed fund involves much more than buying and holding a random set of stocks.

It should be emphasised that this analysis relates only to retail investors, as other investors (for example, pension funds) will face different costs for both using asset managers and directly purchasing equities.

5.3.3 Value of time and skill

Due to data limitations, the analysis above considers only the transactional costs of accessing market infrastructure. It does not consider the value of outsourcing investment activities to a third party, which for the DIY investor represents a significant investment of time and skill (see 'time' and 'skill' costs in Table 5.5).

The time and skill required is likely to be a key reason why end-investors use asset management. Maintaining a well-diversified portfolio of equity requires skill, and professional investment managers offer investment strategies that require considerably more skill than just diversification, as described in section 5.2 above. Given that many individual investors struggle to construct diversified portfolios, it is clear that the extent of time and skill required for a DIY strategy could be considerable and may be unrealistic in practice.¹¹⁷ This makes it very

¹¹⁷ It is also unclear how an end-investor might develop the required skills. The cost is likely to be high if the investor needed to learn the skills of an asset manager, although this might be feasible for simpler investment approaches, or if the investor paid for advice from a professional financial adviser.

difficult to construct a comparison of the DIY and collectivisation approaches that allows for the investment strategy element of the cost to be effectively quantified in both time and skill terms.

Even constructing a portfolio that tracks a market index requires skill that many end-investors are unlikely to have, particularly given the challenges in constructing an appropriately balanced portfolio with only a small amount of money to invest, and handling practicalities such as reinvestment of dividends.

Nevertheless, an illustration is provided below to assess how costs compare when time and skill are included. Simplifying assumptions are required to make a comparison of the time and skill costs, using a very specific example where a DIY approach could be considered to be feasible. This involves a simple investment strategy to create a portfolio consisting of FTSE 100 shares, which is a service broadly equivalent to that provided by a FTSE 100 tracker fund or ETF. The specific comparison considered is between:

- a simple FTSE 100 equity index-tracking investment fund; and
- a DIY approach in which the investor purchases a balanced portfolio of all 100 component shares of the FTSE 100 index, and then rebalances the portfolio in line with the quarterly changes to the FTSE 100 index.

For the purposes of the illustration, the DIY scenario assumes that the total amount of time required over the five years is 30 hours, based on the assumption that:

- the investor initially reads a book on index tracking (assumed to take five hours);
- the investor then identifies and signs up to a suitable investment platform on which to construct the DIY portfolio (assumed to take two hours);
- the investor then constructs the portfolio of 100 shares (another five hours);
- the investor rebalances each quarter in line with the FTSE 100 index (one hour each quarter for five years).

The DIY scenario also requires estimates for the value of time, assumed to be £15 per hour for someone in full-time employment.¹¹⁸ The total time costs therefore sum to £480. Although the value of skill is not quantified as a separate component, it is inherent in the index-tracking fund as well as the DIY approach—that is, some skill is involved in reading and implementing a book on index tracking.

Table 5.7 below presents the findings for this comparison in terms of impact on the final returns, based on the same five-year investment strategy as used in the analysis above.

¹¹⁸ £15 per hour is approximately the average hourly income in the UK, based on the average gross annual earnings for full-time employees of £27,600 in the year ending 5 April 2015. Office of National Statistics (2015), 'Annual Survey of Hours and Earnings'.

Table 5.7 Impact of the cost of constructing a market portfolio, including time and skill costs

Investment strategy	£5,000 investment	£10,000 investment	£50,000 investment
DIY: 100 shares, £15 per hour time value	£3,812	£3,847	£4,128
Collectivisation: market portfolio ¹	£189	£378	£1,891

Note: The impact on final returns is calculated as the difference between the final returns if there were no costs, and the final returns with costs. This difference is typically somewhat larger than the sum of the individual costs, due to the impact of costs on the accumulation of returns over time. ¹ The collectivisation approach for the market portfolio is based on the average costs for a UK equity tracker fund. Based on the ten most competitive UK equity tracker funds provided on the Fidelity investment platform, the average ongoing charges figure (OCF) of 0.10% was used. See Appendix A6 for further details.

