

UNDER THE MICROSCOPE

PRIVATE VS PUBLIC COMPANY OPERATING METRICS FOR US COMPANIES

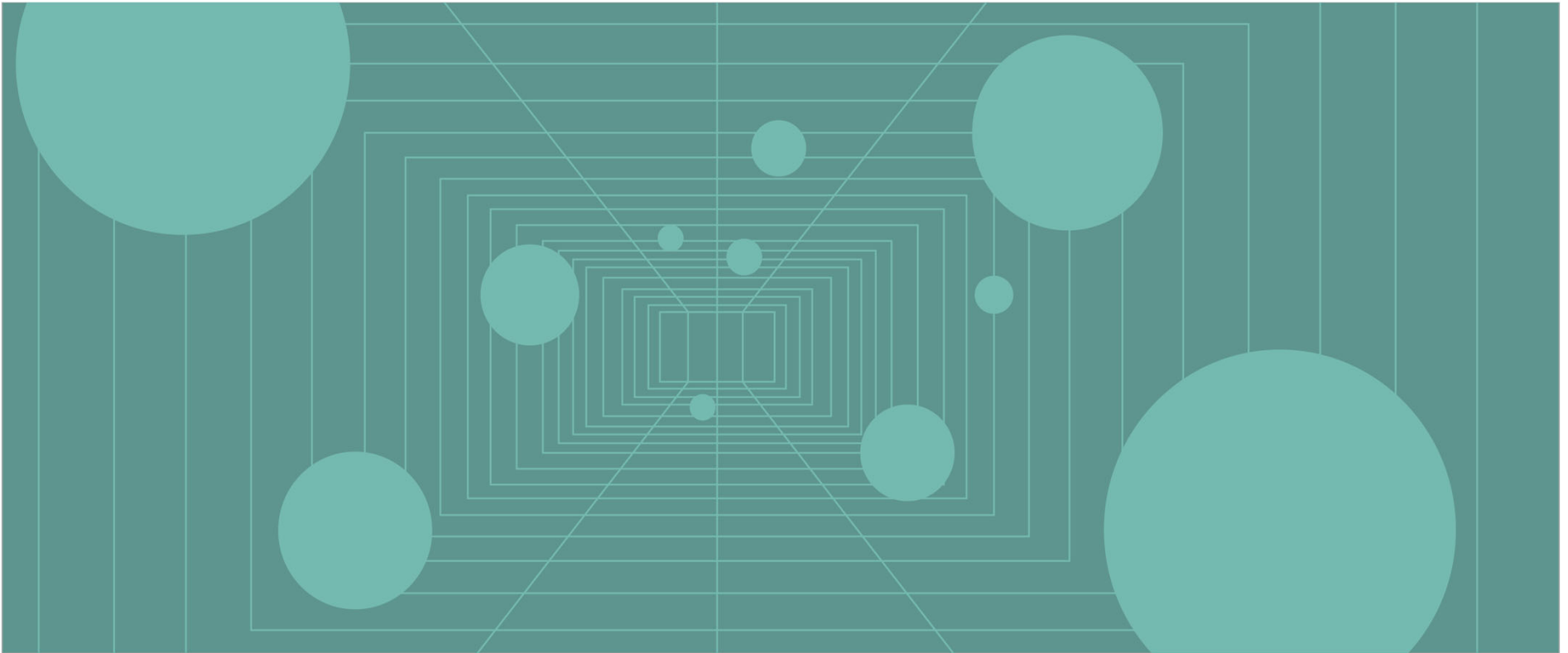


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Introduction to Operating Metrics

- 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 now captured and analyzed current and historical data from global PE funds for ten consecutive years. This year’s report includes data through the period ended December 31, 2020.
- 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 5,700 US-based companies acquired by PE firms from 2000 through 2020 and is subject to change over time. The companies in the universe range in enterprise value from less than \$1 million to about \$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 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.
- 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

