

UNDER THE MICROSCOPE

PRIVATE VS PUBLIC COMPANY OPERATING METRICS FOR US COMPANIES

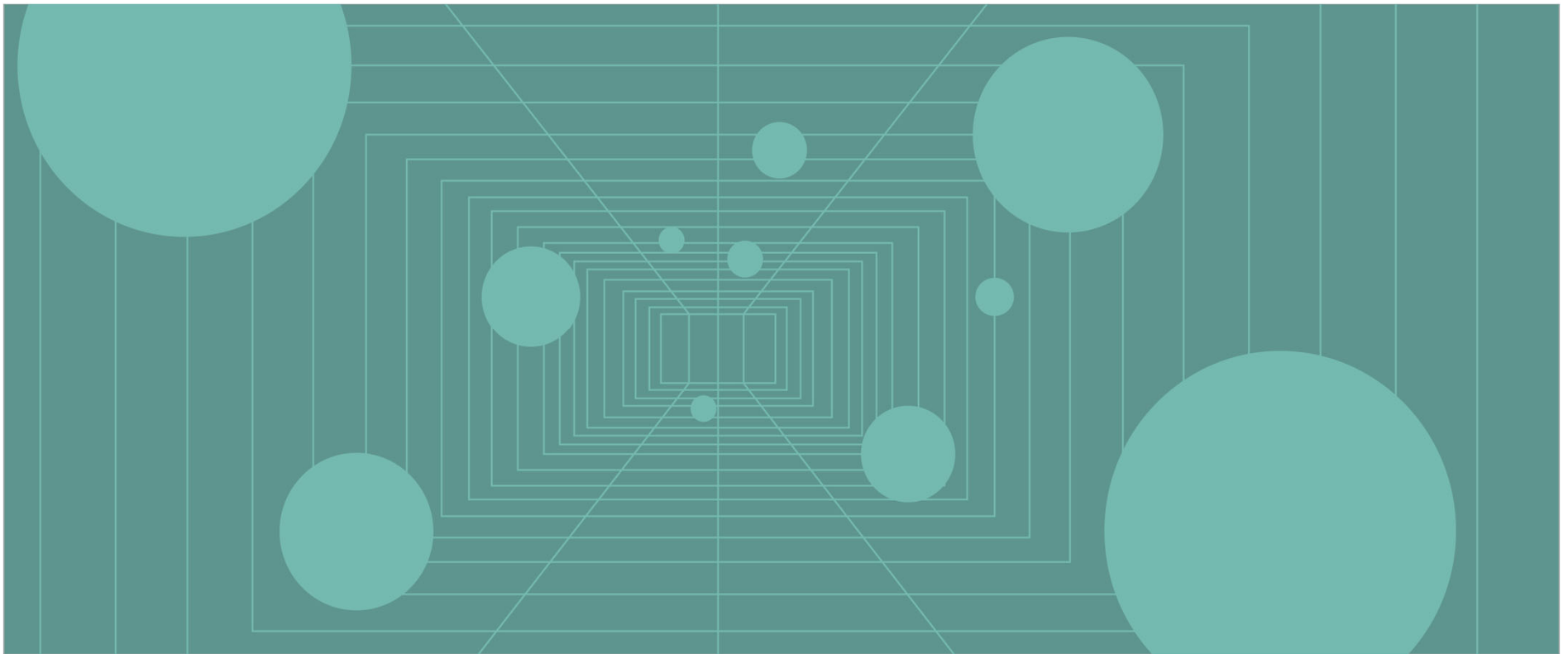


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Introduction to Operating Metrics

- The data in this report on operating metrics provide insights into key parts of the process by which private equity (PE) managers execute their strategy:
 - Purchasing the company and optimizing the capital structure
 - Improving the performance of the company and transforming the business
- PE managers aim to purchase companies at attractive prices, optimize their capital structures, and then—with operational improvements, revenue growth, and/or other acquisitions—seek to sell the company at a higher price.
- Similar metrics can be used to evaluate both private and public companies, though public market analysts typically focus on company earnings and price-earnings ratios rather than EBITDA (earnings before interest, tax, depreciation, and amortization) and use EBITDA multiples as their proxy for cash flow.
- Cambridge Associates has captured and analyzed current and historical data from global PE funds since the year ended December 31, 2011. This year’s report includes data through the period ended December 31, 2021.
- Our analysis allows for the comparison of private and public companies across industry sectors and company sizes for various parts of the investment process. The data shed light on key levers and value drivers in private equity, as well as the risks and returns of private equity versus public equity.

Notes on the Data

- Cambridge Associates collected information from PE firms of all sizes with broad mandates, as well as specialized and sector-focused strategies. The sample of private investments includes approximately 6,700 US-based companies acquired by PE firms from 2000 through 2021 and is subject to change over time. The companies in the universe range in enterprise value from less than \$1 million to more than \$100 billion.
- Within the report, depending on the metric analyzed, the set of companies included will vary. This is due to the acquisition and disposition of companies during the period analyzed. Additionally, this reflects the impact of a statistical tool—an interquartile range—used to screen for outliers as part of each calculation. Lastly, restatements in company data that sometimes occur may lead to changes in historical metrics.
- Operating metrics data were collected directly from investment managers and have not been independently verified.
- Unless specified, the exhibits include unrealized and realized investments.
- For comparisons between the total company universe and public markets, the Russell 2500™ Index was selected based on the market capitalization of the underlying stocks. When breaking down companies by enterprise value, other Russell indexes with more appropriate market cap ranges have been used.
- Deal type categorizations have been made at the company level and reflect information provided by the PE managers.
- Sector classifications are based on the Global Industry Classification Standard (GICS®). GICS was developed by and is the exclusive property and a service mark of MSCI Inc. and S&P Global Market Intelligence LLC and is licensed for use by Cambridge Associates LLC.
- Individual company operating metrics (e.g., revenue and EBITDA) have not been adjusted for acquisitions.
- The analyzed holding period for some companies represented in the dataset is short, and thus EBITDA growth rates may be muted initially, as PE owners do not seek to maximize EBITDA in the first several years of ownership.
- Any company with a negative metric for EBITDA, net debt, or revenue was excluded from analysis using that metric.
- Company counts for each analysis reflect all submitted transactions, excluding outliers. We eliminate “duplicate” transactions completed by the same firm across funds in a given year. For “club” or syndicated deals that involve two or more separate firms, there are two or more companies in our universe.
- When the operating metrics information is disaggregated into deal type, enterprise value, and sectors, the sample sizes are smaller and may be biased by one or several data points. Time periods with fewer than 15 observations have been marked NA.
- Past results are not an indication of future results, provide no guarantee for the future, and will not be constant over time.

PURCHASE THE COMPANY AND OPTIMIZE CAPITAL STRUCTURE

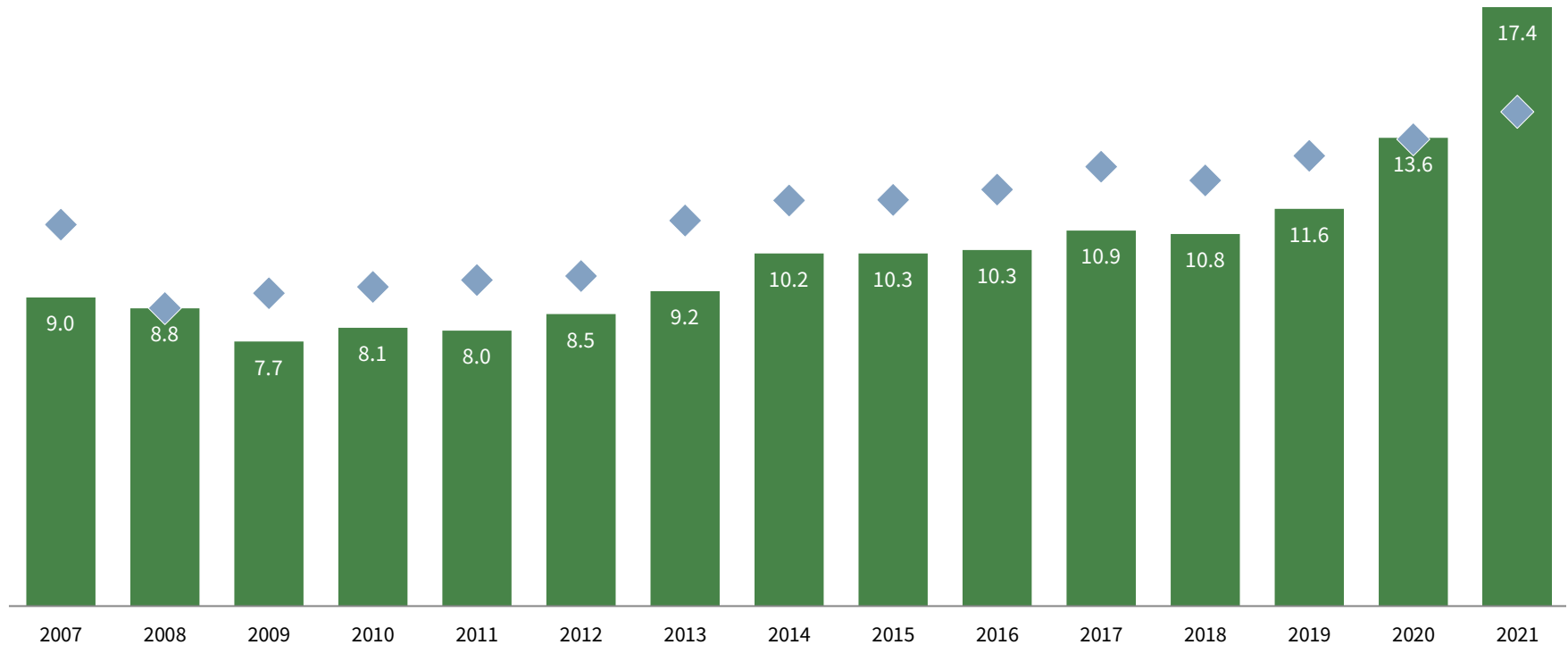
- **EBITDA Purchase Price Multiple**
- Leverage Multiple

Average EBITDA PPMs reached new highs in 2021

Valuations in 2021 were nearly four turns higher than the prior year and more than two times the low of 2009

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Enterprise Value/EBITDA



Number of Companies

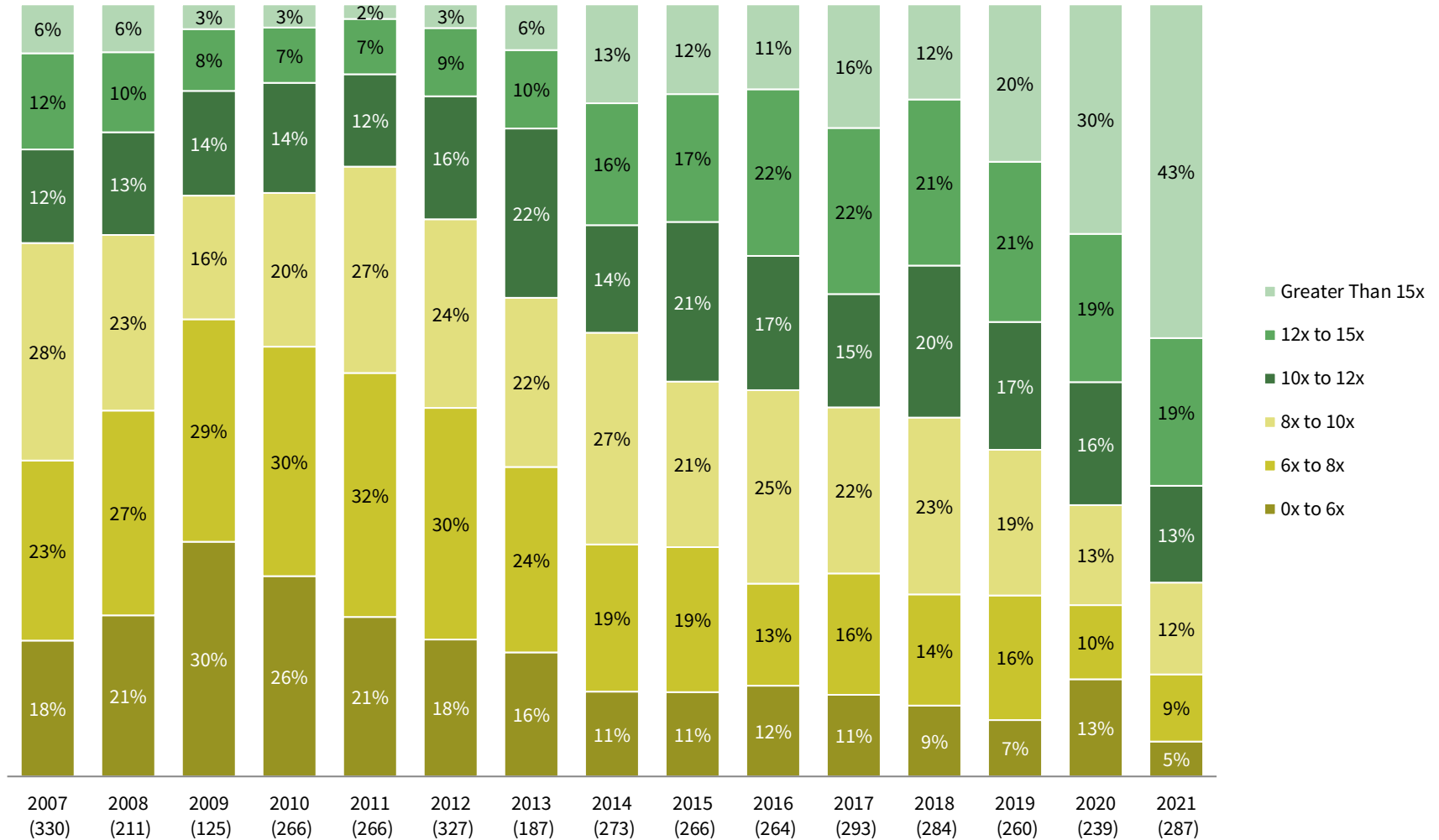
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PE-Owned Companies	330	211	125	266	266	327	187	273	266	264	293	284	260	239	287
Russell 2500™ Index	1,492	1,520	1,596	1,666	1,635	1,655	1,666	1,685	1,642	1,619	1,593	1,568	1,523	1,432	1,490

The percentage of deals transacting at EBITDA multiples of 10x or higher has more than tripled (to 75%) since 2011

In 2021, more than 40% of deals transacted at greater than a 15x multiple, the highest on record

AVERAGE EBITDA PURCHASE PRICE MULTIPLE BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2021 • Enterprise Value/EBITDA

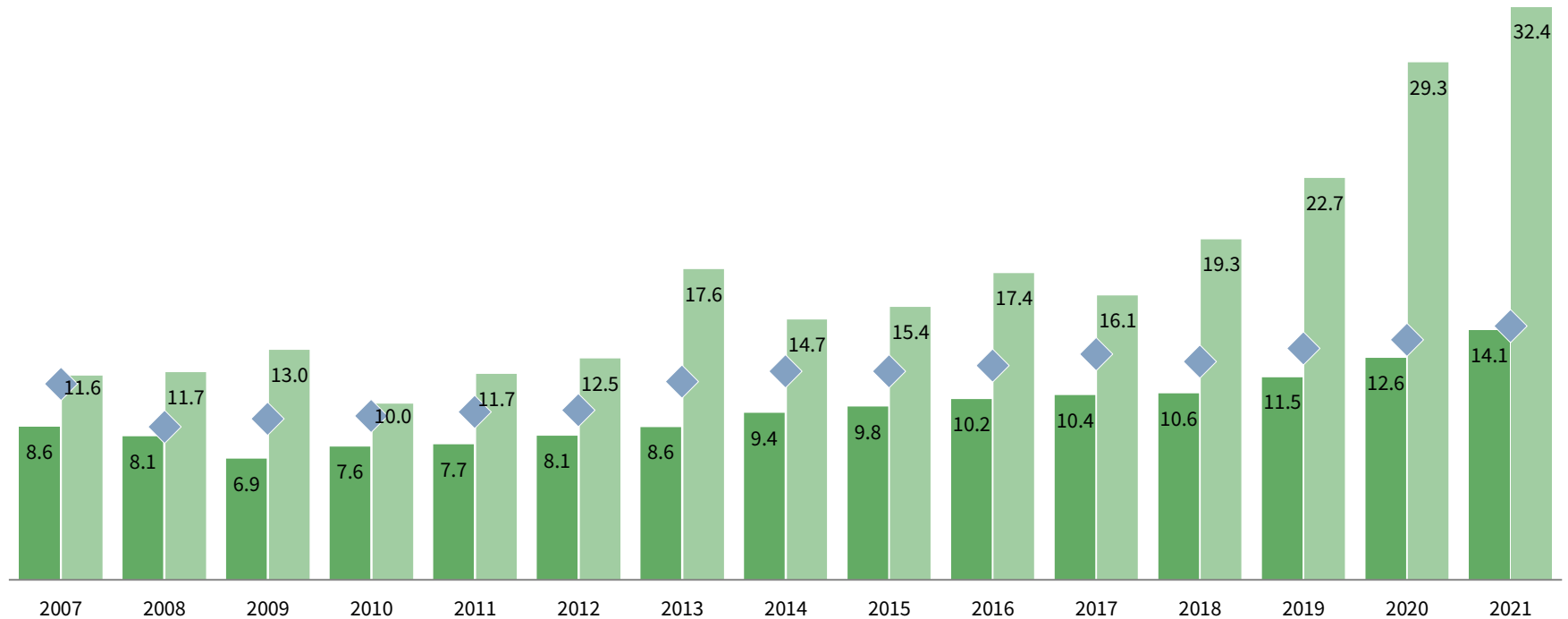


Buyout, growth equity, and public companies transacted at record highs during 2021