Source: Oxera illustrations.

For this specific example of a simple market portfolio, the collectivisation approach produces lower costs than the DIY approach across all of the investment scenarios considered. This is a very specific and hypothetical illustration, but it highlights the considerable value of investing in a fund, even with quite moderate assumptions about the costs of time required.

5.4 Behavioural biases and investor outcomes

Effective investment decision-making, even for relatively simple strategies such as index-tracking, is complex and requires expertise and time. As with many other financial activities, such as completing tax returns or accountancy, individuals often outsource the task to professionals. Even with an understanding of how to construct appropriate investment portfolios, there is evidence that individuals have behavioural traits that can lead to sub-optimal approaches to investing (referred to by behavioural economists as 'behavioural biases').¹¹⁹

A common phenomenon among individual investors is under-diversification of the investment portfolio, as discussed above with regard to a study of US equity investment accounts, which found that the overwhelming majority were under-diversified.¹²⁰ Another 'behavioural bias' is overconfidence, which can manifest itself in various ways, such as the overestimation of one's actual and relative performance, or excessive confidence in the precision of one's beliefs.¹²¹ Overconfident investors tend to overestimate their stock-picking skills and the accuracy of the information they hold, and falsely attribute successes to their own skills, rather than to chance. Overconfidence has also been shown to lead to excessive trading activity,¹²² which in turn reduces investors' net earnings.

¹¹⁹ For a review, see Loos, B., Meyer, S., Weber, J. and Hackethal, A. (2014), 'Which Investment Behaviours Really Matter for Individual Investors?', working paper; and Barber, M.B. and Odean, T. (2013), 'The Behaviour of Individual Investors', in Constantinides, G.M., Milton Harris, M. and Stulz, R.M. (eds), *Handbook of the Economics of Finance*, Volume 2, Part B, Elsevier BV. While behavioural biases tend to be associated with individual retail investors (i.e. the DIY option in this analysis), institutional investors, such as pension funds, are also prone to making investment mistakes and under-diversifying. For example, in a survey of European pension funds by the OECD, the majority of funds (79%) were found to be biased towards domestic and European assets when compared with the estimated optimal allocation. This home bias can be explained by institutional factors such as exchange risks, but also behavioural factors. See Bakker, M. (2013), 'European Union Pension Funds and Home Bias Geographical Asset Allocation in Light of the Three Goals Set by the European Commission', Erasmus University, Rotterdam.

¹²⁰ Goetzmann, W.N. and Kumar, A. (2008), 'Equity portfolio diversification', *Review of Finance*, **12**:3, pp. 433–63.

¹²¹ Moore, D.A. and Healy, P.J. (2008), 'The trouble with overconfidence', *Psychological Review*, **115**:2, p. 502.

¹²² Glaser, M. and Weber, M. (2007), 'Overconfidence and trading volume', *The Geneva Risk and Insurance Review*, **32**:1, pp. 1–36.

Moreover, it has been linked with the ‘disposition effect’¹²³—i.e. the tendency of investors to sell too soon securities whose value has increased, while keeping too long those whose value has decreased. Such an investment strategy reduces post-tax returns earnings, as investors fail to claim tax credits by not selling falling stocks.¹²⁴

Closely related to under-diversification is ‘home bias’—i.e. investors’ tendency to invest in stocks and funds from their home country.¹²⁵ This is linked to people’s need to invest in what is familiar. For example, research in Finland has shown that investors are more likely to trade in stocks of Finnish firms that are located close to where they live and which communicate in their native language.¹²⁶

In addition, there is evidence that individuals fail to rebalance portfolios over time, which is a necessary requirement for maintaining a diversified portfolio.¹²⁷

The analyses presented below assume that end-investors are able to construct DIY portfolios without exhibiting any of these biases. Where this is not the case, the DIY investor is likely to suffer additional costs arising from the poor performance of the portfolio (typically in the form of higher volatility without any improvement in return).