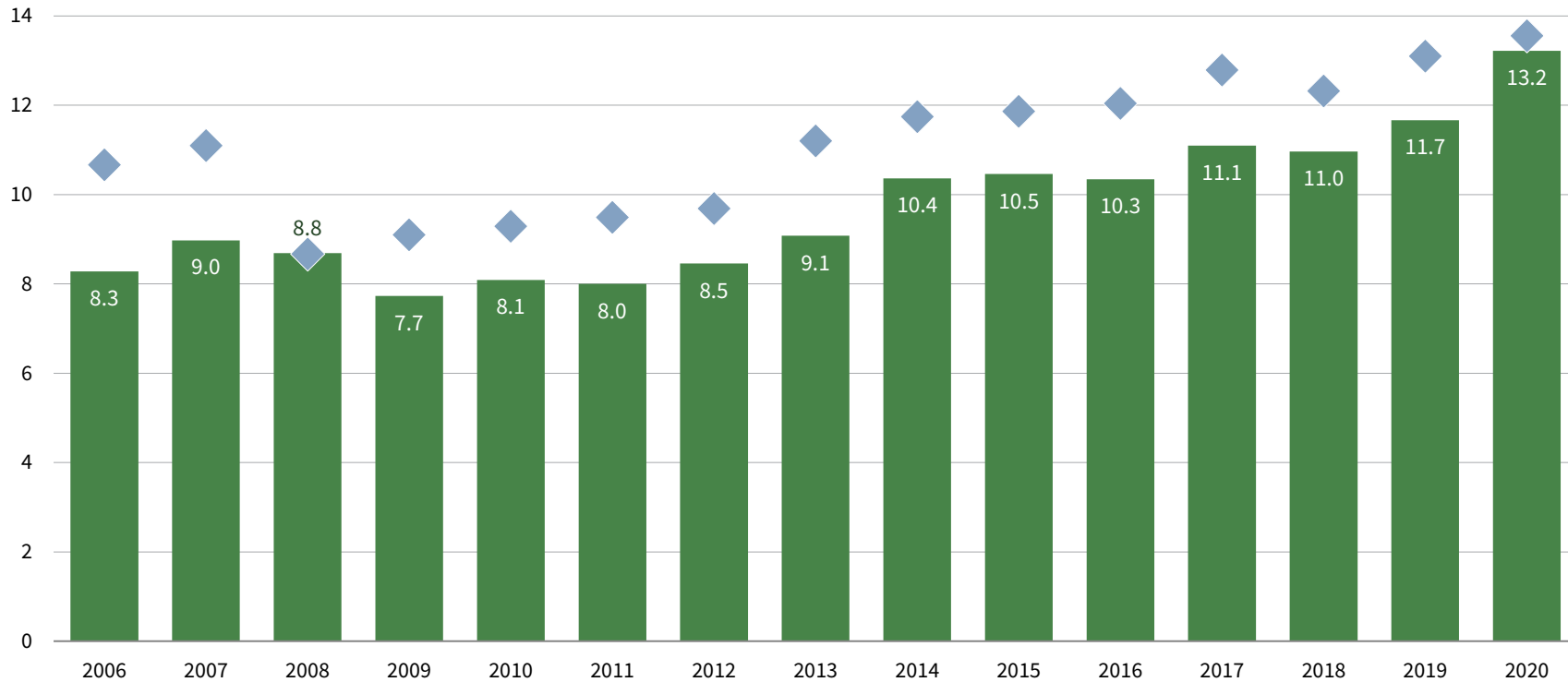
- **EBITDA Purchase Price Multiple**
- Leverage Multiple

Equity valuations have trended upward since 2009

As they did in 2008, private and public purchase price multiples (PPMs) merged in 2020

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

As of December 31, 2020 • Enterprise Value/EBITDA



Number of Companies

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	249	327	208	124	266	256	316	181	263	244	247	266	250	214	189
Russell 2500™ Index	1,564	1,492	1,520	1,596	1,666	1,635	1,671	1,651	1,665	1,634	1,606	1,592	1,563	1,522	1,427