Growth equity valuations were no longer grounded in EBITDA, as evidenced by an average multiple of 32 times in 2021

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Enterprise Value/EBITDA



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	261	162	95	198	208	266	138	215	218	212	225	219	187	154	212
Growth Equity Companies	62	43	27	58	45	56	49	53	41	58	60	46	53	74	75
Russell 2500™ Index	1,492	1,520	1,596	1,666	1,635	1,655	1,666	1,685	1,642	1,619	1,593	1,568	1,523	1,432	1,490

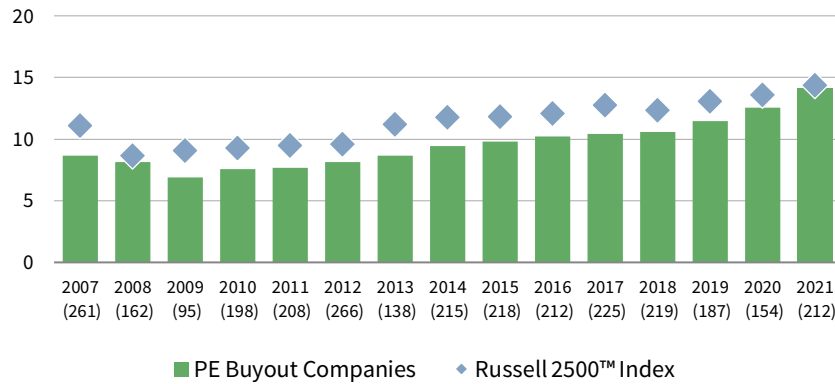
Only small-cap buyouts consistently transacted at meaningful discounts to publics

Large buyouts had their most active year and transacted at the biggest valuation premium versus public companies

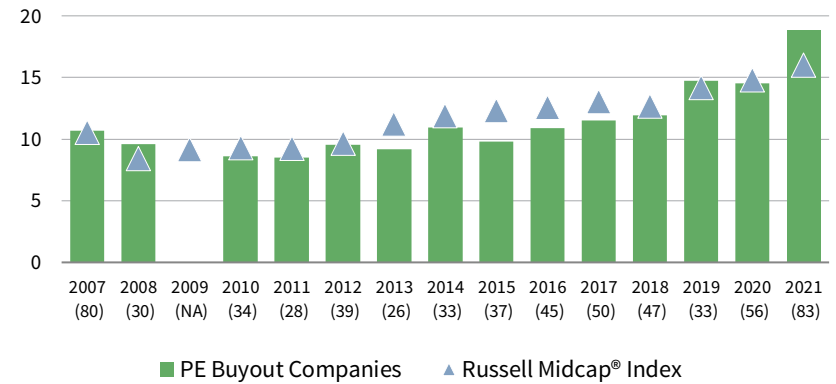
AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2021 • Enterprise Value/EBITDA

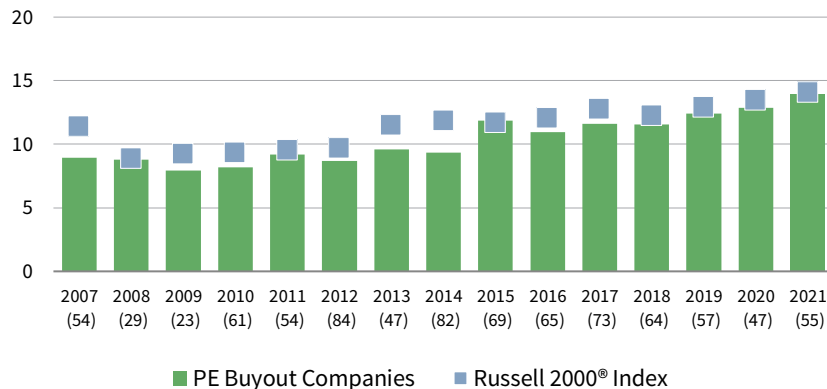
Total Universe



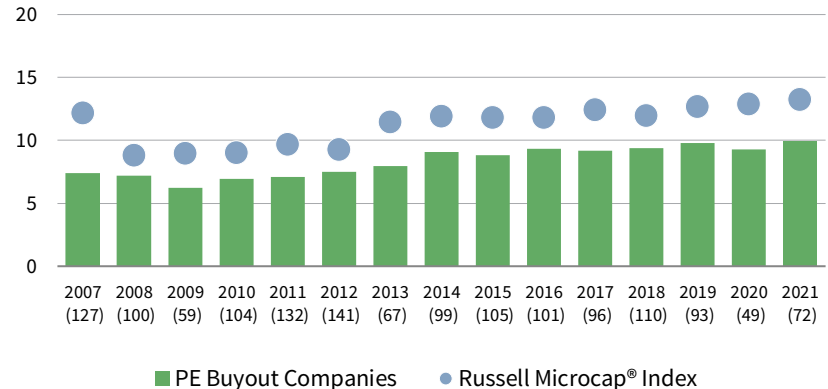
Enterprise Value > \$1 B



Enterprise Value \$250 M – \$1 B



Enterprise Value < \$250 M



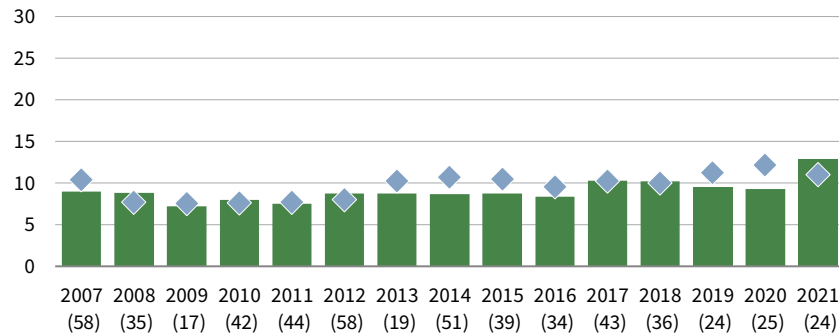
Healthcare and IT valuations have jumped since 2018. IT remains the only sector where private equity does not transact at a discount to publics

Since 2009, PPMs have increased dramatically across all sectors, ranging from 59% (industrials) to 222% (IT)

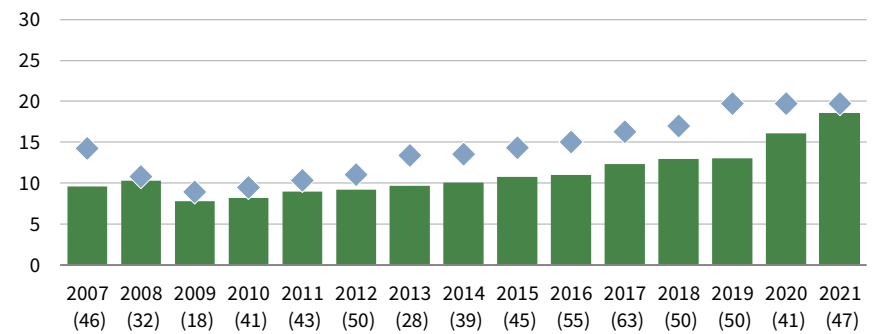
AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2021 • Enterprise Value/EBITDA

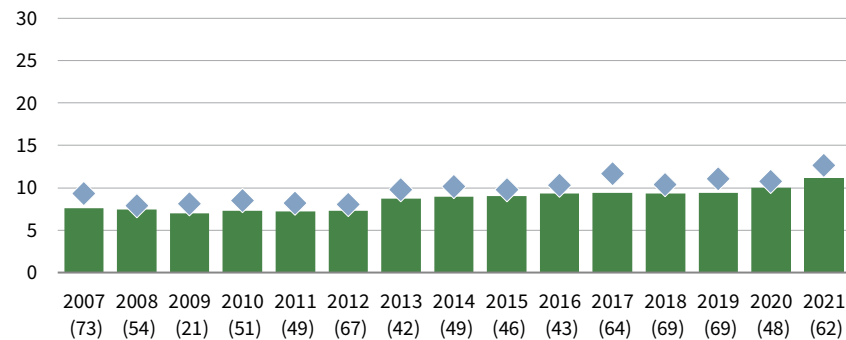
Consumer Discretionary



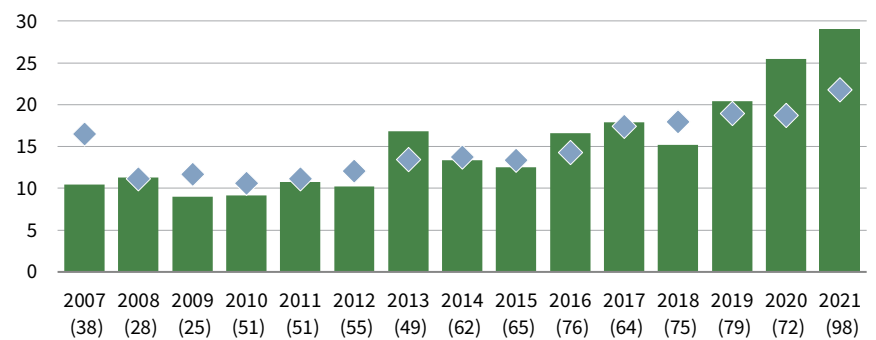
Healthcare



Industrials



Information Technology



■ Private Equity Owned

◆ Russell 2500™

PURCHASE THE COMPANY AND OPTIMIZE CAPITAL STRUCTURE

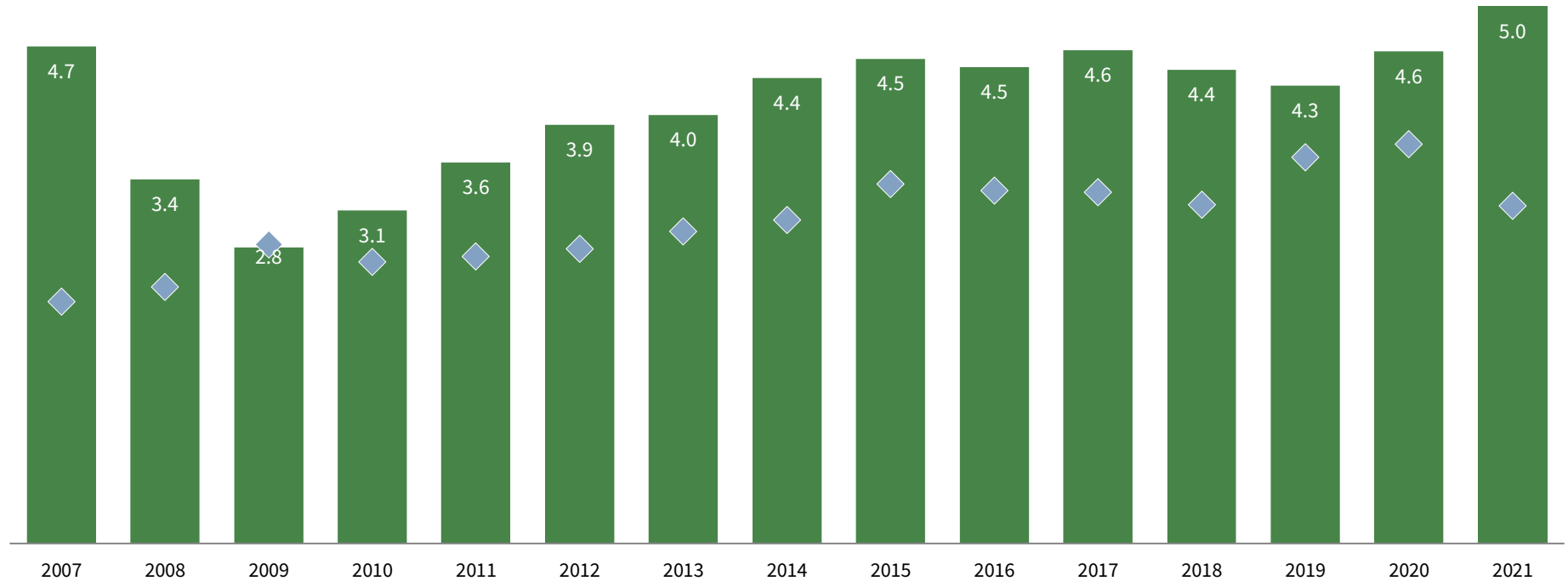
- EBITDA Purchase Price Multiple
- **Leverage Multiple**

Leverage multiples for PE-backed companies hit a new high in 2021

The gap between private and public leverage widened meaningfully in 2021, representing the largest difference between the two since 2007

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Net Debt/EBITDA



Number of Companies

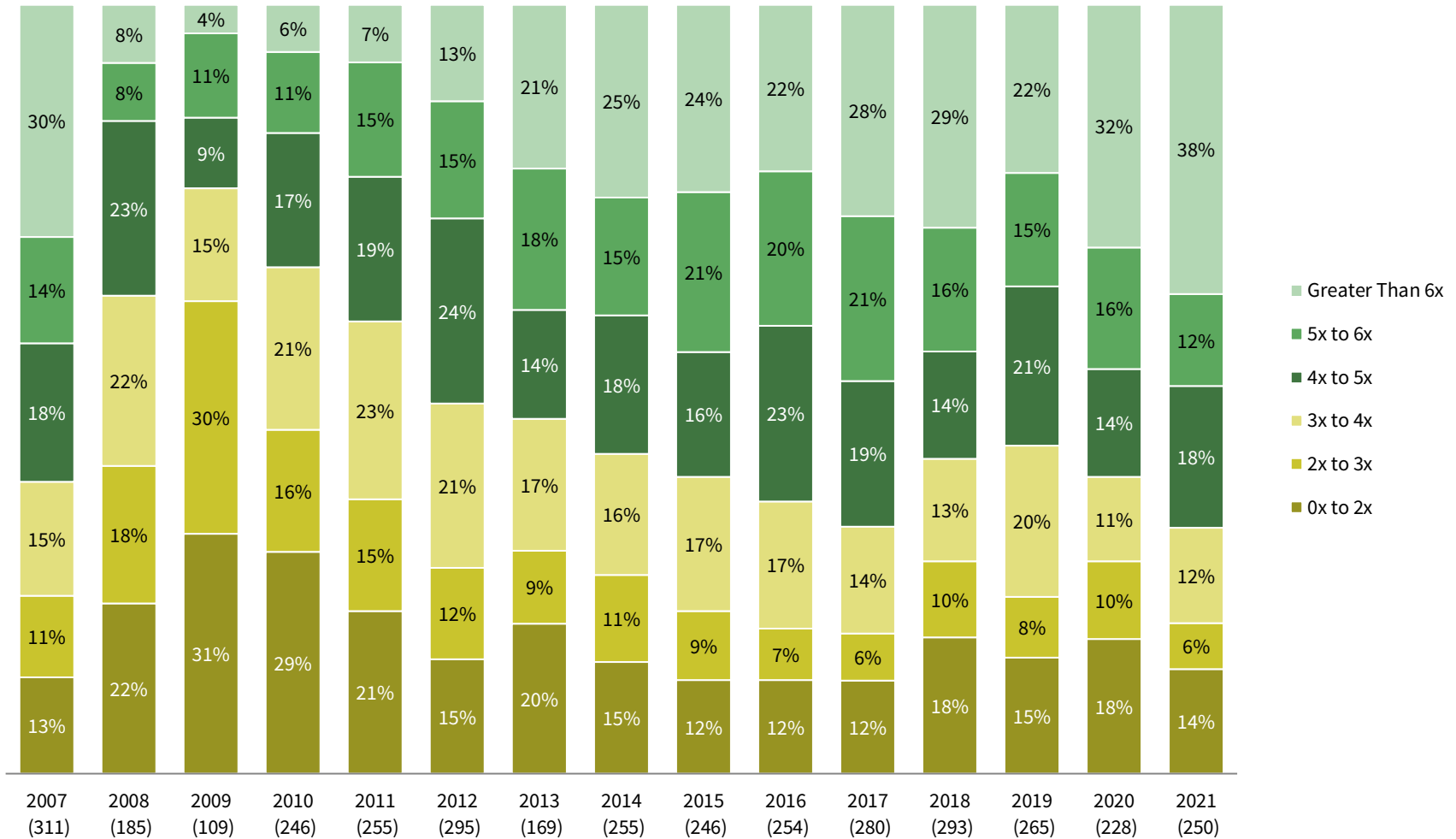
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PE-Owned Companies	311	185	109	246	255	295	169	255	246	254	280	293	265	228	250
Russell 2500™ Index	956	998	1,022	1,012	1,000	1,096	1,136	1,187	1,220	1,215	1,234	1,229	1,285	1,135	1,176

