10th edition

Annual report on the performance of portfolio companies

December 2017

Building a better working world

Annual report on the performance of portfolio companies, 10th edition — December 2017

Contents

The report comprises four sections:

Annual report on the performance of portfolio companies, 10th edition – December 2017

Foreword

This is the 10th annual report on the performance of portfolio companies, a group of large, private equity owned UK businesses that met defined criteria at the time of acquisition. Its publication is one of the steps adopted by the private equity industry following the publication of guidelines by Sir David Walker to improve transparency and disclosure, under the oversight of the private equity Reporting Group (PERG).

Last year's report adopted a new format and reporting style, which are continued in this report. Its focus is on identifying the questions that various stakeholders may have on the impact of private equity ownership of large, UK businesses, and the presentation of facts and benchmarks to provide answers. The report is designed to be read as a standalone document, summarizing the data accumulated over the past 10 years of reporting; it also contains comparisons to last year's results, and for some measures, shows time series trends.

This year, the report covers 52 portfolio companies as at 31 December 2016 (in 2015 there were 60), as well as a further 81 portfolio companies that have been owned and exited since 2005. The findings are based on aggregated information provided on the portfolio companies by the private equity firms that own them – covering the entire period of private equity ownership. This year, data was received covering 44 portfolio companies, a compliance rate of 85%, a decline from last year's figure of 88%. On many measures of performance, the data on the current portfolio is combined with data from portfolio companies exited in 2016 and earlier, which provides over 100 data points, typically measuring performance over several years.

With a large number of portfolio companies, a high rate of compliance, and 10 years of information, this report provides comprehensive and detailed information on the effect of private equity ownership on many measures of performance of an independently determined group of large, UK businesses. The report comprises four sections:

- Section 1: Objectives and fact base
- Section 2: Summary findings
- Section 3: Detailed findings
- Section 4: Basis of findings

This report has been prepared by EY at the request of the BVCA and the PERG. The BVCA supported EY in this work, particularly by encouraging compliance amongst its members and non-members; the BVCA and the PERG have also provided comments to us on early drafts to EY. As in prior years, we welcome comments and suggestions on this report, which can be sent to the contact details at the end of this report.

Yours faithfully,
EY

1

Objectives and fact base

Objectives and fact base

Q&A

What are the objectives of this report?

- The objective of this annual report is to present independently prepared information on key stakeholder questions, in order to inform the broader business, regulatory and public debate on the impact of private equity (PE) ownership on large, UK businesses.

What are the distinctive features of the private equity business model?

- The distinctive features of the private equity business model include controlling ownership of its portfolio company (PC) investments, the use of financial leverage, and its long-term investing horizon.

What are the criteria used to identify portfolio companies, and how are they applied?

- Portfolio companies are identified at the time of their acquisition, based on criteria covering their size by market value, the scale of their UK activities, and the remit of their investors. The criteria and their application are independently determined by the PERG.

How robust is the data set used in this report?

- The aggregated data in this report covers 89% of the total population of portfolio companies. This year, compliance for the current portfolio companies was 44 of 52, or 85%.

What is the time period and coverage of the measures used to evaluate performance?

- The two main measures used in this report cover a) the entire period of private equity ownership of all the portfolio companies, i.e., from initial acquisition to latest date or exit, and b) the latest year-on-prior-year comparison of the current portfolio companies.

How accurate are the individual portfolio company submissions?

- The portfolio company submissions are drawn from key figures disclosed in published, independently audited, annual accounts.
- The data returned to EY is checked for completeness, and iterated with the private equity firms as required.

Objectives and fact base

What are the objectives of this report?

The overall objective of this annual report is to present independently prepared information on key stakeholder questions, in order to inform the broader business, regulatory and public debate on the impact of private equity ownership on large, UK businesses.

This study reports on the performance of the large, UK businesses (the portfolio companies) owned by private equity investors that meet the criteria determined by the PERG. It forms part of the actions implemented by the private equity industry to enhance transparency and disclosure as recommended in the Guidelines proposed by Sir David Walker in November 2007.

By aggregating information on the businesses that meet a defined set of criteria at the time of their acquisition, there is no selectivity or performance bias in the resulting data set. This is the most accurate way of understanding what happens to businesses under private equity ownership.

Key questions of interest to the many stakeholders in the portfolio companies that are addressed in this report include:

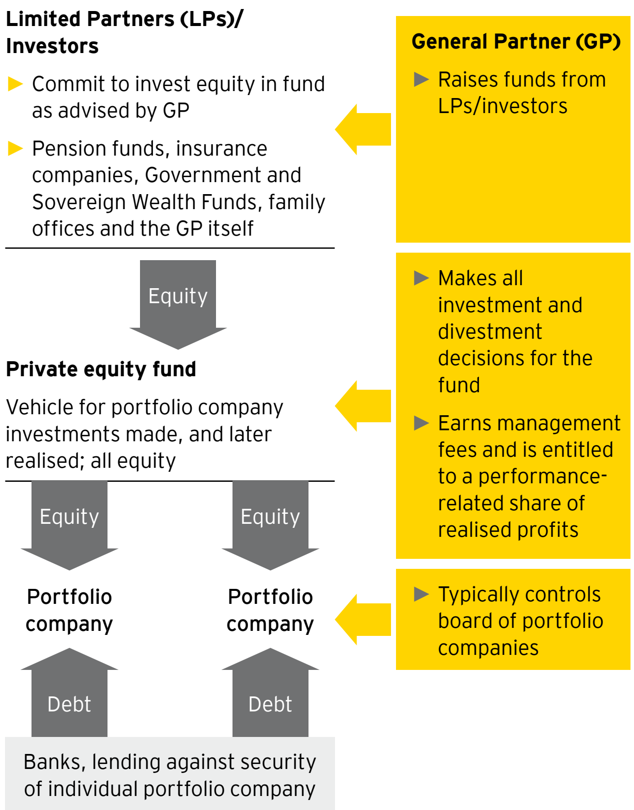
- Do portfolio companies create jobs?
- How is employee compensation, i.e., pay, terms, and pension benefits, affected by private equity ownership: pay, terms, and pension benefits?
- Do portfolio companies increase or decrease investment in capital expenditure, R&D, and bolt-on acquisitions or disposals?
- What are the levels of financial leverage in the portfolio companies, and how does this change over time?
- How does productivity, i.e., labour and capital, change under private equity ownership: labour and capital?
- Do companies grow during private equity ownership?
- How do private equity investors generate returns from their investments in the portfolio companies? How much is attributable to financial engineering, public stock market movement, and strategic and operational improvement?

The findings of this report constitute a unique source of information to inform the broader business, regulatory and public debate on the impact of private equity ownership, by evidencing if and how its distinctive features (including investment selection, governance, incentives and financial leverage) affect the performance of large, UK businesses.

Objectives and fact base

What are the distinctive features of the private equity business model?

The distinctive features of the private equity business model include ownership of its portfolio company investments, the use of financial leverage, and its long-term investing horizon.



Ownership of portfolio companies

- The private equity fund typically acquires all or a majority of the equity in its portfolio companies giving it (as advised by the GP) control of the board, strategy, management and operations of the company.
- Most other financial investors (e.g., hedge funds, public equity funds) acquire minority shareholdings with no direct influence over management or strategy.

Use of financial leverage

- In acquiring portfolio companies, third party debt is used and this is secured on the portfolio company itself, alongside equity provided by the private equity fund.
- The leverage levels applied to portfolio company investments are typically higher than public company benchmarks.

Long term

- LPs make an investment commitment to a private equity fund of c.10 years.
- Typically, equity capital is invested the first five years and realised in the second five years.
- There is a typical investment horizon of three to seven years per portfolio company investment (the average in this study is under six years).
- There are restrictions on withdrawing commitments from the fund, thereby allowing a long-term investment period. This is in contrast to many other financial investors (e.g., hedge funds, public equity funds) who invest in publicly traded shares that have few restrictions on buying or selling.

Objectives and fact base

What are the criteria used to identify portfolio companies, and how are they applied?

Portfolio companies are identified at the time of their acquisition, based on criteria covering their size by market value, the scale of their UK activities, and the remit of their investors. The criteria and their application are independently determined by the PERG.

- The criteria for identifying portfolio companies, and their application, are determined by the PERG (see privateequityreportinggroup.co.uk for details of composition and remit).
- A portfolio company, at the time of its acquisition, was:
  - "Acquired by one or more private equity firms in a public to private transaction where the market capitalisation together with the premium for acquisition of control was in excess of £210m, and either more than 50% of revenues were generated in the UK or UK employees totalled in excess of 1,000 full time equivalents."

  Or

  - "Acquired by one or more private equity firms in a secondary or other non-market transaction where enterprise value at the time of the transaction is in excess of £350m, and either more than 50% of revenues were generated in the UK or UK employees totalled in excess of 1,000 full time equivalents."
  - Private equity firms are those that manage or advise funds that own or control portfolio companies, or are deemed, after consultation on individual cases by the PERG, to be 'private equity like' in terms of their remit and operations.
- The companies, and their investors, that meet the criteria were identified by the BVCA, and then approved by the PERG.
- As in prior years, the portfolio companies that volunteered to comply with the disclosure aspect of the Guidelines, but did not meet all of the criteria above at acquisition, are excluded from this report.

Objectives and fact base

What are the criteria used to identify portfolio companies, and how are they applied?

Movements in the number of portfolio companies.

Exits												
	2005-06	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
At 1 January		**37**	**42**	**47**	**43**	**64**	**73**	**72**	**71**	**62**	**60**	
Portfolio companies introduced/excluded with changes in PERG criteria					12	4		(1)	-	-	(1)	14
Acquisitions of portfolio companies		10	5	-	11	8	7	10	7	11	5	74
Exits of portfolio companies	(9)	(5)	-	(3)	(2)	(3)	(8)	(10)	(16)	(13)	(12)	(81)
Portfolio companies at 31 December		**42**	**47**	**43**	**64**	**73**	**72**	**71**	**62**	**60**	**52**	
Exits and re-entrants		1	-	-	1	1	3	5	-	1	3	15
Number of exits by IPO		-	-	-	-	-	1	3	8	5	2	19

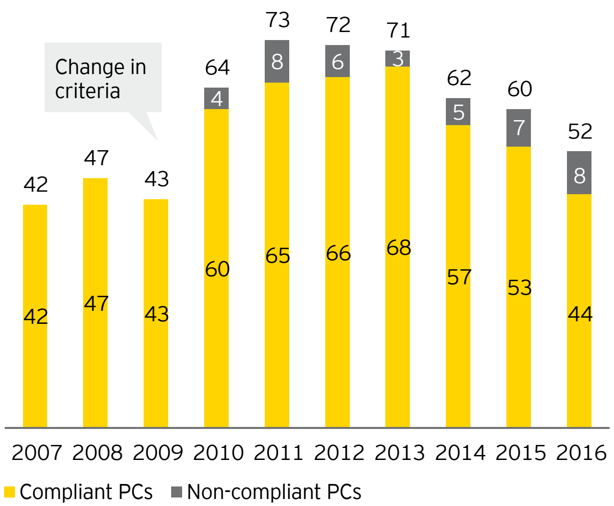
- In 2010, the criteria used to determine the portfolio companies were changed by the PERG, by lowering the entry enterprise value threshold. This brought in a total of 16 new portfolio companies. In 2012, the PERG decided that one "private equity like" investor entity that owned two portfolio companies had restructured in such a way that it was no longer "private equity like". In 2013, the PERG decided that one portfolio company, that had made significant disposals and was, as a result, well below the size criteria, would be excluded from the population; a similar decision was taken for one portfolio company in 2016.
- The effect of private equity ownership on a business is evaluated from the date of acquisition to the date of exit. The date of exit is defined as the date of completion of a transfer of shares which means that the private equity fund no longer has control, or, in the case of IPO onto a public stock market, the date of first trade.

Objectives and fact base

How robust is the data set used in this report?

The aggregated data in this report covers 89% of the total population of portfolio companies. This year, compliance for the current portfolio companies was 44 of 52, or 85%.

Number of portfolio companies on 31 December and compliance



- Private equity firms were requested to complete a data template for each of their portfolio companies, for the purposes of preparing this report. Individual portfolio company submissions were reviewed by EY and accepted or rejected depending on their completeness.
- Compliance by portfolio companies has been above 90% in all bar three years, 2011, 2015 and the current year, at 89%, 88% and 85% respectively. In many measures of performance, data on portfolio companies owned and exited is also included. Of this group of 81 former portfolio companies, 14 relate to exits in the period 2005–07, which were not required to submit the full data template. Compliance of the rest is 62 out of 67, or 93%. Therefore, on this measure of the current portfolio and exits (CP + Exits), the total number of data points is 119 and there is data reported on 106, a compliance rate of 89%.
- For returns attribution, which is only measured on exits, compliance is 74 out of 81, or 91%.
- The main reason for non-compliance is the inclusion of certain portfolio companies of ‘private equity-like’ investors, which are not BVCA members.

Objectives and fact base

How robust is the data set used in this report?

Portfolio companies (on 31 December 2016)

Portfolio company	GP(s)
Advanced	**Vista Equity Partners**
Affinity Water	Infracapital, (Morgan Stanley Infrastructure, Veolia Water, State Administration of Foreign Exchange of the People's Republic of China, Partners Group)
Ambassador Theatre Group	Providence Equity
Anglian Water Group	3i, (Canadian Pension Plan Investment Board, Colonial First State Global Asset Management, IFM Investors)
Annington Homes	Terra Firma
Associated British Ports	Borealis Infrastructure, (Canadian Pension Plan Investment Board, GIC, Kuwait Investment Authority, Hermes Infrastructure)
Callcredit	GTCR
Camelot	**Ontario Teachers' Pension Plan**
Care UK	Bridgepoint
Chime Communications	Providence Equity, (WPP)
Civica	OMERS Private Equity
David Lloyd Clubs	TDR Capital
Domestic and General	CVC Capital Partners
Edinburgh Airport	Global Infrastructure Partners
Expro	Goldman Sachs, KKR (Highbridge Capital Management, Park Square Capital, Arle Capital Partners)
Fat Face	Bridgepoint
Four Seasons Health Care	Terra Firma
Froneri (previously R&R Ice Creams)	PAI Partners, (Nestlé)
Gatwick Airport	Global Infrastructure Partners, (Abu Dhabi Investment Authority, CalPERS, National Pension Scheme of Korea, Future Fund)
HC-One	**Safanad, Formation Capital**

Portfolio companies in **bold** text are those GPs and portfolio companies that have not complied with reporting requirements for the 2016 study.