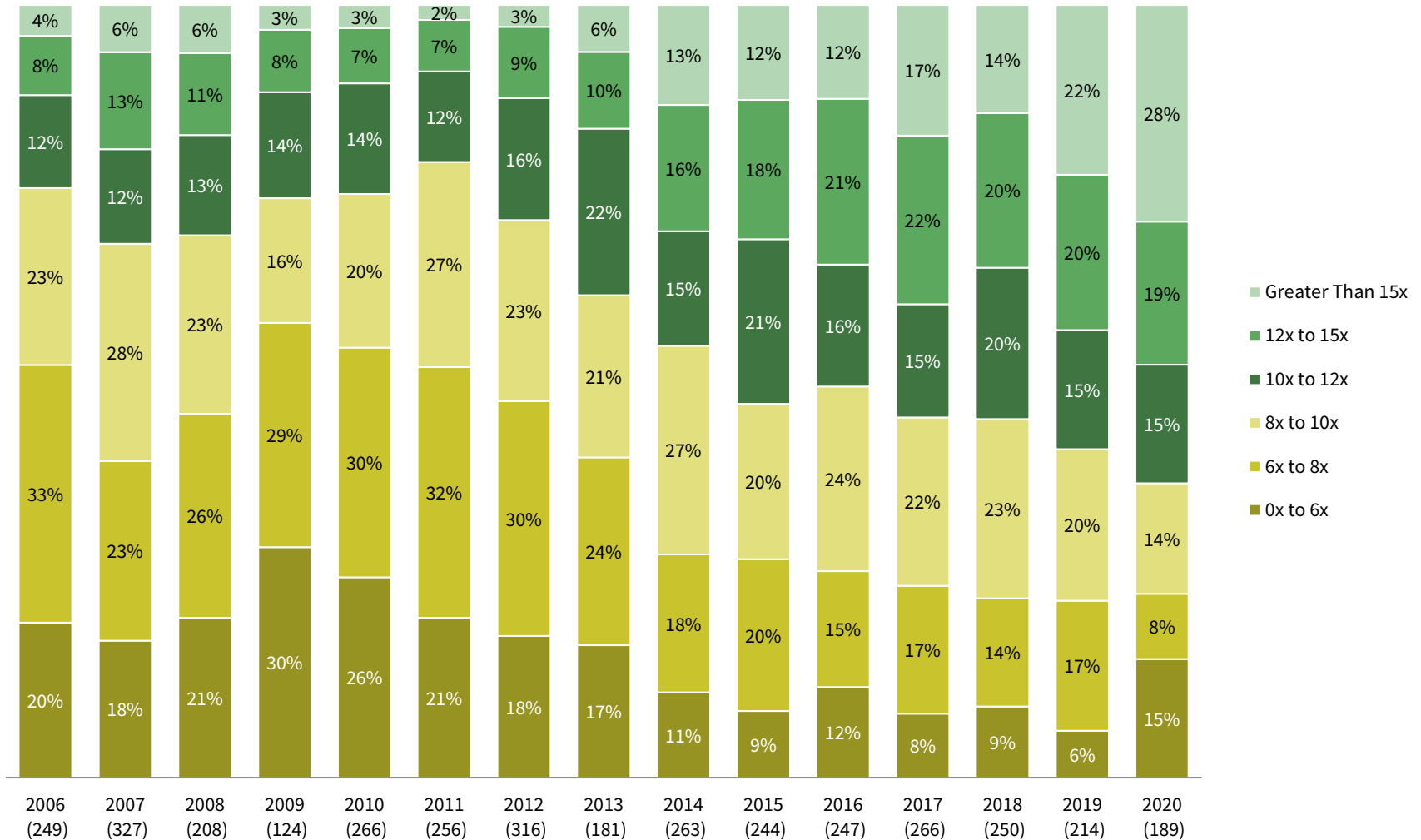
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and Frank Russell Company.
 Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

PPMs have continued to shift toward the expensive end

In 2020, more companies (28%) transacted at a multiple of 15x or higher than in any other segment and the percentage of companies acquired between 6x and 8x (8%) was the lowest of any year