5.5 Concluding remarks

An important question is what motivates investors to use asset management services. We provide three reasons: access to a wide range of asset classes; diversification of portfolio risk; and economies of scale. The value of each of these services has to be seen in the light of how investors behave. Evidence suggests that when investors manage their own portfolio of risky securities they under-diversify, and that under-diversification significantly reduces their returns. This may explain in part the wide use of collective schemes administered by asset managers, and a saving to investors that is not easily quantified.

¹²³ Statman, M., Thorley, S. and Vorkink, K. (2006), ‘Investor overconfidence and trading volume’, *Review of Financial Studies*, **19**:4, pp. 1531–65.

¹²⁴ Odean, T. (1998), ‘Are investors reluctant to realize their losses?’, *The Journal of Finance*, **53**:5, pp. 1775–98.

¹²⁵ Lewis, K.K. (1999), ‘Trying to explain home bias in equities and consumption’, *Journal of Economic Literature*, pp. 571–608.

¹²⁶ Grinblatt, M. and Keloharju, M. (2001), ‘How distance, language, and culture influence stockholdings and trades’, *The Journal of Finance*, **56**:3, pp. 1053–73.

¹²⁷ For example, see Calvet, L.E., Campbell, J.Y. and Sodini, P. (2009), ‘Fight or Flight? Portfolio Rebalancing by Individual Investors’, *The Quarterly Journal of Economics*, **124**:1, pp. 301–48.

A1 Data sources and discussions with stakeholders

Oxera used a range of data sources to conduct the analysis in this study. Primary data was collected from nine asset managers on their investment in the primary and secondary bond and equity markets. For a summary of all data sources used, see Figure A1.1 below.

In addition, Oxera held 22 meetings with 12 asset management firms, three investment banks and four corporations during October, November and December 2014 (see Table A1.1 for a full list). The discussions with asset managers focused on:

- how they meet the demands of investors through their activities in the secondary market. In particular, many asset managers emphasised the importance of professional portfolio management services;
- their role in providing different sources of funding to listed companies through the issuance of rights, bonds (both public and private) and direct lending. Some asset managers described their role during a rights issuance in 2009, when many investee companies were facing financial distress;
- their role in providing private equity finance to unlisted companies. This was discussed especially in the context of investing in start-up companies through venture capital (VC) companies;
- their role in the stewardship and corporate governance of companies, especially when new finance is being raised. Asset managers discussed how they interacted with companies and demanded for changes to be made before new capital was raised;
- cases where they provided finance to companies that were capital-constrained (for example, during the 2009 rights issues);
- their role in IPOs and their interactions with investment banks in the price-setting process.

The discussions with investment banks focused on:

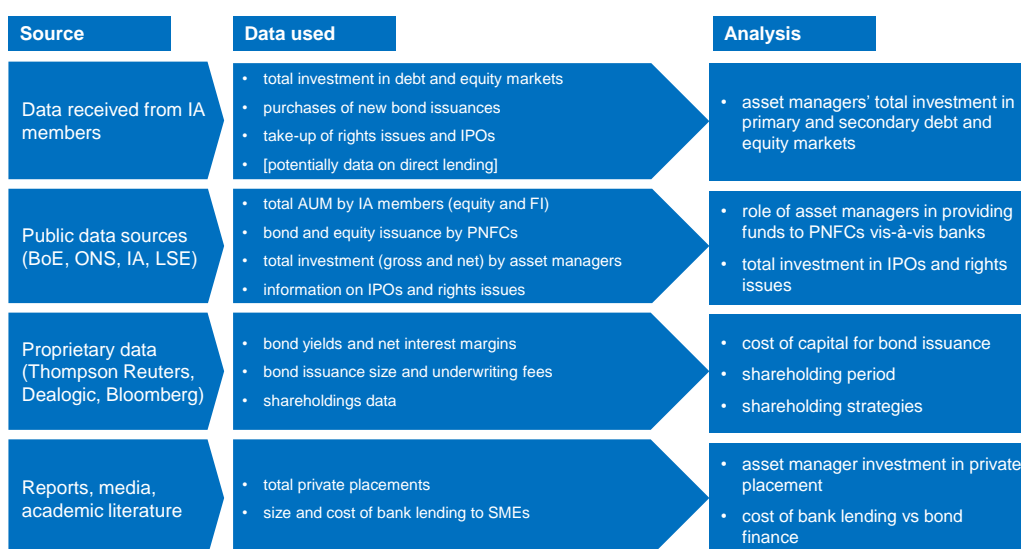
- their interactions with asset managers during the book-building process for an IPO, and the role of asset managers in the price-setting process;
- the contribution of asset managers in supporting new equity issuances (in both IPOs and rights issues). Particular case studies were discussed where asset managers were active in the process;
- their views on how transaction costs involved in raising new capital compare across various sources, including asset managers.