Notes: * indicates where the GP has provided an explanation for non-compliance

1. Company has complied previously
2. Company is new to population
3. Company is a re-entrant due to change of ownership
4. Some data has been provided by new owners
5. GP provided partial information

Objectives and fact base

How robust is the data set used in this report?

Portfolio companies (on 31 December 2016)

Portfolio company	GP(s)
Host Europe Group	Cinven
Infinis[3]	3i
Keepmoat	TDR Capital, (Sun Capital)
LGC[2]	KKR
London City Airport[*,1,3]	**Borealis Infrastructure, Ontario Teachers' Pension Plan (Alberta Investment Management Corporation, Wren House Infrastructure Management)**
Moto	CVC Capital Partners, (USS)
Motor Fuel Group	Clayton Dubilier & Rice
MRH[2]	**Lone Star Funds**
Mydentist	The Carlyle Group
National Car Parks	Macquarie Infrastructure and Real Assets
NewDay[4,5]	Värde Partners
NGA Human Resources (previously Northgate Information Solutions)[*,1]	**Goldman Sachs, (Park Square Capital, KKR)**
Northgate Public Services	Cinven
PA Consulting Group	The Carlyle Group

Portfolio company	GP(s)
Parkdean Holidays[*,5]	**Alchemy, Epiris**
Pizza Express	Hony Capital
Premium Credit	Cinven
Pret a Manger	Bridgepoint
Prezzo	TPG
RAC[3]	CVC Capital Partners, (GIC)
Sky Bet	CVC Capital Partners
South Staffordshire Water	KKR, (Mitsubishi Corporation)
Stonegate Pub Company	TDR Capital
TES Global	TPG

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Objectives and fact base

How robust is the data set used in this report?

Portfolio companies (on 31 December 2016)

Portfolio company	GP(s)
Thames Water	Macquarie Infrastructure and Real Assets, (Hermes GPE, Abu Dhabi Investment Authority, British Columbia Investment Management Corporation, China Investment Corporation, QIC, AMP Capital)
The Vita Group	TPG
Trainline	KKR
Travelodge	Goldman Sachs, (GoldenTree Asset Management, Avenue Capital Group)
Village Hotels (previously Village Urban Resorts)	**KSL Capital**
Viridian	I Squared Capital
Voyage Healthcare	Partners Group, (Duke Street, Tikehau Capital)
Vue Cinemas	OMERS Private Equity, (Alberta Investment Management Corporation)

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Objectives and fact base

How robust is the data set used in this report?

Exits of portfolio companies during 2016

Portfolio company	GP(s)
Airwave Solutions	Macquarie Infrastructure and Real Assets
Ascential	Apax
Biffa	Bain Capital Credit
Brakes Group	Bain Capital, (Fresh Direct)
Enserve	Cinven
Gala Coral[*,5]	**Apollo**
Fitness First	**Oaktree, (Marathon)**
Odeon & UCI Cinemas	Terra Firma
Priory Group	Advent
Infinis Group	Terra Firma
London City Airport	Global Infrastructure Part.
RAC	Carlyle

Portfolio companies in **bold** text are those GPs and portfolio companies that have not complied with reporting requirements for the 2016 study.

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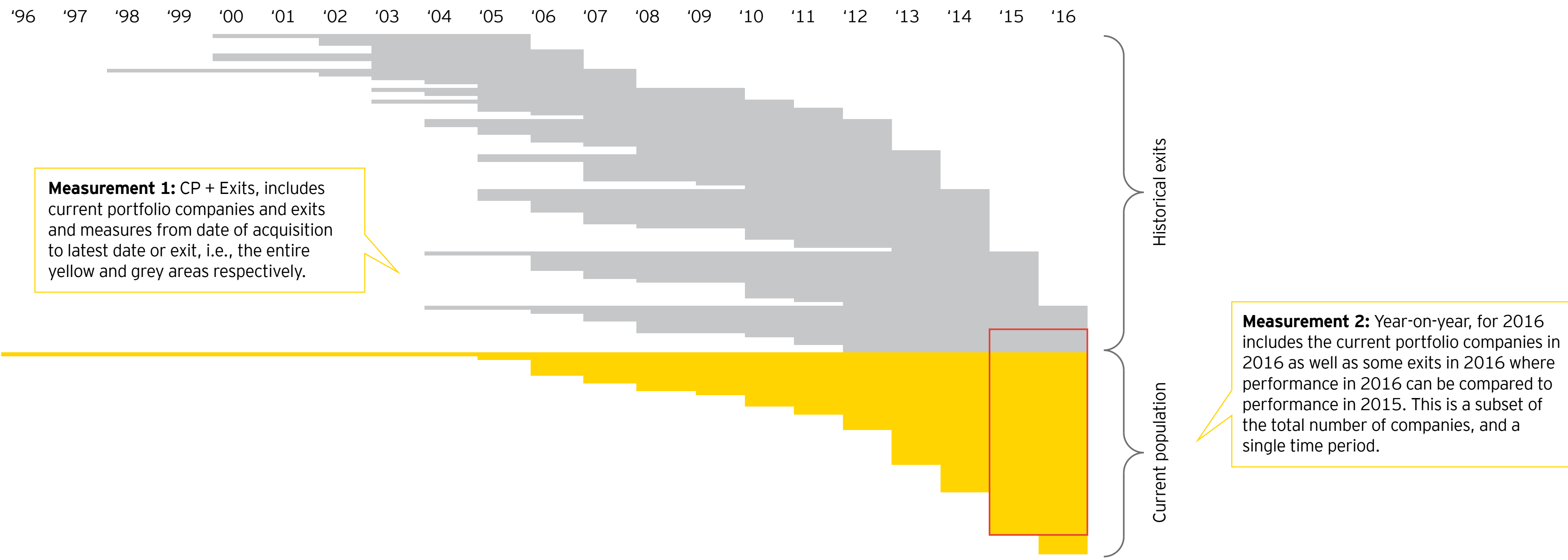
Objectives and fact base

What is the time period and coverage of the measures used to evaluate performance?

The two main measures used in this report cover a) the entire period of private equity ownership of all the portfolio companies, i.e., from initial acquisition to latest date or exit, and b) the latest year-on-prior-year comparison of the current portfolio companies.

Period of ownership of portfolio companies by private equity investors



Note: The data set for company exits includes investments realised starting 2005 vs. 2007 for the main data set.

Objectives and fact base

How accurate are the individual portfolio company submissions?

The portfolio company submissions are drawn from key figures disclosed in the published, independently audited, annual accounts.

- The BVCA and EY contacted the private equity firms in June 2017 and requested a standard data template to be completed for each portfolio company. For exits, the same data template was updated for the final year of private equity ownership, as well as data required to complete the returns attribution analysis. Whilst it is the responsibility of the private equity firm to ensure compliance, in many cases the portfolio company submitted the information directly to EY.
- All of the portfolio companies have annual accounts which have been independently audited. Completion of the data template drew on information available in company accounts, and further information that was prepared from portfolio company and private equity firm sources. This data enabled analysis, inter alia, of the impact of acquisitions and disposals, and movements in pension liabilities and assets. The data template incorporates a number of in-built consistency and reconciliation checks, and also requires key figures to be reconciled to figures in the annual accounts.
- The data templates returned to EY were checked for completeness, and iterated with the private equity firms as required. EY undertook independent checks on a sample of the returns against published company accounts. This found no material discrepancies. Data gathering was completed in November 2017.

2

Summary findings

Summary findings

Q&A

How long does private equity invest in the portfolio companies?

- The average timeframe of private equity investment in the portfolio companies is 5.8 years, i.e., from initial acquisition to exit. The current portfolio companies have been owned for an average of 4.2 years.

Do portfolio companies create jobs?

- Reported employment under private equity ownership has grown by 2.6% per annum. Underlying organic employment growth (removing the effects of bolt-on acquisitions and partial disposals) has grown by 1.4% per annum.
- Annual employment growth at the portfolio companies is in line with the private sector benchmark of 1.4% growth (organic), and the public company benchmark of 2.8% growth (reported).
- Organic employment growth in the portfolio companies slowed in 2016, and was below the private sector benchmark.
- There is a wide range of growth and decline in organic employment at the individual portfolio company level – reflecting many factors. The overall private equity effect is measured by the aggregate result.

How is employee compensation , i.e., pay, terms, and pension benefits affected by private equity ownership: pay, terms, and pension benefits?

- Average employment cost per head in the portfolio companies has grown by 3.5% per annum under private equity ownership.
- Average annual employee compensation growth under private equity ownership is above the UK private sector benchmark, at 3.5% versus 2.5% annual growth.
- Year-on-year growth in average employment cost per head was 4.6% in 2016, above the long-term trend and the UK private sector benchmark of 2.3% over the same period.
- Almost half of the jobs in the portfolio companies are for part-time work with annual compensation of less than £12,500, over double the proportion of the same in the UK private sector. This is explained by a sector focus on consumer services and healthcare, where there is a higher mix of part-time work.
- 5.2% of jobs in the portfolio companies are on zero-hours contracts, slightly below the economy-wide benchmark of 5.5%; when the impact of the healthcare sector is removed, this falls to 2.1%.
- There have been some changes to existing company defined benefit (DB) pension schemes under private equity ownership. At latest date, the aggregated value of liabilities of DB schemes of current portfolio companies exceeds the value of assets; the average time to pay off the DB deficit is estimated as 7.5 years.

Summary findings

Q&A

Do portfolio companies increase or decrease investment in capital expenditure, R&D, and bolt-on acquisitions or disposals?

- Investment in operating capital employed at the portfolio companies has grown by 2.3% per annum.
- The portfolio companies have grown operating capital employed at a slower rate than public company benchmarks, at 2.3% per annum versus 4.2% per annum.
- Annual growth in operating capital employed was 4.3% in 2016, similar to the result in 2015. The longer-term pattern has been more variable.
- 48% of the current portfolio companies have made net bolt-on acquisitions whilst 10% have made net partial disposals, showing investment in bolt-on acquisition ahead of partial disposals.
- Private equity investors, in aggregate, have used free cashflow and additional third party debt to increase investment in the current portfolio companies, versus paying returns to equity investors.

How does productivity , i.e., labour and capital, change under private equity ownership: labour and capital?

- Labour and capital productivity have grown under private equity ownership, by 1.6–1.8% and 6.4% per annum respectively.
- Annual growth in labour productivity in the portfolio companies at between 1.6% and 1.8% is broadly in line with public company and economy-wide benchmarks.
- Gross Value Added (GVA) per employee of portfolio companies declined by 0.2% year-on-year growth versus 2015, and was below the UK private sector benchmark that increased to 2% growth.
- Capital productivity growth in the portfolio companies exceeds public company benchmarks, by 6.4% versus 0% growth per annum.

Summary findings

Q&A

Do private equity owned companies grow?

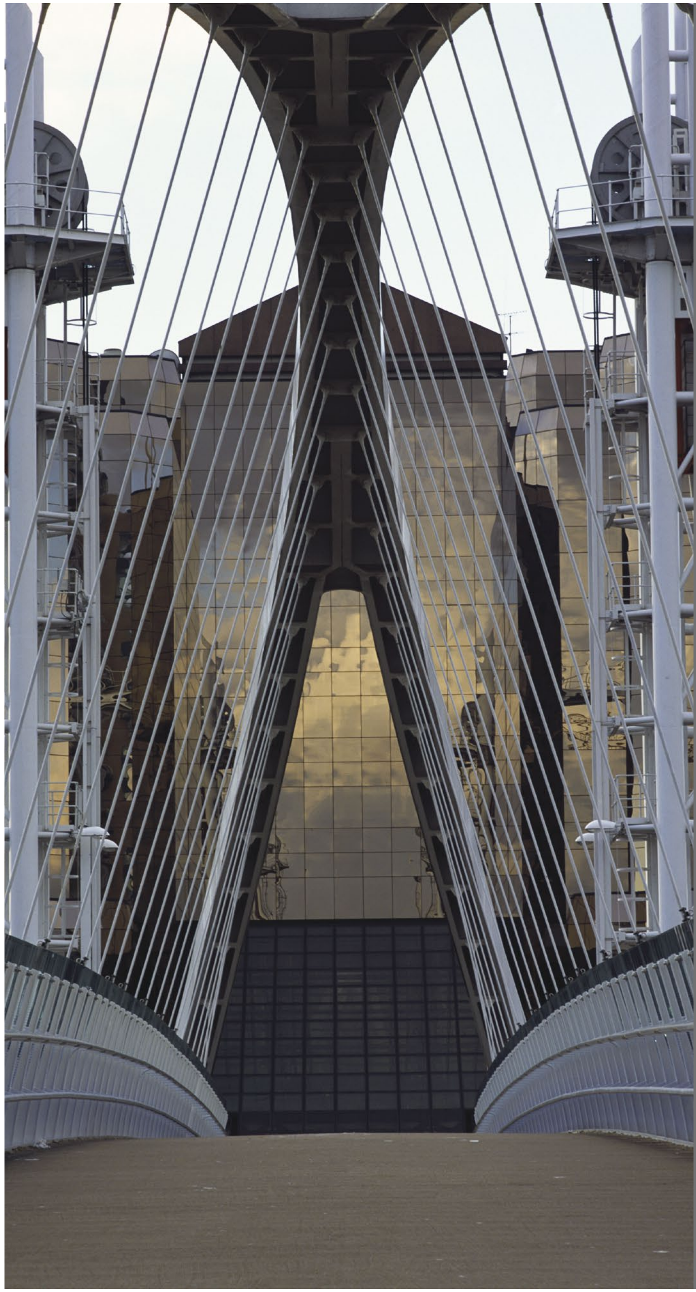
- Since acquisition, the portfolio companies have grown reported revenue at 5.4% per annum and profit at 4.0% per annum; organic revenue and profit growth have grown at 3.8% and 2.4% per annum respectively.
- Revenue and profit growth at the portfolio companies is broadly in line with public company benchmarks, at 5.4% and 4.0% per annum respectively.
- The portfolio companies have grown organic revenue and profit in every year of private equity ownership, with 2016 one of the strongest performance, at 6.5% and 6.7% respectively.

What are the levels of financial leverage in portfolio companies?

- In aggregate, portfolio companies had an average leverage ratio of 6.9x debt to EBITDA at acquisition, and 6.5x at latest date or exit.
- Portfolio companies have much higher levels of financial leverage than public companies: 56% of portfolio companies have debt to EBITDA ratio above 5x, versus 8% of publicly listed companies.