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

As of December 31, 2020 • Enterprise Value/EBITDA

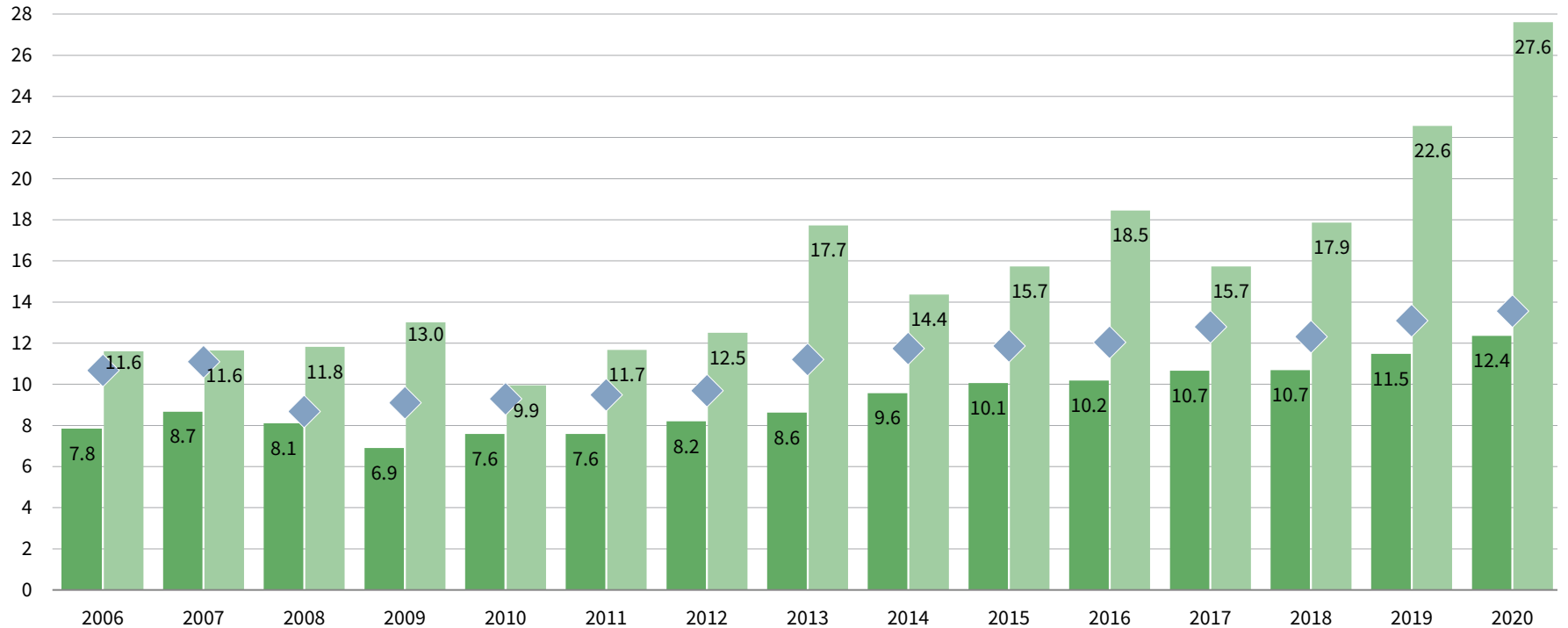


Growth equity multiples hit a new high in 2020

Buyout PPMs have also risen but at a more gradual pace; they have remained lower than those for public companies

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

As of December 31, 2020 • Enterprise Value/EBITDA



Number of Companies

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	207	257	160	95	203	201	259	133	207	197	199	196	186	136	114
Growth Equity Companies	38	60	40	27	57	45	55	49	50	42	52	55	46	51	51
Russell 2500™ Index	1,564	1,492	1,520	1,596	1,666	1,635	1,671	1,651	1,665	1,634	1,606	1,592	1,563	1,522	1,427

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

Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Deal type classifications are made at the company level.

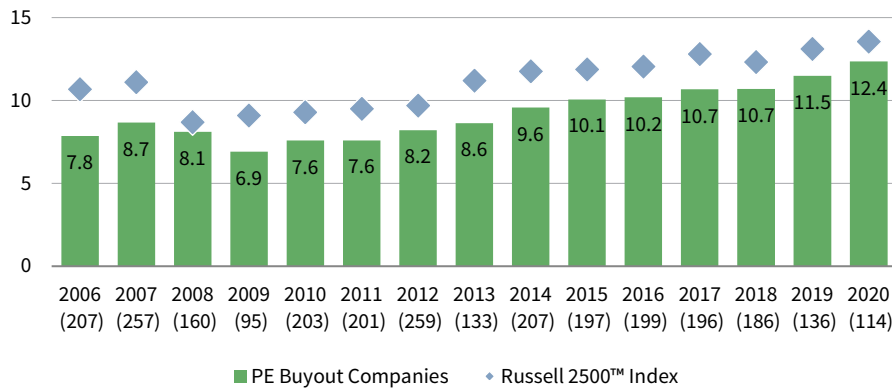
Valuation gap between largest and smallest has been maintained

