Annual report on the performance of portfolio companies, XIII

13th edition

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EY
Building a better working world

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Foreword

This is the 13th annual report on the performance of portfolio companies, a group of large, private equity (PE) owned UK businesses that met defined criteria at the time of acquisition. Its publication is one of the steps adopted by the PE industry following the publication of guidelines by Sir David Walker to improve transparency and disclosure, under the oversight of the PE Reporting Group (PERG).

This report addresses many questions that various stakeholders may have on the impact of PE ownership on large UK businesses, by presenting facts and benchmarks to provide answers. The report is designed to be read stand-alone, summarising the accumulated data over the past 13 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 61 portfolio companies as at the 2019 financial reporting year (2018: 55), as well as a further 102 portfolio companies that have been owned and exited since 2005. The findings are based on aggregated information provided on the portfolio companies by the PE firms that own them — covering the entire period of PE ownership. This year, data was received covering 53 portfolio companies, a compliance rate of 87% and a decrease from last year's figure of 89%. On many measures of performance, the data on the current portfolio is combined with data from portfolio companies exited in 2019 and earlier, which provides over 100 data points, typically measuring performance over several years and a compliance rate of 91%.

With a large number of portfolio companies, a high rate of compliance, and thirteen years of information, this report provides comprehensive and detailed information on the effect of PE 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 British PE and Venture Capital Association (BVCA) and the PERG. The BVCA has supported EY in its work, particularly by encouraging compliance amongst its members and non-members; the BVCA and the PERG have also provided comments on early drafts to EY. As in prior years, we welcome comments and suggestions on this report by contacting the members listed at the end of this report.

Yours faithfully

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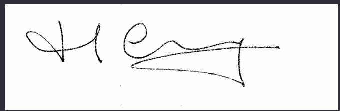
Having outpaced growth in business investment and FDI in the recent past, the value of UK M&A grew more slowly in 2019, possibly reflecting continuing uncertainty over the economic outlook both domestically and internationally. Despite hopes for faster growth in 2020 dashed by the outbreak of the COVID-19 pandemic, M&A proved resilient after an unsurprising slump in the second quarter of the year.

Whilst the results of this annual report for 2019 confirm the trends in PE-owned company performance continued throughout the year, the analysis of 2020 will potentially provide much more insight into the workings of the model and its relative flexibility compared with privately owned businesses. With the economic shock over the last 12 months having impacted sectors in very different ways, we should be able to gain new insights into how ownership impacts performance.

The annual report prepared by EY on the performance of portfolio companies for the BVCA provides an important insight into how PE impacts many aspects of performance at large UK businesses. In aggregate, the portfolio companies under PE ownership have shown positive growth in employment, investment, productivity, revenue, profits and returns to investors, supporting the high financial leverage that is the feature of the PE business model. Compared with relevant public company and UK-wide private sector benchmarks, the performance of the portfolio companies on employment, revenue, profits and productivity growth is in line or ahead of the comparators, indicating some benefits to the PE ownership model. The most striking difference is in capital productivity with the portfolio companies significantly ahead of public companies in driving improvements in this area.

The analysis is based on a wide range of data using an approach developed over several years; hence, we can be confident in the results. Whilst accepting variations in the makeup of portfolio versus public companies means we should always be careful in drawing definitive conclusions. Given the number of companies in the data set, the specific reasons behind movements in metrics cannot be inferred simply based on the data received as there may be other internal and external factors to consider. The results presented in this report provide no evidence of any adverse macroeconomic impact from PE ownership of these large UK businesses.



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Contents

1 Objectives and fact base

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Objectives and fact base

Question	
What period does this report cover? How have any potential impacts from the pandemic been considered?	▶ **All data presented in this report is up until financial year-end in 2019.** ▶ **The data and analysis in this report will, therefore, not include any periods impacted by the COVID-19 crisis.**
What are the objectives of this report?	▶ The objective of this annual report is to present independently prepared information on key stakeholder questions, to inform the broader business, regulatory and public debate on the impact of PE ownership on large UK businesses.
What are the distinctive features of the PE business model?	▶ The distinctive features of the PE business model include controlling ownership of its portfolio company 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 91% of the total population of portfolio companies. This year, compliance for the current portfolio companies was 53 of 61 or 87%.
What are 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 PE ownership of all the portfolio companies, i.e., from initial acquisition to latest date or exit, and b) the latest year and prior-year comparison of the current portfolio companies.
What performance measures are presented in this report, and how do they interrelate?	▶ This report presents a range of performance measures to test the impact of PE ownership on the portfolio companies' resources, productivity, trading, leverage and investor returns.
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 PE firms as required.

What are the objectives of this report?

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

- This study by EY reports on the performance of the large UK businesses (the portfolio companies) owned by PE investors that meet the criteria determined by the PERG. It forms part of the actions implemented by the PE 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 PE 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 affected by PE ownership, e.g., pay and pension benefits?
  - Do portfolio companies increase or decrease investment in capital expenditure, R&D and bolt-on acquisitions or partial disposals?
  - What are the levels of financial leverage in the portfolio companies, and how do they change over time?
  - How do labour and capital productivity change under PE ownership?
  - Do companies grow during PE ownership?
  - How do PE 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 PE ownership, by evidencing if and how its distinctive features (including investment selection, governance, incentives and financial leverage) affect the performance of large UK businesses.
- This is the 13th report covering performance data up to a latest date of June 2020 (2019 financial year-end). It is written to be read as a stand-alone report with comparisons to prior years' findings included for reference.

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What are the distinctive features of the PE business model?

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

Limited partners (LPs)
- Commit to invest equity in fund as advised by GP, i.e., investors
- Pension funds, insurance companies, government and sovereign wealth funds, family offices and the GP itself

Equity

PE fund
Vehicle for portfolio company investments made, and later realised; all equity

Equity | Equity

Portfolio company | Portfolio company

Debt | Debt

Banks, lending against security of individual portfolio company

Note: some PE-like investors (as defined by PERG) have a different business model

General partner (GP)
- Raises funds from LPs
- Makes all investment and divestment decisions for the fund
- Earns management fees and is entitled to a performance-related share of realised profits
- Typically controls board of portfolio companies

Distinctive features of the PE business model
- Ownership of portfolio companies:
  - The PE 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 and 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 PE 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 PE fund of c.10 years.
  - Typically, equity capital is invested for the first five years and realised in the second five years.
  - Typical investment horizon of three to seven years per portfolio company investment (average in this study is six years).
  - There are restrictions on withdrawing commitments from the fund, thereby allowing a long-term investment period. This is in contrast with 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.

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 PE firms in a public-to-private transaction where the market capitalisation together with the premium for acquisition of control was in excess of £210mn, 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 PE firms in a secondary or other non-market transaction where enterprise value at the time of the transaction was in excess of £350mn, and either more than 50% of revenues were generated in the UK, or UK employees totalled in excess of 1,000 full-time equivalents'
  - And where PE 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 PE-like in terms of their remit and operations.
- The companies and their investors that met 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.

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What are the criteria used to identify portfolio companies, and how are they applied? (cont'd)

Movements in the number of portfolio companies

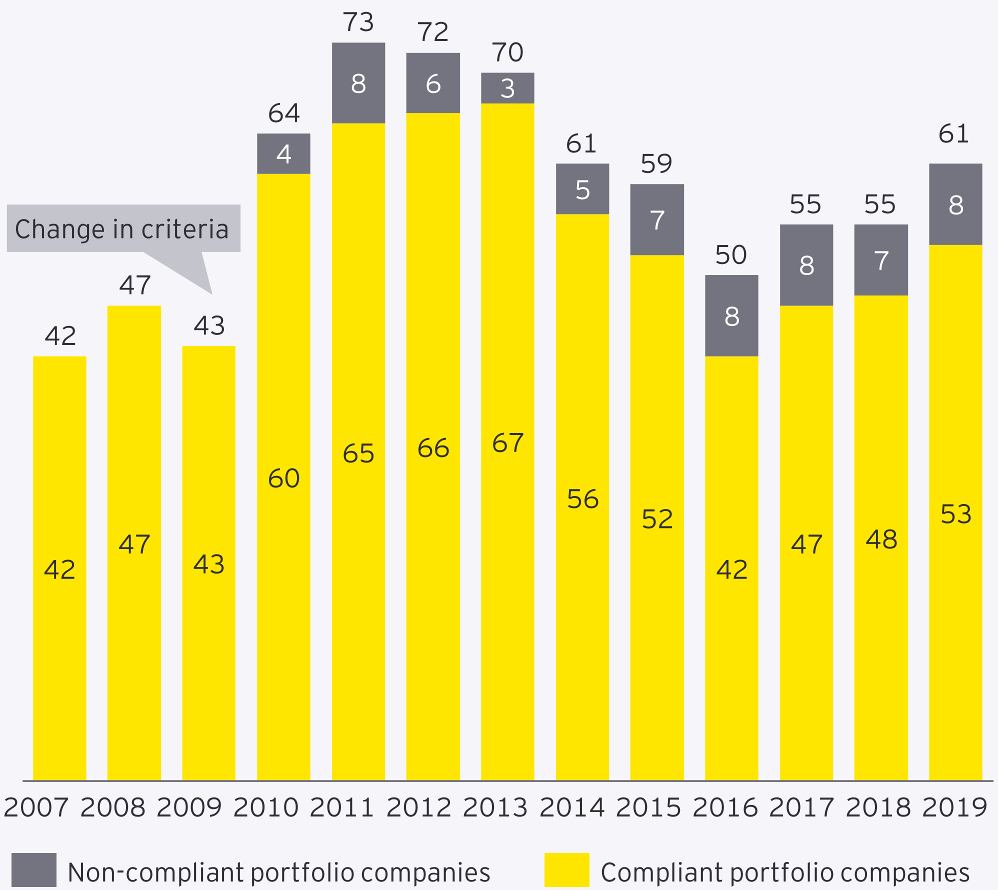
	Exits 2005 -06	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
At 1 January		37	42	47	43	64	73	72	70	61	59	50	55	55	
Portfolio companies introduced/excluded with changes in PERG criteria		-	-	-	12	4	-	(2)	-	-	(2)	-	(1)	-	11
Acquisitions of portfolio companies		10	5	-	11	8	7	10	7	11	5	13	10	10	107
Exits of portfolio companies	(9)	(5)	-	(3)	(2)	(3)	(8)	(10)	(16)	(13)	(12)	(8)	(9)	(4)	(102)
Portfolio companies at 31 December		42	47	43	64	73	72	70	61	59	50	55	55	61	
Exits and re-entrants		1	-	-	1	1	3	5	-	1	3	3	1	-	19
Number of exits by IPO		-	-	-	-	-	1	3	8	5	2	-	-	1	20

- 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 'PE-like' investor entity that owned two portfolio companies had restructured in such a way that it was no longer "PE-like". In 2013, the PERG decided that one portfolio company that had made significant disposals and was as a result well below the size criterion, would be excluded from the population; a similar decision was taken for one portfolio company in 2016. In 2017, one portfolio company was removed as it no longer had a UK-based ownership structure. In 2018, one portfolio company was removed due to restructuring, which diluted ownership below the threshold requirements for the population.
- In 2017, the PERG undertook a consultation process to establish which portfolio companies are 'infrastructure'-like and, therefore, should be excluded from the list of portfolio companies. This resulted in Thames Water being excluded from the 2017 report onwards, Associated British Ports from the 2016 report onwards and Annington Homes from the 2013 report onwards.
- The effect of PE 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 PE fund no longer has control, or, in the case of IPO onto a public stock market, the date of the first trade.

How representative is the data set used in this report?

The aggregated data in this report covers 91% of the total population of portfolio companies. This year, compliance for the current portfolio companies was 53 of 61 or 87%.

Number of portfolio companies on 31 December, and compliance



- PE 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 were accepted or rejected depending on their completeness. In certain analyses in this report, specific data from some PC's has been excluded from our analysis (discussed further in the Key Considerations on the following pages).
- Compliance by portfolio companies has been above 90% in all bar six years, 2011, 2015, 2016, 2017, 2018 and 2019 at 89%, 88%, 85%, 85%, 89% and 87% respectively. In many measures of performance, data covers both current portfolio companies as well as those owned and exited.
- Of this group of 102 former portfolio companies, 14 relate to exits in the period 2005-07 that were not required to submit the full data template. Compliance of the remaining exited portfolio companies is 84 out of 88 or 95%. Therefore on this measure of the current portfolio and exits (CP+exits), the total population is 144, and there is data reported on 135, a compliance rate of 94%.
- For returns attribution, which is only measured on exits, compliance is 92 out of 102 or 90%; all the exits in 2019 provided data.

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How robust is the data set used in this report?

Portfolio companies (as at 31 December 2019)

Portfolio company	GP(s)
Advanced Computer Systems	BC Partners, Vista Equity Partners
Alexander Mann Solutions	OMERS Private Equity
Ambassador Theatre Group	Providence Equity, (Exponent Private Equity)
BCA Marketplace[1]	TDR Capital
Calisen Plc (Calvin Capital)[2]	**KKR**
Camelot	**Ontario Teachers' Pension Plan**
Care UK	Bridgepoint Capital
Chime Communications	Providence Equity, (WPP)
CityFibre	Goldman Sachs
Civica	Partners Group
Clarion Events	Blackstone
David Lloyd Leisure	TDR Capital
Domestic and General	CVC Capital Partners (Abu Dhabi Investment Authority)
Edinburgh Airport	Global Infrastructure Partners
Energia Group (Viridian Group)	I Squared Capital
ESP Utilities	3i Infrastructure plc
esure group	Bain Capital
Farnborough Airport[1]	Macquarie Infrastructure and Real Assets (Europe) Limited
Fat Face	Bridgepoint Capital
Froneri	PAI Partners, (Nestlé)
HC-One	Safanad, Formation Capital (Cavendish Court)
Hyperoptic[1]	KKR
Infinis	3i Infrastructure plc
IRIS Software Group	ICG, Hg Capital
JLA	Cinven
KCOM[1]	Macquarie Infrastructure and Real Assets (Europe) Limited
Keepmoat	TDR Capital, (Sun Capital)
LGC	KKR (Cinven and Astorg as of November 2019)
Loch Lomond[1]	**Hillhouse Capital**
London City Airport[2]	**OMERS Infrastructure, Ontario Teachers' Pension Plan (Alberta Investment Management Corporation, Wren House Infrastructure Management)**

Portfolio company	GP(s)
M Group Services	PAI Partners
Merlin Entertainments[1]	Blackstone
Miller Homes	Bridgepoint Capital
Moto-way	CVC Capital Partners, (USS)
Motor Fuel Group	Clayton, Dubilier & Rice
MyDentist	The Carlyle Group, (Palamon Capital Partners)
NewDay	CVC Capital Partners, Cinven
PA Consulting Group	The Carlyle Group
Parkdean Resorts	Onex
Pizza Express[2]	**Hony Capital**
Premium Credit	Cinven
Punch Taverns	**Patron Capital**
Pure Gym	**Leonard Green & Partners**
QA Training	CVC Capital Partners
RAC	CVC Capital Partners (GIC)
Rubix	Advent International
Shawbrook Bank	BC Partners (Pollen Street Capital)
Stonegate Pub Company	TDR Capital
Study Group International[1]	**Ardian**
Sykes Holiday Cottages[1]	Vitruvian Partners
The Kantar Group Limited[1]	Bain Capital
Travelodge	Goldman Sachs (GoldenTree Asset Management, Avenue Capital Group)
VetPartners	BC Partners
Village Hotels	KSL Capital Partners
Voyage Care	Partners Group, (Duke Street, Tikehau Capital)
Vue Cinemas	OMERS Private Equity (Alberta Investment Management Corporation)
Westbury Street Holdings Limited[1]	Clayton, Dubilier & Rice
Williams Lea Group	Advent International
Zellis (NGA Human Resources)	Bain Capital
Zenith	Bridgepoint Capital
ZPG	Silver Lake Capital

Portfolio companies in **bold** text are those GPs and portfolio companies that have not complied with reporting requirements for the study for 2019 financial years

Notes: * indicates where the GP has provided an explanation for non-compliance
[1] Company is new to population
[2] Company has complied previously

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How robust is the data set used in this report? (cont'd)