How do private equity investors generate returns from their investments in the portfolio companies? How much is attributable to financial engineering, public stock market movement, and strategic and operational improvement?

- The equity return from portfolio company exits is 3.2x public company benchmark; half of the additional return is due to private equity strategic and operational improvement and the other half from additional financial leverage.
- Whilst the results vary over time, the components of the gross return from private equity strategic and operational improvement and additional financial leverage are equal to the equivalent public stock market return.



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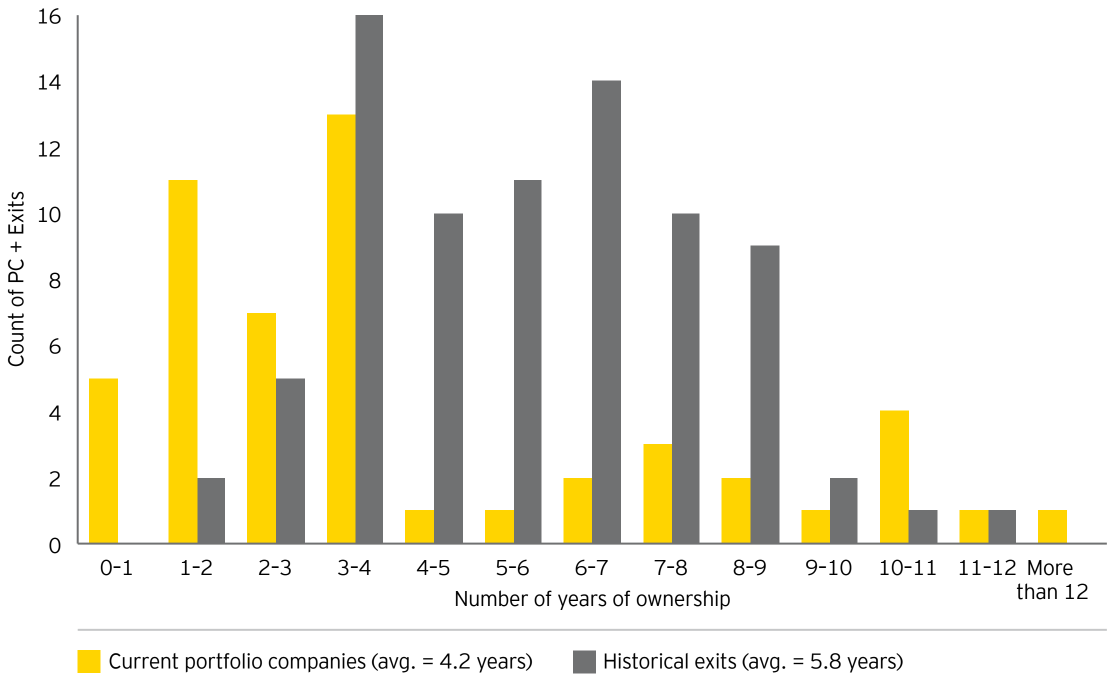
Detailed findings

Detailed findings

How long does private equity invest in the portfolio companies?

The average timeframe of private equity investment in the portfolio companies is 5.8 years, i.e., from initial acquisition to exit. The current portfolio companies have been owned for an average of 4.2 years.

Distribution of years of ownership of portfolio companies



Note: The data set for company exits includes investments realised starting 2005 vs. 2007 for the main data set.

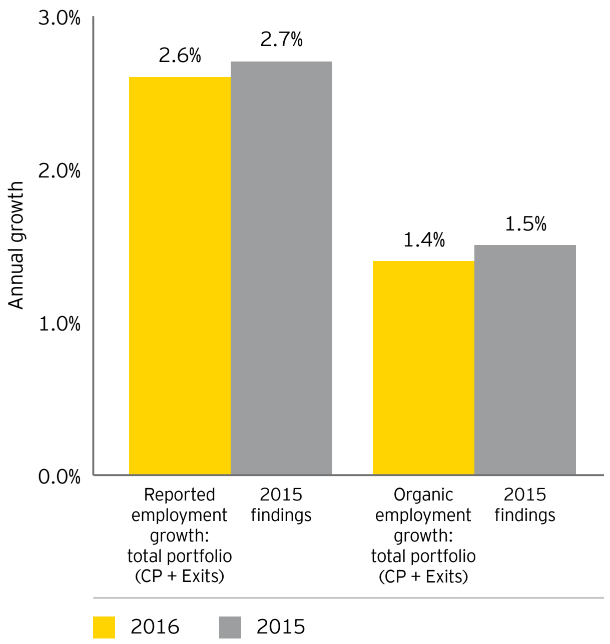
- The private equity business model seeks to achieve an investment return to its investors (pension funds, insurance funds etc.) by realising greater equity proceeds through the sale, and in dividends through ownership of portfolio companies, than its initial equity investment at the time of acquisition.
- The private equity business model is long-term:
  - For the 81 portfolio companies that have been exited over the past 11 years, the average length of ownership is 5.8 years.
  - For the current group of 52 portfolio companies, measured at 31 December 2015, the average length of private equity ownership is 4.2 years.
- Looking at the profile of the historical exits as the best measure of the length of private equity ownership, of the 81 exits, all bar 7, or 91%, were owned for more than three years, and 59% were owned for more than five years.

Detailed findings

Do portfolio companies create jobs?

Reported employment under private equity ownership has grown by 2.6% per annum. Underlying organic employment growth (removing the effects of bolt-on acquisitions and partial disposals) has grown by 1.4% per annum

Reported employment growth and organic employment growth



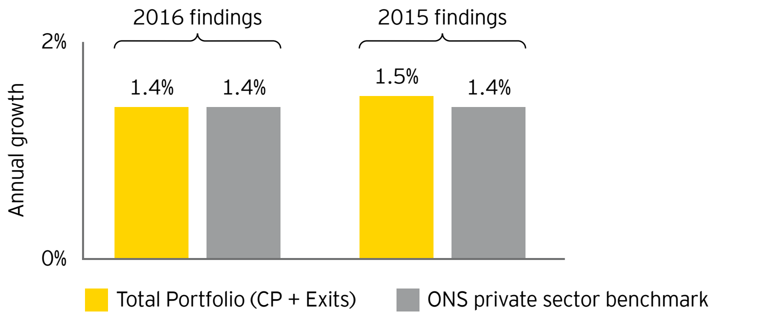
- At time of acquisition of both current portfolio companies and exits by PE investors, these totalled 540,000 jobs (incl. UK and international locations). On latest year end or date of exit, this same group of companies had increased the number of jobs to 644,000 (an additional c.104,000 jobs). Annually, this amounts to a growth rate of 2.6%.
- Additional, private data has been obtained from each portfolio company to isolate the effect of bolt-on acquisitions and partial disposals that may distort reported employment trends. The underlying annual organic employment growth rate is 1.4% per annum, or c.55% of total reported employment growth. The remaining growth is represented by the effect of more jobs added by bolt-on acquisitions, than lost via partial disposals.
- Both growth rates are marginally lower than the findings published in last year's report.

Detailed findings

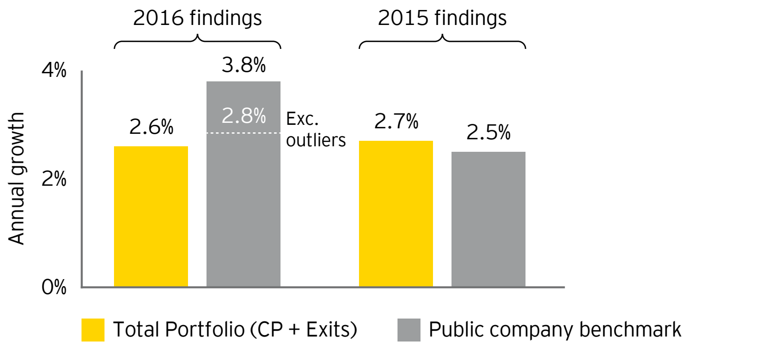
Do portfolio companies create jobs?

Annual employment growth at the portfolio companies is in line with the private sector benchmark of 1.4% growth (organic), and public company benchmark of 2.8% growth (reported).

Organic employment growth vs. UK private sector benchmarks



Reported employment growth vs. public company benchmark



- Organic employment growth can be benchmarked to Office for National Statistics (ONS)* statistics, which report on economy-wide employment trends for the UK private sector. Matched to compare relevant time periods, the 1.4% average annual organic employment growth rate of private equity owned companies is comparable to UK private sector employment growth as a whole. This is consistent with 2015 findings.
- It should be noted that the private sector benchmark includes companies of all sizes. The data on private sector employment trends by company size (available since 2010) shows that large companies (defined as >250 employees) have achieved slower employment growth than the private sector overall. This suggests that on a more comparable basis the portfolio companies are performing ahead of the private sector benchmark.
- Reported employment figures, as disclosed in annual reports by the portfolio companies and public companies, can also be compared, although these figures include the effects of bolt-on acquisitions and partial disposals.
- The reported employment growth of the portfolio companies of 2.6% per annum is below a size, sector and time matched public company benchmark of 3.8% per annum – an increase of 1.3 percentage points from 2015. It should be noted that the 2016 result is driven by the healthcare sector; excluding this sector, the public company benchmark is more in line with the 2015 finding, and the performance of the portfolio companies.

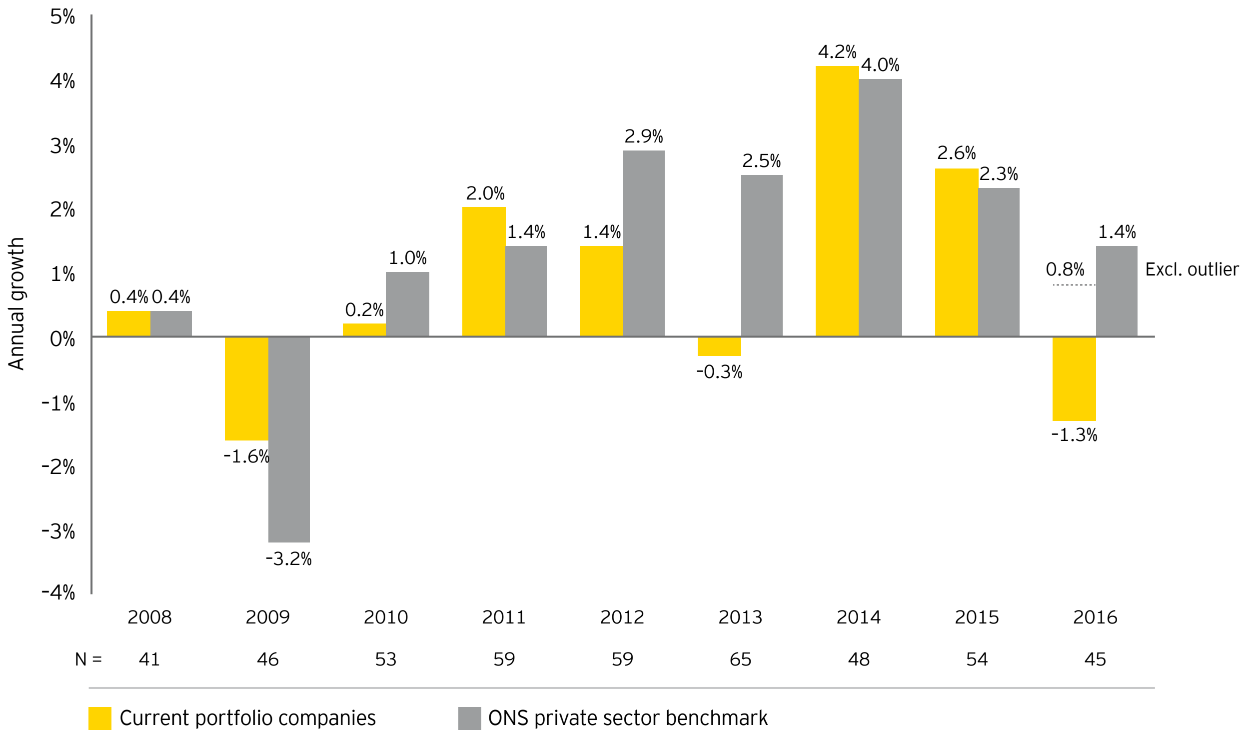
*Annual Business Survey 2016, ONS.

Detailed findings

Do portfolio companies create jobs?

Organic employment growth in the portfolio companies slowed in 2016, and was below the private sector benchmark.

Organic employment growth, year-on-year vs. UK private sector benchmark



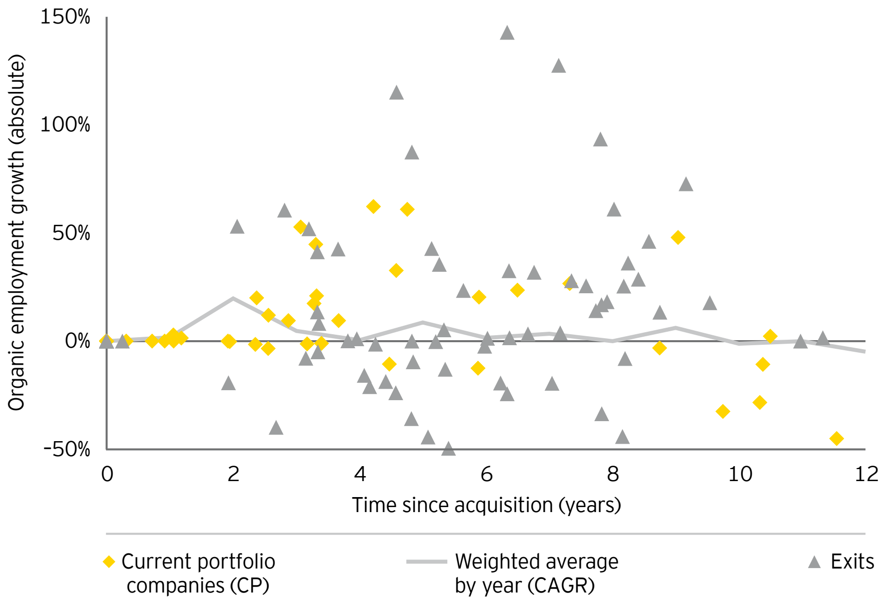
- Looking at the year-on-year trend in organic employment growth, 2016 saw a decline in the year-on-year organic employment growth rate of the portfolio companies to−1.3% (+0.8% when excluding one large outlier). The private sector benchmark declined too, but at 1.4% growth was above the portfolio companies' performance.

Detailed findings

Do portfolio companies create jobs?