Mid-sized buyouts increasingly transact in line with their larger brethren

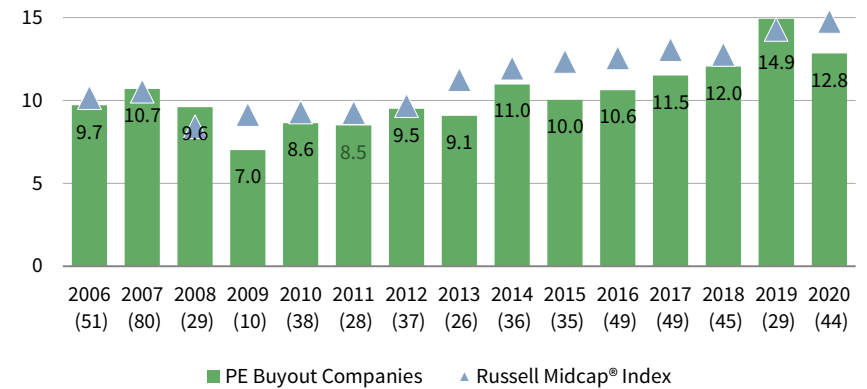
AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2020 • Enterprise Value/EBITDA

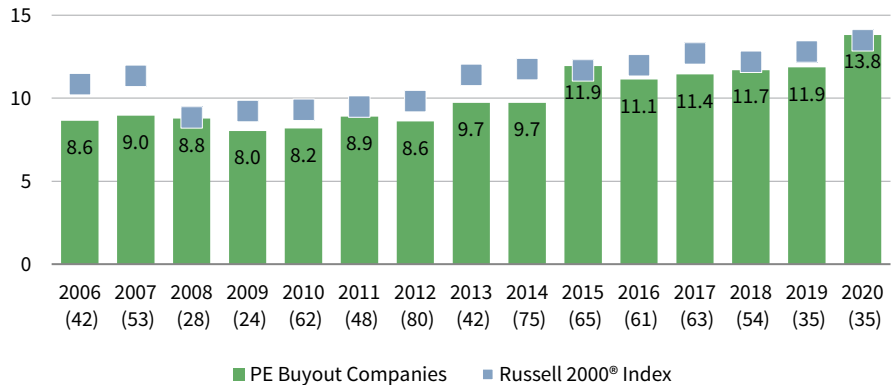
Total Universe



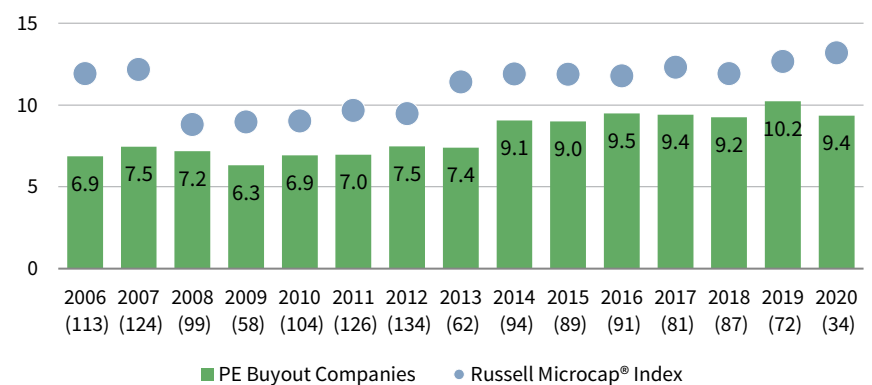
Enterprise Value > \$1B



Enterprise Value \$250M – \$1B



Enterprise Value < \$250M



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

Notes: 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.