Exits of portfolio companies during 2019

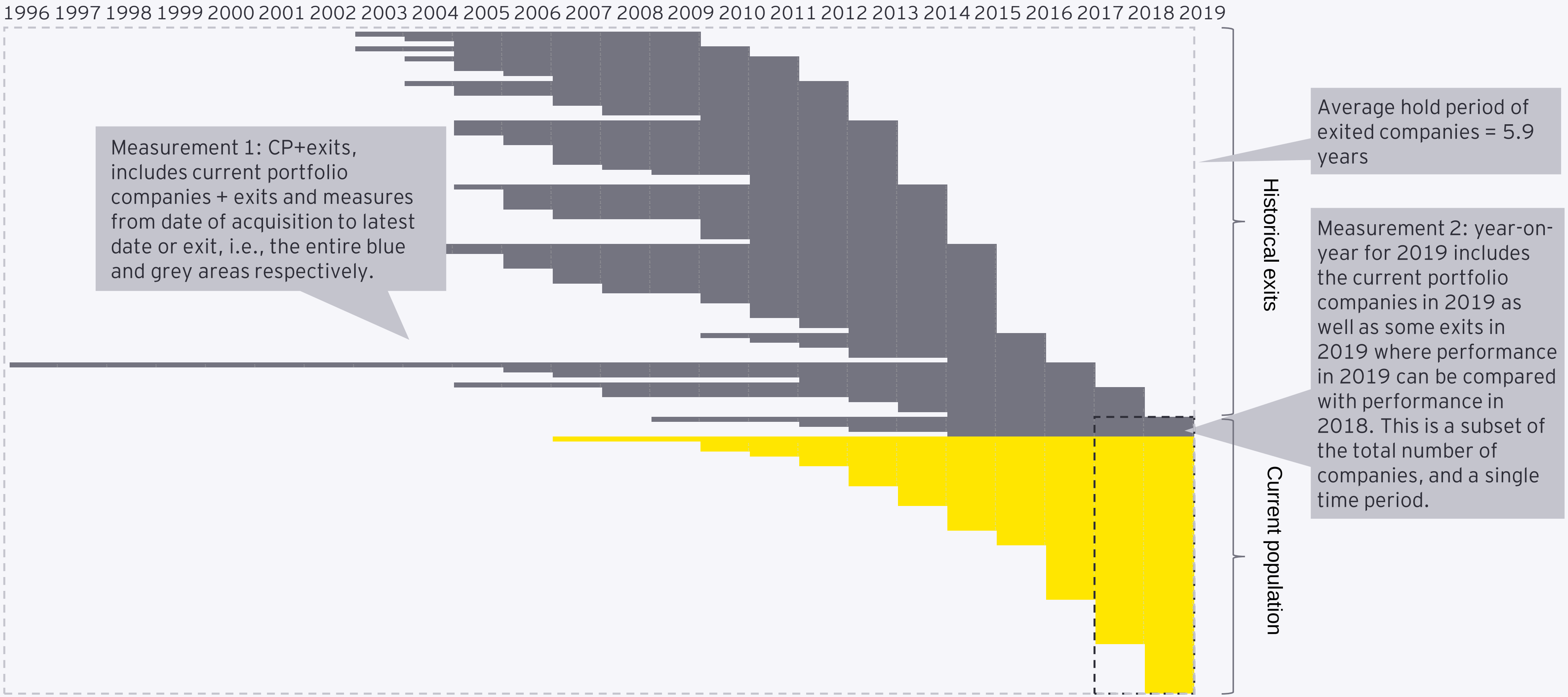
Portfolio company	GP(s)
Four Seasons Health Care	Terra Firma
Gatwick Airport	Global Infrastructure Partners, (Abu Dhabi Investment Authority, CalPERS, National Pension Scheme of South Korea, Future Fund)
Trainline	KKR
TES Global	TPG Capital

What are 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 PE ownership of all the portfolio companies, i.e., from initial acquisition to latest date or exit, and b) the latest year-on-the-prior-year comparison of the current portfolio companies.

Period of ownership of portfolio companies by PE investors

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



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What performance measures are presented in this report, and how do they interrelate?

This report presents a range of performance measures to test the impact of PE ownership on the portfolio companies' resources, productivity, trading, leverage and investor returns.

Overview of performance measures in this report

Change in resources		Plus change in productivity	Leads to changes in trading outcomes	Plus change in financial leverage	Leads to equity returns to investors (at exit)
Labour	Capital				
Employment ▶ Reported ▶ Organic (excluding M&A) Employment cost ▶ Average employment cost-per-head ▶ Pension provision	Operating capital employed ▶ Tangible fixed assets ▶ Operating working capital ▶ Capital expenditure ▶ R&D M&A investment Dividends (as alternative use of cash to investment)	Labour productivity Capital productivity	Revenue ▶ Reported ▶ Organic (excluding M&A) Profit, defined as earnings before interest, tax, depreciation and amortisation (EBITDA) ▶ Reported ▶ Organic (excluding M&A)	Net debt	Returns attribution

Refer to the *Basis of findings* for further details on how the performance measures are calculated.

Notes:
Where the sample size permits, measures are reported by sector grouping as well as in aggregate.
Many measures are compared with benchmarks of the UK private sector economy and public companies. See section 4 for further details of methodology.

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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 PE firms in July 2020 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 PE ownership, as well as data required to complete the returns attribution analysis. Whilst it is the responsibility of the PE firm to ensure compliance, in many cases, the portfolio company submit the information directly.
- The portfolio companies have annual accounts that have been independently audited (though we note a small number of companies provided data not yet signed off by auditors, e.g., due to delay in the audit process caused by the restrictions of the COVID-19 pandemic). Completion of the data template drew on information available in company accounts and further information that was prepared from portfolio company and PE firm sources. This data enabled analysis, among other things, of the impact of acquisitions and disposals, and movements in pension liabilities and assets. The data template incorporates several 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 PE 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 October 2020.
- The data is not adjusted for any periodic changes in accounting policies. Thus, there may be year-on-year differences caused by changes in accounting policies.

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Clarifications on the data used

Impact of changes in accounting, e.g., the introduction of IFRS 16 on portfolio company reporting

As in previous years, the analysis does not seek to align accounting policies (for either the private or public data). In the current year, some entities are expected to have implemented IFRS16 (moving lease costs below EBITDA, and recognising a right-of-use asset and liability on the balance sheet). Whilst it is not possible to isolate any particular impact, there could be an element of accounting impact on the presented growth in EBITDA in our analysis presented in this report that is not reflecting the underlying growth of the companies (but rather driven by changes in reporting). Based on the disclosures in a sample of annual reports, the impact of IFRS16 does not appear to have been significant (<2ppt impact on 2019 organic EBITDA growth).

Benchmark data source

Refer to the *Basis of findings* section at the back of this report for further details of benchmark data sources.

Consistency with historical reporting

In this year's report, we made certain changes to the sectors as a result of the new companies entering the population to further breakdown the industries represented in this population and analyse their performance more appropriately against private/public company benchmarks. We have added technology as a sector; wherein there are eight new portfolio companies and 14 companies that were previously classified as consumer (1), industrial (4), infrastructure (1) and other (8) sectors. Refer to the Basis of findings section for further details.

Note that we have not included an analysis of zero-hour contract jobs in this year's report as the analysis used for benchmarking was discontinued by the Office of National Statistics (ONS) in 2018. ONS discontinued the business survey as zero-hour contracts are instead analysed in their labour survey analysis (e.g., measured by the number of people on zero-hour contracts rather than the number of contracts). The portfolio company data presented 8.0% increase in zero-hour contracts in 2019 (6.4% excluding the healthcare sector where zero-hour contracts are more common), which is broadly in line with the previous year (2018: 6.2% and 6.0% excluding healthcare).

The figures presented throughout this report include all the data points provided by the portfolio companies for each analysis. There are instances where it is not possible to include individual companies on specific analysis, (e.g., not provided comparable data in the template or a negative starting figure on growth rates). In order to reflect this, we have presented the n counts in each analysis, where applicable.

For some measures in certain 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/line or comment raised in the accompanying text to show the result if the outlier(s) is excluded. Refer to the Basis of findings section for further details.

Partial compliance

One of the portfolio companies last reported their data in the 2017 report (published in 2018) and was non-compliant in the previous year. This year, the portfolio company has submitted their exit data only (i.e., compliant for exit data), but we do not have their portfolio company template data after 2017. Hence, a like-for-like analysis cannot be performed based on their data, and we have excluded this company from our analysis (i.e., only included the exit data in our analysis).

2 Summary findings

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Summary findings

Question	Key findings
How long does PE invest in the portfolio companies?	▸ The average timeframe of PE investment in the portfolio companies is 5.9 years (2018: 5.8 years), i.e., from initial acquisition to exit. The current portfolio companies have been owned for an average of 3.4 years (2018: 3.8 years).
Do PE-owned companies grow?	▸ Since acquisition, the portfolio companies have increased reported revenue at 7.3% per annum (2018: 7.1%) and EBITDA at 5.3% per annum (2018: 4.4%); organic revenue and EBITDA growth have increased at 4.8% and 4.1% per annum respectively (2018: 5.1% and 3.2%). ▸ The revenue and EBITDA increase in the portfolio companies is slightly faster compared with the public company benchmarks, at a revenue increase of 7.3% versus 4.1% and EBITDA increase at 5.3% versus 3.9% per annum respectively. ▸ The portfolio companies reported higher organic EBITDA increase in 2019 versus prior years.
Do portfolio companies create jobs?	▸ Reported employment under PE ownership has increased by 2.7% per annum (2018: 3.1%). Underlying organic employment growth (removing the effects of bolt-on acquisitions and partial disposals) has increased by 1.5% per annum (2018: 1.5%). ▸ Annual employment growth of the portfolio companies is above the private sector benchmark of 1.5% versus 1.2% growth (organic), and the public company benchmark at 2.7% versus 2.5% growth (reported). ▸ Organic employment growth in the portfolio companies in the last year was in line with the long-term average and above the private sector benchmark (1.9% versus 1.0%). On both measures, employment growth has increased since a decline in 2016. ▸ At the company level, there is a wide range of movements in organic employment (reflecting several factors).

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Summary findings (cont'd)

Question	Key findings
How is employee compensation affected by PE ownership: pay, terms and pension benefits?	▸ Average employment cost-per-head in the portfolio companies has increased by 3.2% per annum under PE ownership (2018: 2.9%). ▸ Average annual employee compensation growth under PE ownership is above the UK private sector benchmark, at 3.2% versus 3.0% (2018: 2.9% versus 2.7%). ▸ Year-on-year growth in average employment cost-per-head was 3.5% in 2019 (2018: 2.8%), broadly in line with the long term trend and the UK private sector benchmark of 3.4% over the same period (2018: 3.5%). ▸ Around 40% of the jobs in the portfolio companies (which will include both part-time and full-time jobs) have annual compensation of less than £12,500. This is impacted by a high proportion of workers in the healthcare and consumer services sector. ▸ There have been few changes in existing company defined benefit pension schemes under PE ownership. The average time to pay off the deficit of the DB schemes in the portfolio is estimated as 6.2 years, a reduction from 6.9 years in the 2018 report.
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 increased by 2.0% per annum (2018: 2.2%). ▸ The portfolio companies have increased operating capital employed at a slightly slower rate than public company benchmarks, at 2.0% per annum versus 2.4% per annum (2018: 2.2% versus 2.4%). ▸ Annual increase in operating capital employed was 3.2% in 2019, slightly below the 4.5% increase in 2018. The increase in operating capital employed is 6.7% when adjusted for one large company with a significant working capital movement (discussed further in the Detailed findings). ▸ Of the current portfolio companies, 46% have made net bolt-on acquisitions whilst 4% have made net partial disposals, showing investment in bolt-on acquisitions ahead of partial disposals (2018: 42% and 11% respectively). ▸ PE investors, in aggregate, have used free cash flow and additional third-party debt to increase investment in the current portfolio companies.

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Summary findings (cont'd)

Question	Key findings
How does labour and capital productivity change under PE ownership?	▸ Labour and capital productivity have increased under PE ownership, by 1.5%-3.3% and 12.2% per annum respectively (2018: 1.4%-2.4% and 11.9%). ▸ Annual increase in labour productivity in the portfolio companies at between 1.5% and 3.3% is broadly in line with public company and economy-wide benchmarks. ▸ Gross value added (GVA) per employee of portfolio companies increased by 4.1% year on year versus 2018, and was ahead of the UK private sector benchmark of 2.9% per annum (2018: 2.1%). ▸ Capital productivity increase in the portfolio companies exceeds public company benchmarks, by 12.2% versus 1.3% growth per annum (2018: 11.9% versus 1.2%).
What are the levels of financial leverage in portfolio companies?*	▸ In aggregate, portfolio companies had an average leverage ratio of 6.7 debt to EBITDA at acquisition, 6.1 at latest date or exit (2018: 6.7 and 6.2 respectively). Excluding infrastructure assets, these leverage ratios were 6.7 at acquisition and 5.6 at latest date or exit. ▸ Portfolio companies have higher levels of financial leverage than public companies: 56% of portfolio companies have a debt-to-EBITDA ratio above 5x (2018: 54%), versus 19% of publicly listed companies (2018: 5%).
How do PE 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 attributed to PE 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 PE strategic and operational improvement have increased in recent years.

* Financial leverage based on audited accounts

In aggregate, the portfolio companies under PE ownership have shown positive growth in employment, investment, productivity, revenue, profits and returns to investors. PE owners have invested more in bolt-on acquisitions than they have realised in partial disposals, which have added to the positive underlying organic trends. Compared with relevant public company and UK-wide private sector benchmarks, the performance of the portfolio companies on employment, investment, compensation and productivity growth is in line or ahead of the benchmarks, indicating some benefits of the PE ownership model. The gross financial returns from the equity investments in the portfolio companies are circa three times greater than the public stock market benchmark – benefitting from both additional financial leverage as well as strategic and operational outperformance.

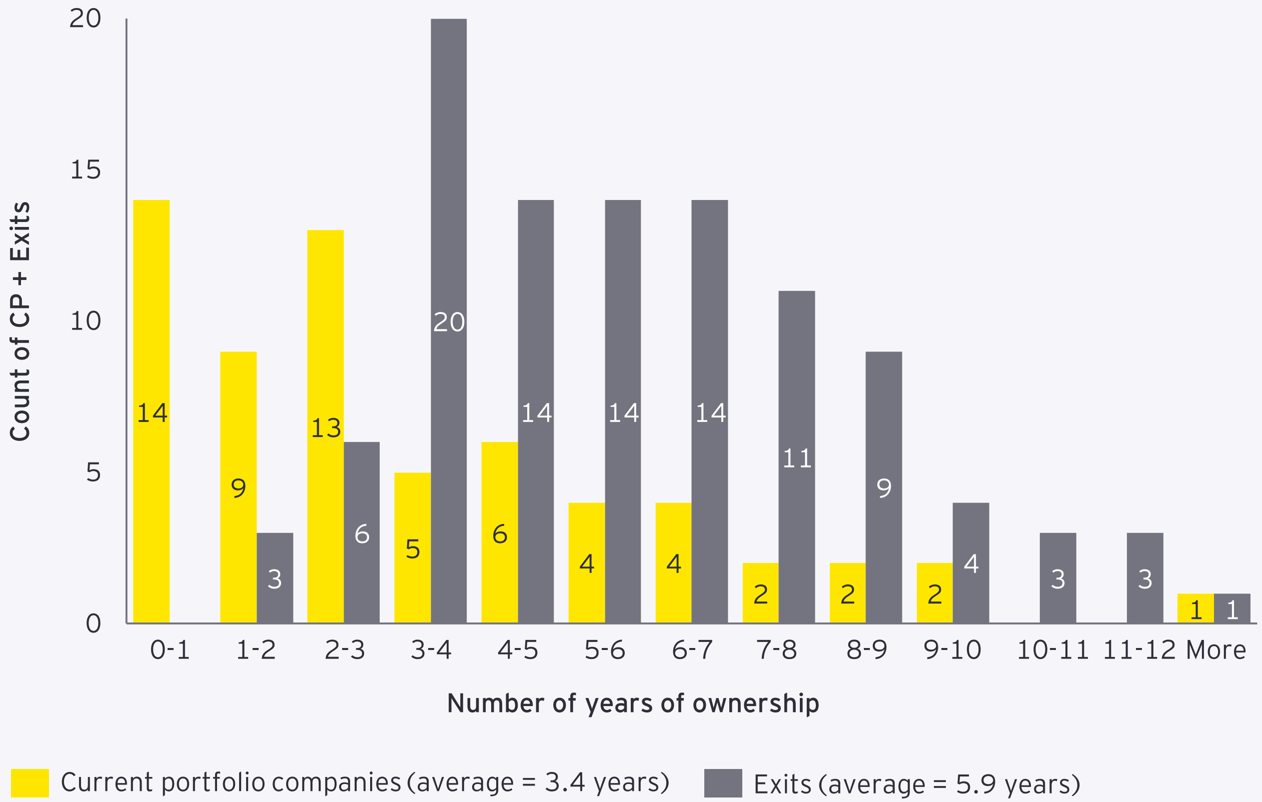
3 Detailed findings

How long does PE invest in the portfolio companies?