At a company level, there is a wide range of growth and decline in organic employment – reflecting many factors. The overall private equity effect is best measured by the aggregate result.

Organic employment growth by portfolio company over time



Notes: Axes have been capped to ease reading – chart excludes three companies whose results exceed these limits.
Absolute employment growth measured as change in employment from time of investment to exit or latest date, divided by employment at time of investment.

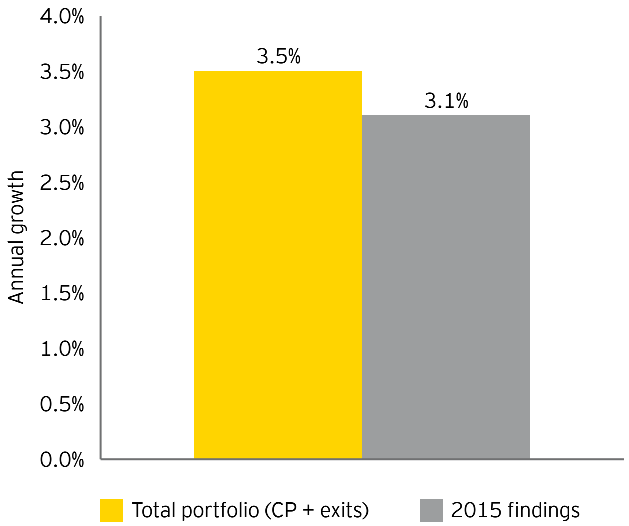
- At the individual portfolio company level, there is a wide range of outcomes on organic employment growth. Some portfolio companies show high levels of organic employment growth, whilst others show high levels of decline in employment. This range of individual portfolio company outcomes reflects many factors including market conditions, expansion or reduction in capacity, and focus on growth or productivity.
- The aggregated effect (the correct way to assess for any systematic effect of private equity ownership on the performance of the portfolio companies) is net growth in organic employment.

Detailed findings

How is employee compensation affected by private equity ownership?

Average employment cost per head in the portfolio companies has grown by 3.5% per annum under private equity ownership.

Growth in average employment cost per head



- This report uses average employment cost per head as the measure of employee compensation. It is noted that this metric will not equate to like-for-like change in employee compensation, due to changes in the composition of companies, numbers of employees at differing pay levels and terms, changes in taxes, working hours, bonus schemes, overtime rates, and annual base pay awards.
- The average employment cost per head has grown by 3.5% per annum under the entire period of private equity ownership, a 0.4 percentage point increase from the restated 2015 findings.
- Due to a change in methodology for the calculation of employment cost per head average growth across portfolio companies, the 2015 findings (2.1% per annum) have been re-calculated (as 3.1% per annum) to allow a comparison of 2016 and 2015 findings on the same methodological basis.

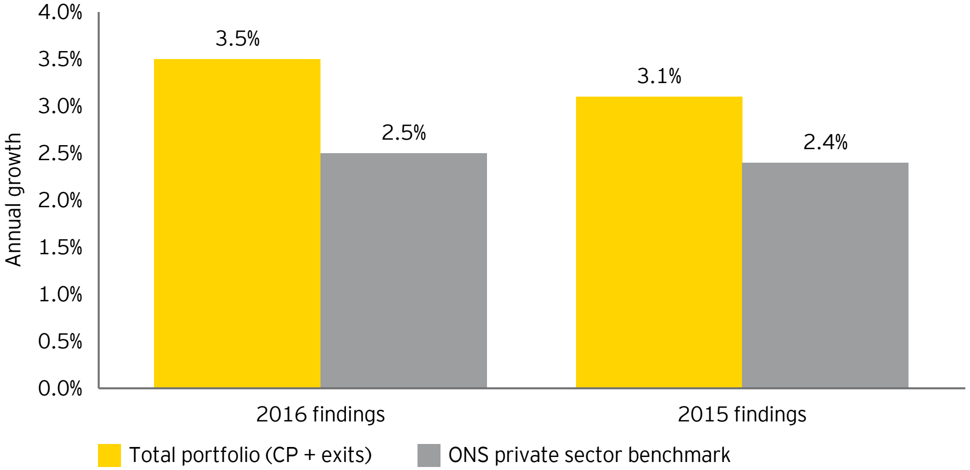
Note: Adjusted figures for 2015, due to a change in methodology. Our report published in 2015, Annual report on the performance of portfolio companies, IX, showed a growth in employment cost of 2.1% per annum.

Detailed findings

How is employee compensation affected by private equity ownership?

Average annual employee compensation growth under private equity ownership is above the UK private sector benchmark, at 3.5% versus 2.5% annual growth.

Growth in employment cost per head



- Average annual employment cost per head growth of 3.5% in the private equity owned portfolio companies is ahead of the ONS private sector benchmark of 2.5% over comparable time periods.
- Compared to last year's findings, the ONS* private sector benchmark has increased slightly, whilst the portfolio company result has increased further.

Note: Adjusted figures for 2015, due to a change in methodology. Our report published in 2015, Annual report on the performance of portfolio companies, IX, showed a growth in employment cost of 2.1% per annum.

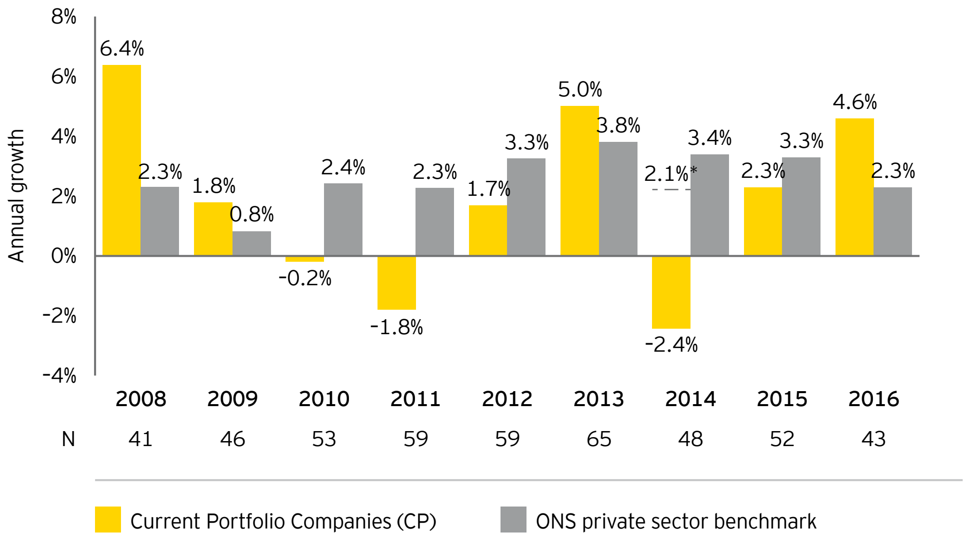
*Annual Business Survey 2016, ONS.

Detailed findings

How is employee compensation affected by private equity ownership?

Year-on-year growth in average employment cost per head was 4.6% in 2016, above the long-term trend and the UK private sector benchmark of 2.3% over the same period.

Year-on-year average employment cost per head growth



- The year-on-year growth in average employment cost per head for the portfolio companies is variable, particularly when compared to the overall stable pattern of average compensation increases in the UK private sector as a whole since the downturn in 2009. The variability in the portfolio company data is typically due to major changes taking place at one to a few portfolio companies in a year, which influence the overall result. Some of these are marked out as outliers in the chart.
- In 2016, average employment cost per head in the portfolio companies grew at 4.6%, faster than in the private sector by 2.3 percentage points. This level of year-on-year growth has been seen in prior years, e.g., in 2013, but does not mark out a discernible trend. In the prior two years, 2014 and 2015, employment cost per head growth at the portfolio companies was behind the ONS* private sector benchmark.
- Given the high percentage of lower salary jobs in the portfolio companies versus the private sector as a whole, one factor that will explain part of the 2016 increase for the portfolio companies was the introduction of the National Living Wage for workers aged 25 and over, from 1 April 2016, a 7.5% increase on the National Minimum Wage at that time. It is also noted that the National Minimum Wage was increased by 4% in October 2016.

Note: *2014 denotes year-on-year % growth excluding two outliers.

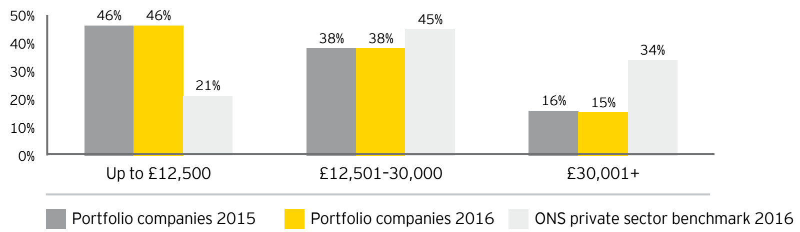
*Annual Business Survey 2016, ONS.

Detailed findings

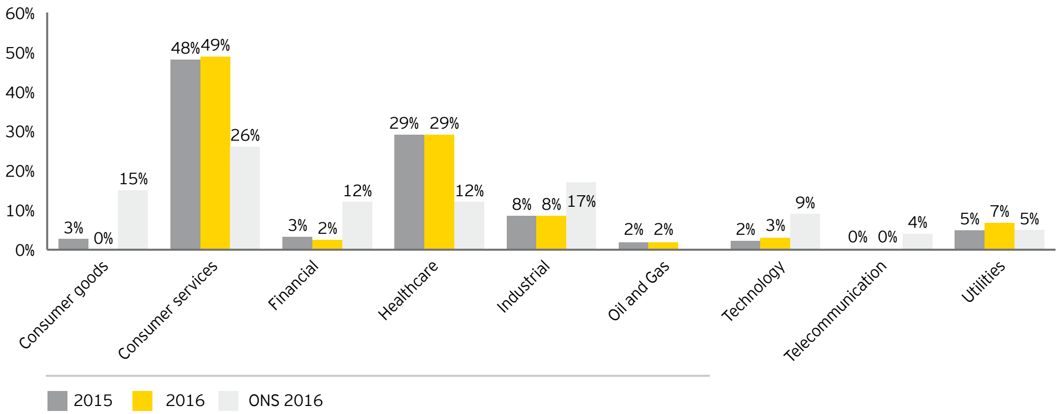
How is employee compensation affected by private equity ownership?

Almost half of the jobs in the portfolio companies are for part-time work with annual compensation of less than £12,500, over double the proportion of the same in the UK private sector. This is explained by a sector focus on consumer services and healthcare where there is a much higher mix of part-time work.

Percentage of portfolio company UK jobs by annual compensation band



Percentage of portfolio company UK jobs by sector



Note: Sector distribution for 2015 portfolio companies has been restated based on updated sector classification.

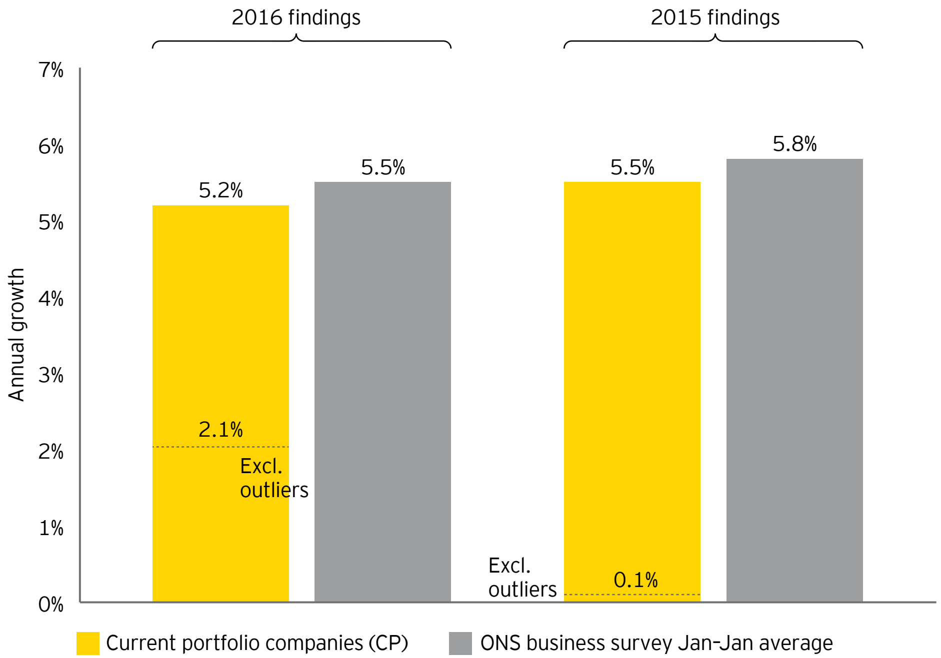
- Data on employment by annual compensation has been required from the portfolio companies since 2014 – in order to further understand employment trends and practices.
- The portfolio companies have a high mix of part-time jobs paying less than £12,500 per annum, which remained stable in 2016, and account for 46% of total jobs. This stands well above the UK private sector as a whole, where 21% of jobs are in this compensation range.
- One reason for the large number of part-time jobs in the portfolio companies is the sector mix, with the portfolio companies over-represented in consumer services (e.g., restaurants) and healthcare (e.g., care homes) where part-time working is significant. 77% of jobs in the portfolio companies are in these two sectors, versus 38% in the UK private sector.
- Excluding these two sectors from the portfolio company dataset, the salary band distribution shifts significantly to less than 5% in the lowest salary band, and a bit higher than 50% and 40% in the middle and highest bands respectively – above the UK private sector benchmark.

Detailed findings

How is employee compensation affected by private equity ownership?

5.2% of jobs in the portfolio companies are on zero-hours contracts, slightly below the economy-wide benchmark of 5.5%; when the impact of the healthcare sector is removed, this falls to 2.1%.

Percentage of UK jobs under zero-hours contracts



- In addition to data on employment by compensation band, since 2014 the portfolio companies have disclosed the number of jobs on zero-hours contracts.
- Across 43 portfolio companies in 2016, 5.2% of UK jobs were on zero-hours contracts. This is slightly below the national average based on data from ONS* which shows that the proportion of all UK employees on zero-hours contracts is 5.5%.
- Within the portfolio companies there is a significant concentration of use of zero-hours contracts. The healthcare sector typically has a significant proportion of their employees on zero-hours contracts, where this form of employment is more common. Excluding all six portfolio companies in that sector, the percentage of portfolio company employees on zero-hours contracts falls to 2.1%, which is well below the rate for the UK as a whole.