Almost 40% of deals in 2021 used leverage of 6x EBITDA or greater

This is the largest percentage of any year in the sample

AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2021 • Net Debt/EBITDA

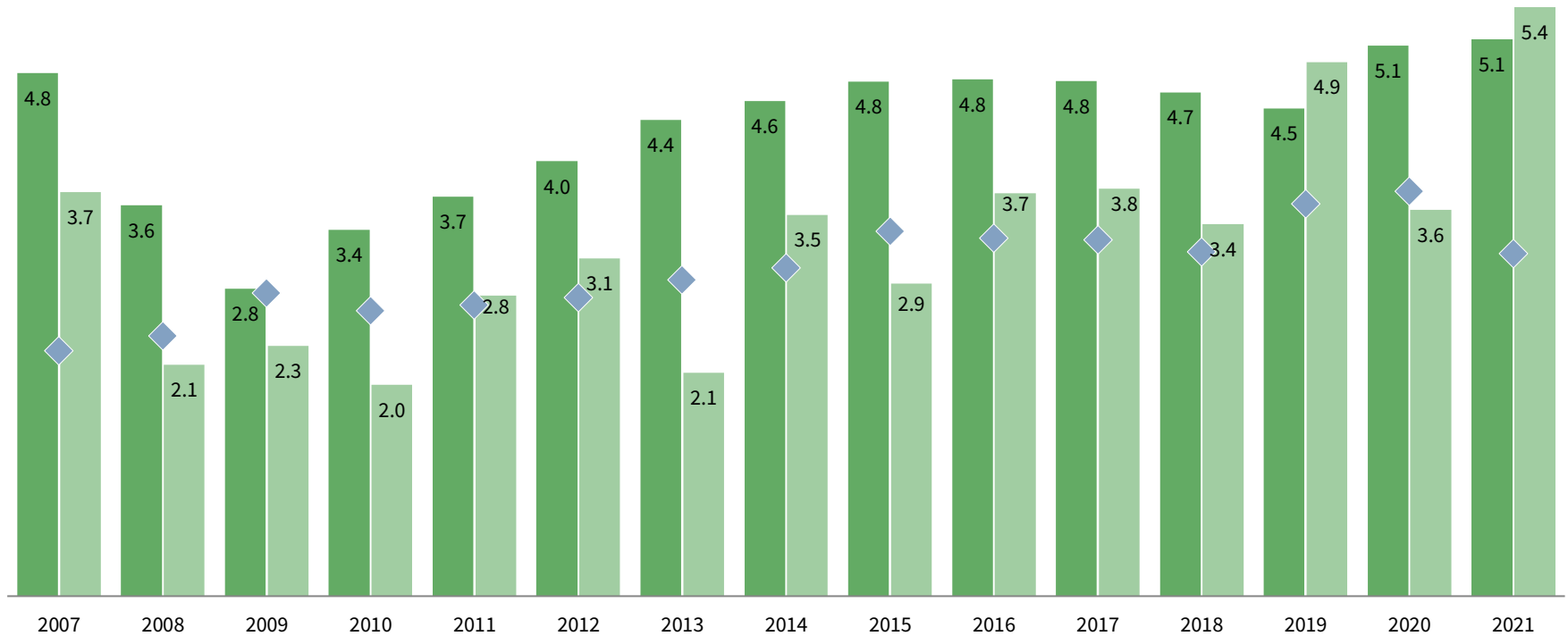


Average growth equity and buyout leverage multiples have remained elevated

Both hit new highs in 2021

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Net Debt/EBITDA



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	261	150	80	197	217	257	135	209	211	203	224	220	187	150	198
Growth Equity Companies	42	28	22	42	32	32	27	39	28	41	43	45	43	47	51
Russell 2500™ Index	956	998	1,022	1,012	1,000	1,096	1,136	1,187	1,220	1,215	1,234	1,229	1,285	1,135	1,176

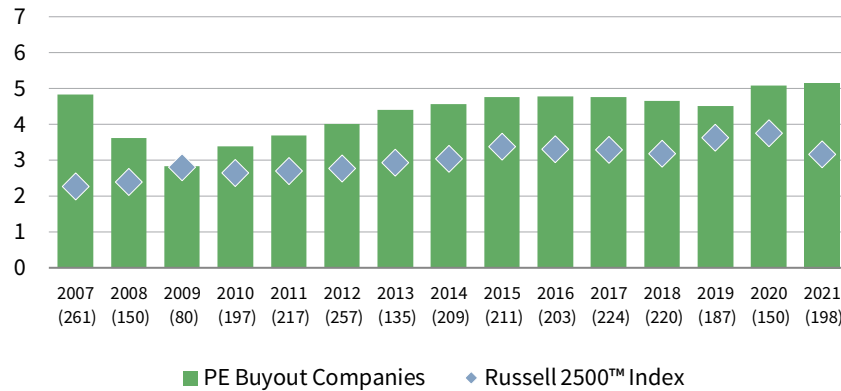
In 2021, large buyouts averaged their highest leverage multiples since 2007

However, multiples for mid-cap buyouts and public companies across size ranges declined

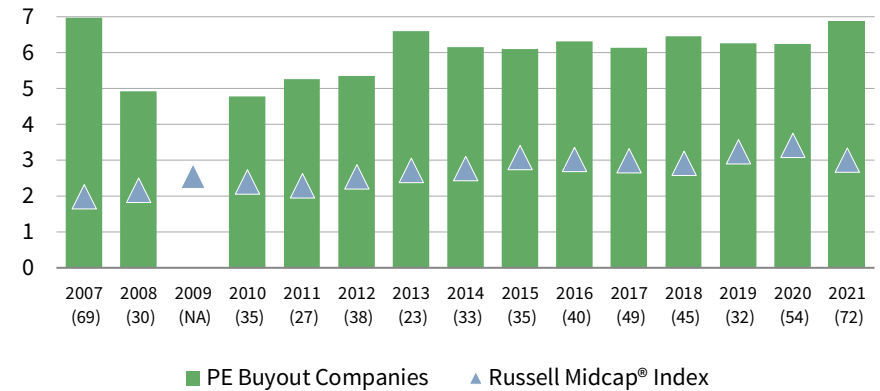
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2021 • Net Debt/EBITDA

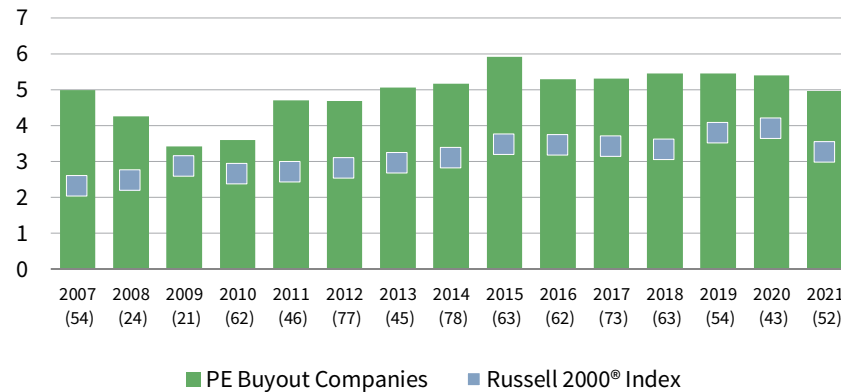
Total Universe



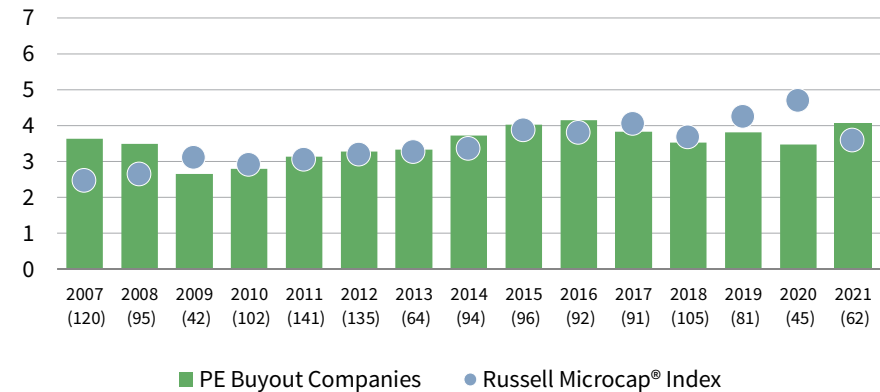
Enterprise Value > \$1 B



Enterprise Value \$250 M – \$1 B



Enterprise Value < \$250 M



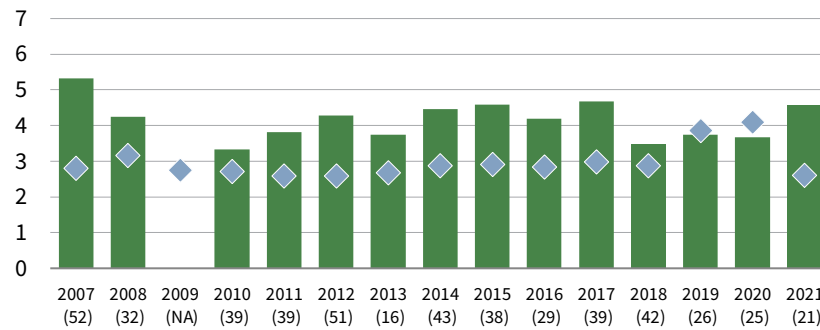
PE leverage multiples in healthcare and IT outpaced publics by the largest margin on record in 2021

Healthcare is the first sector to record a yearly average of greater than 6x leverage

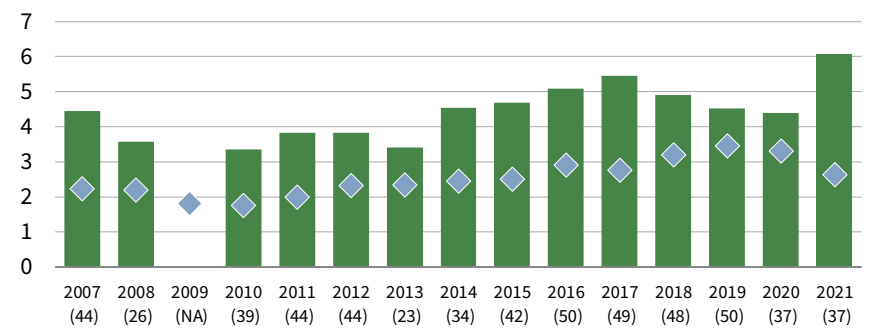
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2021 • Net Debt/EBITDA

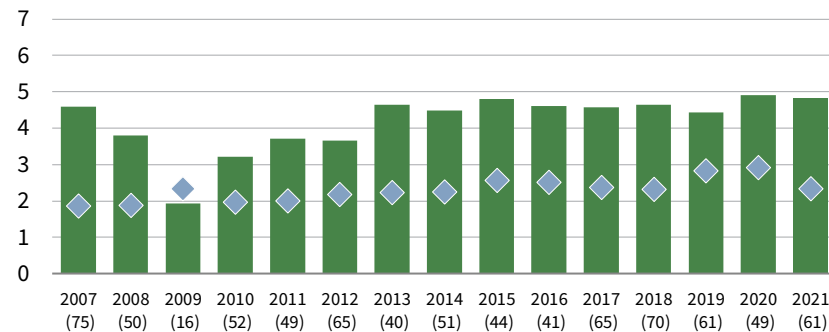
Consumer Discretionary



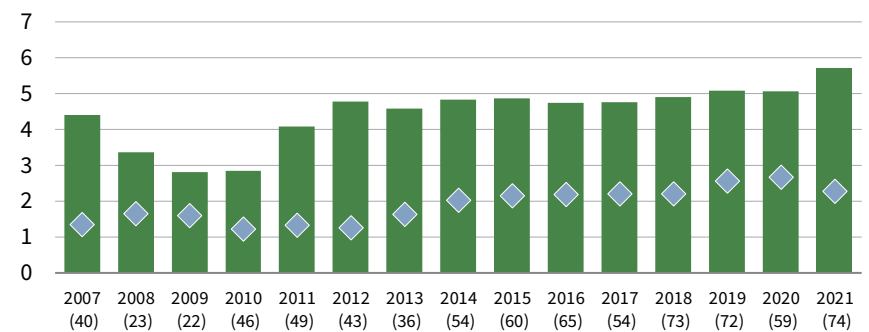
Healthcare



Industrials



Information Technology



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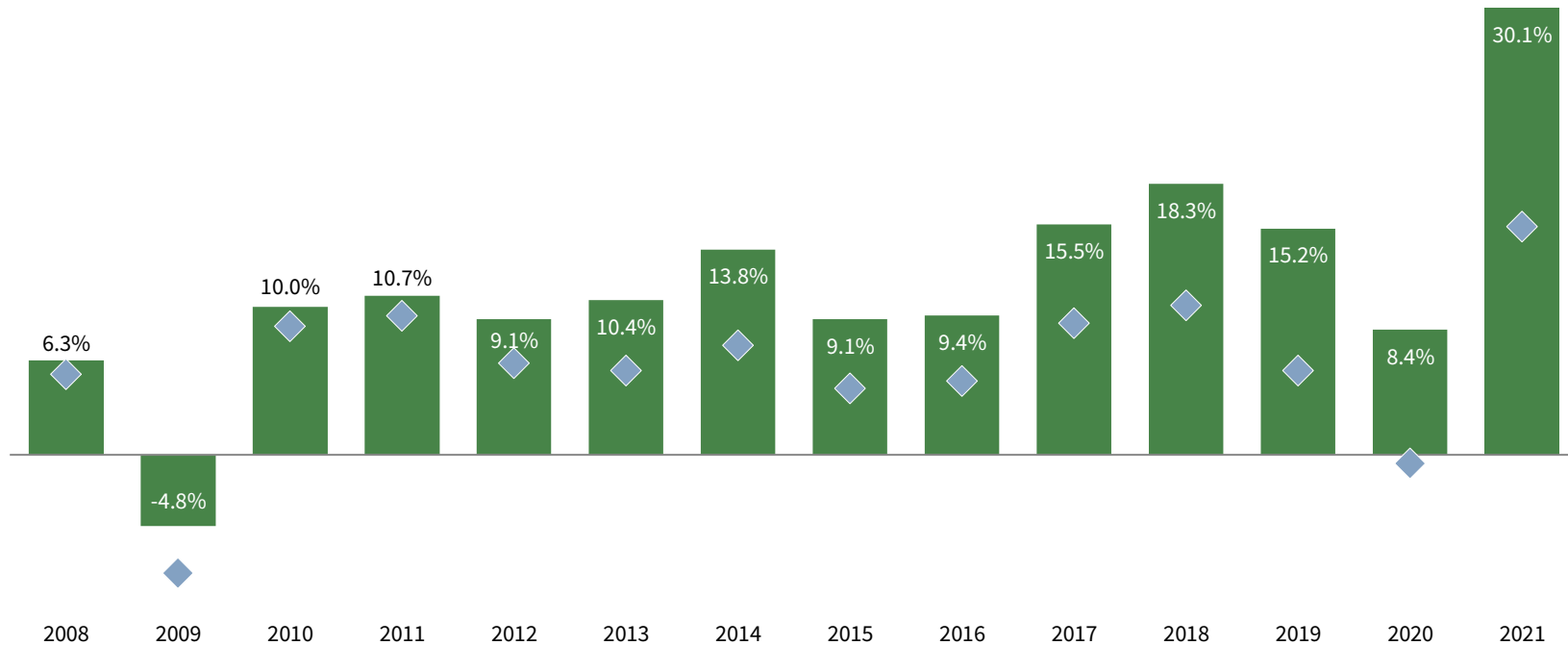
- **Revenue Growth**
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

2021 revenue growth was more than 3x higher than in 2020, indicating the COVID-19 pandemic recovery

In the last five years, PE company revenue growth has outpaced public company growth by ~10% annually compared to the prior nine years at ~3%

AVERAGE ANNUAL REVENUE GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Annual Growth Rate (%)