The average timeframe of PE investment in the portfolio companies is 5.9 years, i.e., from initial acquisition to exit. The current portfolio companies have been owned for an average of 3.4 years.

Distribution of years of ownership of portfolio companies

Note: the data set for portfolio company exits includes investments realised starting in 2005 versus 2007 for the main data set.

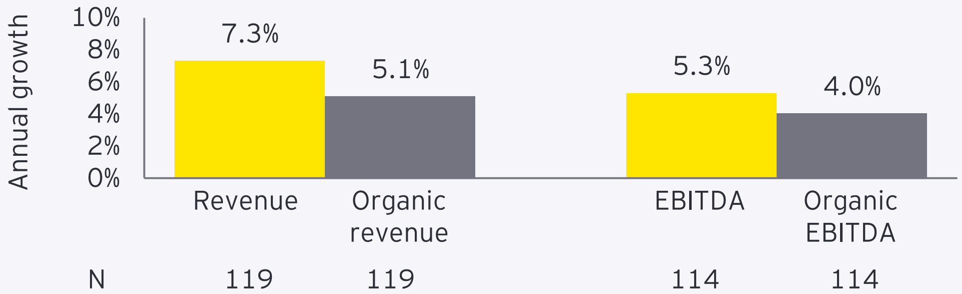


- The PE business model seeks to achieve an investment return to its investors (pension funds, insurance funds etc.) by realising greater equity proceeds through the sale, and in dividends through ownership of portfolio companies, than its initial equity investment at the time of acquisition.
- The PE business model is long term:
  - For the 102 portfolio companies that have been exited since 2005, the average length of ownership is 5.9 years.
  - For the current group of 61 portfolio companies, the average length of PE ownership is 3.4 years at 31 December 2019.
  - For the portfolio companies exited in 2019, the average hold period was 6.5 (2018: 6.9).
- Looking at the profile of the historical exits as the best measure of the length of PE ownership, of the 102 exits, 91% were owned for more than three years, and 58% were owned for more than five years.

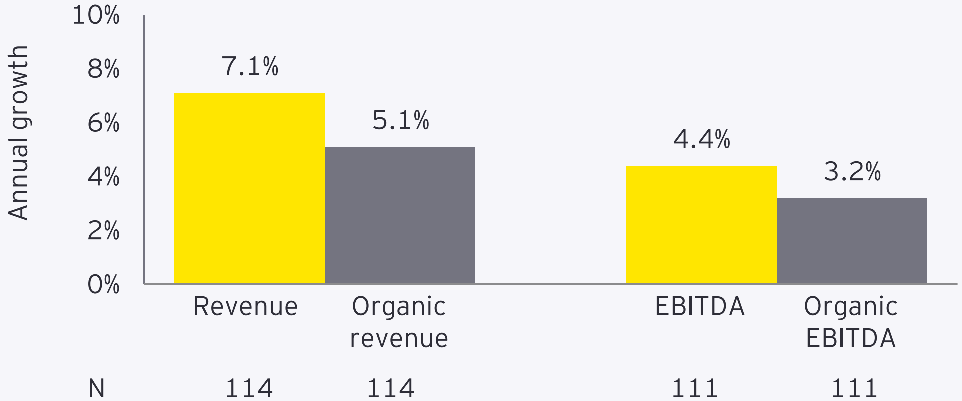
Do PE-owned companies grow?

Revenue and EBITDA increase in the portfolio companies is slightly faster compared with public company benchmarks: revenue increase of 7.3% versus 4.1% and EBITDA increase at 5.3% versus 3.9%

Reported and organic revenue and EBITDA growth since acquisition (CP+exits, 2019)



Reported and organic revenue and EBITDA growth since acquisition (CP+exits, 2018)



Refer to page 17. No changes have been made to underlying data for changes in accounting policies.

- Reported revenue and profit (EBITDA) annual growth over the entire period of private ownership to date is, on average, 7.3% for revenue and 5.3% for EBITDA.
- Organic revenue and profit (EBITDA) annual growth rates (excluding the effect of bolt-on acquisitions and partial disposals) are 5.1% and 4.0% respectively. As with other measures, there is variation by sector, with consumer and healthcare showing the fastest organic profit growth rates, whilst all industries, excluding industrials and healthcare are showing equally strong organic revenue growth. Others are largely comprised of financial sector companies.
- 2019 results are in line with 2018 on a revenue basis, whereas reported and organic profit (EBITDA) has seen a higher growth.

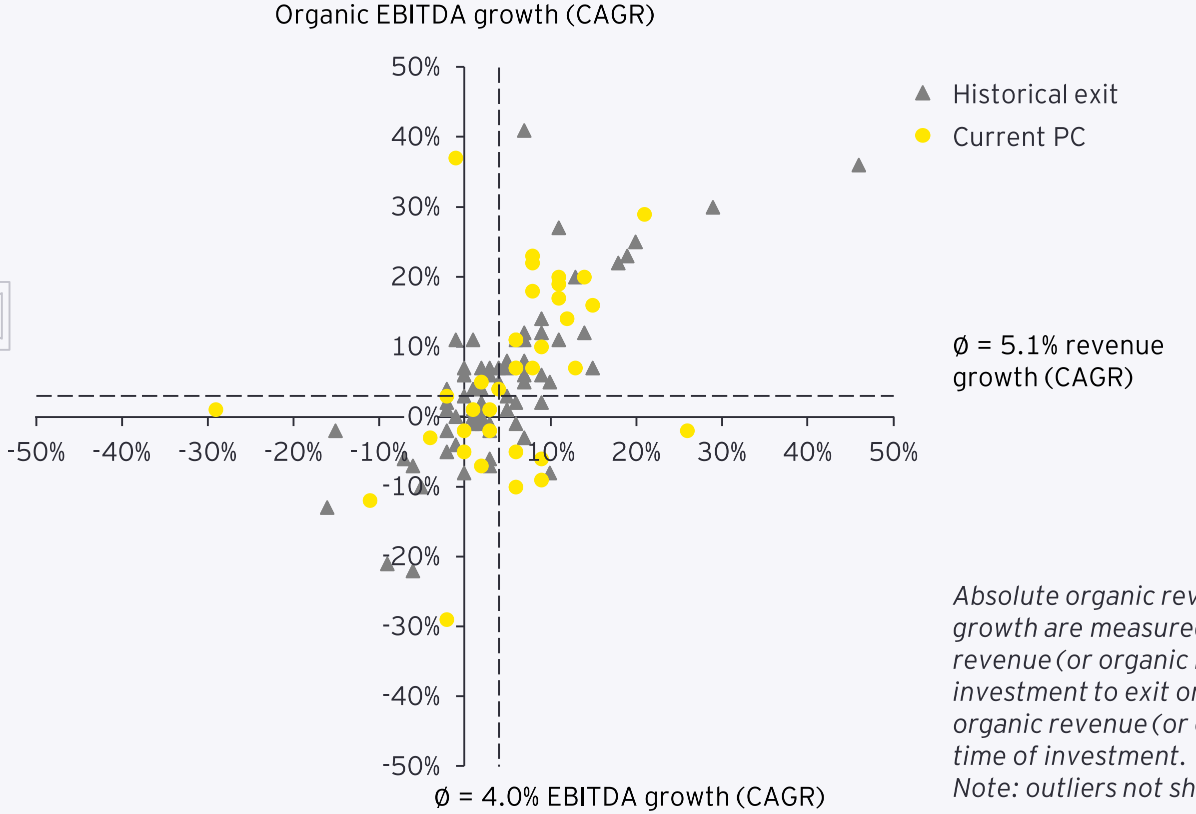
Sector	Organic revenue growth	Organic EBITDA growth
Industrials	2.5%	2.2%
Consumer	5.3%	5.5%
Healthcare	4.7%	7.8%
Infrastructure	7.3%	1.9%
Technology	6.6%	4.2%
Other	5.5%	1.9%

Do PE-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

Absolute organic revenue and organic EBITDA growth are measured as the change in organic revenue (or organic EBITDA) from the time of investment to exit or latest date, divided by organic revenue (or organic EBITDA) at the time of investment.



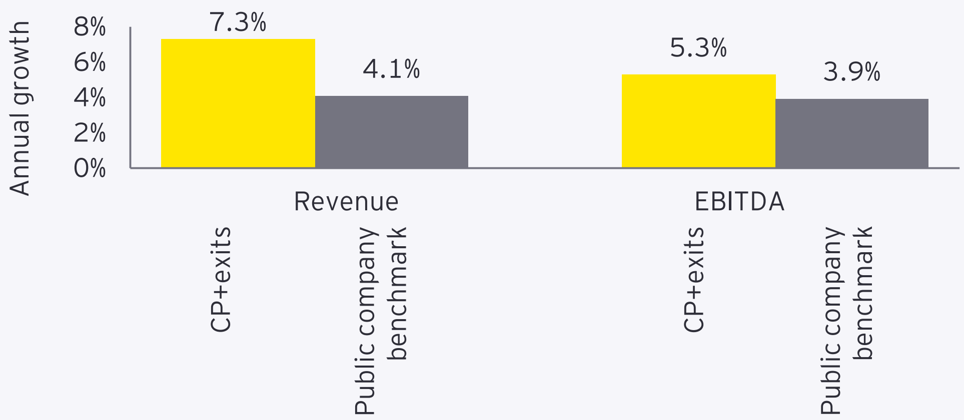
- The chart shows the data points of organic revenue and EBITDA growth for each of the current portfolio companies and historical exits, measured as the CAGR from acquisition to latest date or exit. This shows a wide range of outcomes around the average results, similar to the earlier analysis of organic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

Absolute organic revenue and organic EBITDA growth are measured as the change in organic revenue (or organic EBITDA) from the time of investment to exit or latest date, divided by organic revenue (or organic EBITDA) at the time of investment.
Note: outliers not shown.

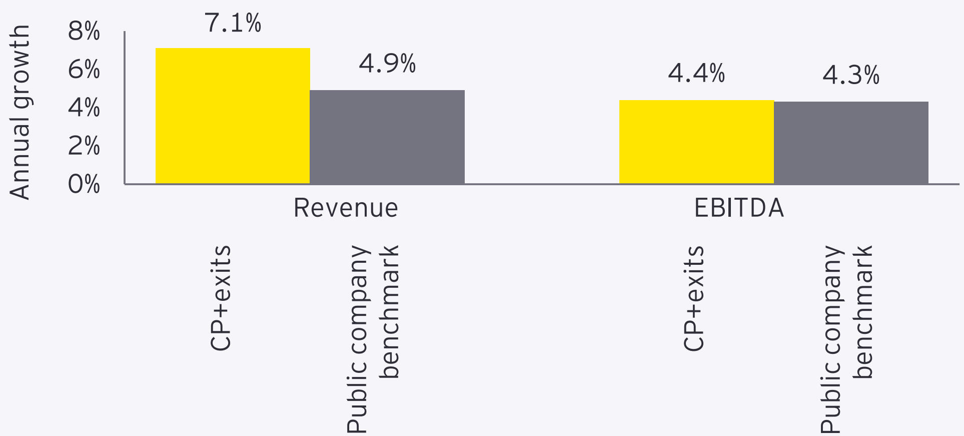
Do PE-owned companies grow?

Revenue and EBITDA increase in the portfolio companies is slightly faster compared with public company benchmarks – revenue increase of 7.3% versus 4.1% and EBITDA increase at 5.3% versus 3.9% per annum respectively

Revenue and EBITDA growth since acquisition (2019)



Revenue and EBITDA growth since acquisition (2018)

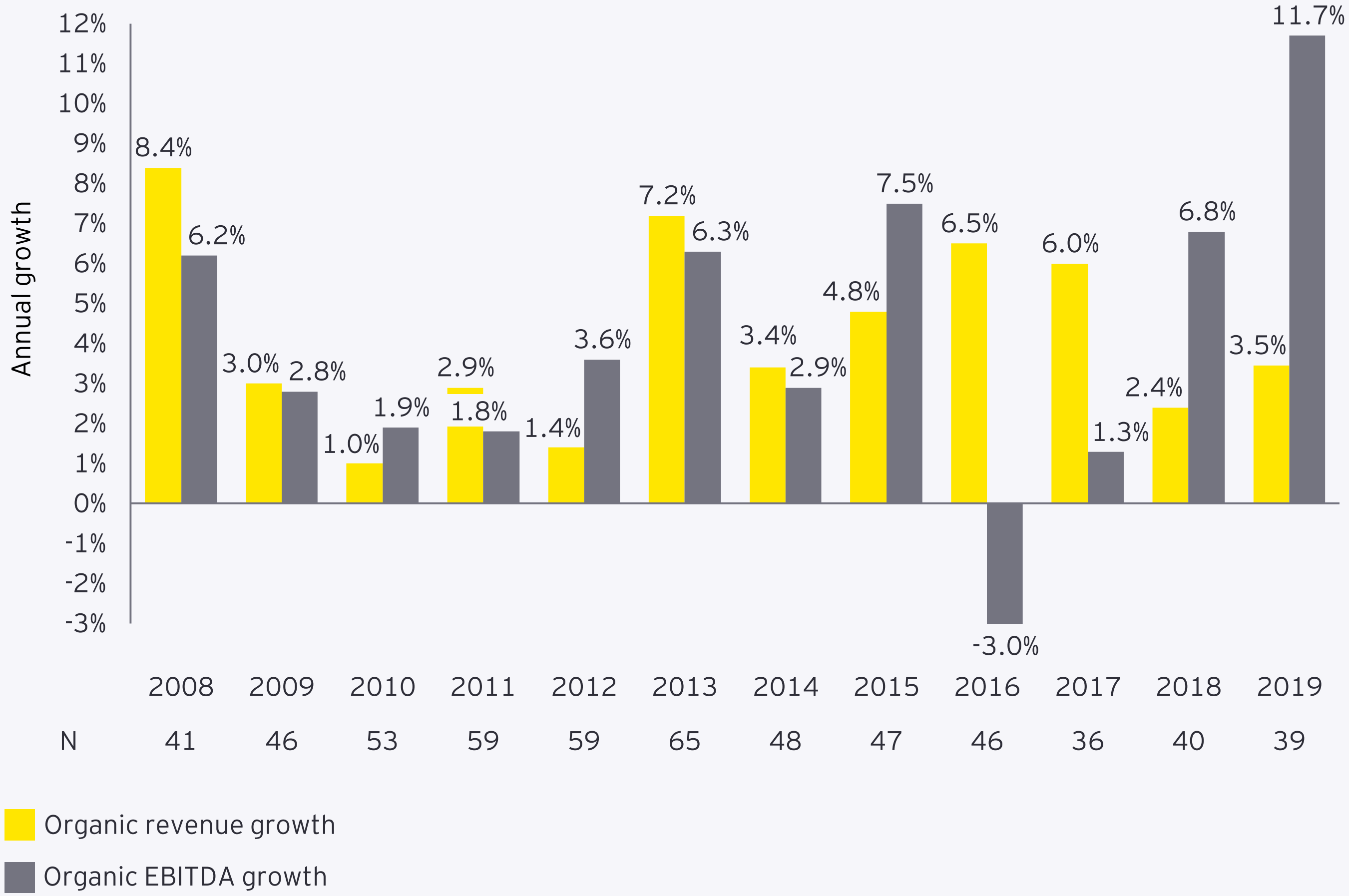


- Reported revenue and profit (EBITDA) performance of the portfolio companies is above the public company benchmark.
- In terms of drivers of revenue growth, the portfolio companies have shown more growth in capital productivity than growth in operating capital employed, including acquisitions. For public companies, the reverse is true.
- In terms of drivers of reported EBITDA growth, portfolio companies show slightly higher growth in employment and labour productivity compared with the public company benchmark.