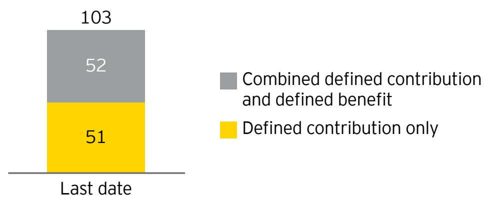
*Annual Business Survey 2016, ONS.

Detailed findings

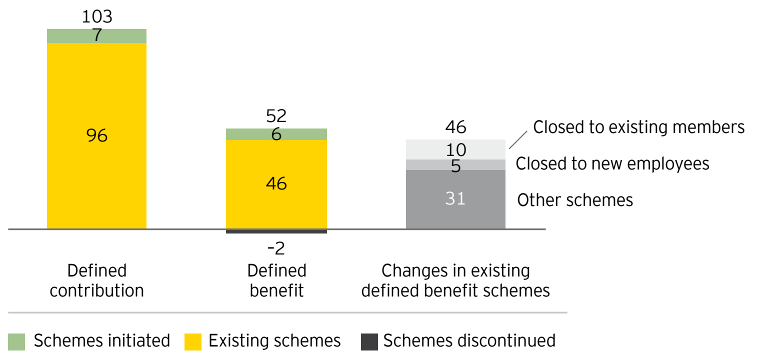
How is employee compensation affected by private equity ownership?

There have been some changes to existing company defined benefit pension schemes under private equity ownership.

Distribution of companies by type of pension schemes (portfolio companies and exits)



Changes to pension schemes under private equity ownership (portfolio companies and exits)



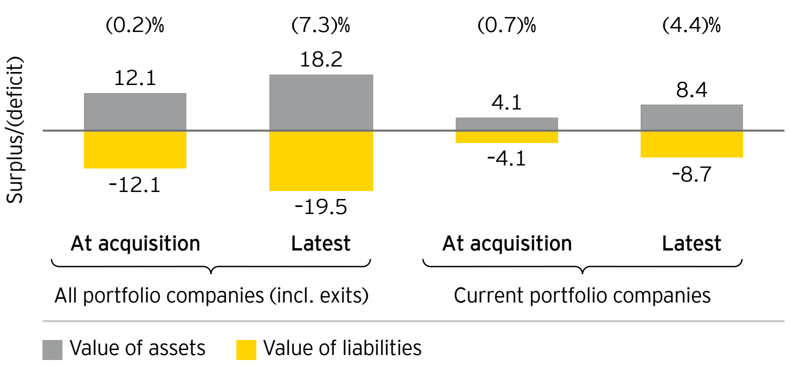
- Out of the 105 portfolio companies that provided pension information, 103 reported that they offer pension schemes to their employees (51 offer defined contribution (DC) schemes only, and 52 offer a combination of defined benefit (DB) and DC schemes) and two historical exits reported that they did not provide any pension scheme to their employees.
- The Pensions Regulator is responsible for reviewing pension arrangements including at the time of change in ownership. Eight of the 48 portfolio companies where a DB scheme was in place prior to acquisition sought approval from the regulator at the time of their investment.
- Under private equity ownership, there have been changes to portfolio company pension schemes:
  - At seven portfolio companies, new DC schemes have been initiated. In the case of two portfolio companies this was in part due to the fact that there was only a DB scheme at the time of acquisition.
  - At six portfolio companies, new DB schemes have been initiated, and two schemes have been closed.
  - In addition, ten DB schemes were closed to accruals for existing members, and five for new members.

Detailed findings

How is employee compensation affected by private equity ownership?

At latest date, the aggregated value of liabilities of DB schemes of current portfolio companies exceeds the value of assets; the average time to pay off the deficit is estimated as 7.5 years.

DB pension schemes: liabilities/assets over time (£b)



DB pension schemes: time to pay off deficit (current portfolio companies)

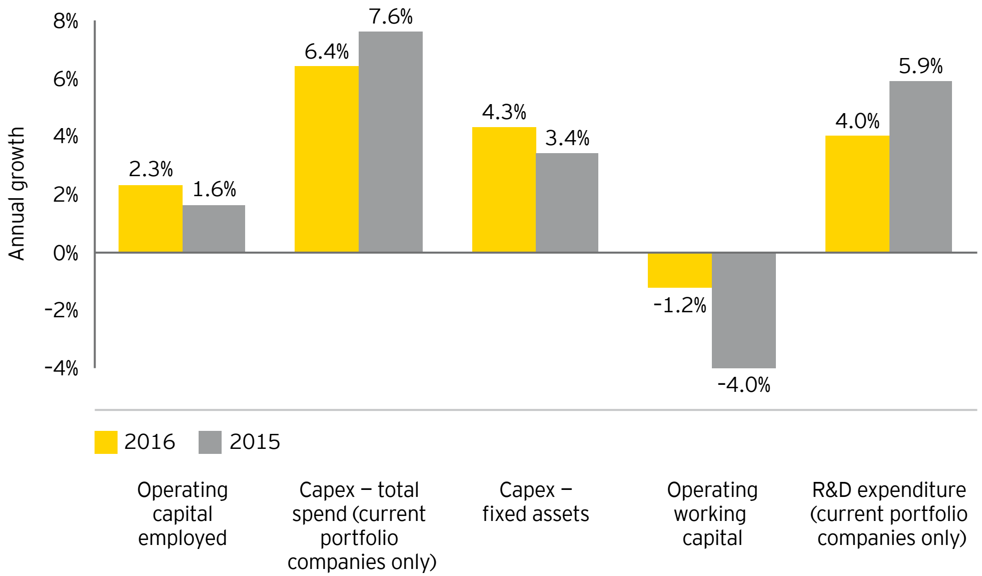
- While the assets of DB pension schemes have grown under the period of private equity ownership, liabilities have grown faster, resulting in an increase in the accounting deficit, i.e., liabilities in excess of assets.
- For the current portfolio companies, this effect is less pronounced where the pensions accounting surplus of 0.7% at the time of acquisition has turned into a deficit of (4.4)% at latest date.
- Of the 24 current portfolio companies offering DB pension schemes, 15 reported deficits:
  - Ten companies reported the estimated time to pay off the deficit, which on average is 7.5 years.
  - Five did not provide detail on the estimated time to pay off the deficit, or reported that this was “under discussion”.

Detailed findings

Do portfolio companies increase or decrease investment?

Investment in operating capital employed at the portfolio companies has grown by 2.3% per annum.

Growth in measures of investment since acquisition



	Operating capital employed	Capex – total spend (current portfolio companies only)	Capex – fixed assets	Operating working capital	R&D expenditure (current portfolio companies only)
N (2016)	102	47	72	104	10
N (2015)	93	48	50	99	12

Note: Methodology for aggregated growth of operating working capital has been updated (differs from our previous years' reports).

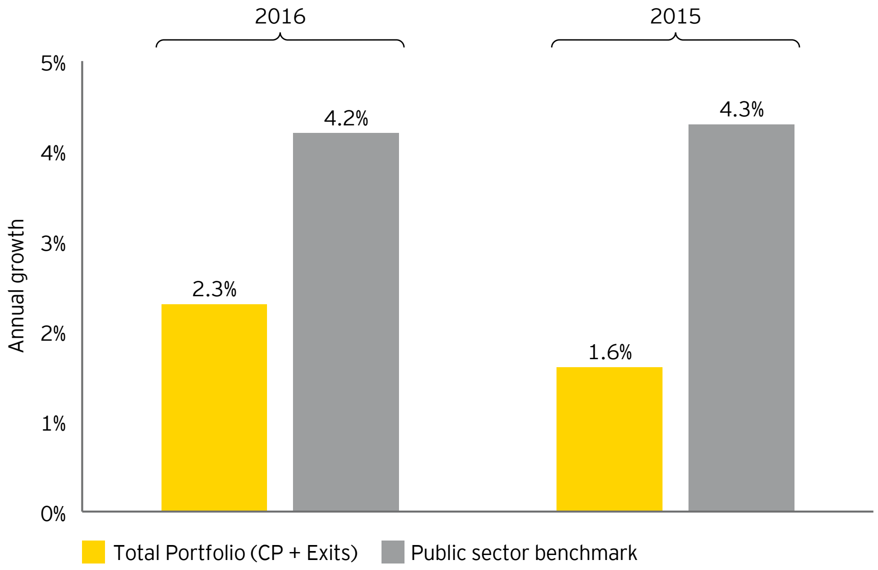
- There has been growth in several measures of investment at the portfolio companies whilst under private equity ownership.
- Operating capital employed has grown at an annual average rate of 2.3%. This measure comprises tangible fixed assets (property, plant and equipment) and operating working capital (stock, trade debtors and creditors). Total capital expenditure has grown by 6.4%. This includes investment in brands, intellectual property and other intangible assets, some of which relates to bolt-on acquisitions. The tangible fixed asset capital expenditure relates to investment in property, plant and equipment, and has grown at 4.3%. Operating working capital has decreased by 1.2% per annum.
- The growth in operating capital employed of 2.3% comprises organic growth (85% of the total) and the net effect of bolt-on acquisitions less partial disposals (15% of the total).
- 10 of the current portfolio companies quantify investments in R&D, and several of those are in the industrials and technology sectors. For this group, total R&D expenditure grew by 4.0% per annum under private equity ownership.
- Compared to the findings in 2015, there is slightly faster growth in operating capital employed, whilst expenditure on R&D has declined. The 2015 result for operating working capital has been re-stated following a revision in methodology.

Detailed findings

Do portfolio companies increase or decrease investment?

The portfolio companies have grown operating capital employed at a slower rate than public company benchmarks, at 2.3% per annum versus 4.2% per annum.

Growth in operating capital employed since acquisition



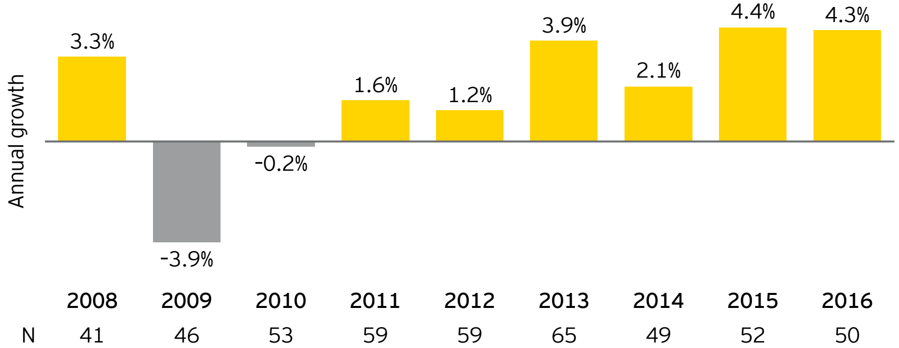
- The portfolio companies, in aggregate, have grown operating capital employed by 2.3% per annum during the entire period of private equity ownership. In comparison, the public company benchmark (time and sector matched) shows higher growth in operating capital employed of 4.2% per annum.
- Given the findings on the prior page, it is likely that the difference in growth in operating capital employed between the portfolio companies and the public company benchmark is explained by greater control of working capital in the portfolio companies, rather than material differences in capital investment.
- The 2016 finding is consistent with the prior year.

Detailed findings

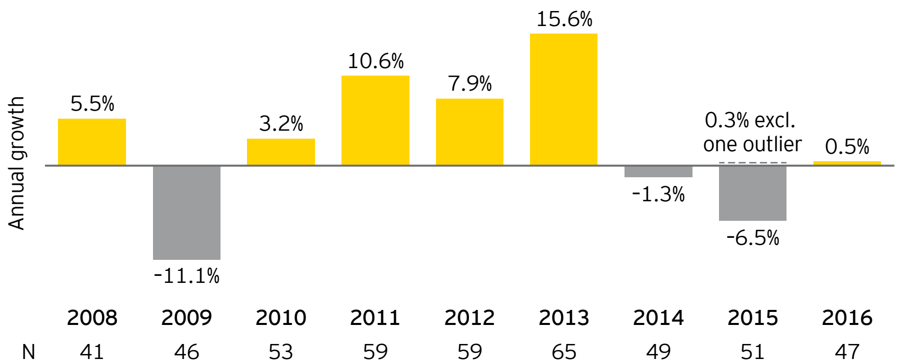
Do portfolio companies increase or decrease investment?

Annual growth in operating capital employed was 4.3% in 2016, similar to the result in 2015. The longer-term pattern has been more variable.

Year-on-year growth in operating capital employed



Year-on-year growth in capital expenditure on tangible assets



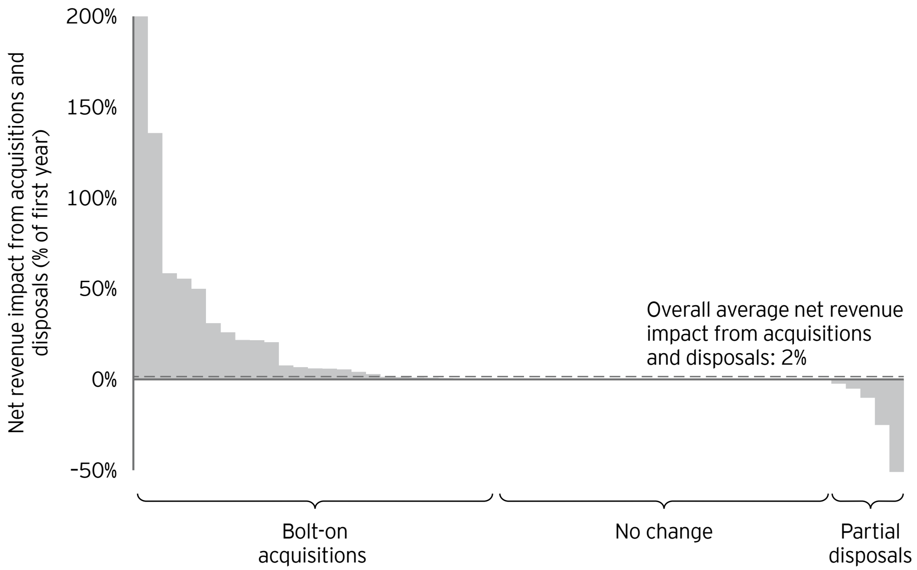
- Year-on-year growth in operating capital employed in 2016 was 4.3%, similar to 2015.
- Over the long time frame of this study, the year-on-year growth in operating capital employed is variable:
  - In 2009–10, when the UK economy was most fragile, the portfolio companies tightened their control of operating capital employed, e.g., by reducing capital expenditure (see below).
  - From 2011, the portfolio companies have steadily increased operating capital employed, in 2011–13 by boosting capital expenditure and in 2014-15 from growth in working capital.
- In 2016, capital expenditure on tangible assets grew by 0.5% compared to 2015; similar findings were reported in 2015 (after adjustment for one outlier).
- Growth in capital expenditure was strong in the years following the downturn, but has been steady or limited over the past three years.