The discussions with companies centred on:

- their interactions with asset managers in their capacity as shareholders or bondholders;
 - their experience in raising capital through various sources, including borrowing directly from asset managers through a private placement. Discussions focused on the ability of large institutional investors and asset managers to provide bespoke financing through the private placement of bonds;
-

- the importance of having various sources of capital to draw from, and the consequent impact on the cost of capital.

Figure A1.1 Data sources



Note: BoE, Bank of England. LSE, London Stock Exchange. AUM, assets under management. FI, fixed-income securities. PNFC, private non-financial company.

Source: Oxera.

Table A1.1 Companies interviewed by Oxera

Company	Type
Aviva Investors	Asset manager
Baillie Gifford	Asset manager
BlackRock	Asset manager
Fidelity	Asset manager
Invesco	Asset manager
Jupiter	Asset manager
Legal and General Investment Management	Asset manager
M&G	Asset manager
Royal London Asset Management	Asset manager
Schroders	Asset manager
Standard Life	Asset manager
Threadneedle	Asset manager
Bank of America Merrill Lynch	Investment bank
Citi	Investment bank
UBS	Investment bank
Arqiva	Corporate
Vodafone	Corporate
Imperial Tobacco	Corporate
BP	Corporate

Source: Oxera.

A2 Estimation of the role of asset managers in the primary market

During the course of this study, Oxera spoke to 12 asset managers and collected data on their involvement in the primary market from nine of these institutions, which accounted for approximately 40% of total assets under management of all IA member firms.

The data collected was the amount invested in new sterling-denominated corporate bond issues, IPOs, and further issues (rights issues and placings). It was collected in aggregate form on an annual basis, although the availability of data varied by asset manager. This data was then used to extrapolate to the total asset manager population, using the IA estimates for total assets under management. The extrapolation effectively divides the primary purchases of the subgroup of asset managers who provided data by their share in the assets under management for the particular security.

The extent of involvement of different asset managers varies considerably on an annual basis, with the possible exception of the bond market. Large institutional investors in bonds need to access the primary market for bonds every year in a way that is not required of asset managers focusing on equity. This is because the rate of IPOs and further issues, relative to the value of outstanding assets (market capitalisation), is much lower with equities than it is with bonds.

A3 Calculation of holding periods of shares

The methodology used to estimate the holding periods of asset managers and other investors uses data from stamp duty receipts. Stamp duty is paid by the purchasing party in each share transaction and is equal to 0.5% of the value of the transaction. Most investors in UK equity are subject to stamp duty, except for 'qualifying intermediaries', such as market makers at large banks that can be expected to trade at a high frequency.