Do PE-owned companies grow?

The portfolio companies reported stronger positive organic profit increase in 2019 versus prior years

Year-on-year organic revenue and EBITDA growth

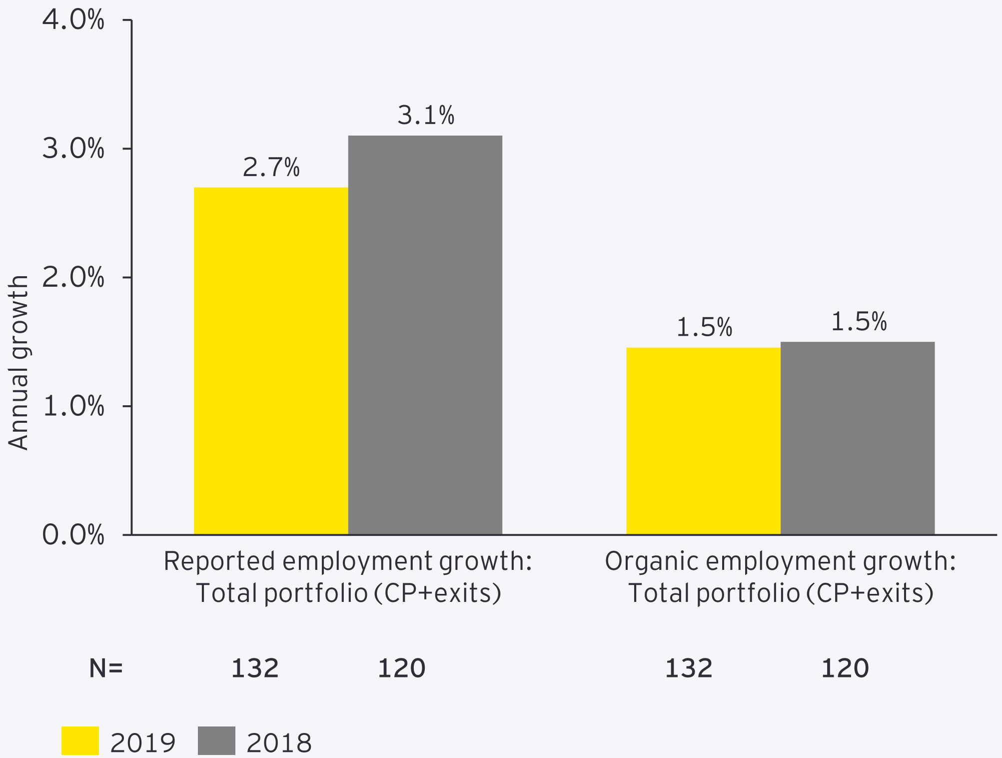


- 2019 was a year of strong organic growth for portfolio companies with 3.5% revenue and 11.7% profit growth.
- The year-on-year growth in organic revenue and EBITDA shows a variable pattern, reflecting the broader trend of the economy, company-specific factors and the change in portfolio sector mix.
- Part of the variability in the portfolio company data is due to changes taking place at one or more portfolio companies in a year that influence the overall result.

Do portfolio companies create jobs?

Reported employment under PE ownership has increased by 2.7% per annum. Underlying organic employment growth (removing the effects of bolt-on acquisitions and partial disposals) has grown by 1.5% per annum

Reported employment growth and organic employment growth



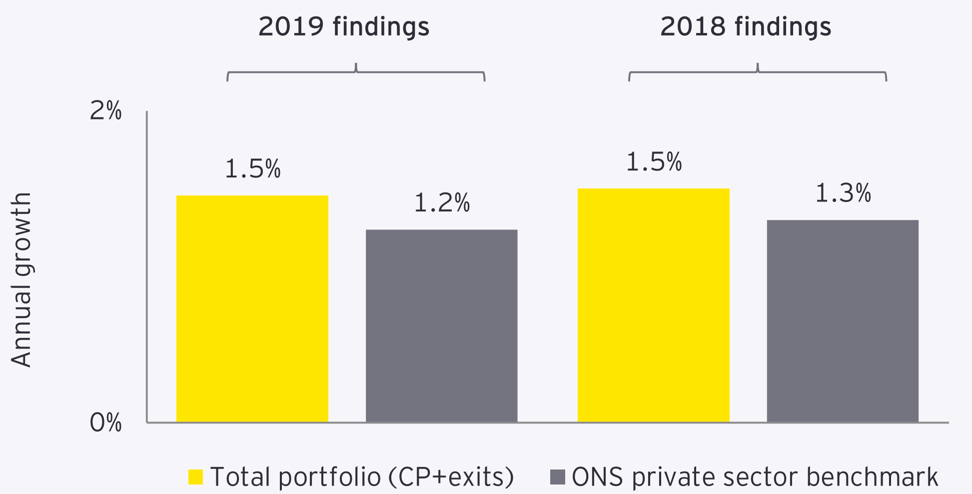
- At the time of acquisition by PE investors, portfolio companies had 640,000 jobs (including UK and international locations). On latest year-end or date of exit, this same group of companies had increased the number of jobs to 754,000 (an additional 114,000 jobs). Annually, this amounts to a growth rate of 2.7%.
- 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 1.5% per annum or c.56% of total reported employment growth. Higher reported versus organic employment means that there were more jobs added by bolt-on acquisitions than lost via partial disposals.
- Reported growth rate was somewhat lower than in the findings published in last year's report, whereas organic growth rate was in line with the prior year's rate.

Sector	Reported employment growth	Organic employment growth
Industrials	-2.2%	-1.5%
Consumer	3.6%	2.1%
Healthcare	3.8%	2.6%
Infrastructure	3.3%	1.4%
Technology	3.1%	1.3%
Other	2.3%	0.1%

Do portfolio companies create jobs?

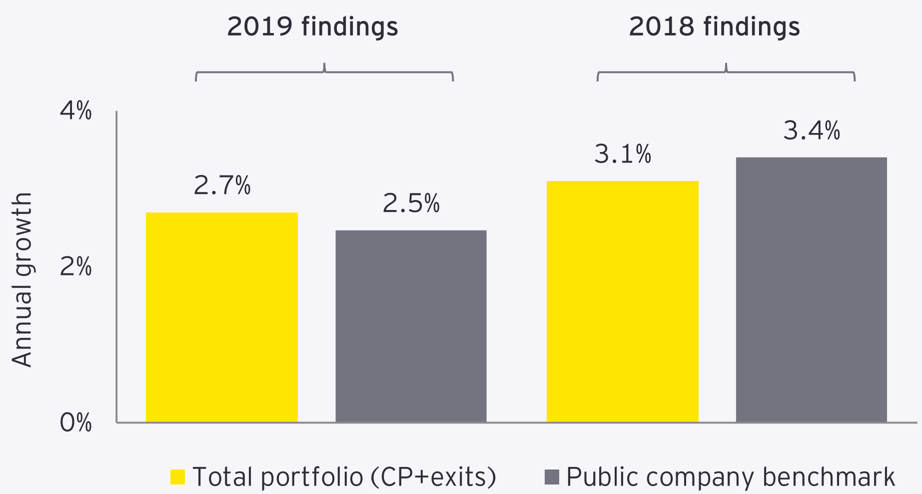
Annual employment growth at the portfolio companies is above both the private sector benchmark of 1.2% (organic) and the public company benchmark of 2.5% (reported)

Organic employment growth versus UK private sector benchmarks



- Organic employment growth can be benchmarked to ONS statistics which report on economy-wide employment trends for the UK private sector. Matching to compare relevant time periods, the 1.5% average annual organic employment growth rate of PE-owned companies is slightly above the UK private sector employment growth as a whole.

Reported employment growth versus public company benchmark

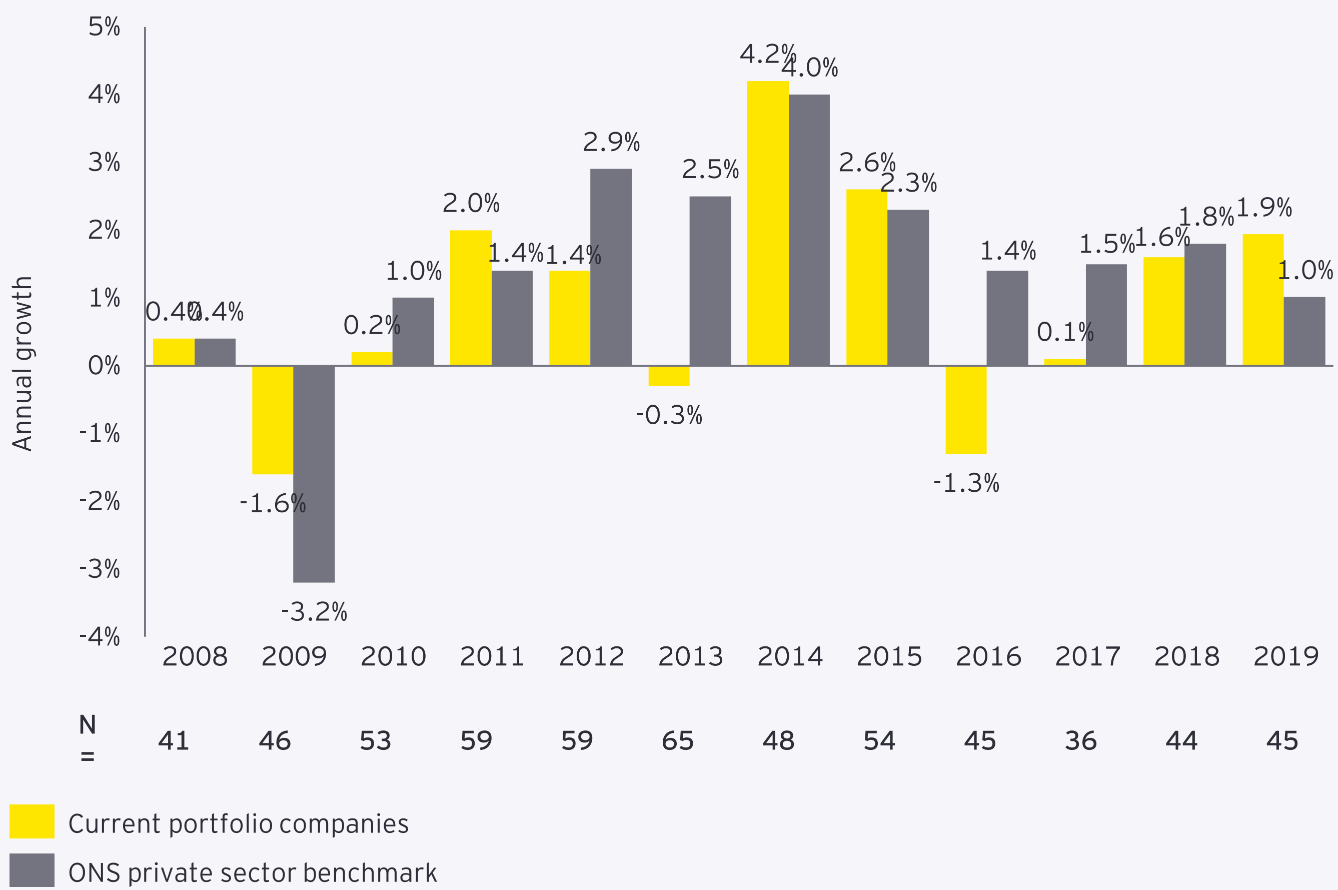


- Reported employment growth figures, as disclosed in annual reports by the portfolio companies and public companies, can also be compared, although these figures include the effects of bolt-on acquisitions and partial disposals.
- The reported employment growth of the portfolio companies of 2.7% per annum is slightly above the public company benchmark of 2.5% per annum.

Do portfolio companies create jobs?

Organic employment growth in the portfolio companies in the last year was greater than the private sector benchmark

Organic employment growth, year on year versus UK private sector benchmark

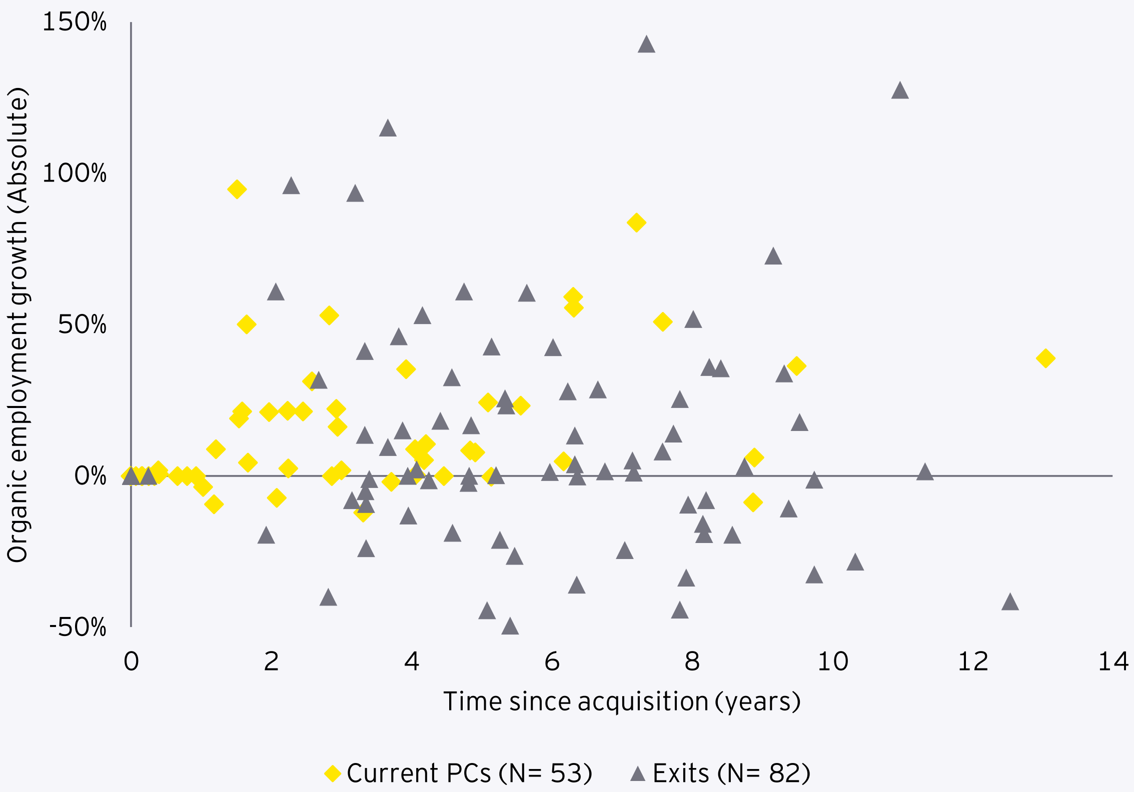


- Looking at the year-on-year trend in organic employment growth, 2019 saw a continued increase in organic employment since 2016, yet still below the annual growth rates in 2014–15. The low organic growth in 2017 compared with 2018 is partly explained by outliers, where one or two results can affect the portfolio company figures. In 2017, whilst not shown separately, a large healthcare employer experienced a substantial reduction in jobs.
- The ONS private sector benchmark growth was below that of the portfolio companies in 2019.

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 PE effect is best measured by the aggregate result

Organic employment growth by portfolio company over time



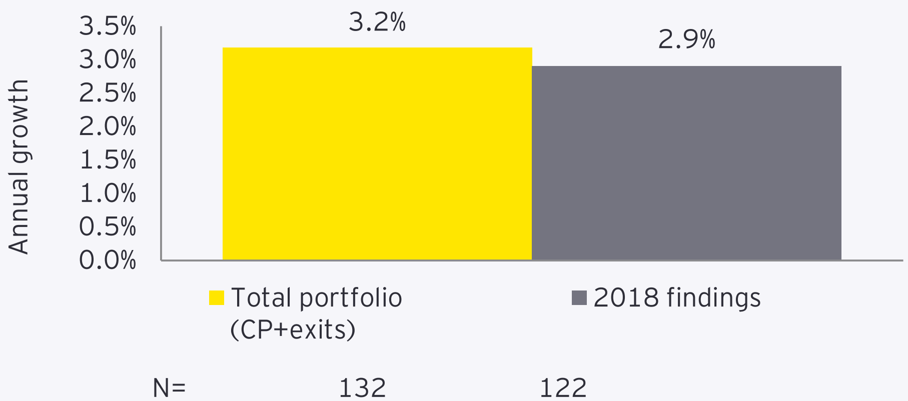
- At the individual portfolio company level, there is a wide range of outcomes in organic employment growth. This range of individual portfolio company outcomes reflects many factors, including market conditions, expansion or reduction in capacity and focus on growth or productivity.
- The chart shows the total change in organic employment (growth or decline) under PE ownership, measured against length of ownership – with a wide dispersion of results.
- The aggregated effect (considered a more valid way to assess for any systematic effect of PE ownership on the performance of the portfolio companies) is net growth in organic employment.
- Average growth in organic employment for all portfolio companies (current portfolio companies + exits) is 1.5% for 2019 (1.5% in 2018).