Number of Companies

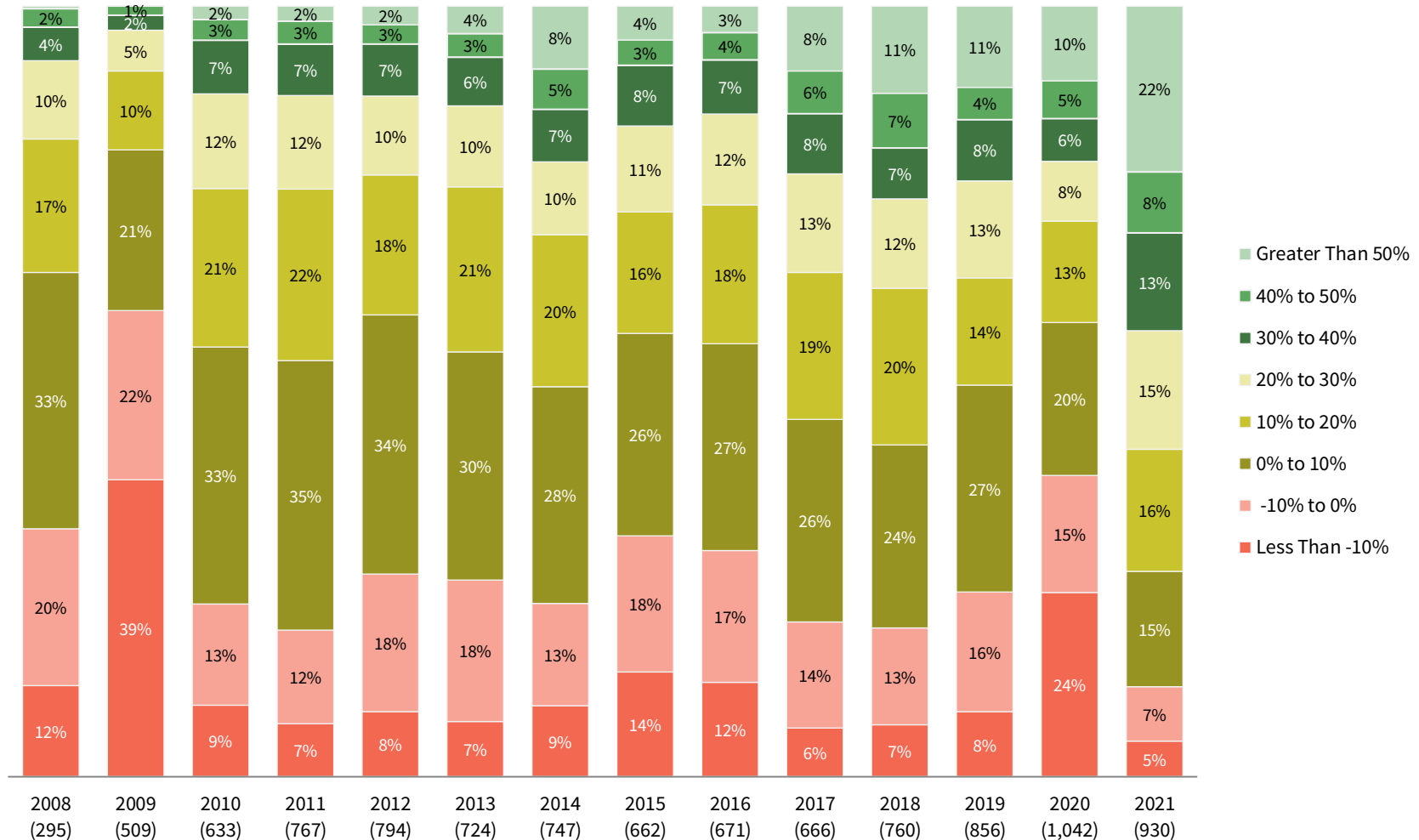
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PE-Owned Companies	295	509	633	767	794	724	747	662	671	666	760	856	1,042	930
Russell 2500™ Index	2,026	2,020	2,050	2,042	2,001	2,028	2,043	2,033	2,002	1,982	2,000	1,995	1,993	1,997

Across the time period, 2021 had the smallest percentage of deals with declining revenue

During the year, 43% of the universe grew revenue by 30% or more

AVERAGE ANNUAL REVENUE GROWTH BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2021 • Annual Growth Rate (%)

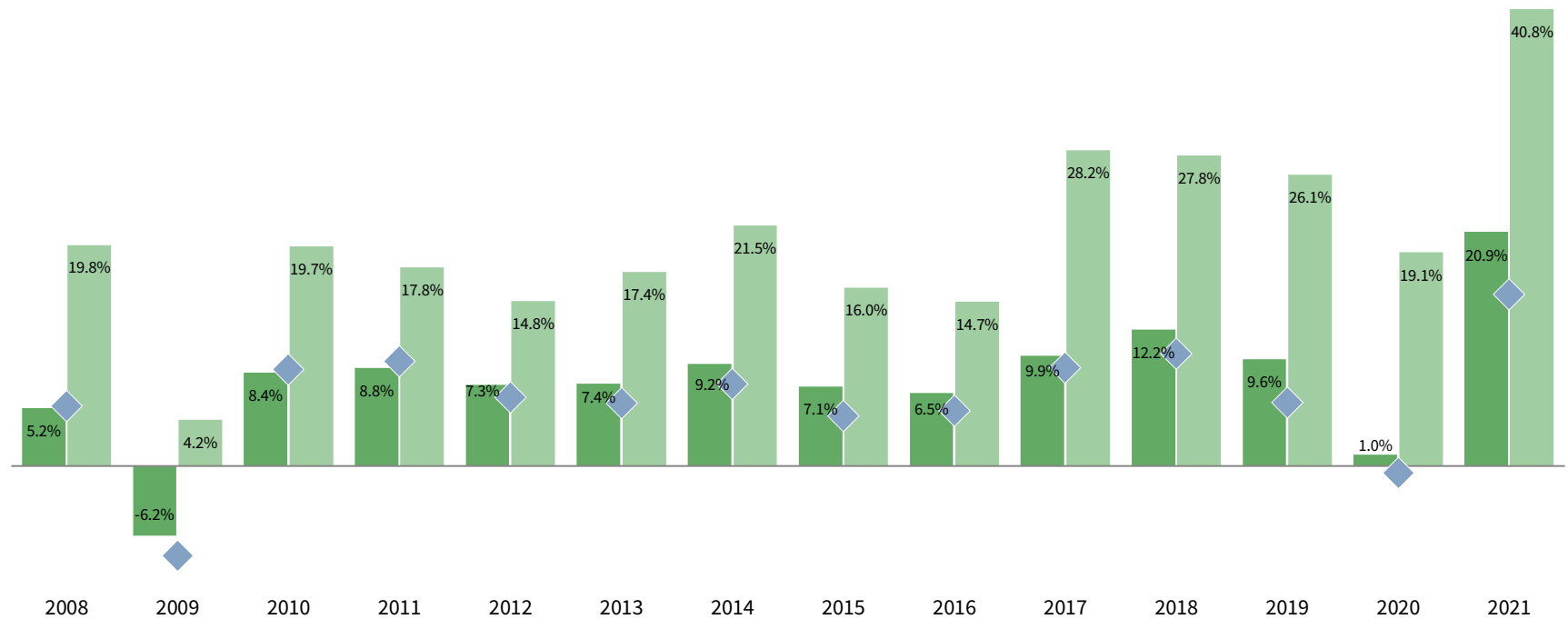


Revenue growth hit new heights in 2021

Growth equity companies stood out with 40.8% year-over-year growth, nearly double their long-term average

AVERAGE ANNUAL REVENUE GROWTH OF US BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	254	412	483	568	543	460	463	364	405	392	445	472	568	498
Growth Equity Companies	48	92	140	178	209	239	244	257	249	246	297	354	408	402
Russell 2500™ Index	2,026	2,020	2,050	2,042	2,001	2,028	2,043	2,033	2,002	1,982	2,000	1,995	1,993	1,997

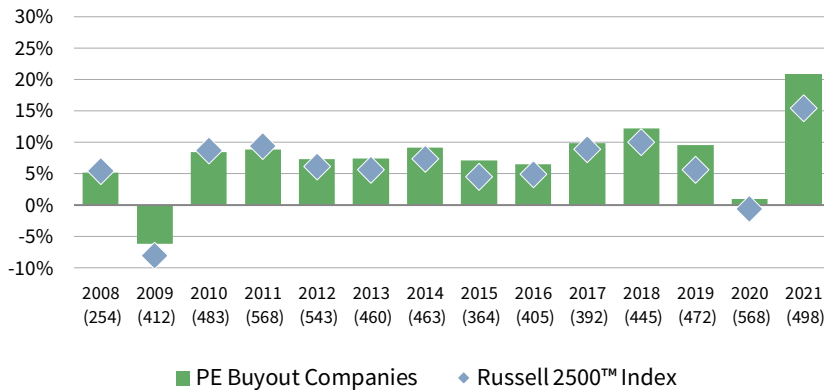
Across all size ranges and years, public and private revenue growth reached new highs in 2021

Average annual revenue growth in 2020–21 for small and large buyouts was roughly double that of the previous 12 years

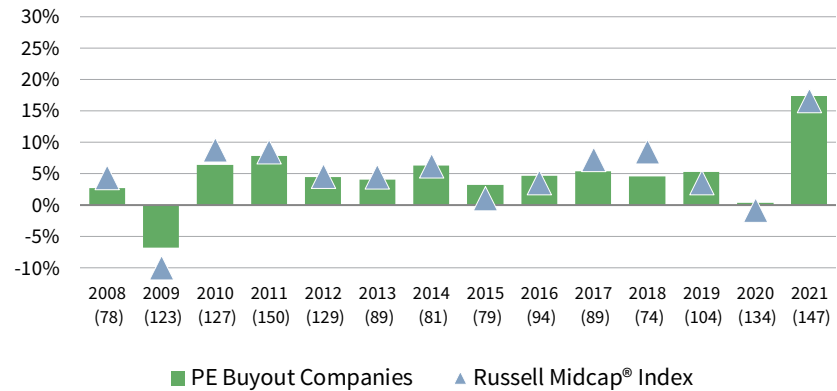
AVERAGE ANNUAL REVENUE GROWTH OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2021 • Annual Growth Rate (%)

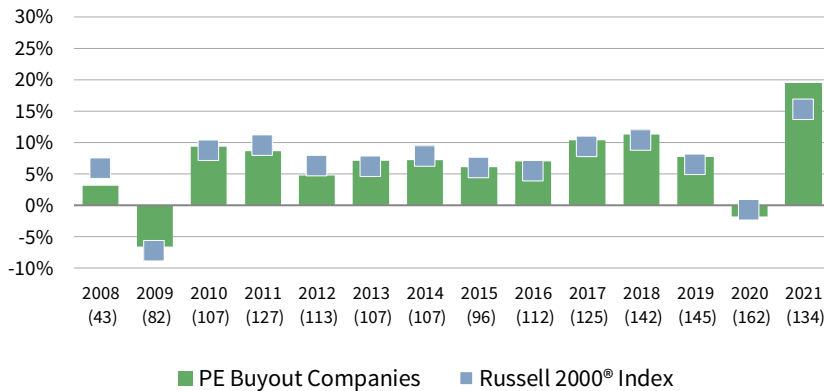
Total Universe



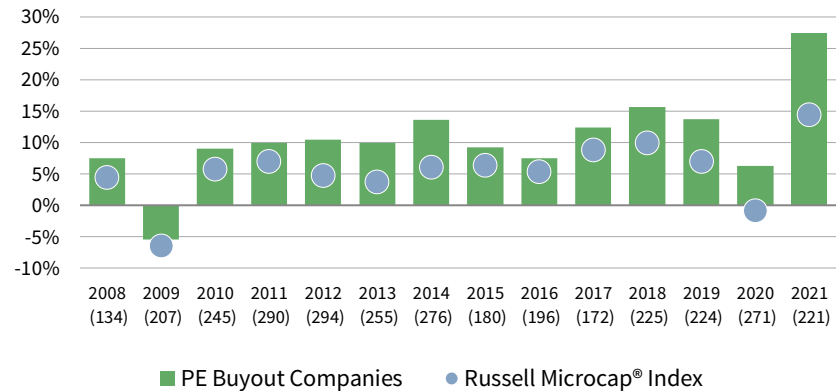
EV > \$1 B



EV \$250 M – \$1 B



EV < \$250 M



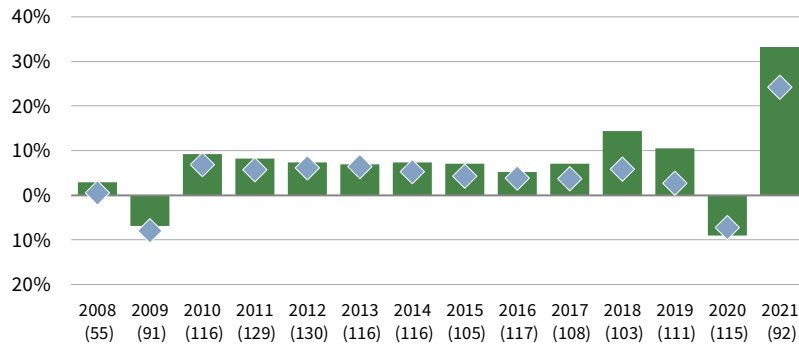
All sectors saw record growth in 2021

Highlighting the sector's cyclical nature, consumer discretionary had the biggest rebound in 2021 following the worst decline in 2020

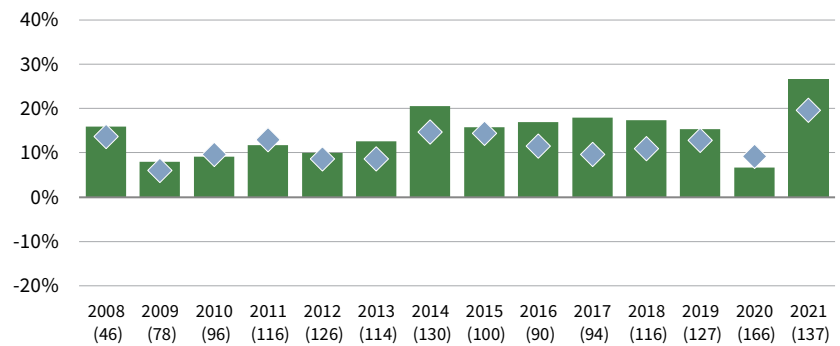
AVERAGE ANNUAL REVENUE GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2021 • Annual Growth Rate (%)

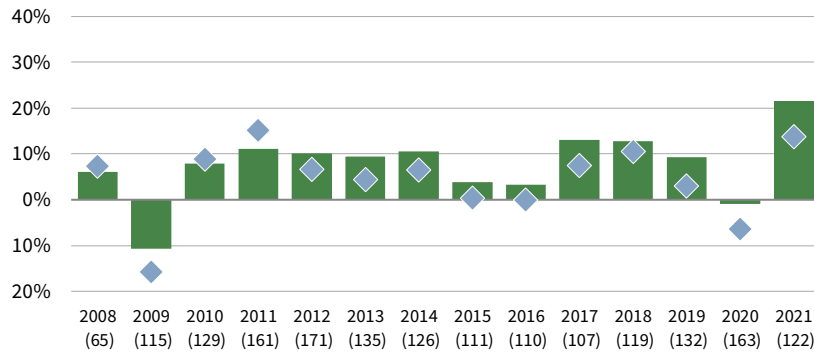
Consumer Discretionary



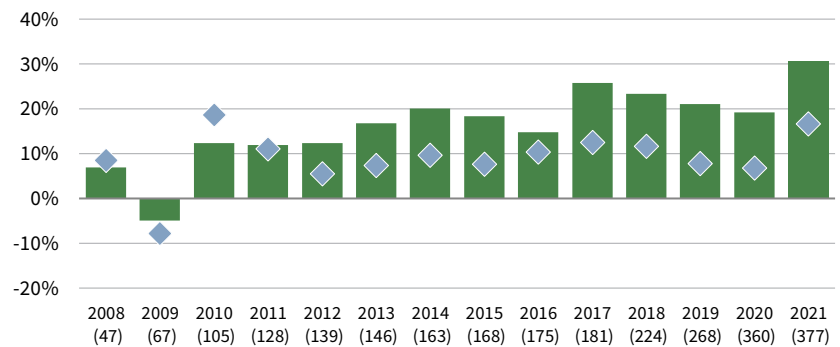
Healthcare



Industrials



Information Technology



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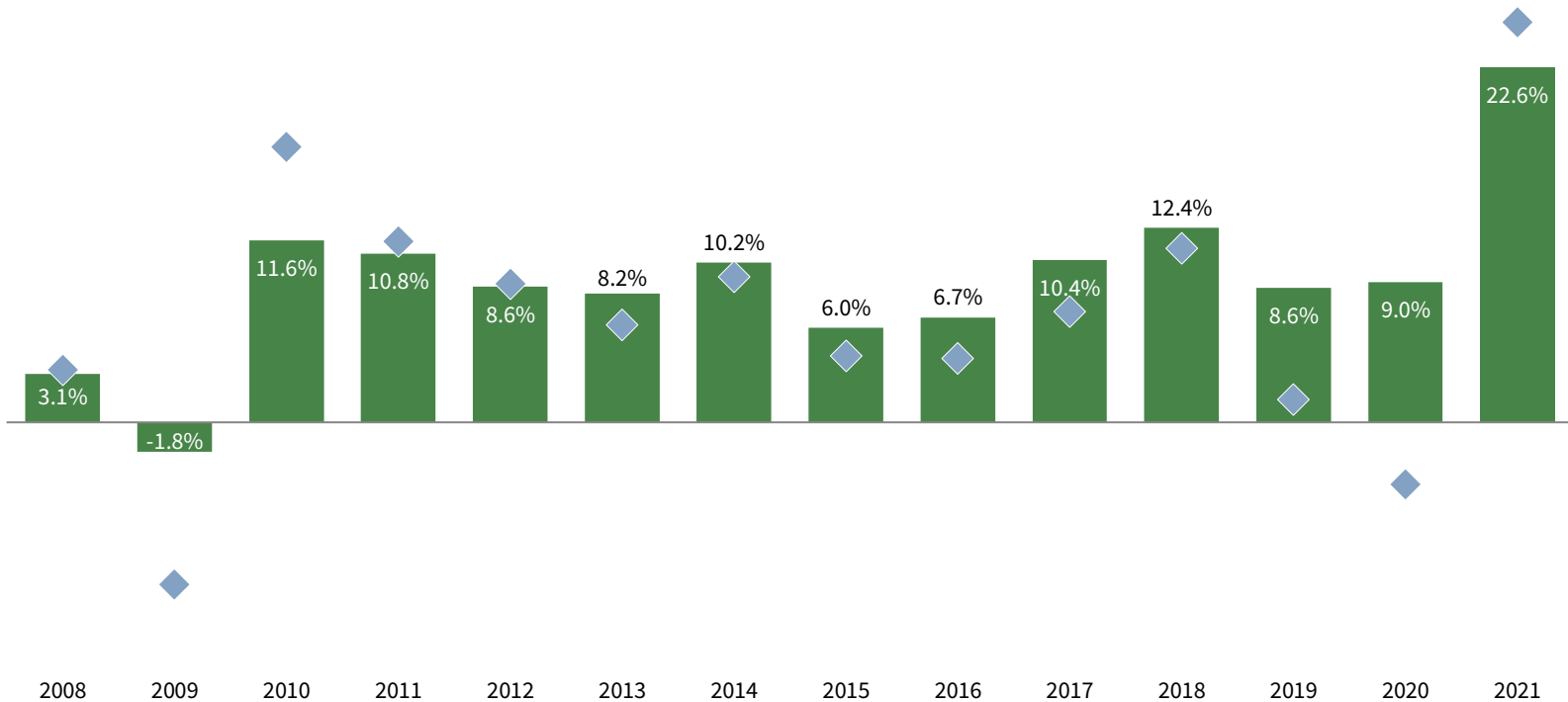
- Revenue Growth
- **EBITDA Growth**
- EBITDA Margin
- Exit Metrics