Detailed findings

Do portfolio companies increase or decrease investment?

48% of the current portfolio companies have made net bolt-on acquisitions, whilst 10% have made net partial disposals, showing investment in bolt-on acquisition ahead of partial disposals.

Revenue impact of acquisitions and disposals, current portfolio companies



- In addition to investment in existing businesses, there can be investment in bolt-on acquisitions, as well as release of funds through partial disposals. The chart shows an analysis of the relative significance of bolt-on acquisitions and partial disposals, by measuring the revenue growth or decline relative to the first year, or base figure.
- On a net basis, 25 of the 52 portfolio companies (48%) have grown revenue under private equity ownership by investments in bolt-on acquisitions, whilst five portfolio companies (10%) have reduced revenue by partial disposals. As already commented, the overall result is more investment in bolt-on acquisitions than release of funds from partial disposals. Twenty-three portfolio companies (42%) have had no M&A activity under their current private equity owners.
- There are relatively few portfolio companies where bolt-on acquisitions or partial disposals are material in size relative to the original portfolio company. In the current population, seven portfolio companies have made acquisitions that have increased revenue by more than 25%, and two portfolio companies have disposed of more than 25% of revenue.

Detailed findings

Do portfolio companies increase or decrease investment?

Private equity investors, in aggregate, have used free cashflow and additional third party debt to increase investment in the current portfolio companies versus paying returns to equity investors.

Movements in net debt, from acquisition to latest date (current portfolio companies)

	Net debt (£b)	Net debt/EBITDA
Net debt at acquisition	32.0	6.5
Operating cash flow post tax and interest payments, pre capex	(8.4)	
Net funds to equity investors	3.4	
Capital expenditure (organic plus bolt-on acquisitions net of disposals)	18.0	
Increase/(decrease) in net debt	13.0	
Net debt at latest date	45.0	7.5

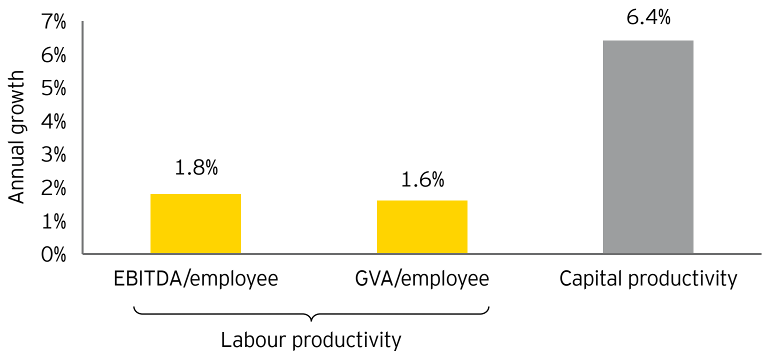
- Analysing the cashflows of the portfolio companies allows scrutiny of the sources and uses of funds during the period of private equity ownership.
- Since acquisition, the current portfolio companies have generated £8.4b of free cashflow, i.e., after most investing, financing and tax payments. These funds could have been returned to investors by paying dividends, or by paying off third party debt. Whilst there have been payments to equity investors totalling £3.4bn, this has been more than offset by an aggregate £18.0bn additional investment.
- To fund this investment in the portfolio companies, third party debt has increased, by a net £13.0bn. As net debt has grown faster than profit (or EBITDA), the leverage ratio of net debt to EBITDA has increased.
- The increase in leverage ratio is largely explained by the group of portfolio companies in utilities and infrastructure sectors, where both financing markets and the requirements of capital expenditure programmes have led to higher leverage increases than in the rest of the portfolio companies. This group saw their leverage ratio rise from 7.0 at acquisition to 10.1 at latest date, whilst the other current portfolio companies had leverage at acquisition of 5.9 down to 5.1 at latest date.

Detailed findings

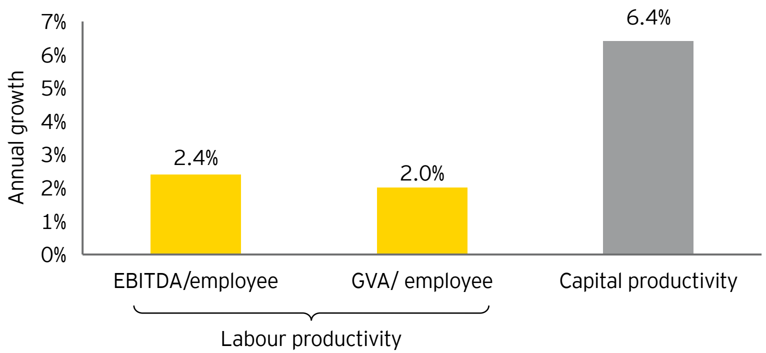
How does productivity change under private equity ownership?

Labour and capital productivity have grown under private equity ownership, by 1.6%–1.8% and 6.4% per annum respectively.

Growth in labour productivity and capital productivity since acquisition (2016)



Growth in labour productivity and capital productivity since acquisition (2015)



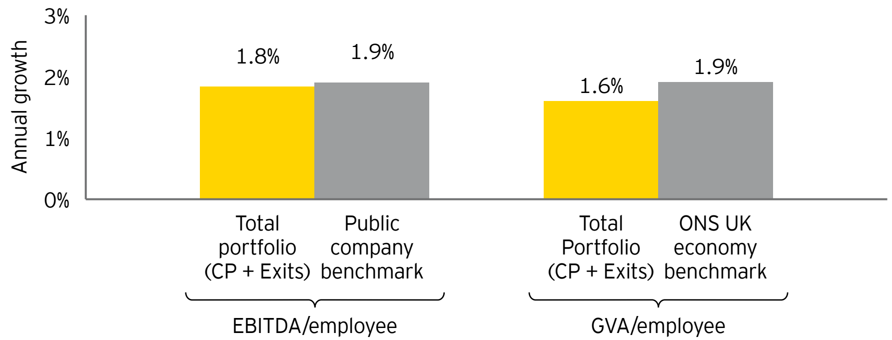
- Economic impact is a function of both changes in productivity and growth in resources.
- To assess the performance of the portfolio companies on labour productivity, two measures have been analysed:
  1. Profit (or EBITDA) per employee, which can be benchmarked to public companies. On this measure, the portfolio companies have grown labour productivity by 1.8% per annum.
  2. Gross Value Added (GVA) per employee, which is preferred by economists and can be benchmarked to the UK private sector. On this measure, the portfolio companies have grown labour productivity by 1.6% per annum.
- Capital productivity is measured as revenue over operating capital employed. The portfolio companies have grown capital productivity by 6.4% per annum.
- Compared to the 2015 findings, labour productivity has declined a little whilst capital productivity is unchanged.

Detailed findings

How does productivity change under private equity ownership?

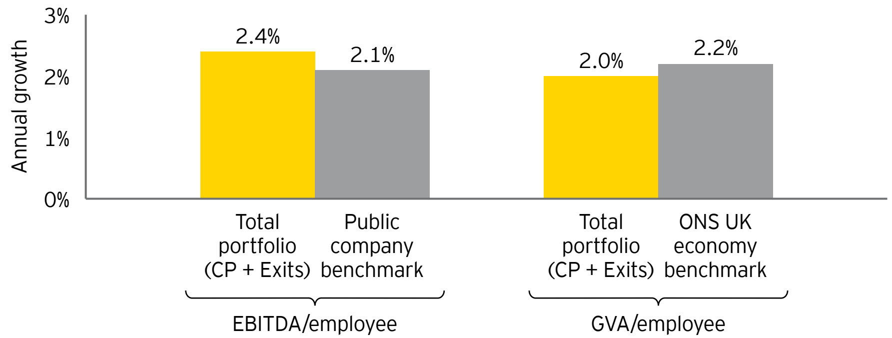
Annual growth in labour productivity in the portfolio companies at between 1.6% and 1.8% is broadly in line with public company and economy-wide benchmarks.

Growth in profit per employee and GVA/employee since acquisition (2016)



- On a profit per head metric, the portfolio companies have seen comparable growth in labour productivity to the public company benchmark.
- GVA per employee has grown at a slightly lower rate than the UK economy.

Growth in profit per employee and GVA/employee since acquisition (2015)



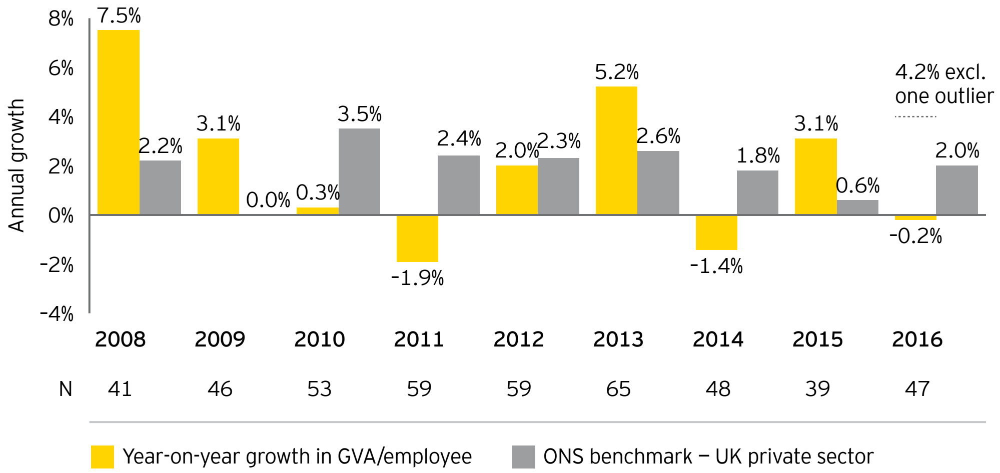
- Last year's results indicated higher levels of growth in profit per employee for both portfolio companies and the public benchmark.
- On the other hand, the long-term growth rate in GVA per employee of portfolio companies remains slightly below the ONS benchmark for the UK economy.

Detailed findings

How does productivity change under private equity ownership?

The year-on-year growth in GVA per employee of portfolio companies declined by 0.2% versus 2015, and was below the UK private sector benchmark that increased to 2% growth.

Year-on-year growth in GVA/employee, portfolio companies vs. private sector benchmark



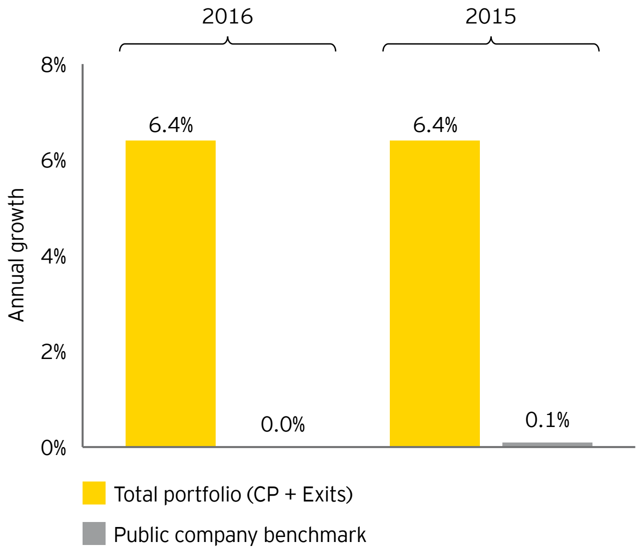
- Labour productivity in portfolio companies reduced in 2016 (–0.2%), below the private sector benchmark performance (2.0%) – although it is noted that one outlier explains all of the decline from the 2015 result, and that excluding this one data point, the average result is 4.2%, ahead of 2015 and the private sector benchmark.
- The 2016 labour productivity reduction of –0.2% was driven by portfolio companies' decline in EBITDA compared to 2015 (–2.4%), although removing one large outlier this turns into faster EBITDA growth and the improvement in productivity as noted above.
- As with other measures in this report, the year-on-year growth in GVA/ employee varies in the portfolio companies, versus a more consistent trend in the UK private sector benchmark.

Detailed findings

How does productivity change under private equity ownership?

Capital productivity growth in the portfolio companies exceeds public company benchmarks, by 6.4% versus 0% growth per annum.

Growth in capital productivity since acquisition



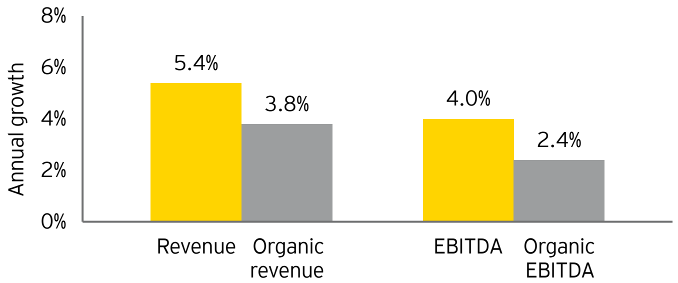
- There is no economy-wide data reported on capital productivity; hence capital productivity growth in the portfolio companies is compared to the public company benchmark. This shows that the portfolio companies have grown capital productivity faster, by 6.4% per annum versus 0.0% per annum.
- Faster capital productivity growth in the portfolio companies versus the public company benchmark implies that the portfolio companies have been more effective at generating revenue growth from existing investments, and/or that the incremental investment in operating capital employed (where public companies have grown faster) has been more effective in generating revenue growth.
- Given that the absolute growth in capital employed is small relative to the initial amount, it seems most likely that the portfolio companies have been more effective in generating revenue growth from existing investments, compared to the public company benchmark. Public companies have grown capital employed faster, and have not diluted capital productivity but neither has it improved.

Detailed findings

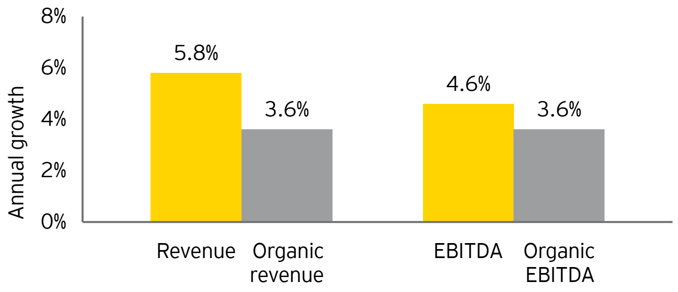
Do private equity owned companies grow?