1. Absolute employment growth is measured as change in employment from the time of investment to exit or latest date, divided by employment at time of investment.

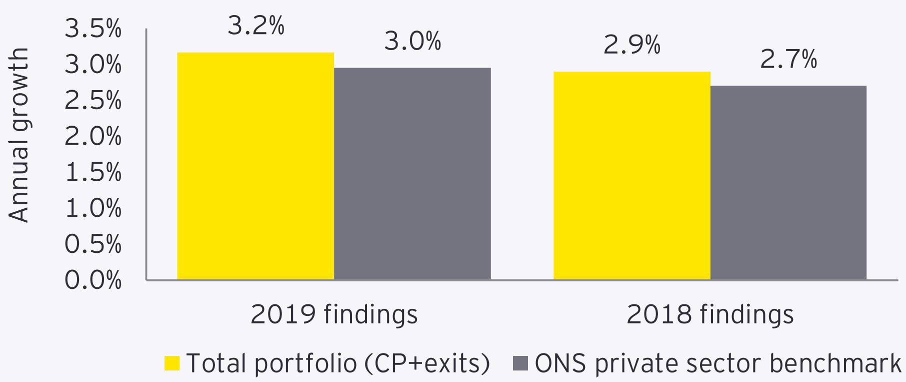
How is employee compensation affected by PE ownership?

Average employment cost-per-head in the portfolio companies has increased by 3.2% per annum under PE ownership, which is in line with the UK private sector benchmark of 3.0%

Growth in average employment cost-per-head



Growth in employment cost-per-head



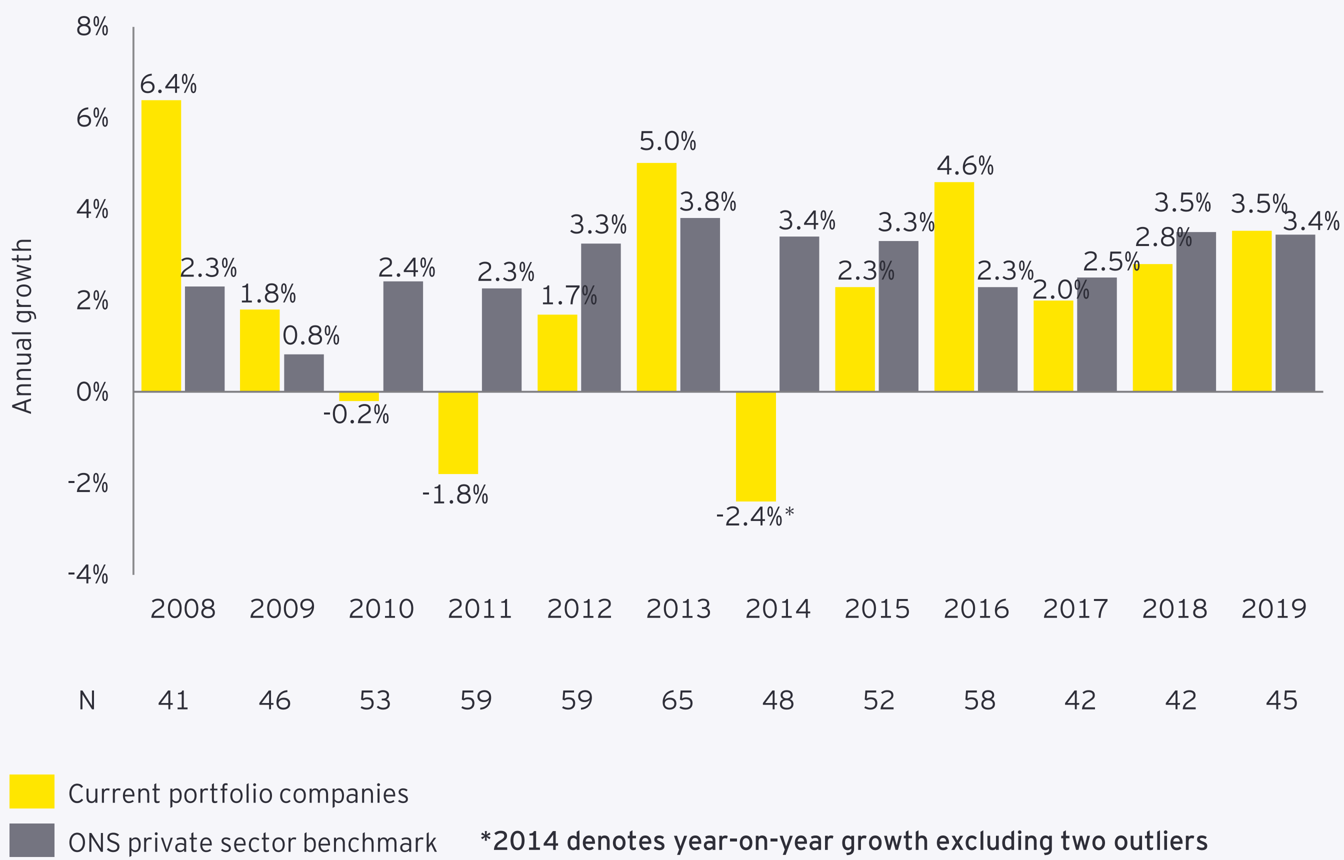
- This report uses average employment cost-per-head as a measure of employee compensation. It is noted that this metric will not equate precisely to like-for-like change in employee compensation, due to changes in the composition of companies, numbers of employees at differing pay levels and terms, changes in taxes, working hours, bonus schemes, overtime rates and annual base pay awards.
- The average employment cost-per-head has increased by 3.2% per annum under the entire period of PE ownership, slightly above the 2018 findings.
- Average annual employment cost-per-head increase of 3.2% in the PE-owned portfolio companies is in line with the ONS private sector benchmark of 3.0% over comparable time periods.

Sector	Growth in average employment cost
Industrials	4.6%
Consumer	1.5%
Healthcare	1.5%
Infrastructure	4.3%
Technology	4.9%
Other	2.8%

How is employee compensation affected by PE ownership?

Year-on-year growth in average employment cost-per-head was 3.5% in 2019, broadly in line with the long-term trend and in line with the UK private sector benchmark of 3.4% over the same period

Year on year average employment cost-per-head growth



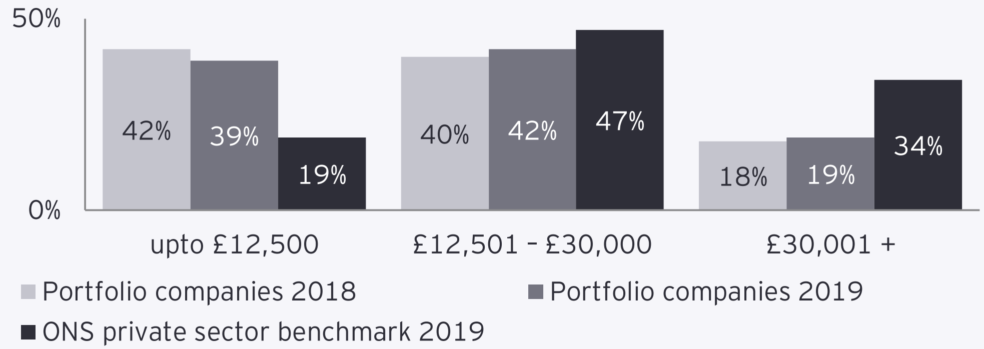
***2014 denotes year-on-year growth excluding two outliers**

- The year-on-year growth in average employment cost-per-head for the portfolio companies is variable, particularly when compared with the overall stable pattern of average compensation increases in the UK private sector as a whole since the downturn in 2009.
- Part of the variability in the portfolio company data is due to changes taking place at one or more portfolio companies in a year that influence the overall result.
- In 2019, average employment cost-per-head in the portfolio companies grew by 3.5%, slightly above the ONS benchmark of 3.4%.

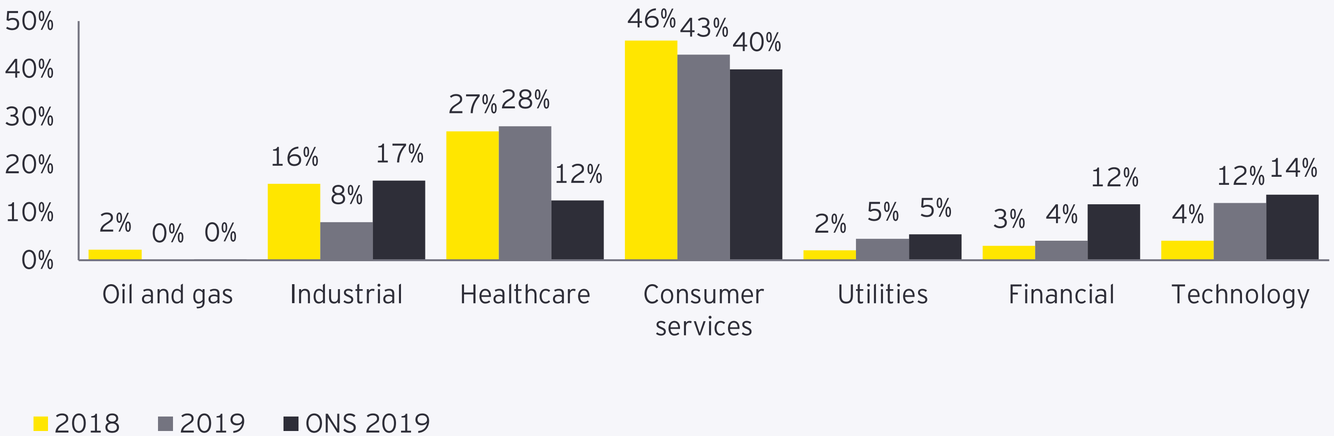
How is employee compensation affected by PE ownership?

Around 40% of the jobs in the portfolio companies (which will include both part-time and full-time jobs) have an annual compensation of less than £12,500. This is impacted by a high proportion of workers in the healthcare and consumer services sectors

Percentage of portfolio company UK jobs by annual compensation band



Percentage of portfolio company UK jobs by sector

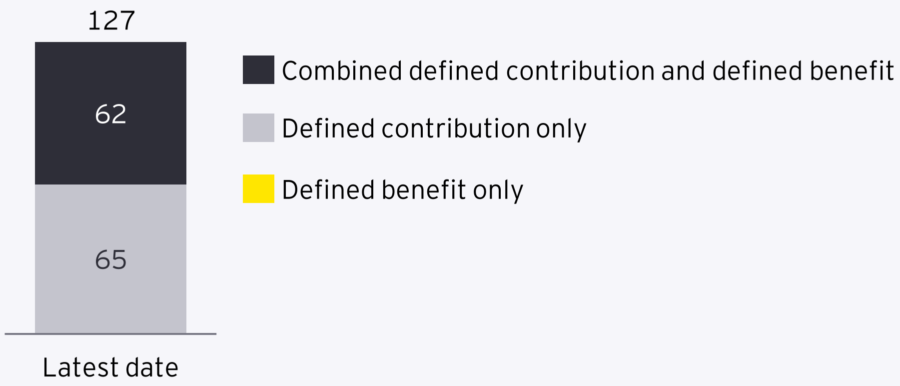


- Data on employment by annual compensation has been required from the portfolio companies since 2014, to understand employment trends and practices further.
- There has been a slight shift in compensation among portfolio companies, with increases in the higher salary ranges and thus a higher portion of jobs earning more than £12,500 (61% versus 58% in 2018).
- The portfolio companies have a high portion of jobs earning less than £12,500 per annum (39%), which stands well above the UK private sector as a whole where 19% of jobs are in this compensation range.
- Part of the higher portion in the lower compensation range among portfolio companies may be influenced by sector (and hours) mix, with the portfolio companies over-represented in healthcare (e.g., care homes) and consumer services (e.g., restaurants) and under-represented in the financial and technology sectors. 71% of jobs in the portfolio companies are in healthcare and consumer services, versus 52% in the UK private sector.

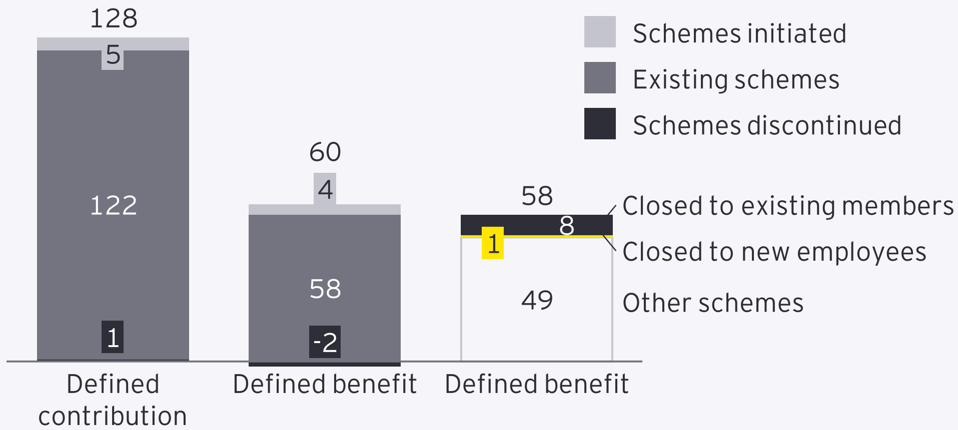
How is employee compensation affected by PE ownership?

There have been few changes in existing company defined benefit pension schemes under PE ownership

Distribution of companies by type of pension schemes (CP+exits)



Changes to pension schemes under PE ownership (CP+exits)



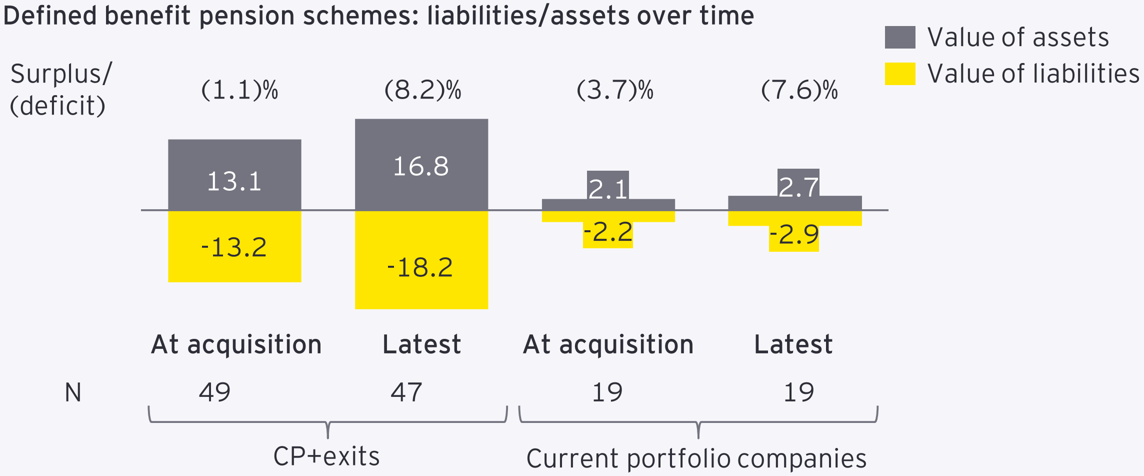
- Of the 130 portfolio companies that have provided pension information, 127 reported that they offer pension schemes to their employees (62 offer defined contribution (DC) schemes only, 65 offer a combination of defined benefit (DB) and DC schemes, and none offers DB schemes only). Two historical exits and one new entry 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. Of the 62 companies including both DC and DB, 58 companies had a DB scheme in place prior to acquisition, of which nine sought approval from the regulator at the time of their investment.