For 2011, the analysis used data on stamp duty payments from a report by the IA.¹²⁸ The report measures the stamp duty costs paid as a percentage of assets under management, by the 15 largest passive and 15 largest active funds in the UK All Companies sector, each accounting respectively for 86% and 51% of the total value of funds invested. The cost estimates were weighted based on the relative size of passive and active funds (passive funds account for 20% of all funds).¹²⁹

For 2012 to 2014, the analysis used data from Morningstar to identify the largest 20 funds that invested in UK equity in 2014. Funds whose equity investment in the UK was less than 90% of their total equity investment were excluded.¹³⁰ The 20 funds selected for the analysis comprised 15 active and five passive funds and covered 22% of total assets invested by funds that invest in UK equity. The amount of stamp duty paid was retrieved from the funds' annual statements.¹³¹

To estimate the total stamp duty paid by other investors, the total stamp duty paid by all investors was first calculated using stamp duty receipts from HM Treasury. With asset managers holding approximately 30% of the UK equity market,¹³² the analysis estimated the percentage of other investors' shares traded each year, thus estimating their implied holding period. For example, if asset managers traded 20% of their shares (implying an estimated holding period of five years) and hold 30% of the market value of UK equity, this means that they traded approximately 6% of all UK shares. If, in total, 30% of the shares were traded in that year, this implies that other investors traded 24% of total shares (30% - 6%), which in turn is 43% of the value of their own portfolio (24%/70%). This results in an estimated holding period of approximately three years.

While this method is useful for comparing the holding periods of asset managers and other investors, it is not as effective in obtaining accurate estimates of asset managers' holding periods of companies. This is because the estimation does not differentiate between the holding period of stocks and the holding period of companies. In other words, if a fund adjusts its position in a company, this would contribute to a higher turnover (and hence lower average holding period), although it may be of little consequence with regard to the company's strategy.¹³³

¹²⁸ Bryant, C. and Taylor, G. (2012), 'Fund Management Charges, Investment Costs and Performance', IMA Statistics Paper 3, May.

¹²⁹ Investment Management Association (2014), 'Asset Management in the UK 2013-2014. The IMA Annual Survey', September.

¹³⁰ Figures on the percentage of UK equity were taken from 2014, as previous data was not available from Morningstar or the funds' annual statements.

¹³¹ Many statements reported it as transaction taxes. However, we restricted the analysis to those funds with more than 90% in UK equity.

¹³² The analysis makes the implicit assumption that all those investors who are liable for stamp duty cover the entirety of the UK equity market in terms of holdings.

¹³³ For further discussion and illustration of this point, see Investment Management Association (2012), 'Understanding equity turnover data: initial findings from IMA research submitted to the Kay review'.

A4 Calculation of the concentration of shareholdings

Figure 3.2 above presents analysis of the size of the equity holdings of selected asset managers, to explore the degree of concentration of shareholdings. This analysis is based on data on the shareholdings of asset managers, which was obtained from Bloomberg. Bloomberg collects data on asset managers' share ownership from the following sources:¹³⁴

- directly from asset managers—Bloomberg maintains relations with major asset managers and receives information on their shareholdings, typically on a monthly basis;
- JunctionRDS, a shareholder analysis house specialising in research into institutional ownership of UK companies;
- state filings (asset managers' and companies' annual reports);
- public sources, such as company websites and news sources.

The data lists the holdings of asset managers in two types of security: shares of listed companies around the world; and shares in funds, operated by themselves or other asset managers. Asset managers' holdings of funds are excluded from the analysis as it is not possible to identify their holdings of the underlying securities in the fund.

For most asset managers in the sample, the ownership of funds was a small percentage of total holdings (~1–2%). Asset managers who have a large share of their assets under management invested in funds (over 25% of their holdings) have been excluded from the sample.

¹³⁴ The information on Bloomberg's methodology was collected from conversations with Bloomberg representatives.

A5 Calculation of the volatility of multi-asset-class portfolios

Table 5.3 above presents estimates of the reduction in volatility produced by a multi-asset-class portfolio compared with one that is restricted to the more readily available asset classes, such as domestic equities.

The extent of benefit that investors obtain from diversifying across asset classes depends on the degree of correlation between asset classes, as well as the expected return. If asset classes are closely correlated, the benefit of diversification will be less. Alternative asset classes may also have different expected returns, or different charges and costs, which would also have an impact on the logic of wider diversification.