The average EBITDA growth of all companies was greater than 20% in 2021, the only time during the period analyzed

In 2021, public company EBITDA growth exceeded that of PE-backed businesses for the first time since 2012

AVERAGE ANNUAL EBITDA GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Annual Growth Rate (%)



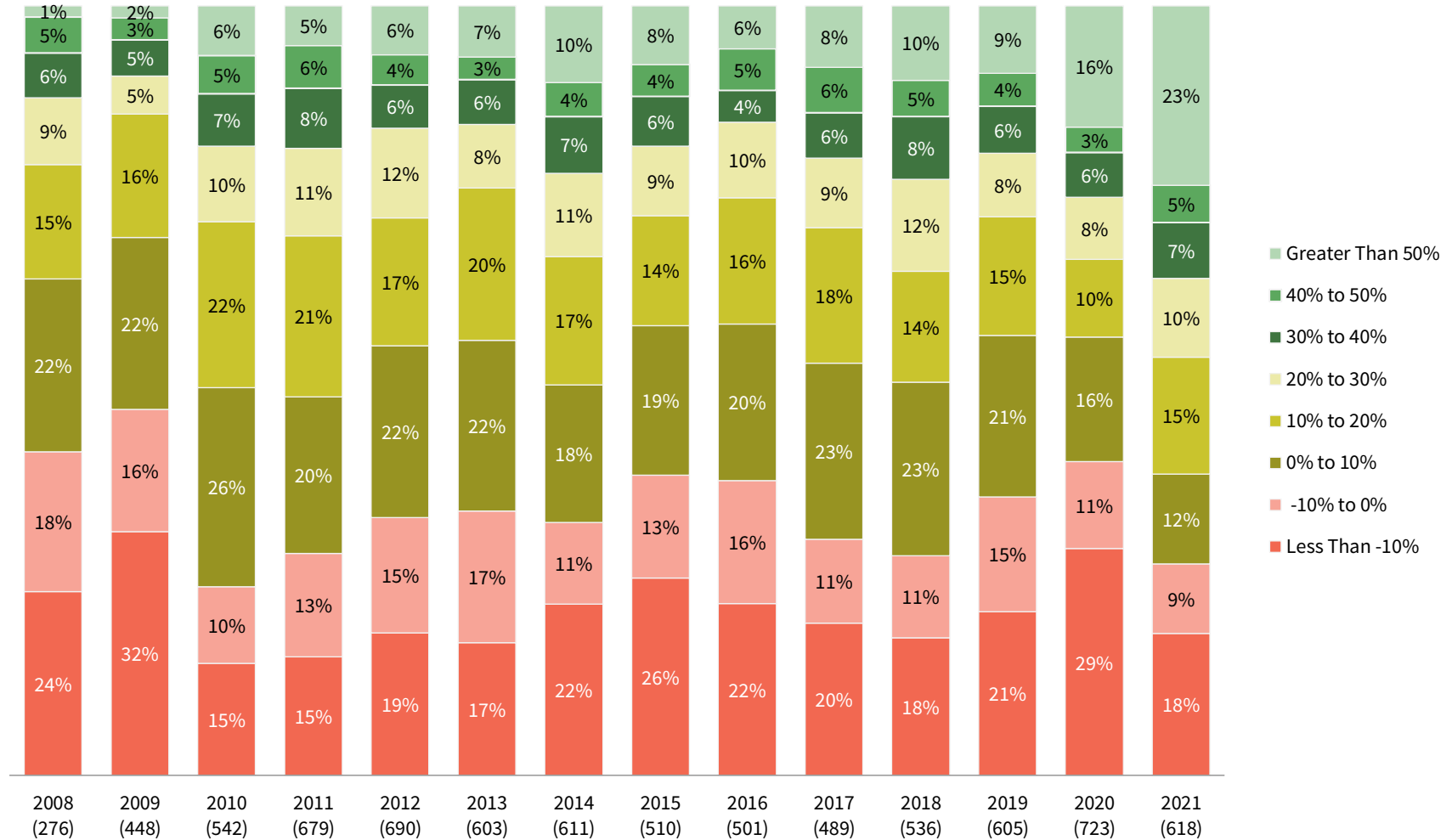
	Number of Companies														
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
PE-Owned Companies	276	448	542	679	690	603	611	510	501	489	536	605	723	618	
Russell 2500™ Index	1,314	1,293	1,386	1,467	1,440	1,465	1,454	1,426	1,395	1,404	1,391	1,389	1,311	1,255	

In 2021, a third of PE-backed companies grew EBITDA by more than 30%

Notwithstanding the recovery, nearly 30% of companies experienced EBITDA declines

AVERAGE ANNUAL EBITDA GROWTH BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES^{B1:R34}

As of December 31, 2021 • Annual Growth Rate (%)

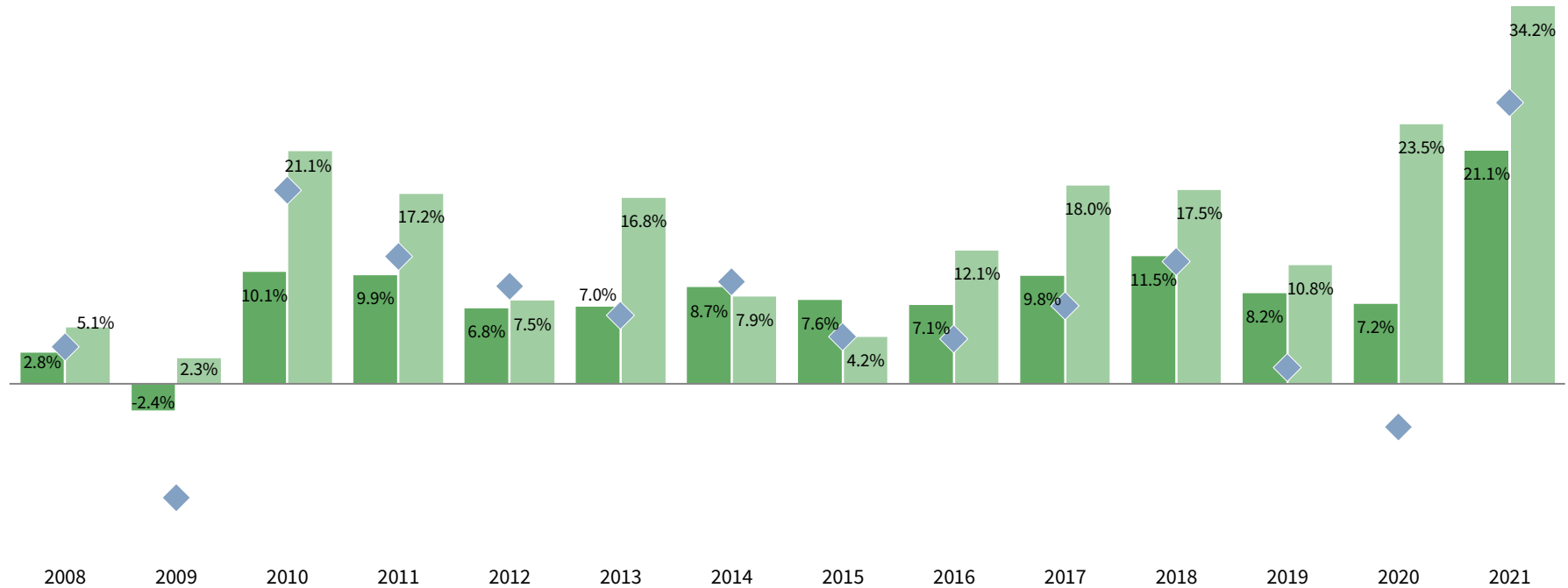


Buyout, growth equity, and public companies averaged the highest EBITDA growth of any year analyzed in 2021

Public companies grew EBITDA faster than buyouts for the first time since 2014

AVERAGE ANNUAL EBITDA GROWTH OF US BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	241	380	423	531	514	432	445	346	358	363	409	435	515	447
Growth Equity Companies	34	64	106	137	150	151	147	136	123	109	127	146	167	169
Russell 2500™ Index	1,314	1,293	1,386	1,467	1,440	1,465	1,454	1,426	1,395	1,404	1,391	1,389	1,311	1,255

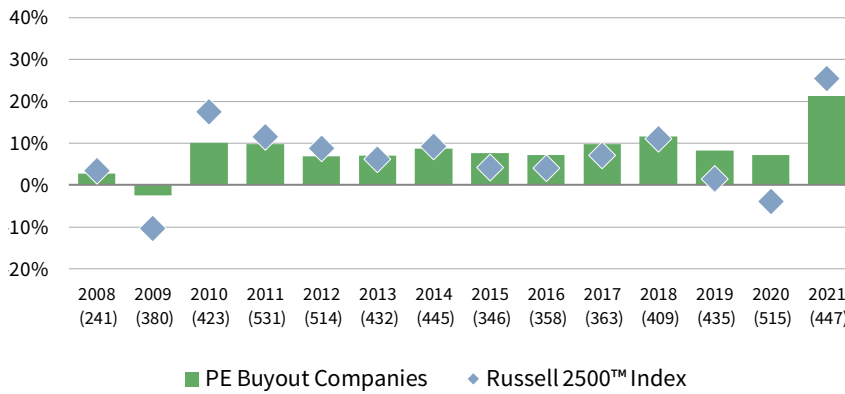
Small-cap companies (public and private) grew EBITDA the fastest

Public company growth outpaced PE at every size segment in 2021

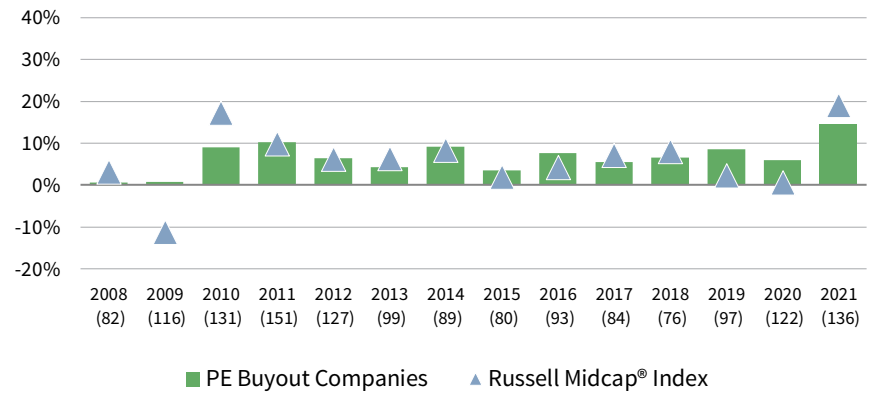
AVERAGE ANNUAL EBITDA GROWTH OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2021 • Annual Growth Rate (%)

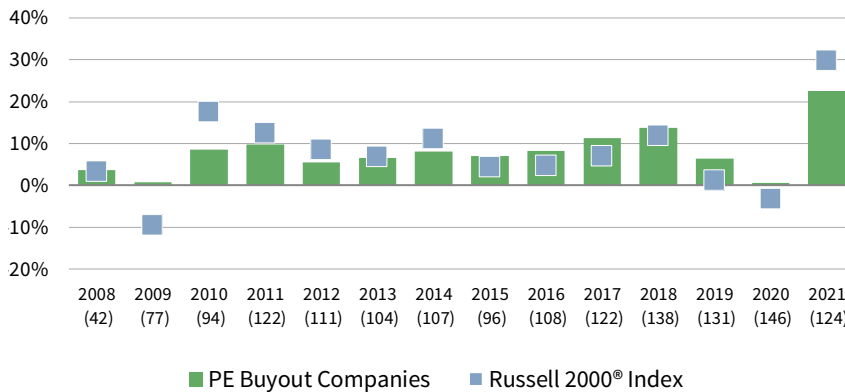
Total Universe



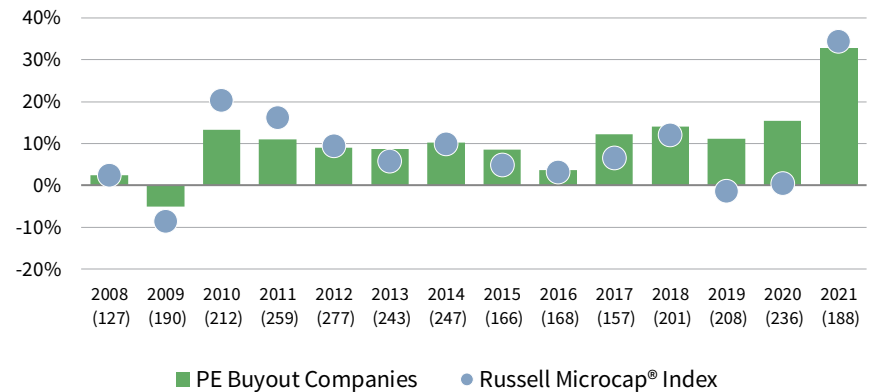
Enterprise Value > \$1 B



Enterprise Value \$250 M – \$1 B



Enterprise Value < \$250 M



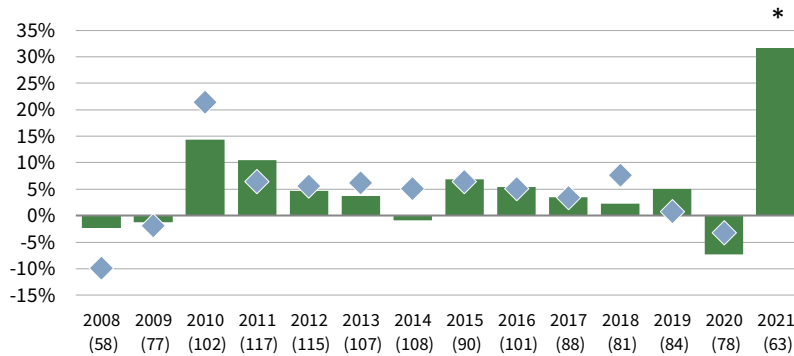
All sectors except IT saw meaningfully higher EBITDA growth in 2021 than in prior years

PE-backed consumer companies had the most extreme rebound from 2020

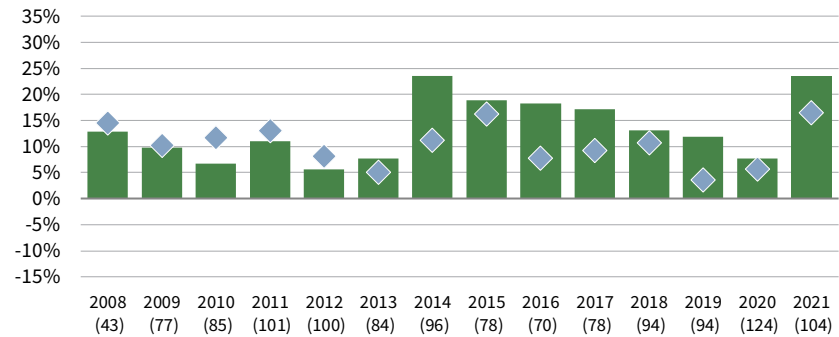
AVERAGE ANNUAL EBITDA GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2021 • Annual Growth Rate (%)

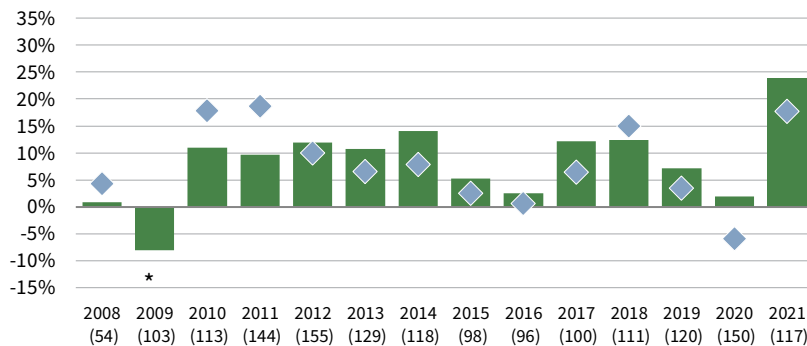
Consumer Discretionary



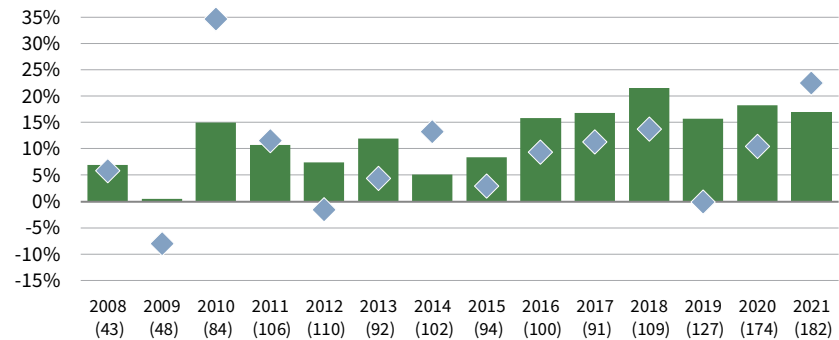
Healthcare



Industrials



Information Technology



■ Private Equity Owned

◆ Russell 2500™

* Axis has been capped at -15% and 35% for scaling purposes. Industrials companies in the Russell 2500™ saw EBITDA growth of -22.7% in 2009. Consumer discretionary companies in the Russell 2500™ saw EBITDA growth of 62.6% in 2021.