- Under PE ownership, there have been changes to portfolio company pension schemes:
  - At five portfolio companies, new DC schemes have been initiated. In the case of two portfolio companies, this was in part because there was only a DB scheme at the time of acquisition and in the case of one portfolio, there was no pension scheme at the time of acquisition.
  - At four portfolio companies, new DB schemes have been initiated, and two schemes have been closed.
  - Also, eight DB schemes were closed to accruals for existing members and one for new members.
- In 2019, there were minimal changes to pension schemes under PE ownership; one portfolio company initiated a DB scheme and no existing DB schemes closed.

How is employee compensation affected by PE ownership?

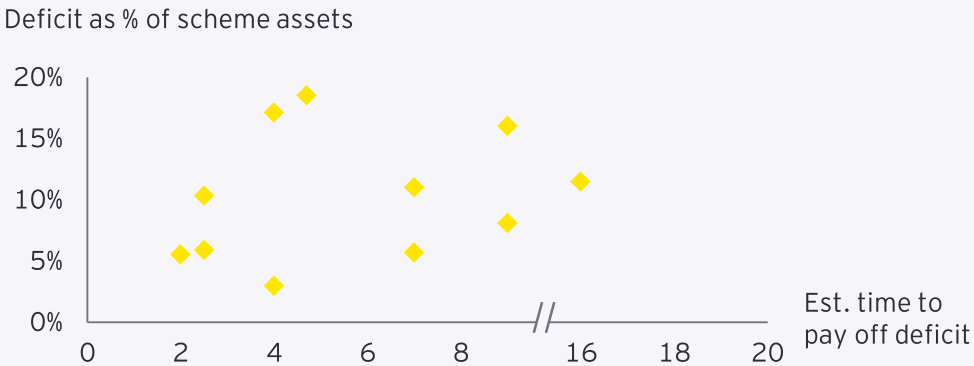
The average time to pay off the deficit of the DB schemes in the portfolio is estimated as 6.2 years, a reduction from 6.9 years in the 2018 report

Defined benefit pension schemes: liabilities/assets over time



- Whilst the assets of defined benefit pension schemes have increased under the period of PE ownership, liabilities have increased faster, resulting in an increase in the accounting deficit, i.e., liabilities in excess of assets.
- The deficit at latest date of -8.2% deficit is in line with the previous year (-8.4%) and showing a similar payoff timeline (6.2 years versus 6.9 years as per the 2018 report).

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

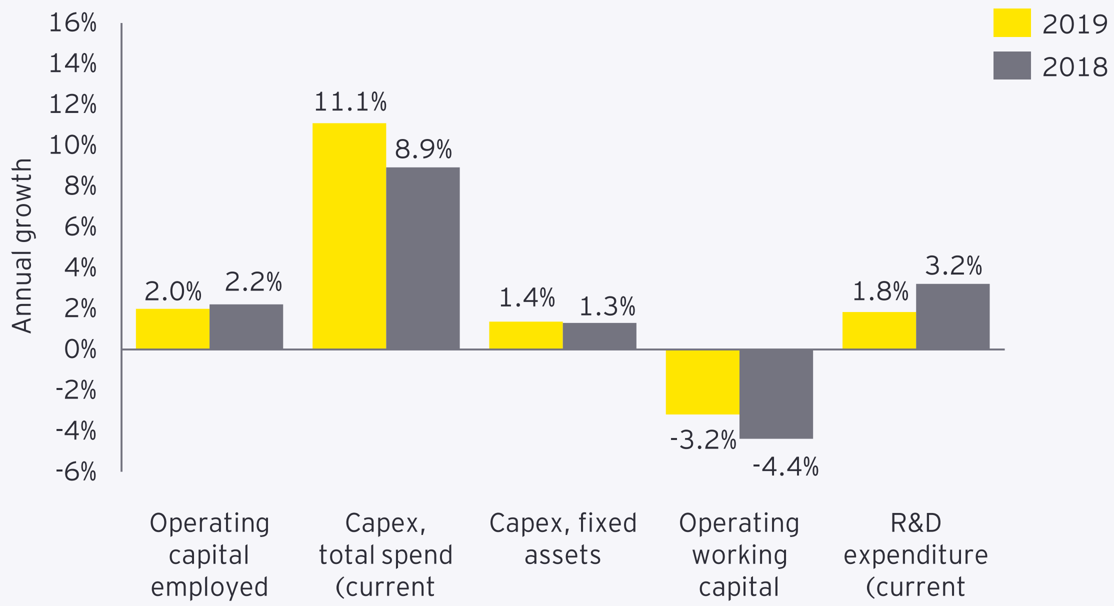


- Of the 22 current portfolio companies offering defined benefit pension schemes, 14 reported deficits:
  - Eleven companies reported the the estimated time to pay off the deficit, which on average is 6.2 years.
  - Three did not provide detail on estimated time to pay off the deficit, or reported that this was ‘under discussion’.

Do portfolio companies increase or decrease investment?

Investment in operating capital employed at the portfolio companies has increased by 2.0% per annum

Growth in measures of investment since acquisition



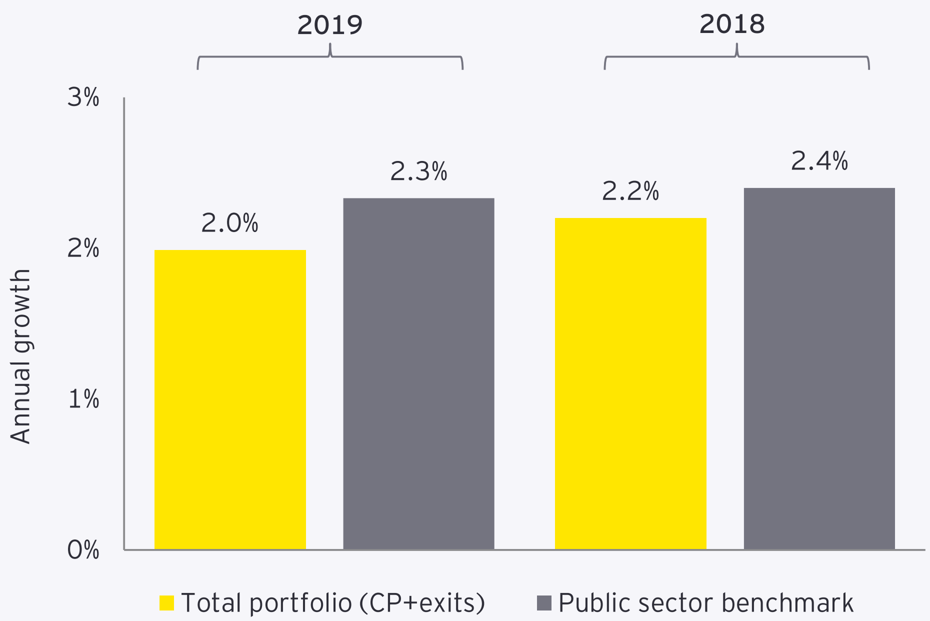
	Operating capital employed	Capex, total spend (current portfolio companies)	Capex, fixed assets	Operating working capital	R&D expenditure (current portfolio companies)
N (2019)	114	42	39	133	5
N (2018)	117	40	42	123	4

- There has been growth in several measures of investment at the portfolio companies whilst under PE ownership.
- Operating capital employed has increased at an annual average rate of 2.0%. This measure comprises tangible fixed assets (property, plant and equipment) and operating working capital (stock, trade debtors and creditors). Total investing activities in current portfolio companies have increased by 11.1%. This includes all tangible/intangible investments (some of which relate to bolt-on acquisitions).
- The tangible fixed asset capital expenditure relates to investment in property, plant and equipment, and has increased at 1.4%. Operating working capital has decreased by 3.2% per annum; note that this will be impacted by the working capital profile (and underlying sector/nature) of the portfolio company.
- A minority of current portfolio companies measure expenditure on R&D, and several of those are in the industrials and technology sectors. For this group, total R&D expenditure increased by 1.8% per annum under PE ownership, though we note the small sample size.
- Compared with findings in 2018, increases in operating capital employed have remained similar, in both fixed assets and working capital.

Do portfolio companies increase or decrease investment?

The portfolio companies have grown operating capital employed at a lower rate compared with public company benchmarks, at 2.0% per annum versus 2.3% per annum

Growth in operating capital employed since acquisition



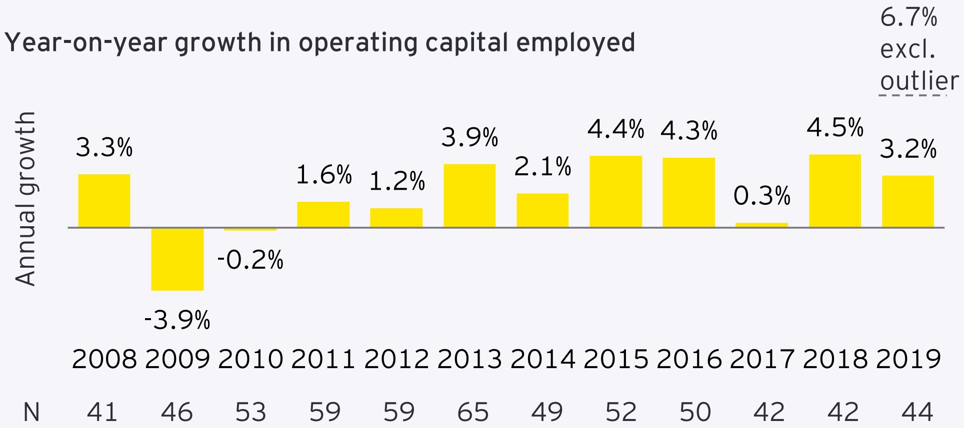
N = 130 121

- The portfolio companies, in aggregate, have grown operating capital employed by 2.0% per annum during the entire period of PE ownership. The public company benchmark (time and sector matched) shows slightly higher growth in operating capital employed of 2.3% per annum.

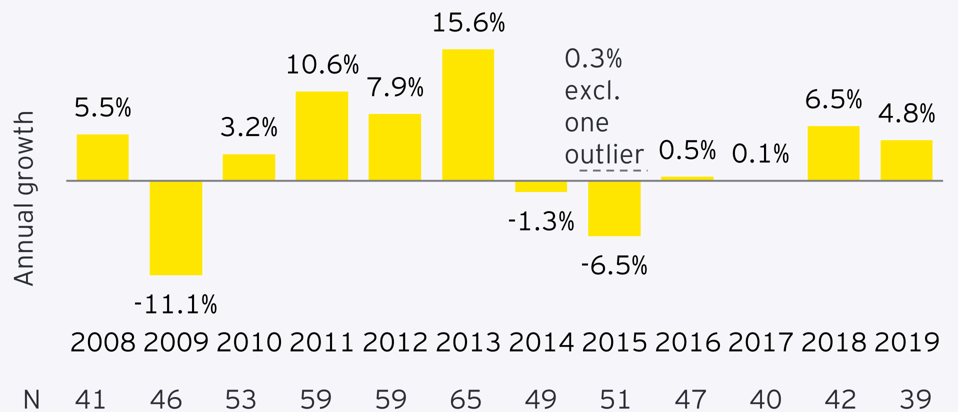
Do portfolio companies increase or decrease investment?

Annual growth in operating capital employed was 3.2% in 2019, slightly lower than 4.5% in 2018

Year-on-year growth in operating capital employed



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

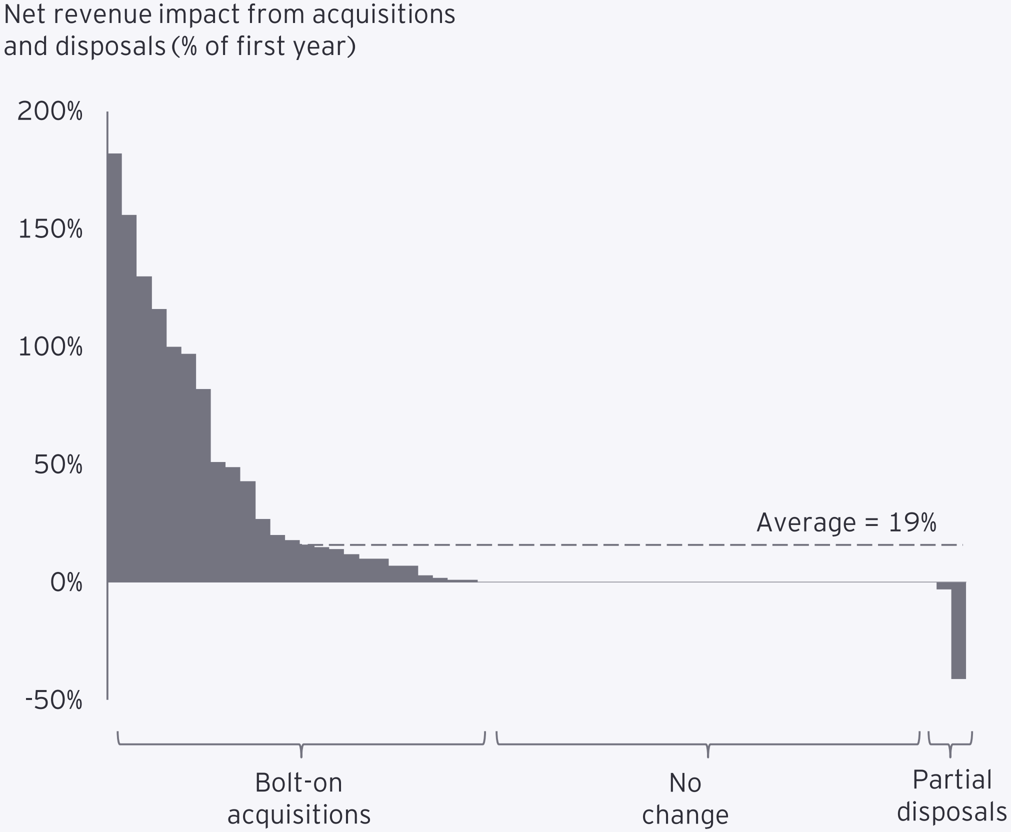


- Year-on-year growth in operating capital employed in 2019 was 3.2%, declining from 4.5% in 2018.
- This is somewhat explained by slower growth in capex on tangible assets (as shown in the bottom chart).
- The lower growth compared with 2018 is impacted by significant negative working capital movements in one large portfolio company. The increase in operating capital employed would be 6.7% when adjusted for this company.
- The average growth rate of current portfolio companies over the last 12 years is 2.1% for operating capital employed and 3.5% for capital expenditure on tangible assets.

Do portfolio companies increase or decrease investment?

Forty-six percent of the current portfolio companies have made net bolt-on acquisitions, whilst 4% have made net partial disposals, showing investment in bolt-on acquisitions ahead of partial disposals

Revenue impact of bolt-on acquisitions and partial disposals, current portfolio companies



- In addition to investment in existing businesses, there has been investment in bolt-on acquisitions, as well as release of funds through partial disposals. The chart shows an analysis of the relative significance of all bolt-on acquisitions and partial disposals by individual portfolio companies, by measuring the resulting net revenue growth or decline relative to the first year, or base figure.
- On a net basis, 26 of the 57 portfolio companies (46%) have increased revenue under PE ownership by investments in bolt-on acquisitions, whilst 2 portfolio companies (4%) have reduced revenue by partial disposals. This is in line with the previous year, and thus there is a continued trend in more investment in bolt-on acquisitions than the release of funds from partial disposals. Twenty-nine portfolio companies (51%) have reported no M&A activity under their current PE owners.
- There are some portfolio companies where bolt-on acquisitions or partial disposals are material in size relative to the original portfolio company. In the current population, five portfolio companies have made acquisitions that have increased revenue by more than 100%, and one portfolio company has disposed of more than 25% of revenue.

EY

Do portfolio companies increase or decrease investment?