Since acquisition, the portfolio companies have grown reported revenue at 5.4% per annum and profit at 4.0% per annum; organic revenue and profit growth have grown at 3.8% and 2.4% per annum respectively.

Reported and organic revenue and EBITDA growth since acquisition (2016)



Reported and organic revenue and EBITDA growth since acquisition (2015)



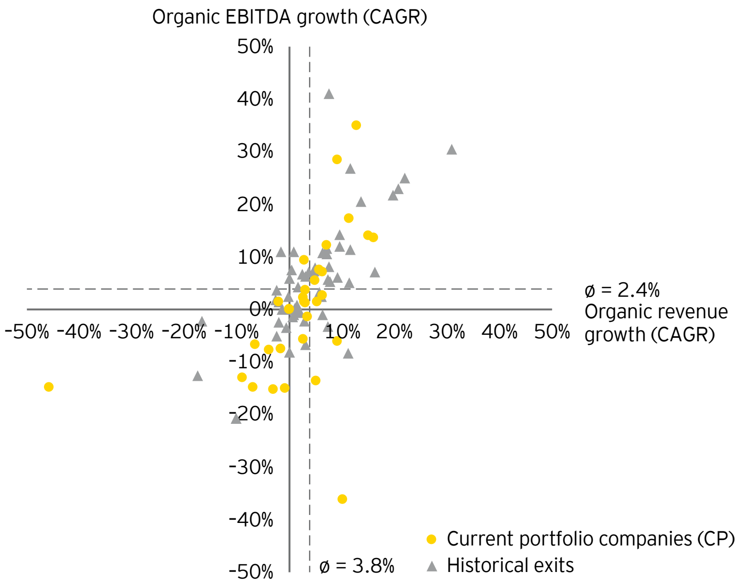
- Reported revenue and profit (EBITDA) growth over the entire period of private ownership to date average 5.4% for revenue and 4.0% for profit.
- 71% of revenue growth and 59% of profit growth come from underlying organic growth, with the rest due to the net effect of bolt-on acquisitions.
- All these figures are slightly lower than the 2015 findings.

Detailed findings

Do private equity owned companies grow?

At the individual portfolio company level there is a wide range of performance in organic revenue and EBITDA growth.

Organic revenue and EBITDA growth by portfolio company since acquisition



Notes: Absolute organic revenue/organic EBITDA growth measured as change in organic revenue/organic EBITDA from time of investment to exit/latest date, divided by organic revenue/organic EBITDA at time of investment.
Axes have been capped (-50%;50%) to ease reading – chart excludes five companies whose organic revenue CAGR or EBITDA CAGR exceed these limits.

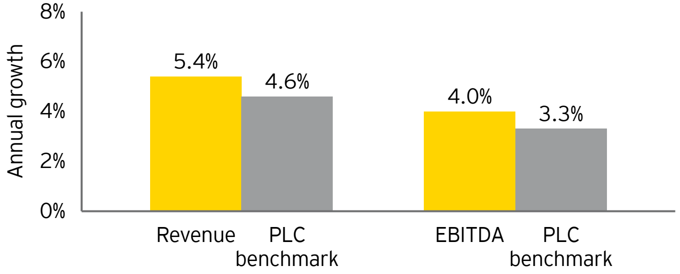
- The chart shows the data points of organic revenue and EBITDA growth for each of the current portfolio companies and historical exits, measured as the CAGR from acquisition to latest date or exit. This shows a wide range of outcomes around the average results, similar to the earlier analysis of organic employment growth by portfolio company.
- Individual company performance is affected by many factors, external and internal to the business. Not all portfolio companies grow under private equity ownership, but some grow very fast. The findings in this report combine all the data to test aggregated results, and to compare them to private and public sector benchmarks.

Detailed findings

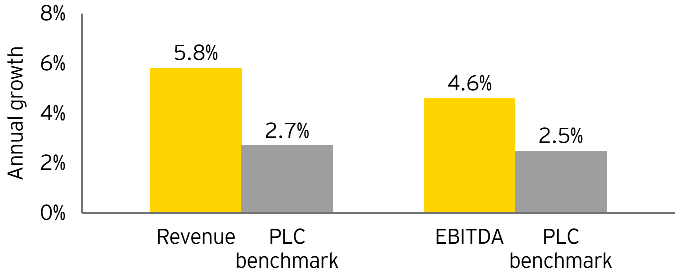
Do private equity owned companies grow?

Revenue and profit growth at the portfolio companies is broadly in line with public company benchmarks, at 5.4% and 4.0% per annum respectively.

Revenue and EBITDA growth since acquisition (2016)



Revenue and EBITDA growth since acquisition (2015)



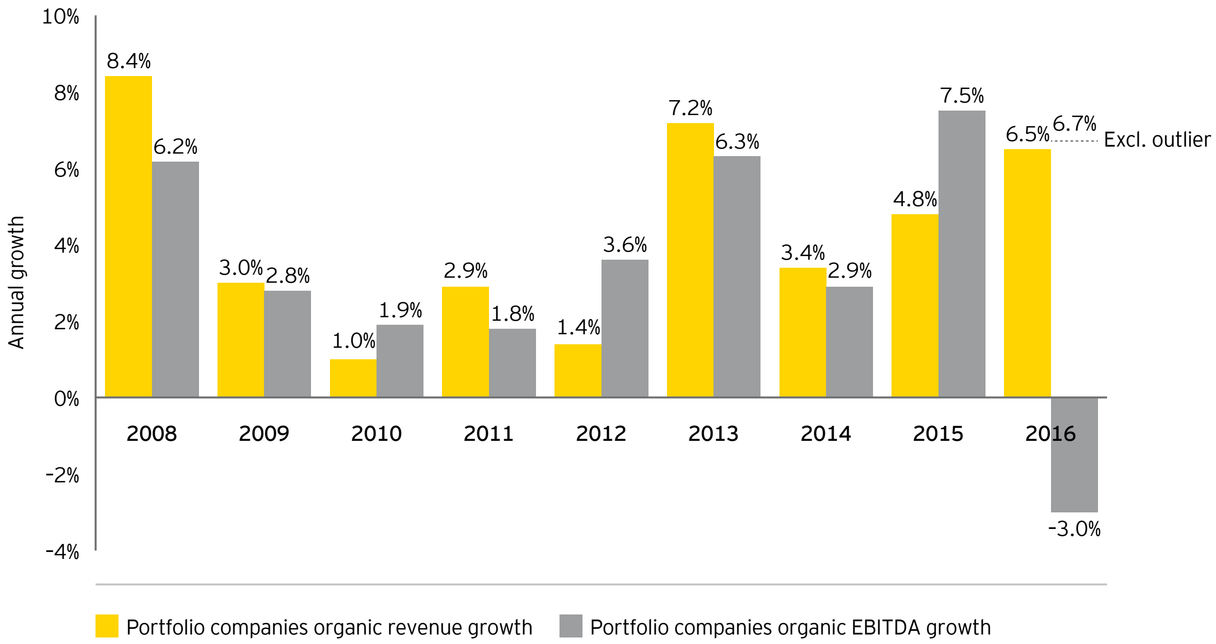
- Reported revenue growth of the portfolio companies averages 5.4% per annum since acquisition, explained by more growth in capital productivity than growth in operating capital employed, including acquisitions. For public companies, the reverse is true.
- In terms of reported EBITDA growth, portfolio companies average 4.0% per annum, slightly ahead of the public company benchmark of 3.3% per annum.
- Compared to the 2015 findings, portfolio company growth rates have slowed by c.1–2 percentage points, whilst the public company benchmark has increased by 1–2 percentage points, closing most of the performance gap in these two measures.

Detailed findings

Do private equity owned companies grow?

The portfolio companies have grown organic revenue and profit in every year of private equity ownership, with 2016 showing some of the strongest performance, at 6.5% and 6.7% respectively.

Year-on-year organic revenue and EBITDA growth



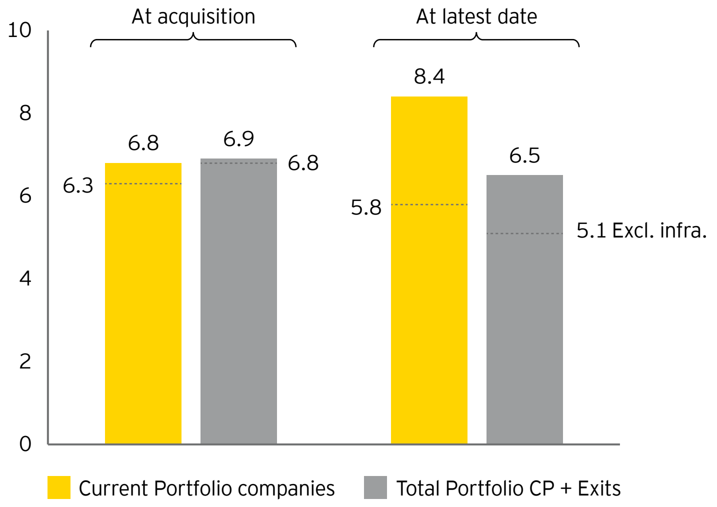
- 2016 was a year of strong organic growth for portfolio companies, with 6.5% revenue and 6.7% profit growth (adjusting for one outlier); the aggregate average shows a year-on-year decline of 3%.
- The year-on-year growth in organic revenue and EBITDA shows a variable pattern, reflecting the broader economy trend, company specific factors and change in portfolio sector mix.

Detailed findings

What are the levels of financial leverage in the portfolio companies?

In aggregate, portfolio companies had an average leverage ratio of 6.9x debt to EBITDA at acquisition, and 6.5x at latest date or exit.

Debt to EBITDA ratio (at acquisition and latest date)



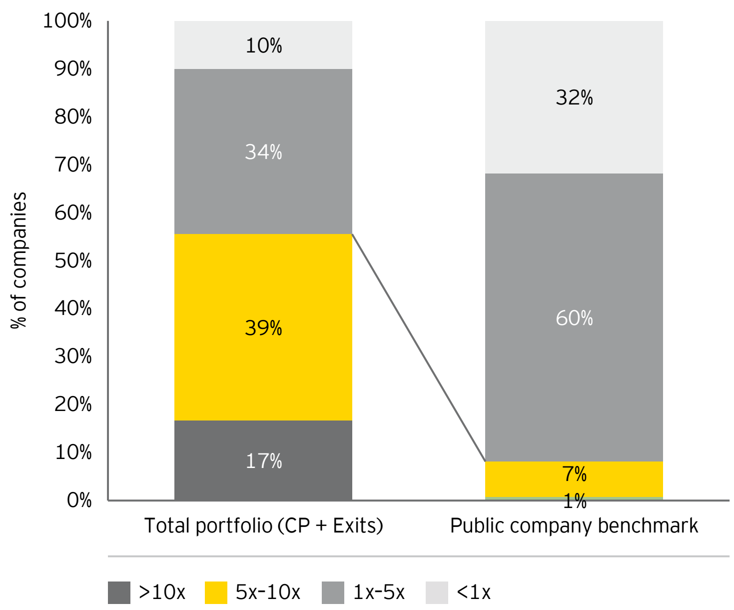
- One measure of financial leverage is the ratio of debt to EBITDA, that is different to the more common measure of net debt to EBITDA by excluding company cash balances.
- Across the total portfolio, the leverage ratio averaged 6.9x at the time of initial investment by the current private equity owners, and 6.5x at latest date or exit.
- The current portfolio companies show a different pattern, with similar leverage at acquisition, but a marked increase in leverage at latest date. There are several portfolio companies that operate in infrastructure markets; this group explains most of the increase, with higher leverage supported by stable, utility-like cashflows. Excluding infrastructure businesses, the portfolio leverage is in the 5–6x range.

Detailed findings

What are the levels of financial leverage in the portfolio companies?

Portfolio companies have much higher levels of financial leverage than public companies: 56% of portfolio companies have a debt to EBITDA ratio above 5x, versus 8% of publicly listed companies.

Comparison of financial leverage (debt to EBITDA ratio)



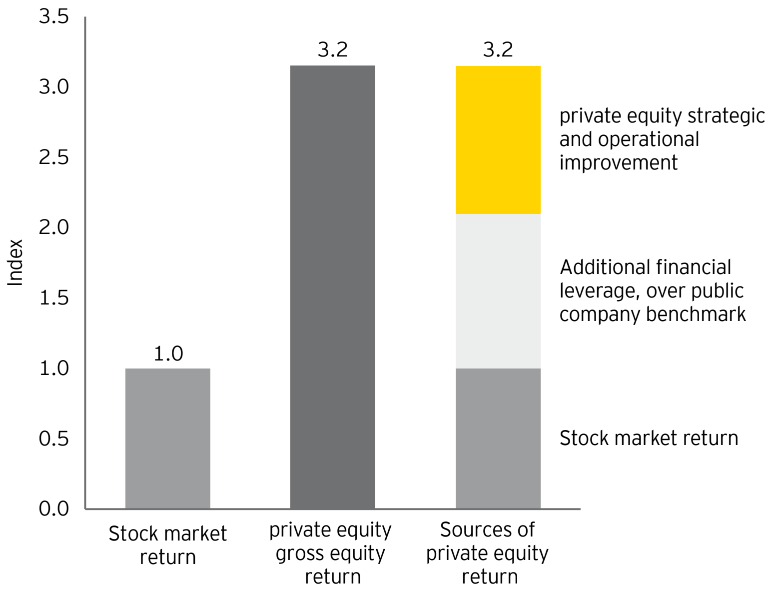
- One distinctive feature of the private equity business model is that it typically uses greater financial leverage than most public companies. More debt and less equity at the time of investment increases the effect of change in enterprise value at exit on equity return, both up and down.
- On the metric of debt to EBITDA, the portfolio companies (PC + Exits) averaged 6.5x, compared to a public company benchmark of 1.5x, showing much higher levels of financial leverage in the portfolio companies. Whilst 56% of portfolio companies have leverage ratios (debt to EBITDA) above 5x, this is true for only 8% of PLCs.
- It is noted that, unlike public companies, increased financial leverage may not be a long-term feature of the portfolio companies, e.g., post the investment period of private equity investors, the financial leverage may change – reflecting the capital structure of their new owners.

Detailed findings

How do private equity investors generate returns from their investments in the portfolio companies?

The equity return from portfolio company exits are 3.2x the public company benchmark; half of the additional return is due to private equity strategic and operational improvement and the other half from additional financial leverage.