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and Frank Russell Company.

Note: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Numbers in parentheses represent number of private equity-owned companies in each year.

IMPROVE THE PERFORMANCE OF THE COMPANY AND TRANSFORM THE BUSINESS

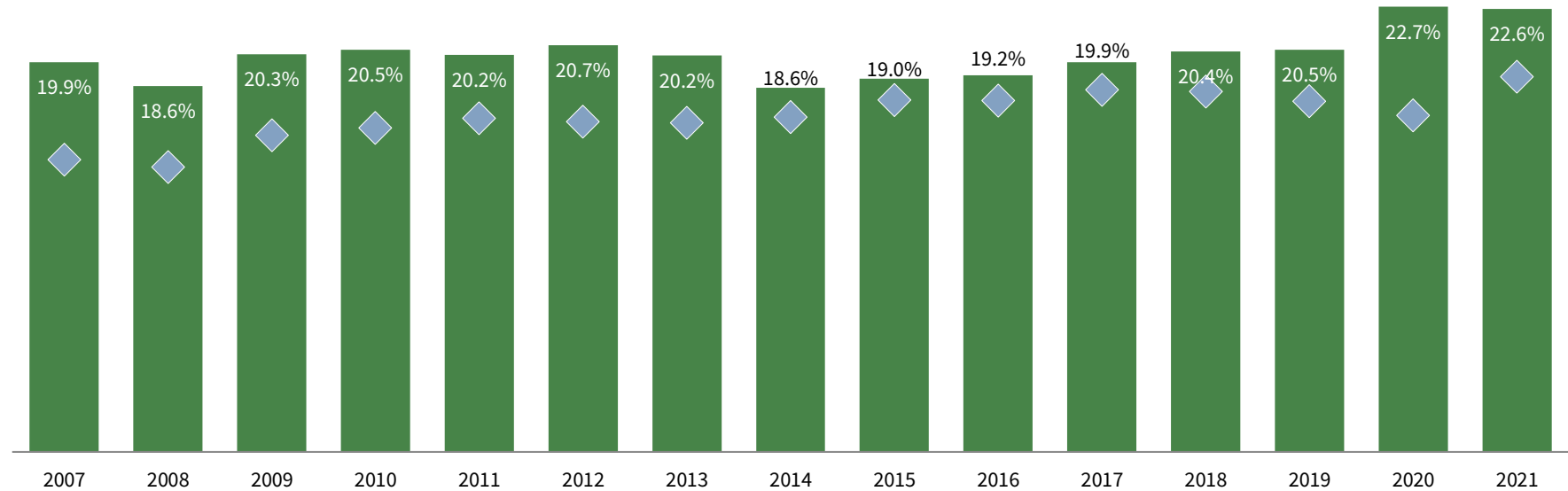
- Revenue Growth
- EBITDA Growth
- **EBITDA Margin**
- Exit Metrics

PE companies operated at meaningfully higher margins in 2020–21 than in the previous 13 years

Public company margins consistently trailed those of PE businesses

AVERAGE ANNUAL EBITDA MARGIN OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • EBITDA/Revenue (%)



Number of Companies

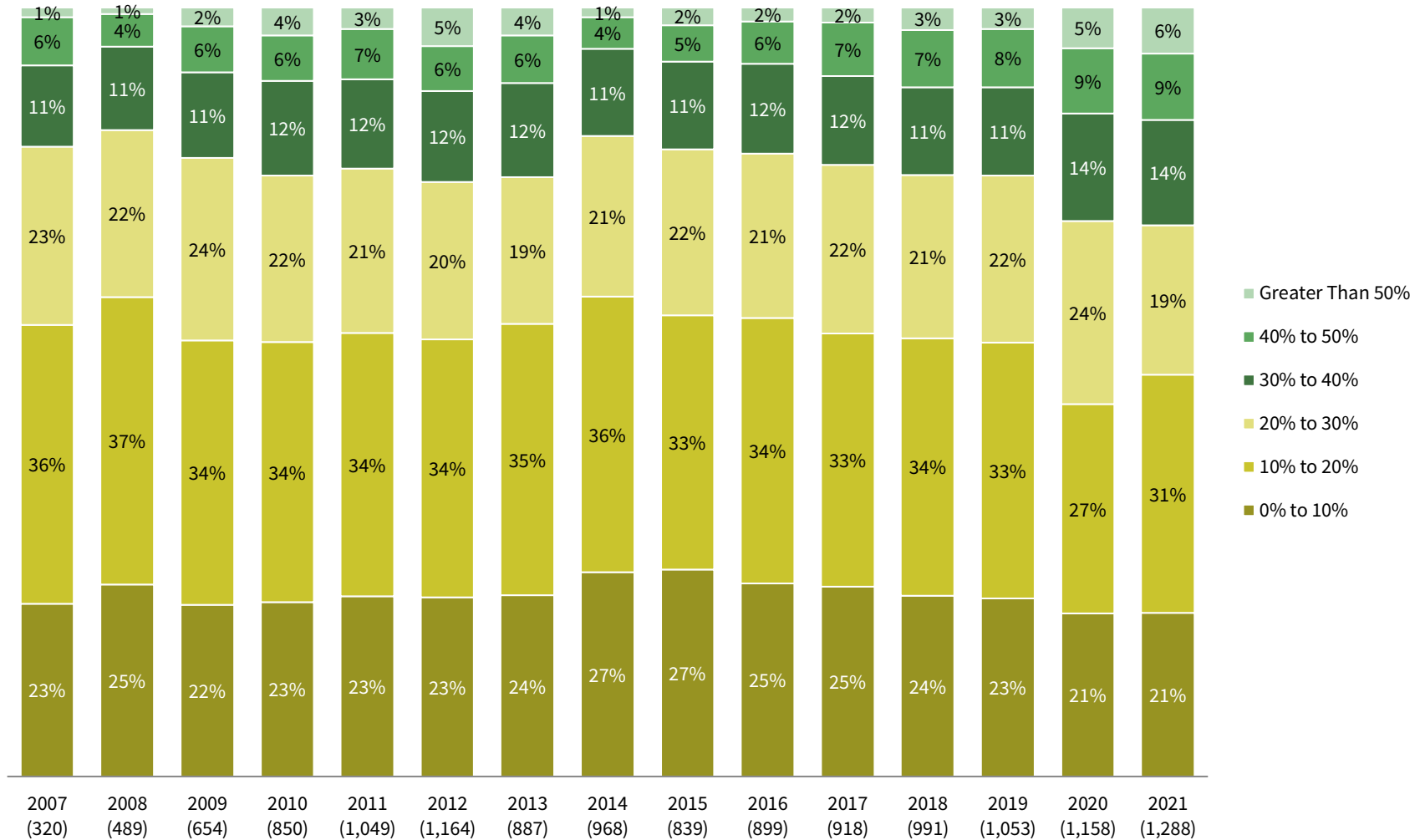
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PE-Owned Companies	320	489	654	850	1,050	1,163	887	975	832	899	918	991	1,053	1,188	1,288
Russell 2500™ Index	1,565	1,563	1,724	1,750	1,741	1,680	1,687	1,707	1,699	1,630	1,610	1,597	1,543	1,474	1,513

The percentage of PE companies operating at 30%+ margins has steadily increased since 2014

At the same time, the percentage of PE companies operating at margins of less than 10% has declined

AVERAGE ANNUAL EBITDA MARGIN BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2021 • EBITDA/Revenue (%)



Buyout and growth equity companies operated at consistently higher margins than their public peers over the long term

Despite the economic recovery in 2021, buyout companies operated at lower margins than in 2020

AVERAGE ANNUAL EBITDA MARGIN OF US BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • EBITDA/Revenue (%)



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	273	408	513	653	787	847	642	718	582	653	676	719	752	799	922
Growth Equity Companies	48	75	125	189	204	249	220	218	202	225	199	238	251	317	343
Russell 2500™ Index	1,565	1,563	1,724	1,750	1,741	1,680	1,687	1,707	1,699	1,630	1,610	1,597	1,543	1,474	1,513

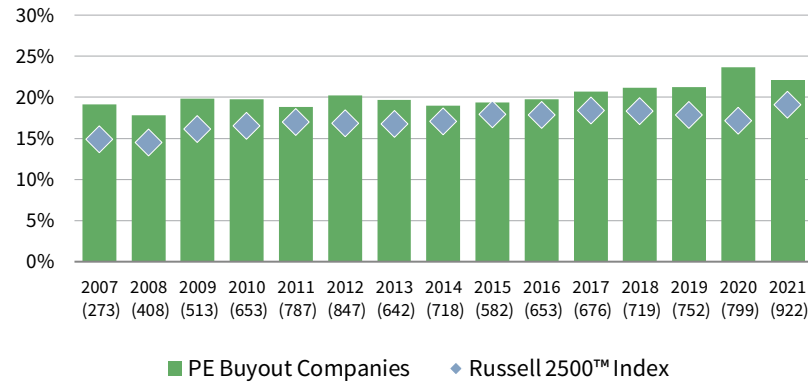
Large companies posted the highest margins on record in 2020 and 2021

Across the size ranges, margins were higher in 2020 than they were during the recovery year of 2021

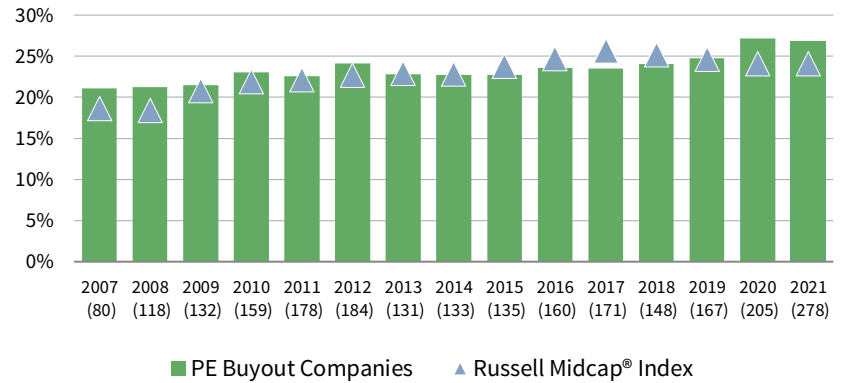
AVERAGE ANNUAL EBITDA MARGIN OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2021 • EBITDA/Revenue (%)

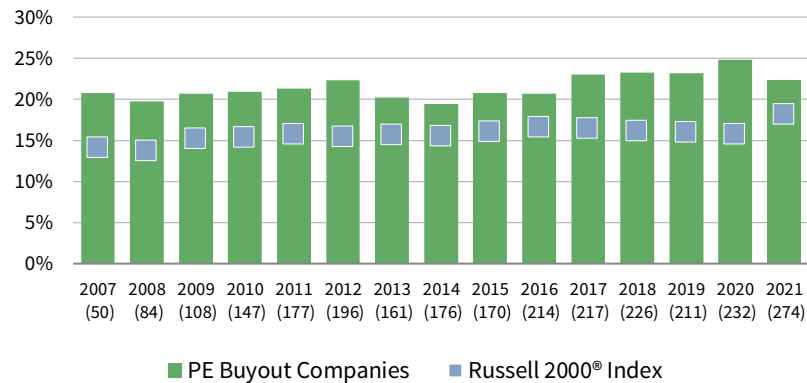
Total Universe



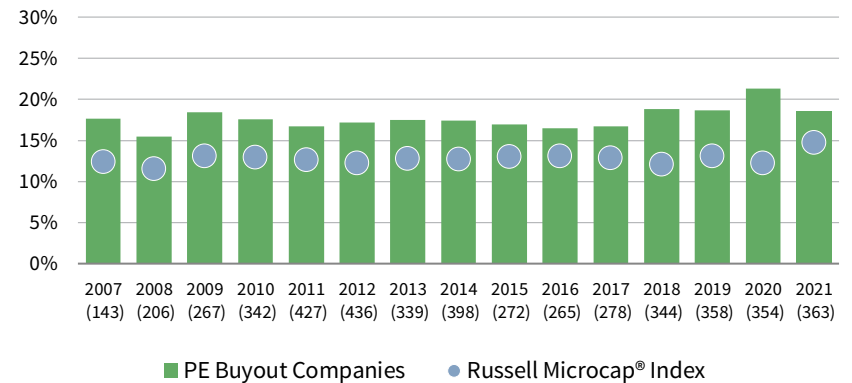
Enterprise Value > \$1 B



Enterprise Value \$250 M – \$1 B



Enterprise Value < \$250 M



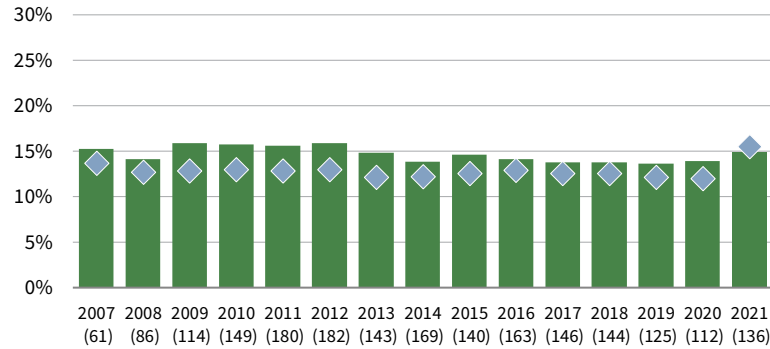
PE-backed IT companies have operated at the highest margins and IT remained the only sector where PE meaningfully exceeds publics

Public and PE-backed consumer discretionary and healthcare companies saw margin increases in 2021

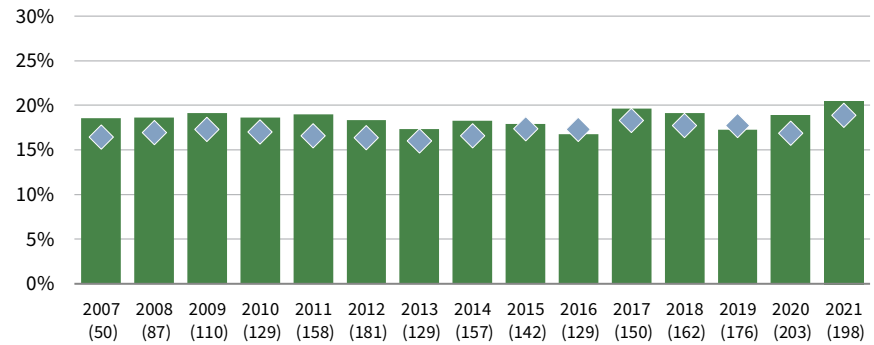
AVERAGE ANNUAL EBITDA MARGIN OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2021 • EBITDA/Revenue (%)