PE investors, in aggregate, have used free cash flow and additional third-party debt to increase investment in the current portfolio companies

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

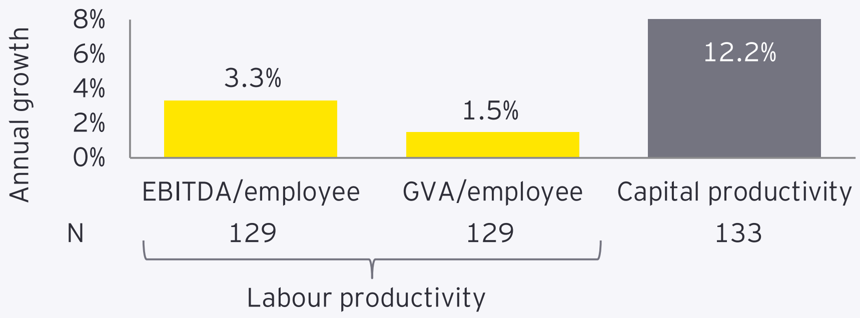
	Net debt (£bn)	Net debt/ EBITDA
Net debt at acquisition	20.9	6.2
Operating cashflow post tax and interest payments, pre capex	(9.7)	
Net funds to equity investors	3.6	
Capex (organic plus bolt-on acquisitions net of disposals)	16.7	
Increase/(decrease) in net debt	10.6	
Net debt at latest date	31.5	6.1

- Analysing the cash flows of the portfolio companies allows scrutiny of the sources and uses of funds during the period of PE ownership.
- Since acquisition, the current portfolio companies have generated £9.7bn of free cash flow, 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 £3.6bn, this has been more than offset by an aggregate additional investment of £16.7bn.
- To fund this investment in the portfolio companies, third-party debt (net debt) has increased by a net £10.6bn. As profit (or EBITDA) has grown in line with net debt albeit slightly slower, the leverage ratio of net debt to EBITDA has decreased slightly from 6.2 at acquisition to 6.1 to date.

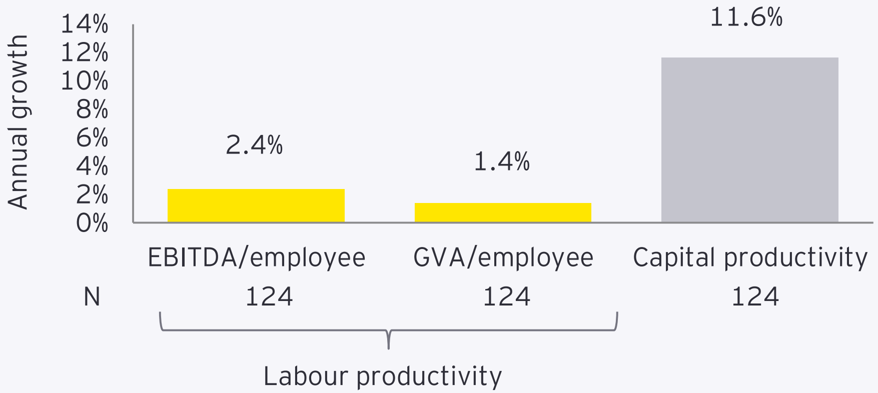
How does productivity change under PE ownership?

Labour and capital productivity have increased under PE ownership, by 1.5%–3.3% and 12.2% per annum respectively

Growth in labour productivity and capital productivity since acquisition (CP+exits, 2019)



Growth in labour productivity and capital productivity since acquisition (CP+exits, 2018)



- 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:
  - Profit (or EBITDA) per employee, which can be benchmarked to public companies. On this measure, the portfolio companies have increased labour productivity by 3.3% per annum.
  - GVA per employee, which is often used by economists and can be benchmarked to the UK private sector. On this measure, the portfolio companies have increased labour productivity by 1.5% per annum.
- Capital productivity is measured as revenue over operating capital employed. The portfolio companies have increased capital productivity by 12.2% per annum.
- Compared with 2018 findings, labour productivity measured by EBITDA/employee and GVA/employee and capital productivity have improved.
- Part of the variability in the portfolio company data on a sector basis is due to changes taking place at one or more portfolio companies in a year that influence the overall result.

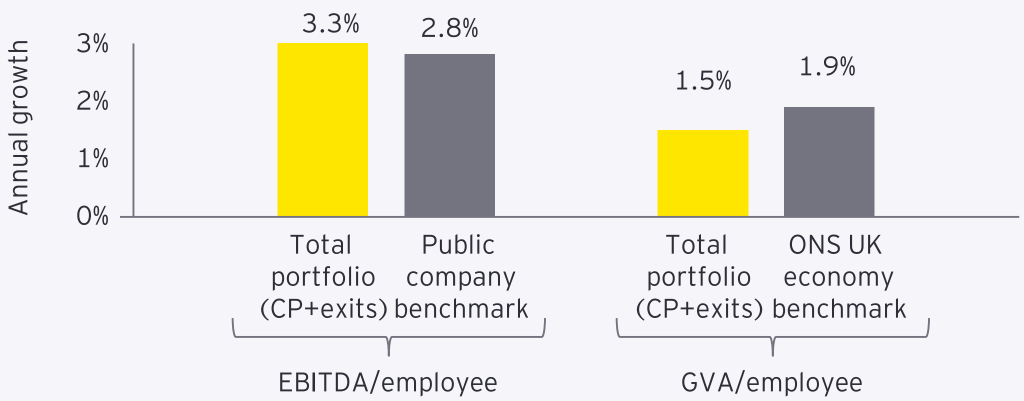
Sector	Growth in GVA/employee	Growth in capital productivity
Industrials	1.4%	19.9%
Consumer	2.0%	22.0%
Healthcare	5.0%	4.7%
Infrastructure	1.7%	-0.5%
Technology	4.5%	9.5%
Other	-1.6%	-1.6%

Note: 2018 labour productivity growth has been updated for a calculation error identified (11.6% versus 6.9% disclosed in 2018 report)

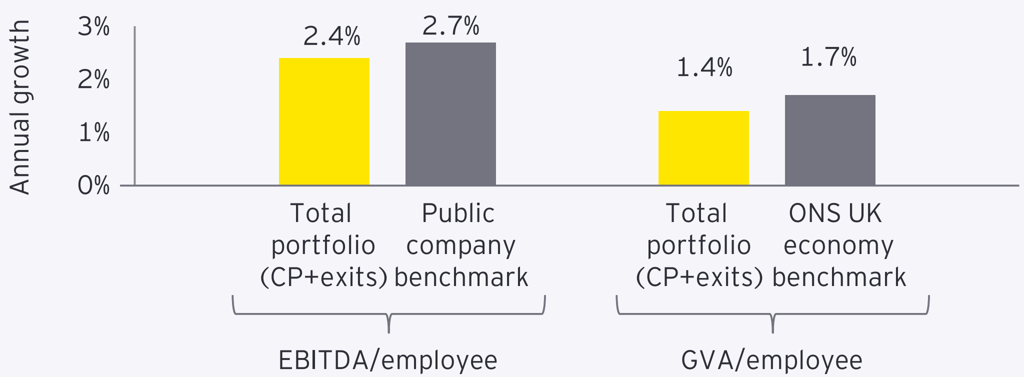
How does productivity change under PE ownership?

Annual increase in labour productivity in the portfolio companies at between 3.3% and 1.5%, which is broadly in line with public company and economy-wide benchmarks

Growth in EBITDA per employee and GVA per employee since acquisition (2019)



Growth in EBITDA per employee and GVA per employee since acquisition (2018)

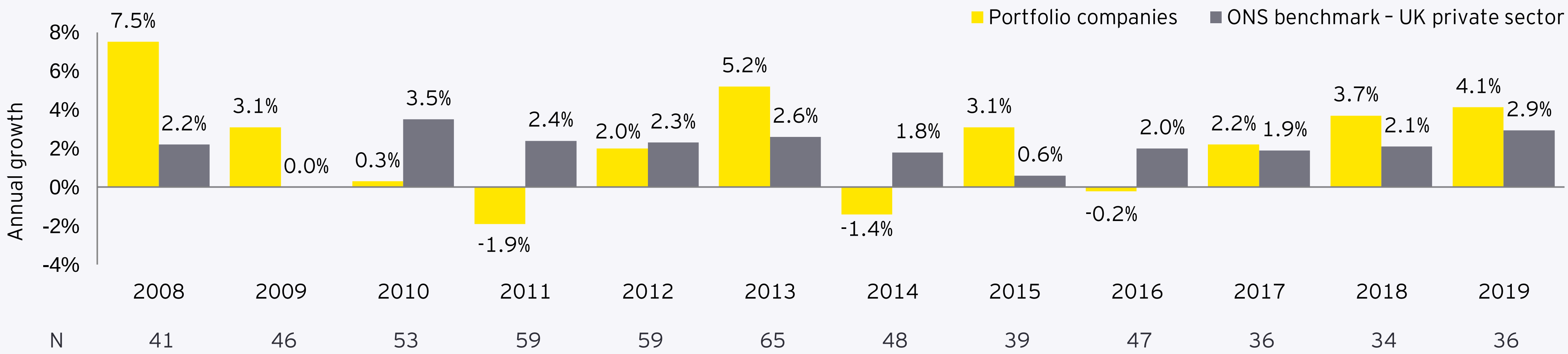


- On profit (EBITDA) per head metric, the portfolio companies have seen a higher increase in labour productivity compared with the public company benchmark. We comment on the organic EBITDA in the following pages.
- GVA per employee has increased at a similar rate compared with the UK economy.
- 2019 findings have overall increased versus the prior year.

How does productivity change under PE ownership?

GVA per employee of portfolio companies increased by 4.1% year on year versus 2018, above the UK private sector benchmark

Year-on-year growth in GVA per employee, portfolio companies versus private sector benchmark

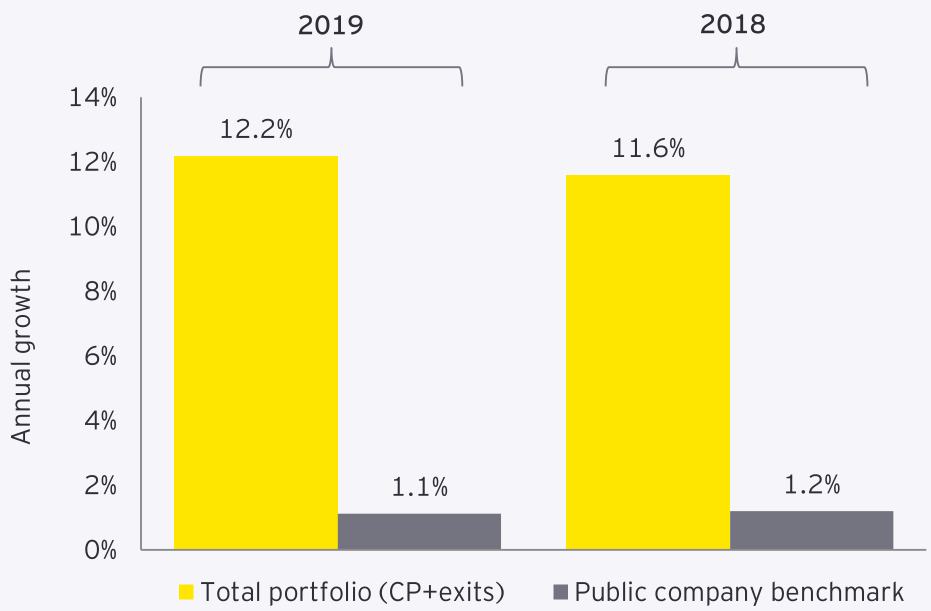


- Labour productivity in portfolio companies increased by 4.1% in 2019, above the private sector benchmark growth of 2.9%.
- This increase in labour productivity was driven by portfolio companies' EBITDA and employment cost growth.
- As with other measures in this report, the year-on-year growth in GVA per employee varies in the portfolio companies compared with a more consistent trend in the UK private sector benchmark.
- The average year-on-year growth rate in GVA per employee for the current portfolio companies over the last 12 years is 1.3%.

How does productivity change under PE ownership?

Capital productivity growth in the portfolio companies exceeds public company benchmarks by 12.2% versus 1.1% growth per annum

Growth in capital productivity since acquisition

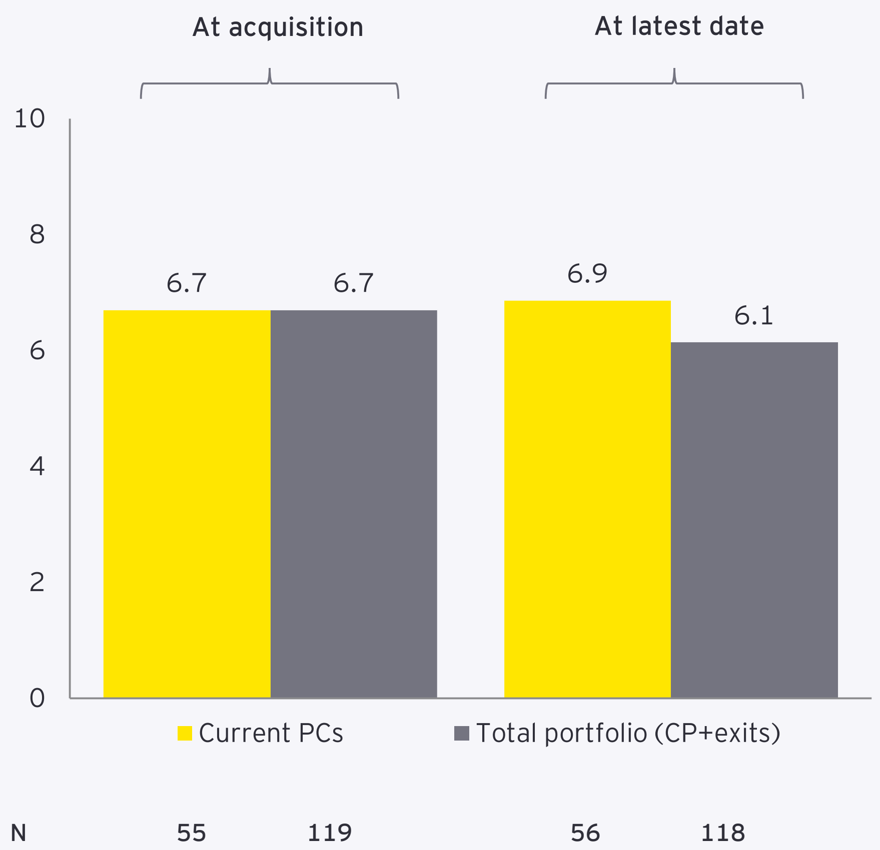


- There is no economy-wide data reported on capital productivity; hence capital productivity growth in the portfolio companies is compared with the public company benchmark. This shows that the portfolio companies have grown capital productivity faster, by 12.2% per annum in 2019 versus 1.1% per annum in 2018.
- 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 with the public company benchmark. Public companies have grown capital employed faster and have not diluted capital productivity – but neither has it improved.

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

All portfolio companies had an average leverage ratio of 6.7 debt to EBITDA at acquisition and 6.1 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, which differs from EBITDA by excluding company cash balances.
- Across the total portfolio, the leverage ratio averaged 6.7x at the time of initial investment by the PE owners and 6.1x at latest date or exit, indicating that debt has grown but at a slightly lower rate to growth in profit. By sector, leverage has reduced under PE ownership in all sectors except infrastructure and others.
- Excluding infrastructure assets, the leverage ratio across the rest of the portfolio averaged 6.7x at the time of initial investment and 5.6x at the latest date or exit.