In terms of the pure benefit of diversification across asset classes, this can be studied by comparing the volatility of individual asset classes with that of a portfolio of asset classes. This comparison requires data on the performance of different asset classes, which was collected for the purposes of this study from two types of source:

- industry reports on the volatility of different asset classes over time;¹³⁵
- a hypothetical portfolio of asset classes constructed for this study based on historical observations of benchmark indices for the different asset classes (such as FTSE All-share and S&P 500).¹³⁶

These sources provided data on volatility and cross-correlations over time. Using this data, hypothetical portfolios of different asset classes were constructed, and the volatility of the portfolio then compared with the average volatility across the asset classes. This provided an estimate of the impact of diversification across asset classes on volatility, while maintaining the same average expected return. The following estimates were made:

- data from Frontier Investment (2008)¹³⁷ indicates that a globally diversified portfolio of equity, bonds and property had returns that were 23% less volatile than a similar UK-only portfolio over the 1987–2007 period;
- data from Goldman Sachs (2012),¹³⁸ for nine asset classes over the 2001–10 period, suggests that an equally diversified portfolio of those asset classes would be 11% less volatile than the average for those asset classes;
- Oxera's analysis, of 22 global equity and bond indices from 2005 to 2014, suggests that an equally diversified portfolio of those indices would be 17% less volatile than the average for those asset classes.

¹³⁵ See Goldman Sachs (2012), 'The potential benefits of diversification'; and Frontier Investment Management LLP Research (2008), 'The benefits of portfolio diversification', January.

¹³⁶ Data collected using Datastream in early December 2014.

¹³⁷ See Frontier Investment Management LLP Research (2008), op. cit.

¹³⁸ See Goldman Sachs (2012), op. cit.

A6 Estimates of charges for investment activities

Table 5.5 in section 5 provides a breakdown of investment activities that compares the DIY approach with the collectivised approach. The table includes estimates of the fees involved in each case. The sources of those estimates are explained below.

The fee estimates for using investment platforms are based on publicly available fee information from three leading providers: Fidelity, Hargreaves Lansdown and Barclays Stockbrokers.¹³⁹ This includes data on:

- monthly account fees, found to vary from £3 to £5 per month;
- the cost of conducting share transactions, which vary from £9 to £12 per transaction, with discounts often being applied for multiple transactions within a month;
- platform service fees applied as a percentage of assets per year, which vary from 0.35% to 0.45%.

The table also includes a breakdown of the typical charges that are applied to UK all companies funds, based on estimates of the averages taken from the annual accounts of funds.¹⁴⁰ This includes:

- the cost of conducting transactions, including the cost of stamp duty as well as brokers fees, which is paid directly out of funds and is not paid by the asset manager, estimated to be 0.23% of assets per year on average;
- the cost of custody of shares, which is included in the OCF of the fund, estimated to be 0.02% of assets per year on average;
- the cost of administering the portfolio, including taxation and auditing, which is included in the OCF of the fund, estimated to be 0.09% of assets per year on average;
- the cost of fund management, which is equal to the OCF minus the cost of custody and administration, estimated to be 0.69% of assets per year on average.

The table also includes an estimate of the implicit costs of trading shares, based on the bid/ask spread. This spread was observed to be approximately 0.1% of the value of share transactions on the platforms described above for a small selection of leading FTSE 100 shares in December 2015. These spreads vary across shares and over time, and this estimate is likely to be at the lower end of spreads for the DIY share investor.

In addition, data was collected from the Fidelity platform on the typical OCF for UK equity tracker funds, as used in Table 5.7. The OCFs of the top ten most competitive UK equity tracker funds (out of a total of 15 funds) varied from 0.05% to 0.17%, with an average value of 0.10% (as used in Table 5.7).

¹³⁹ The fees data was collected in December 2015.

¹⁴⁰ Fitz Partners (2015), 'Fund Transaction Fee and Portfolio Turnover Benchmarks', press release, 29 April.

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