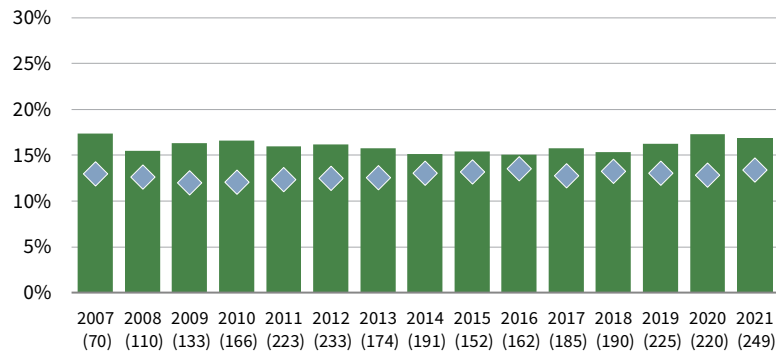
Consumer Discretionary



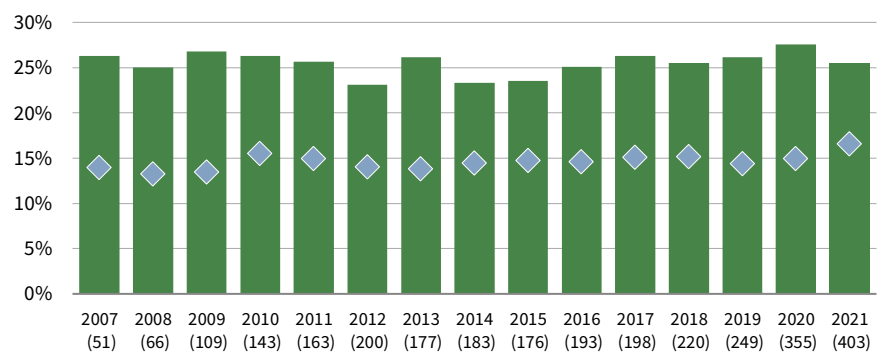
Healthcare



Industrials



Information Technology



■ Private Equity Owned

◆ Russell 2500™

IMPROVE THE PERFORMANCE OF THE COMPANY AND TRANSFORM THE BUSINESS

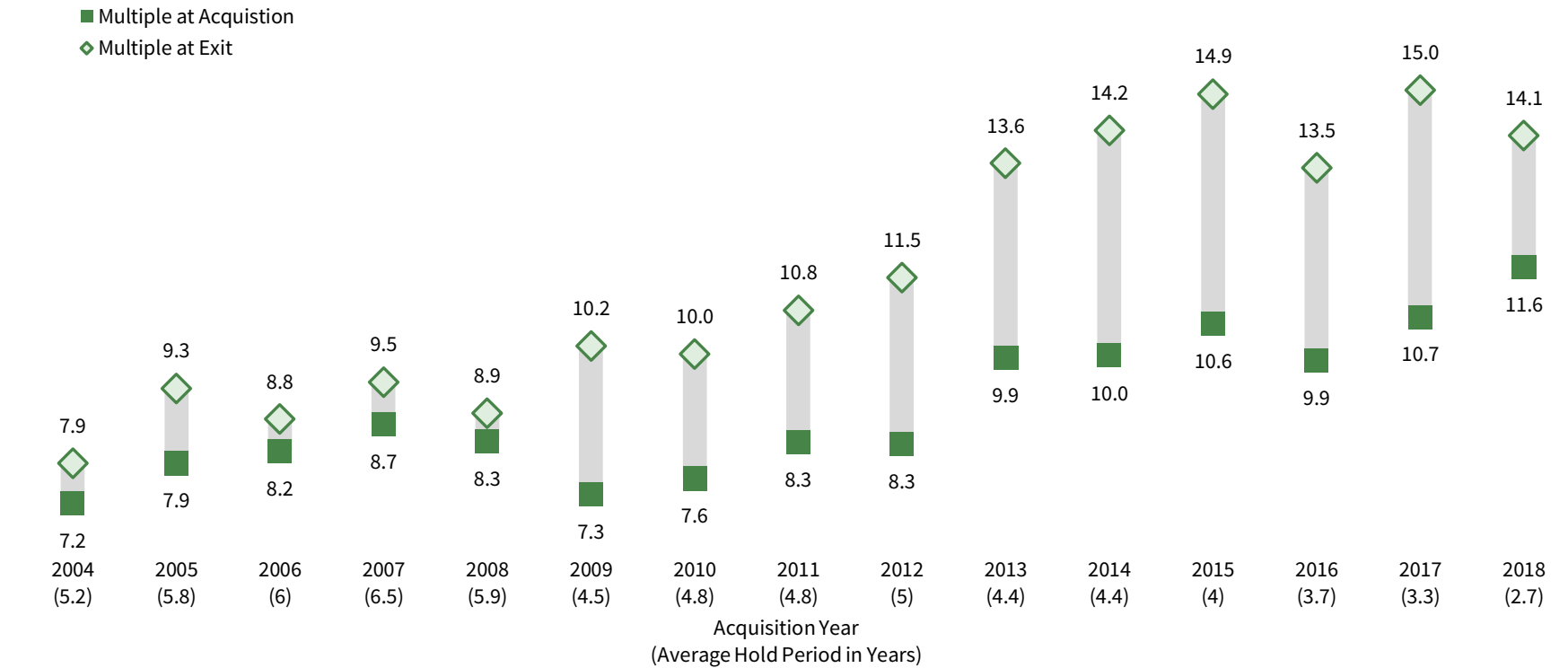
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- **Exit Analyses**

Multiple expansion has been most pronounced for exited companies acquired in 2013–18

For companies acquired pre-Global Financial Crisis, multiple expansion at exit was much lower

MEDIAN EBITDA MULTIPLE EXPANSION OF EXITED US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • Enterprise Value/EBITDA



	Number of Companies															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
PE-Owned Companies	89	115	172	215	146	86	179	146	177	101	127	107	84	56	32	

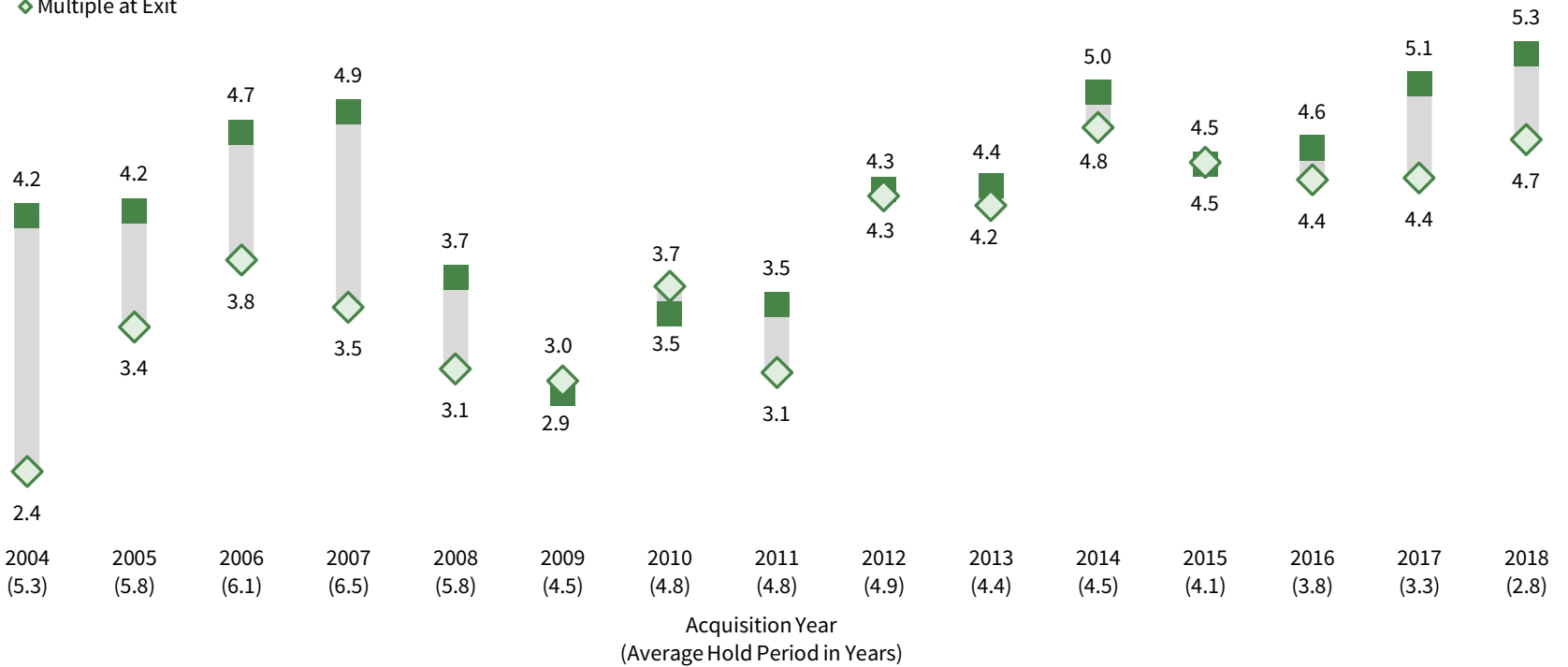
Leverage multiples declined the most for companies acquired pre-GFC

Change in leverage multiple during PE ownership was less notable (or nonexistent) for exited companies acquired from 2009–18

MEDIAN EBITDA LEVERAGE MULTIPLE COMPRESSION OF US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • Net Debt/EBITDA

■ Multiple at Acquisition
◇ Multiple at Exit



Number of Companies

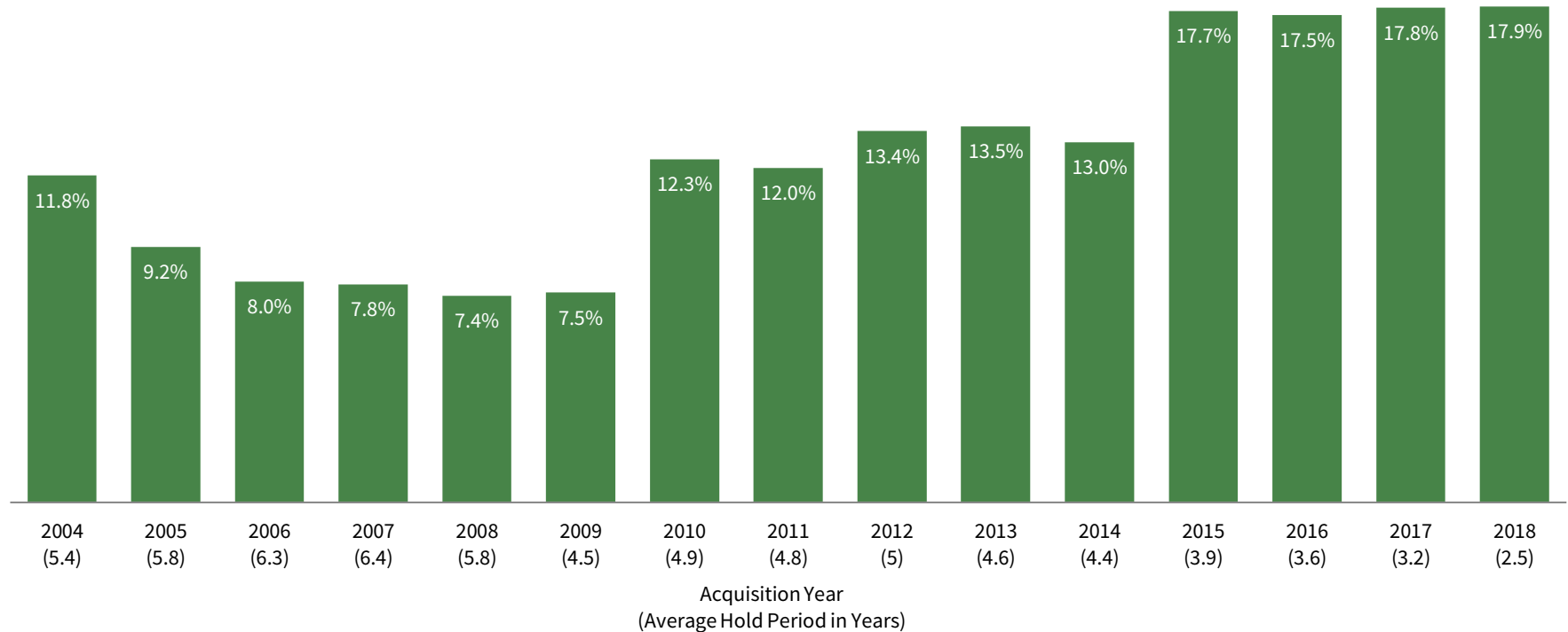
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PE-Owned Companies	86	105	157	200	121	65	155	133	154	81	109	98	77	55	31

Revenue CAGRs have continued to expand, underscoring the industry's increased focus on top-line growth

Over the full time period, there have been three distinct phases of growth

MEDIAN REVENUE CAGR OF EXITED US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • Compound Annual Growth Rate (%)



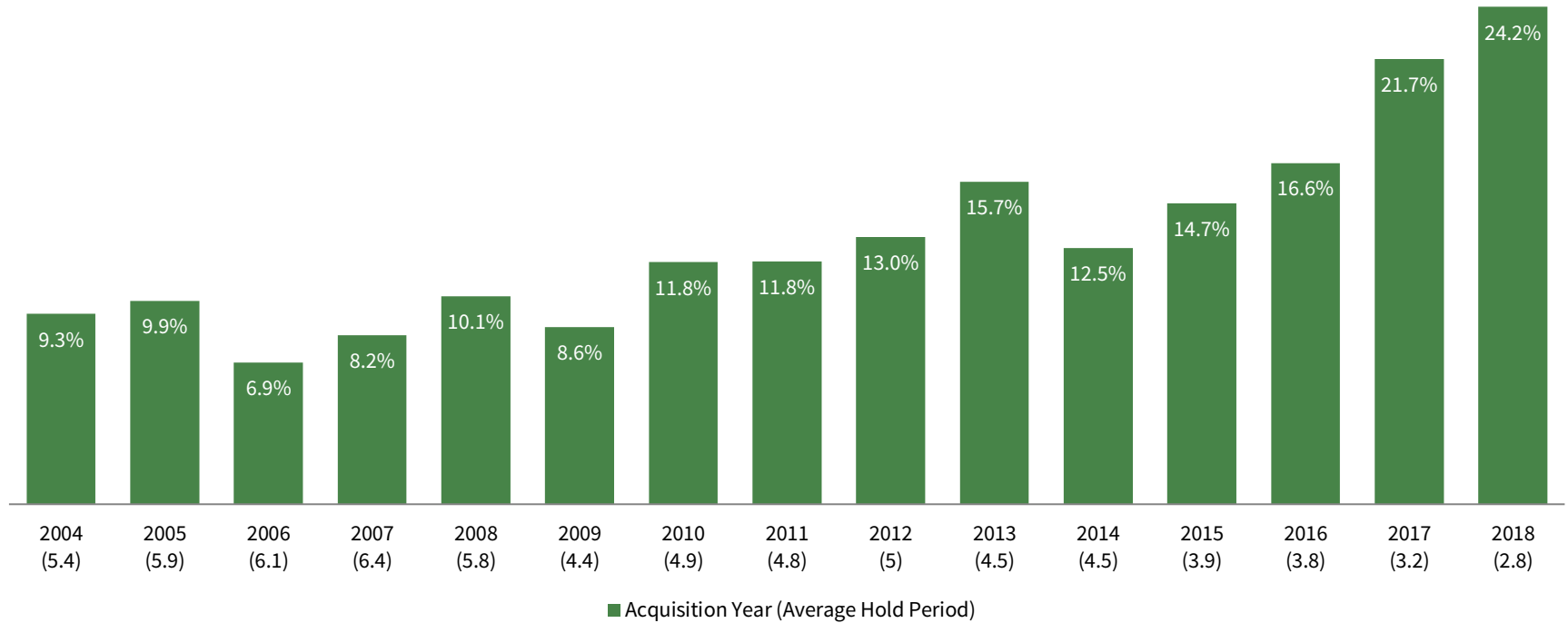
	Number of Companies															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
PE-Owned Companies	117	140	224	269	170	117	218	178	209	132	171	152	112	93	50	

Median EBITDA CAGRs for exited companies acquired since 2010 have trended steadily upward

Over time, our analyses suggest that exited companies of the most recent vintages (shorter hold periods) have exhibited the highest EBITDA CAGRs

MEDIAN EBITDA CAGR OF EXITED US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • Compound Annual Growth Rate (%)



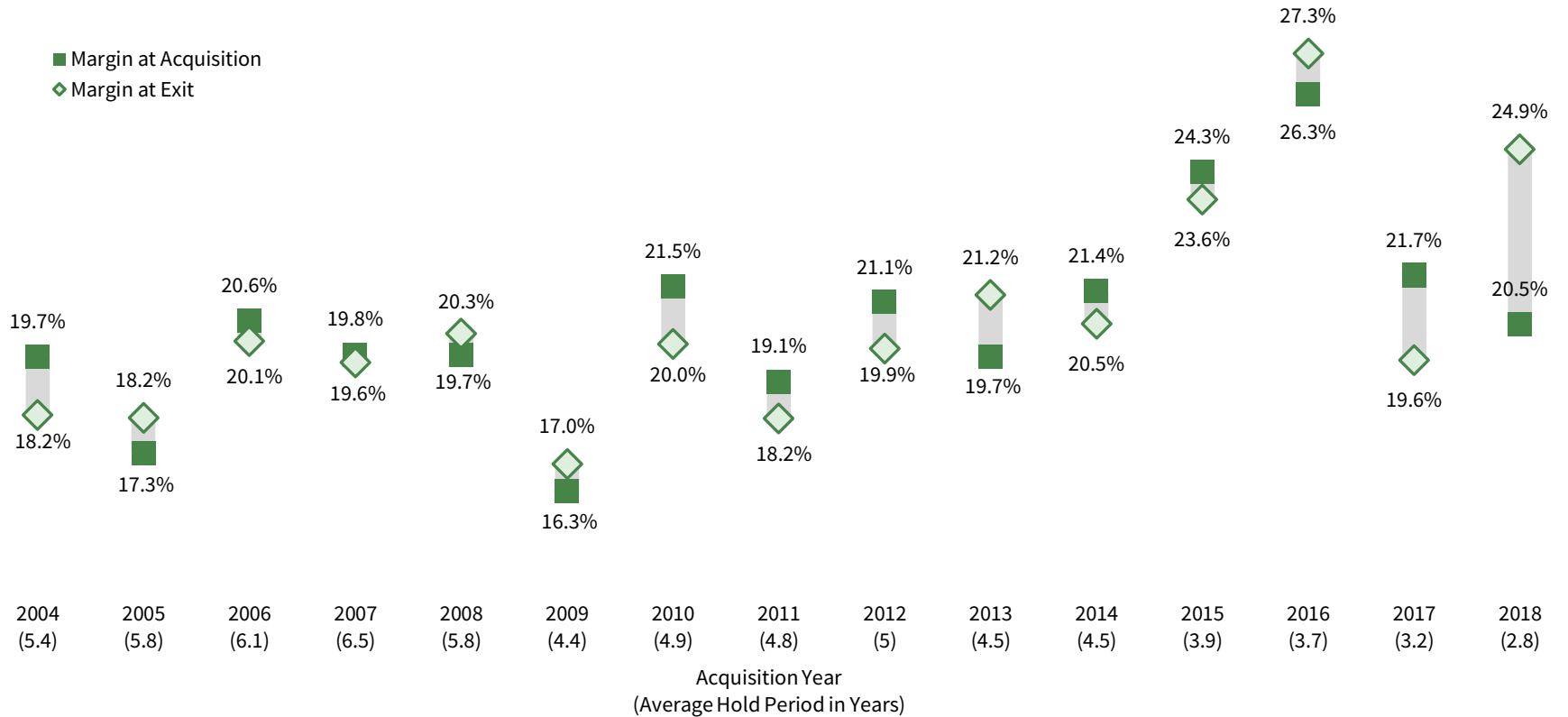
	Number of Companies															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
PE-Owned Companies	99	126	188	237	156	91	186	152	182	104	138	117	86	63	32	