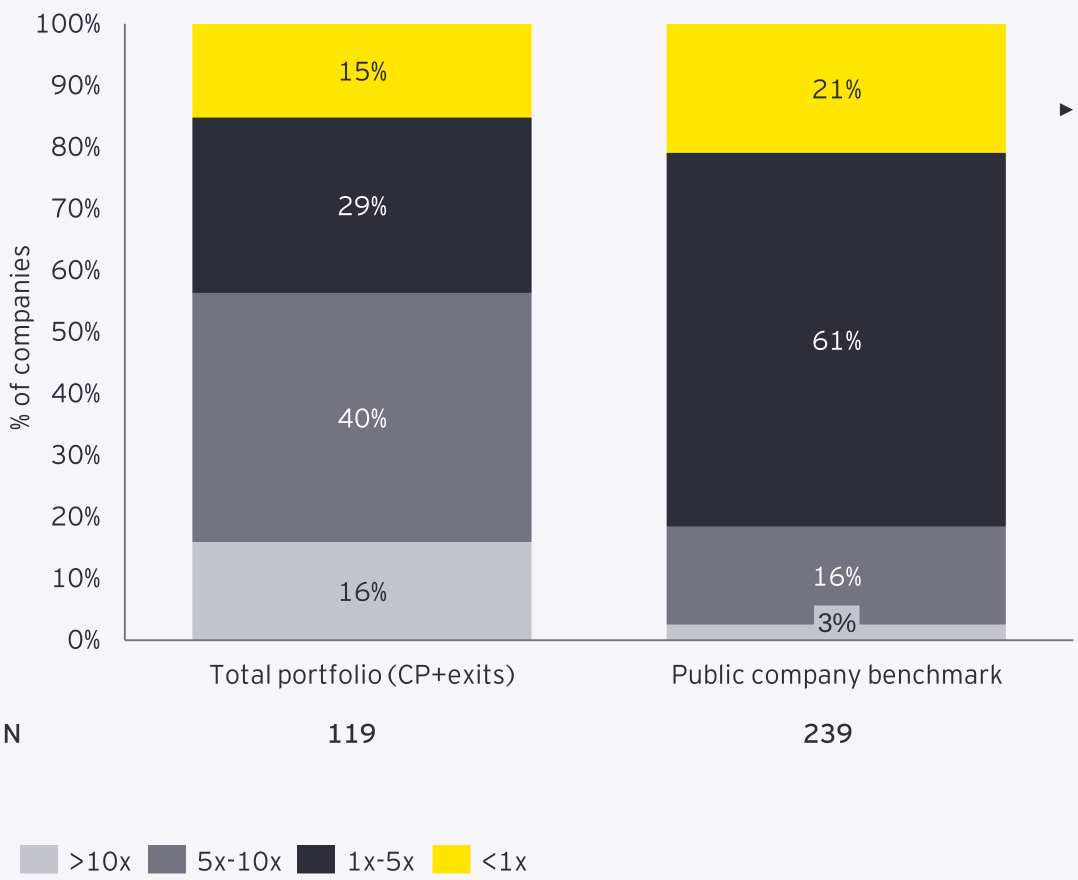
Sector (CP+exits)	Debt to EBITDA at acquisition	Debt to EBITDA at latest date/exit
Industrials	6.5	5.7
Consumer	7.4	5.2
Healthcare	5.6	5.2
Infrastructure	6.3	9.3
Technology	5.5	5.3
Other	6.7	8.2

- The current portfolio companies show a slight increase in leverage under PE ownership.

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 19% of publicly listed companies

Comparison of financial leverage (debt to EBITDA ratio)

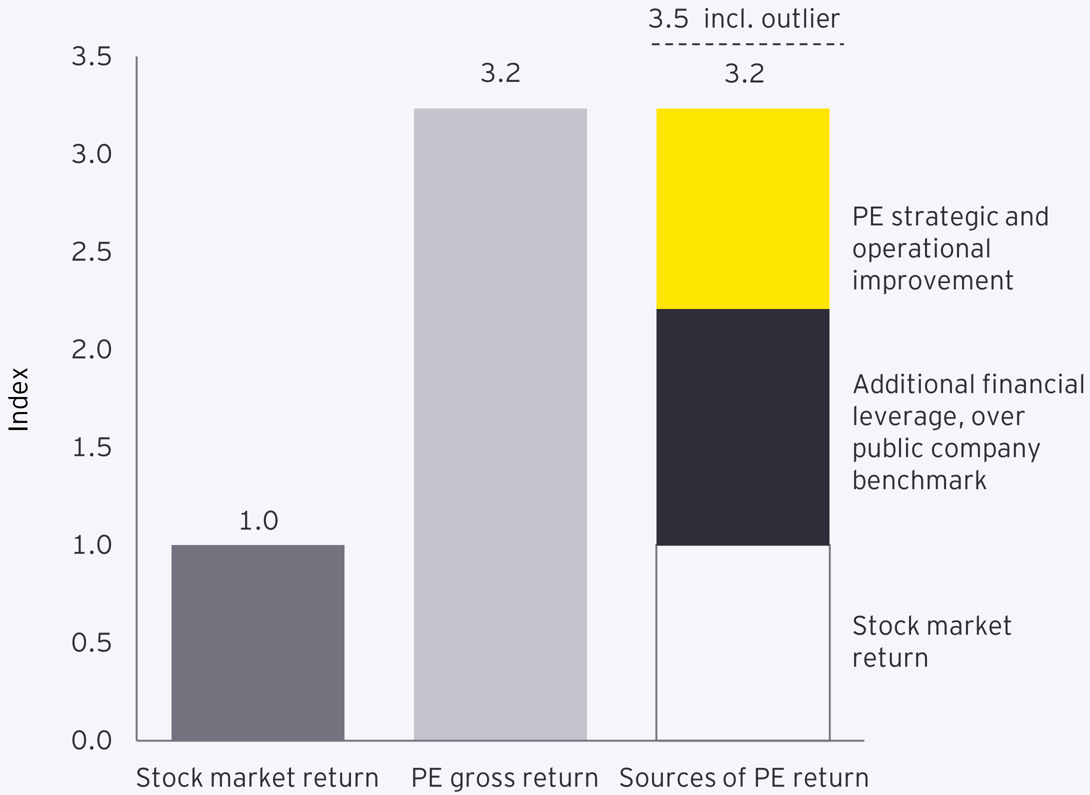


- One distinctive feature of the PE business model is that it typically uses greater financial leverage than most public companies. More debt and less equity at the time of investment increases the effect of change in enterprise value at exit on equity return, both up and down.
- On the metric of debt to EBITDA, the portfolio companies (CP+exits) averaged 6.1x compared with the public company benchmark of 2.6x, showing higher levels of financial leverage in the portfolio companies. Whilst 56% of portfolio companies have leverage ratios above 5x, this is true for only 19% of companies in the public company benchmark.

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

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

Gross equity return and sources of return, portfolio company exits 2005-19

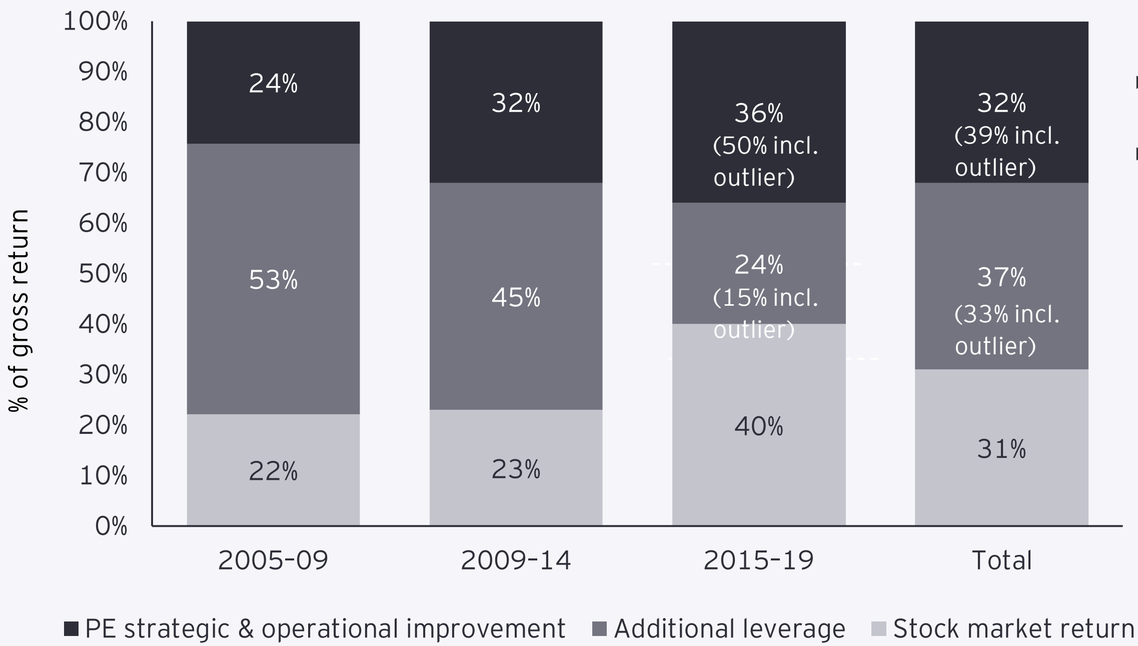


- The portfolio companies owned and exited by their PE owners achieved an aggregate gross equity investment return significantly in excess of benchmarked public companies, by a factor of 3.2x (compared with the equity return from investment in public companies matched by the same timeframe as each portfolio company investment).
- For public and PE, the measure of gross return is before the fees and charges incurred by investors, which are higher in PE than in public equity.
- The source of the PE return over and above public company return comprises the amount attributable to additional financial leverage and PE strategic and operational improvement.

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

Whilst the results vary over time, the component of the gross return from PE strategic and operational improvement has grown in recent years

Returns attribution, portfolio company exits 2005-19



	2005-09	2009-14	2015-19	Total
N	16	34	41	91
Ave. hold time (yrs)	4.2	6.2	7.2	6.3

- Analysing the sources of PE returns over time, here expressed by year of exit of the portfolio companies, shows some variation but also a consistent element of PE strategic and operational improvement.
- Of the four exits in 2019, one company had a distorting impact and has thus been excluded from the analysis.
- The trend is similar if it is not adjusted for sector-specific benchmarks (i.e., a similar trend if applying the general market return).

4 Basis of findings

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Basis of findings

Question	
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 PE ownership of the portfolio companies.
Is the profile of the portfolio companies skewed by sector or size?	▶ The portfolio companies are skewed towards the healthcare sectors and consumer services, accounting for 71% of employment versus 52% in the UK private sector as a whole and under-indexed in the financial sector. The portfolio companies are smaller than the public companies that make up the public company benchmark used in this report. ▶ There is variation by sector across many of the performance measures in this report. Consumer and infrastructure sectors tend to perform above the other sector groupings, whilst industrials tends to perform the worst.
How are the benchmarks derived and calculated?	▶ The benchmarks used in this report are compiled from published information, matched by sector and timeframe to individual portfolio companies, and aggregated using the same methodology as 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 PE investments in the portfolio companies.

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How is the portfolio company data aggregated?

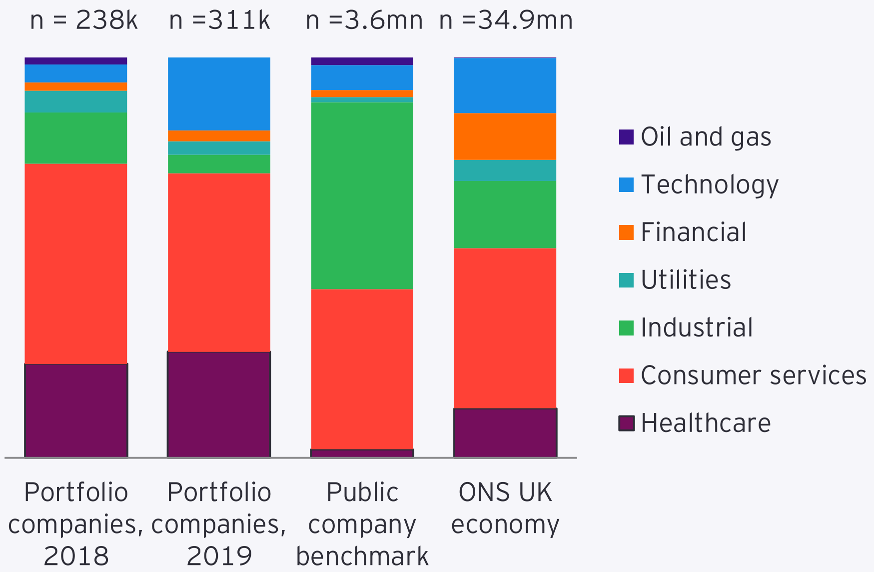
The findings in this report are aggregated across all portfolio company data points, to give insights into the systematic effects of PE ownership of the portfolio companies.

- The most accurate way of assessing the effect of PE 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 PE 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 PE 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 PE 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 cashflow require a comparison of full current year 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 PE 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., not provided in data template or a negative starting figure on growth rates, where this is noted on the chart. 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 is added to show the result if the outlier(s) is excluded or a separate comment raised in the accompanying text.
- 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.

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

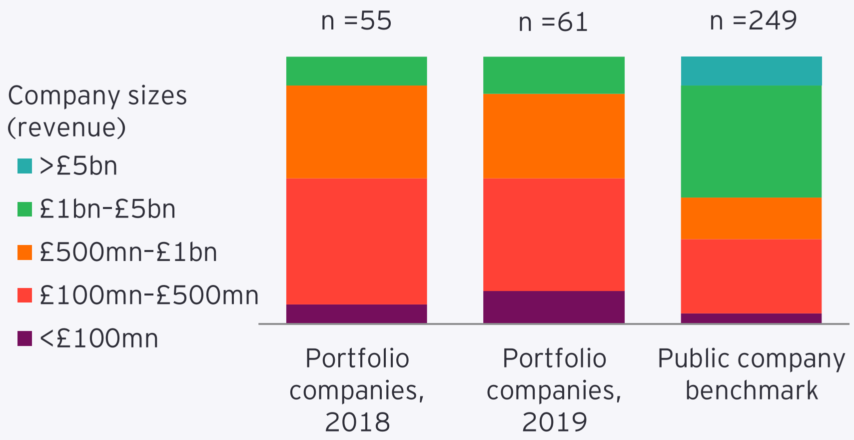
The portfolio companies are skewed towards the consumer and healthcare sectors, accounting for 71% of employment versus 52% in the UK private sector as a whole; the portfolio companies are smaller than the public companies that make up the public company benchmark used in this report

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



Company size mix by number of companies: portfolio companies and public company benchmark

Note: n-count for portfolio companies includes exits where performance figures for year of exit has been provided



- 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 evolves.
- Of the current portfolio companies, 71% of employment is in the consumer and healthcare sectors, compared with 52% in the UK economy. Conversely, portfolio company employment in the financial sector is 3% of the total, compared with 12% for the UK economy as a whole.
- The public company 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.

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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 aggregating portfolio company results.

Sector	Current portfolio companies	Companies in public company benchmark
Consumer	27	89
Healthcare	6	11
Utilities	5	9
Industrials	5	82
Technology	12	31
Financial	6	18
Oil and gas	0	9
Total	**61**	**249**

Public company benchmark

- There are no readily available benchmarks on company performance to compare with the portfolio companies. Public company benchmarks are prepared as follows:
  - All 611 primary listed companies on the London Stock Exchange (LSE) at 31 December 2019.
  - The following are excluded on basis of no sector overlap: 309 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), 24 companies with market capitalisation less than £210mn, the size threshold for take-privates in the PERG criteria, 29 companies with market capitalisation greater than £11bn (the market capitalisation of the largest portfolio company over the period of this study).
  - This results in 249 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, i.e., 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 the result is aggregated – again in the same way as for the portfolio companies, i.e., using the same weighting factors.

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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 PE investments in the portfolio companies.

- One of the most common measures of investment return used by PE investors is equity multiple, i.e., equity realised divided by equity invested, before all fund-level fees and charges. This data, which is not typically disclosed, is provided on 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) to three components:
  - Additional leverage: the effect on the equity multiple of the additional financial leverage PE 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 thereby reducing 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 is adjusted for dividends. The difference between the 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 PE 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 with the investment return after the adjustment for additional leverage, i.e., when both public and PE have the same capital structure.
  - PE 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 PE ownership versus public company benchmark performance, i.e., in earnings growth, valuation multiple change and dividends. The component of the equity multiple for PE 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 have been incorporated.

Glossary of methodology for select analysis

		Performance measure	Methodology
Resources	Labour	**Employment**	
		Reported	Reported employment is based on number of FTEs as reported by the portfolio companies.
		Organic	Measures the number FTEs after excluding for impacts of M&A.
		Employment cost	
		Avg. employment cost-per-head	Employment cost represents salary expense excluding pension.
		Pension provision (surplus/deficit)	Percentage of net assets/market liability of the total market value of the pension scheme assets.
	Capital	**Operating capital employed**	Operating capital employed is defined as the sum of fixed assets and working capital, where:
			► Tangible fixed assets is based on reported figures by the portfolio companies
			► Working capital is calculated as trade debtors + stock – trade creditors (as reported)
Productivity		**Labour productivity**	Calculated as the sum of EBITDA/Employee and GVA/Employee
		EBITDA/employee	EBITDA per employee as reported by the portfolio companies.
		GVA/employee	GVA per employee calculated as total EBITDA + total employment cost (as reported by portfolio companies).
		Capital productivity	Calculated as revenue/operating capital employed, weighted by pro forma capital employed

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