Equity returns and sources of return, portfolio company exits 2005-16



1. Weighted average

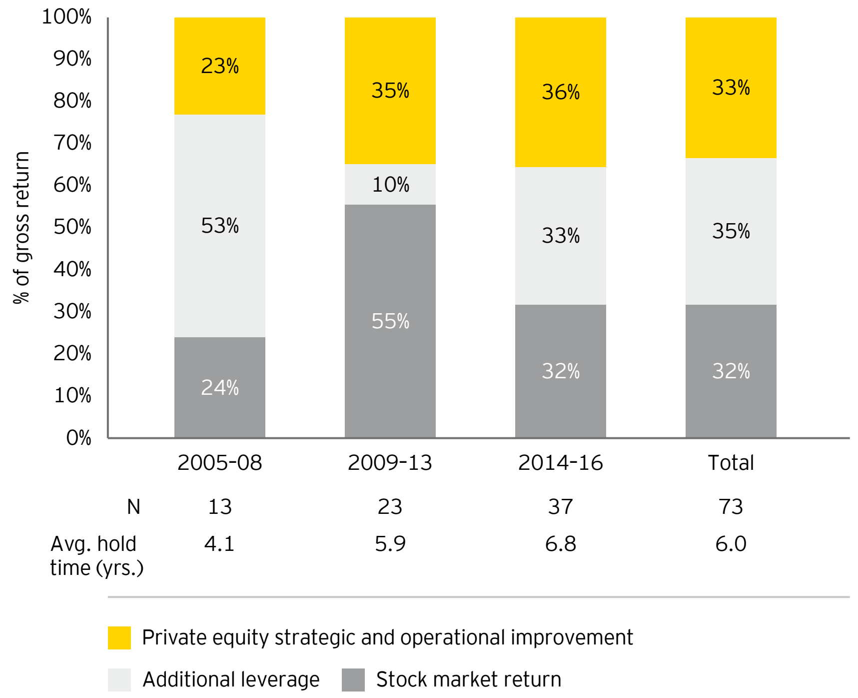
- The portfolio companies owned and exited by their private equity owners achieved an aggregate gross equity investment return significantly in excess of benchmarked public companies, by a factor of 3.2x, i.e., the same equity invested in public companies matched by sector and over the same timeframe as each portfolio company investment.
- For public and private equity, this is a measure of gross return, so before the fees and charges incurred by investors.
- The source of the private equity return over and above public company return comprises the amount attributable to additional financial leverage and private equity strategic and operational improvement. Whilst additional leverage generates a material contribution to the equity return, there is an equal amount of the investment return that relates to the strategic and operational improvement of the portfolio companies during private equity ownership, i.e., over and above that achieved by the public companies in the same sector and timeframe.
- In last year's report, the headline figure of private equity gross equity gain versus stock market return was >4x, versus 3.2x in 2016 findings. This is due to an increase in the attribution of return to the public stock market in the 2016 exits (mostly due to one very long hold investment); the absolute private equity gross equity return is unchanged.

Detailed findings

How do private equity investors generate returns from their investments in the portfolio companies?

Whilst the results vary over time, the components of the gross return from private equity strategic and operational improvement and additional financial leverage are equal to the equivalent public stock market return.

Returns attribution, portfolio company exits 2005-16



1. Weighted average

- Analysing the sources of private equity returns over time, here expressed by year of exit of the portfolio companies, shows some variation but also a consistent element of private equity strategic and operational improvement.
- Within the equity return due to additional leverage, it is noted that a part of this is due to the estimated tax shield benefit, i.e., as interest on third-party debt is tax deductible, the annual cost of additional debt is partially offset by a reduction in corporation tax payable – versus equity financing. Over the timeframe of the private equity investment, this annual improvement in cashflow from lower tax payments accrues to equity holders; in aggregate it is estimated to be a small part of the equity gain from additional leverage.

4

Basis of findings

Basis of findings

Q&A

How is the portfolio company data aggregated?

- The findings in this report are aggregated across all portfolio company data points, to give insights into the systematic effects of private equity ownership on the portfolio companies.

Is the profile of the portfolio companies skewed by sector or size?

- The portfolio companies are skewed towards the consumer services and healthcare sectors, accounting for 77% of employment versus 38% in the UK private sector as a whole. The portfolio companies are smaller than the public companies that make up the public company benchmark used in this report.

How are the benchmarks derived and calculated?

- The benchmarks used in this report are compiled from published information, then matched by sector and timeframe to individual portfolio companies, and aggregated using the same methodology as aggregated portfolio company results.

What is the returns attribution methodology?

- The returns attribution methodology separates out the effects of additional financial leverage and public stock market performance to test for evidence of outperformance by private equity investments in the portfolio companies.

Basis of findings

How is the portfolio company data aggregated?

The findings in this report are aggregated across all portfolio company data points, to give insights into the systematic effects of private equity ownership on the portfolio companies.

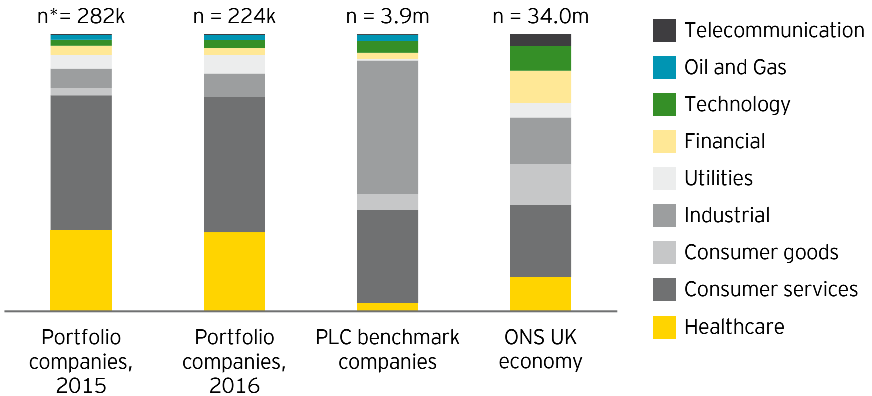
- The most accurate way of assessing the effect of private equity ownership on the portfolio companies is to aggregate all of the data to present a single, overall result. Given the independent control of portfolio company selection criteria by the PERG, the size of the population, and the high degree of compliance, these aggregated findings provide insight into several key questions asked about the effect of private equity ownership on large, UK businesses.
- Aggregating the data across all of the portfolio company data points avoids the bias that originates from selective use of either the best or the worst on any measure – which may be correct individually but is not the right basis of a generalised view on the effect of private equity ownership.
- There are two main average growth measures used in the report:
  - "CP + Exits": this measures the change from acquisition to the latest date, or exit. As a result, it measures performance over the longest time period possible of private equity ownership, and includes the largest number of data points.
  - "Year-on-year": this measures the change in the current year from the prior year, for current portfolio companies.
  - It should be noted that for the "CP + Exits" measure, there is a calculation of average growth rates over different time periods across the portfolio companies which creates some inherent inaccuracy. To avoid any significant distortion, the calculated average growth rate is tested against the simple check of percentage total change in factor/average length of holding period.
- Many growth measures including revenue, profit, organic employment, capital expenditure and cash flow, require full year comparison to full prior year to avoid the error inherent in annualising partial year figures. This means that there is a delay from the time of acquisition by private equity investors to when these year-on-year results can be incorporated in the analysis.
- In all findings, the figures presented include all the data points from the portfolio companies, except in specific situations where it is not possible to include individual companies, e.g., where the figures are not provided in the data template, or where there is a negative starting figure on growth rates, and these are noted on the charts.
- In some measures in some years, the calculated average is affected by the performance of one or two portfolio companies. In a few instances, this is deemed to distort the overall result, in which case the actual result is presented unchanged, and a separate bar or line added to show the result if the outlier(s) is excluded.
- Average growth rates, a frequent performance measure in this report, are weighted averages in order to best measure economic impact, e.g., employment growth rates are weighted on the number of employees at acquisition. If numerical averages are used, this is noted.

Basis of findings

Is the profile of the portfolio companies skewed by sector or size?

The portfolio companies are skewed towards the consumer services and healthcare sectors, accounting for 77% of employment versus 38% in the UK private sector as a whole. The portfolio companies are smaller than the public companies that make up the public company benchmark used in this report.

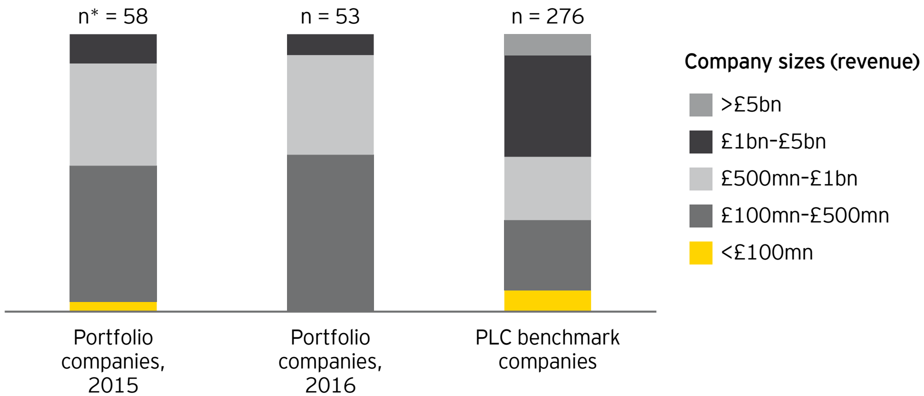
Industry sector mix by employment: portfolio companies, PLC benchmark companies and UK economy



- The portfolio companies are active across a wide range of industry sectors, the mix of which has changed as the composition of the portfolio companies has evolved.
- Of the current portfolio companies, 77% of employment is in the consumer services and healthcare sectors, compared to 38% in the UK economy. Conversely, portfolio company employment in the industrials sector is 8% of the total, compared to 17% for the UK economy as a whole.

Note: Sector distribution for 2015 portfolio companies has been restated based on updated sector classification.
n = number of jobs

Company size mix by number of companies: portfolio companies and PLC benchmark companies



- The PLC benchmark group has been selected on size, set at the largest and smallest deal sizes in the entire portfolio company group (CP + exits) from all companies listed on the London market.
- Within this range, the population of portfolio companies is smaller in terms of revenue size, with a large share of companies below £500mn in annual revenues, and relatively few above £1bn.

Note: n*count for portfolio companies includes exits where performance figures for year of exit have been provided.
n = number of companies

Basis of findings

How are the benchmarks derived and calculated?

The benchmarks used in this report are compiled from published information, then matched by sector and timeframe to individual portfolio companies, and aggregated using the same methodology as aggregated portfolio company results.

Sector	Current portfolio companies	PLCs in sector benchmark
Consumer services	18	67
Health care	5	17
Utilities	6	7
Consumer goods	1	23
Industrial	5	91
Technology	3	34
Financial	5	21
Oil and Gas	1	13
Telecommunications	0	3
Total	44	276

Public company benchmark

- There are no readily available benchmarks on company performance to compare to the portfolio companies. Public company benchmarks are prepared as follows:
  - All 637 primary listed companies on the London Stock Exchange (LSE) at 31 December 2016 are taken as a starting point.
  - The following are excluded on the basis of no sector overlap: 301 in Basic Materials and Equity Investment Trusts, OEICs and other financial or non-comparable sector entities (e.g., Real Estate Investment and Services, Real Estate Investment Trusts, Banks, Equity and Non-Equity Investment Instruments), 32 companies with market capitalisation <£210mn, the size threshold for take-privates in the PERG criteria, 28 companies with market capitalisation >£11bn (the market capitalisation of the largest portfolio company over the period of this study).
  - This results in 276 public companies in the benchmark group, with a sector composition as shown in the table.
- Public company data is sourced from Capital IQ and aggregated at the sector level to produce sector benchmarks for each measure over time. Sector benchmarks are matched to individual portfolio companies, by sector and also over the same timeframe. The overall public company benchmark result is then aggregated in the same way as for the portfolio companies, e.g., using the same weighting factors.

UK private sector benchmark

- For the UK private sector benchmarks, data is sourced from ONS reports. Time periods are matched for each portfolio company, and then the result is aggregated – again in the same way as for the portfolio companies, e.g., using the same weighting factors.

Basis of findings

What is the returns attribution methodology?

The returns attribution methodology separates out the effects of additional financial leverage and public stock market performance to test for evidence of outperformance by private equity investments in the portfolio companies.

- One of the most common measures of investment return used by private equity investors is equity multiple, i.e., equity realised divided by equity invested, before all fund level fees and charges. This data, not typically disclosed, is provided in the portfolio company data templates.
- To analyse the sources of any investment return, the 'returns attribution' calculation analyses the gross equity multiple and attributes any equity gain (or loss) into three components:
  - Additional leverage: the effect on equity multiple of the additional financial leverage private equity firms place on a company above the average public company sector levels. To calculate this effect, the capital structure of each investment is adjusted to match the average financial leverage levels of public company sector benchmarks; typically this reduces the amount of debt, and increases the amount of equity, and therefore reduces the equity return. The adjusted capital structure also takes into account interest savings over the holding period as well as the changes in net debt that took place during ownership; any leveraged dividends received by equity investors are moved to the date of exit, and the exit capital structure adjusted for dividends. The difference between original investment equity multiple and the adjusted equity multiple is the effect of additional leverage.
  - Public stock market returns: the effect on the equity multiple of underlying gain in the sector, that an investor could have achieved by investing in public stock markets. This effect is calculated by determining the Total Shareholder Return (TSR) earned in the public company benchmark sector over the same timeframe as the private equity investment. Both measures of equity return capture sector earnings growth, valuation multiple changes and dividend payments. The public stock market return TSR is converted into an equivalent equity multiple figure and then compared to the investment return after the adjustment for additional leverage, i.e., when both public and private equity have the same capital structure.
  - Private equity strategic and operational improvement: this is the component of the equity multiple that is not explained by additional leverage, or public stock market returns, so it captures all the incremental effects of private equity ownership versus public company benchmark performance, i.e., in earnings growth, valuation multiple change, and dividends. The component of the equity multiple for private equity strategic and operational improvement is calculated by subtracting the market return from the equity multiple adjusted for additional leverage.
- Consistent with other analyses in this report, the benchmarks and calculations are applied at the individual portfolio company level, and then aggregated to produce the overall findings presented in this report.
- It should be noted that there is no standard methodology for the returns attribution calculation. The methodology in this report has been discussed with the PERG, and the Global Capital Committee of the BVCA, and their comments incorporated.

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