No consistent theme observed for margin changes during PE ownership

Though from the late 2000s to now, margins overall have trended upward

MEDIAN EBITDA MARGIN EXPANSION OF EXITED US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • EBITDA/Revenue (%)



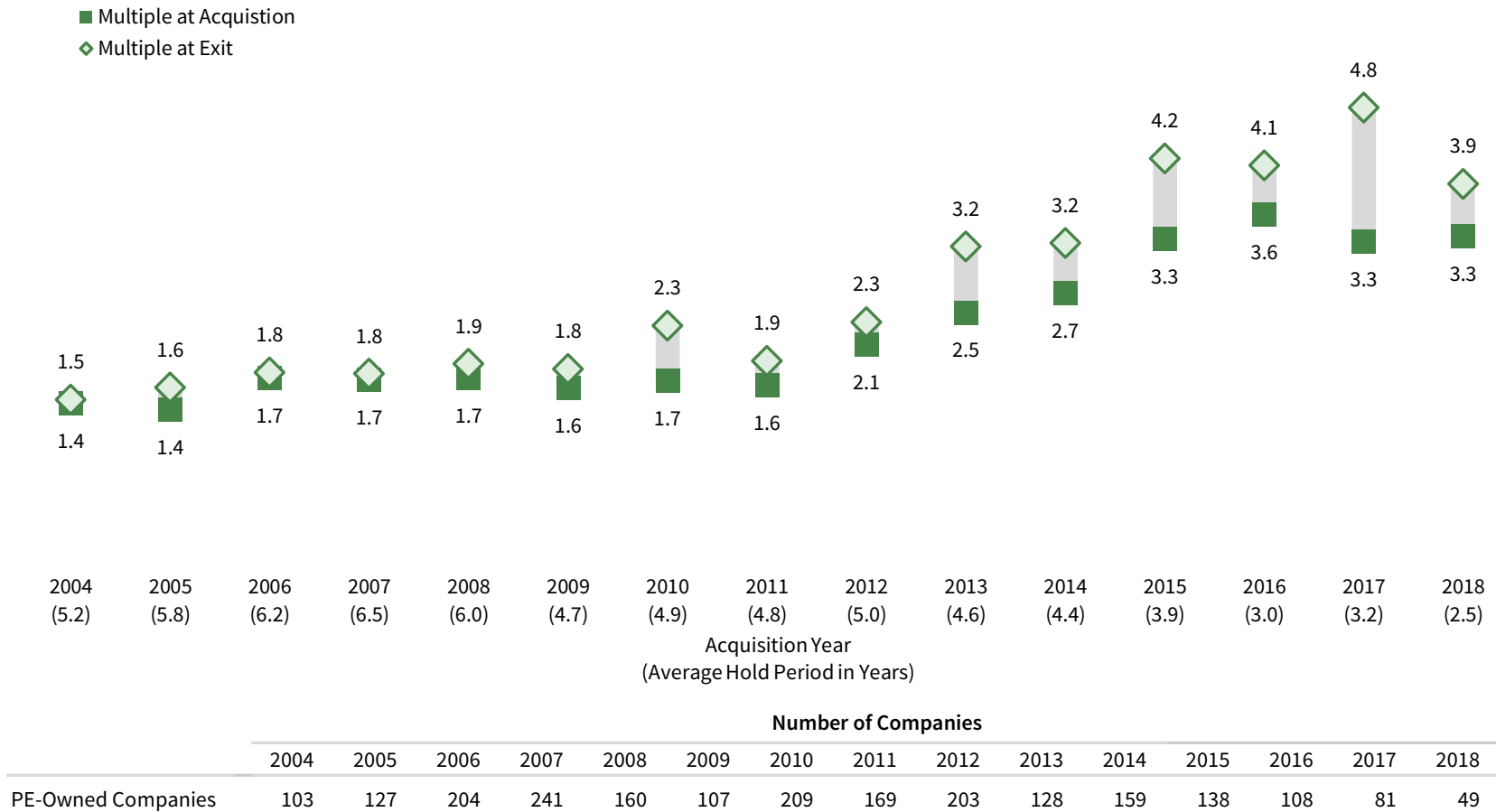
	Number of Companies															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
PE-Owned Companies	96	123	182	225	153	90	185	152	180	105	138	116	84	64	31	

For all acquisition years analyzed, median exit revenue multiples exceeded those at acquisition

Meaningful increase in revenue multiples reflects valuation environment as well as the change in industry composition (more IT)

MEDIAN REVENUE MULTIPLE EXPANSION OF EXITED US PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2021 • Enterprise Value/EBITDA





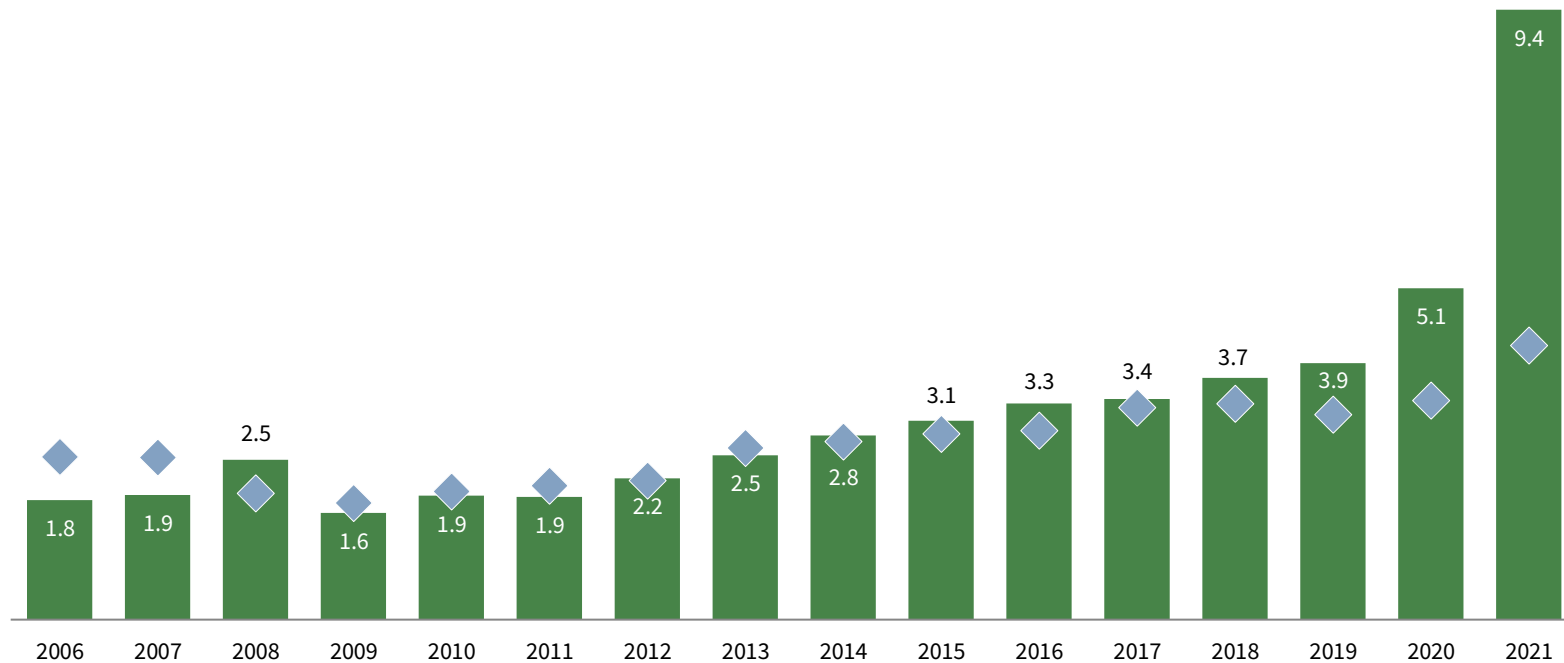
APPENDIX: REVENUE PURCHASE PRICE MULTIPLE

After a gradual ten-year climb (2010–19), revenue PPMs skyrocketed during the pandemic

The difference between private and public revenue PPMs was at its largest in 2021, driven in part by “venture-like” deals

AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY–OWNED COMPANIES VS PUBLIC COMPANIES

As of December 31, 2021 • Enterprise Value/LTM Revenue



Number of Companies

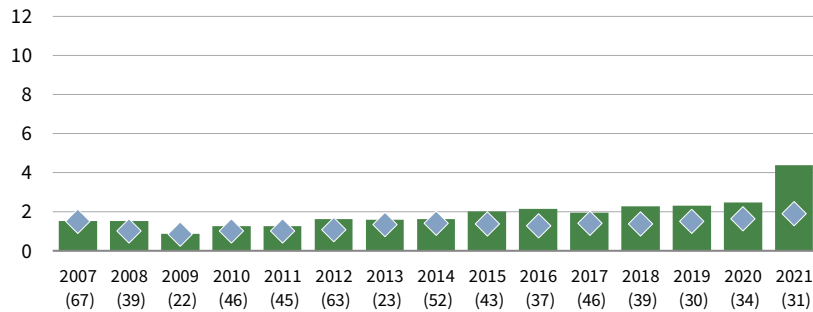
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PE-Owned Companies	355	236	143	298	299	362	229	330	322	332	384	377	367	336	450
Russell 2500™ Index	2,257	2,291	2,228	2,235	2,175	2,179	2,248	2,284	2,280	2,231	2,234	2,269	2,189	2,229	2,320

In 2021, private revenue PPMs rose to “all time” highs in three of the four sectors

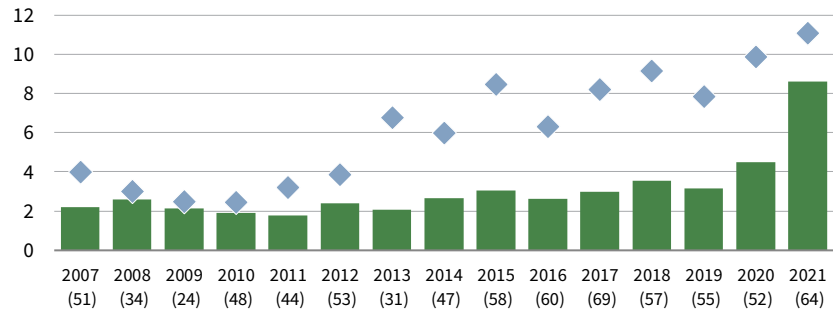
The spike in PPMs in 2021 somewhat masks the gradual increase in valuations since the end of the GFC, particularly for the growth sectors (IT and healthcare)

AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR
As of December 31, 2021 • Enterprise Value/Revenue

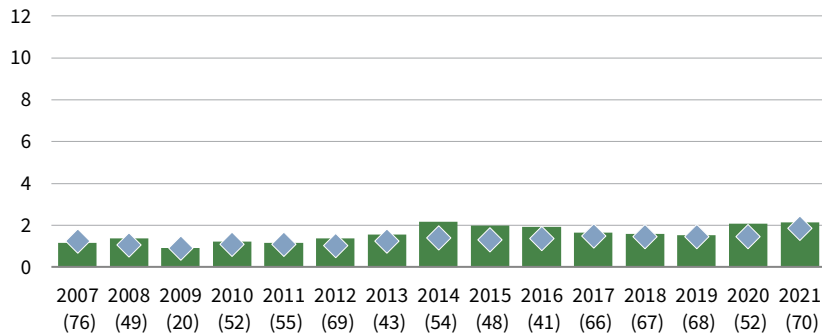
Consumer Discretionary



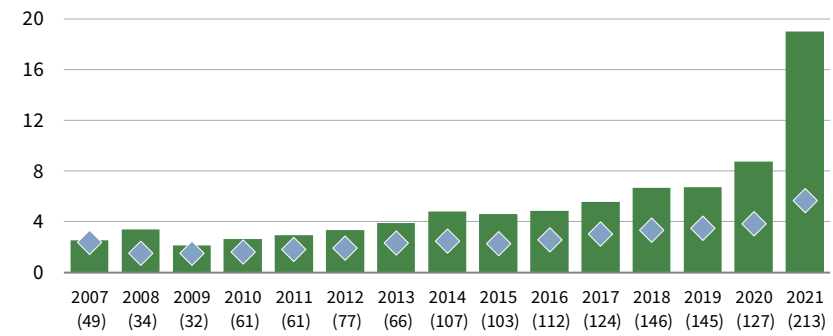
Healthcare



Industrials



Information Technology



■ Private Equity Owned

◆ Russell 2500™

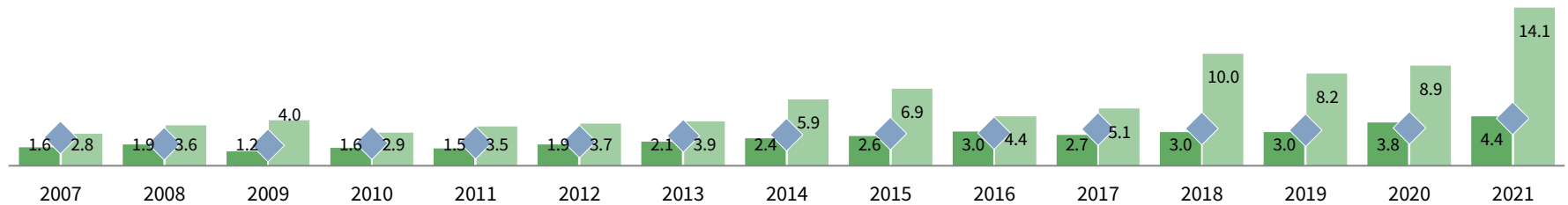
There is no doubt that growth has commanded premium valuations

In 2021, average revenue multiples for growth equity and growth equity IT companies were more than triple the averages from 2007–17

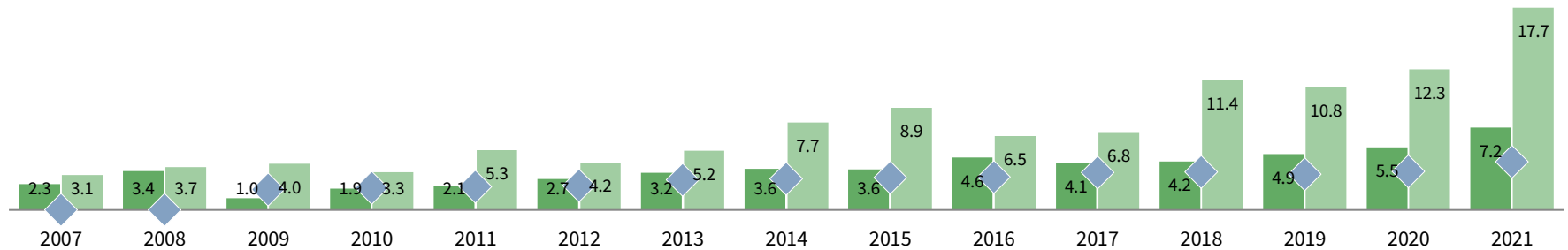
AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION BY DEAL TYPE AND SECTOR VS PUBLIC COMPANIES

As of December 31, 2021 • Enterprise Value/LTM Revenue

Deal Type: US Companies



Deal Type: US IT Companies



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Buyout Companies	257	163	99	218	221	278	154	232	232	225	247	250	205	179	247
Growth Equity Companies	78	55	41	69	68	84	69	109	97	101	122	117	125	127	173
Russell 2500™	2,257	2,291	2,228	2,235	2,175	2,179	2,248	2,284	2,280	2,231	2,234	2,269	2,189	2,229	2,320
IT Buyout Companies	30	21	13	32	39	44	36	57	61	61	58	79	71	55	78
IT Growth Equity Companies	14	9	18	26	25	32	30	50	48	57	64	61	77	67	96
Russell 2500™ IT Companies	2,257	2,291	2,228	2,235	2,175	2,179	2,248	2,284	2,280	2,231	2,234	2,269	2,189	2,229	2,320



CAMBRIDGE
ASSOCIATES

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