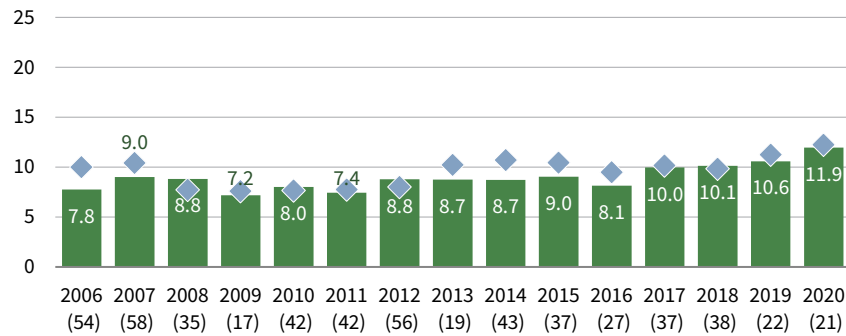
PPMs vary significantly by sector, with IT continuing its upward trajectory

Private healthcare company PPMs have been meaningfully lower than public counterparts since 2013, due to PE's "overweight" to services and the segment's overall lower multiples

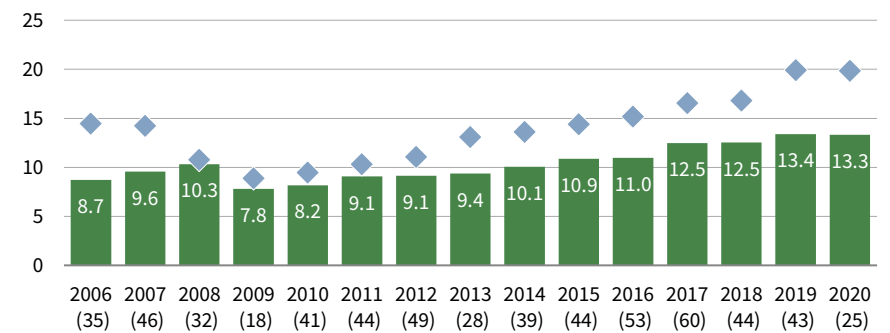
AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Enterprise Value/EBITDA

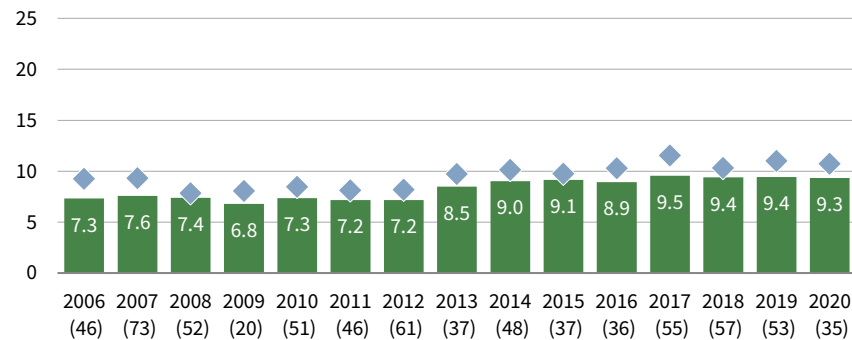
Consumer Discretionary



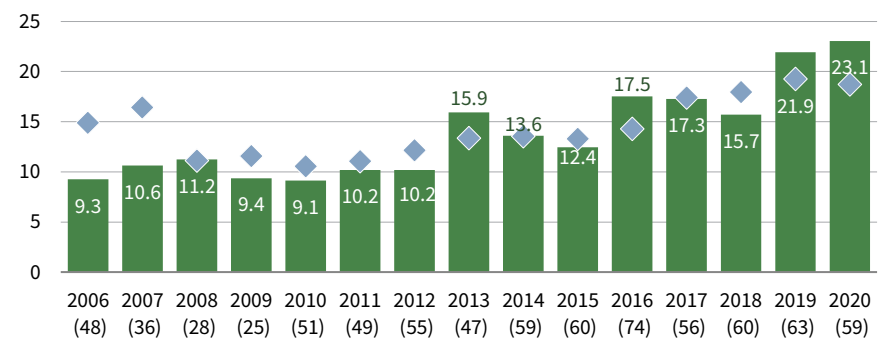
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

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

Notes: 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.

PURCHASE THE COMPANY AND OPTIMIZE CAPITAL STRUCTURE

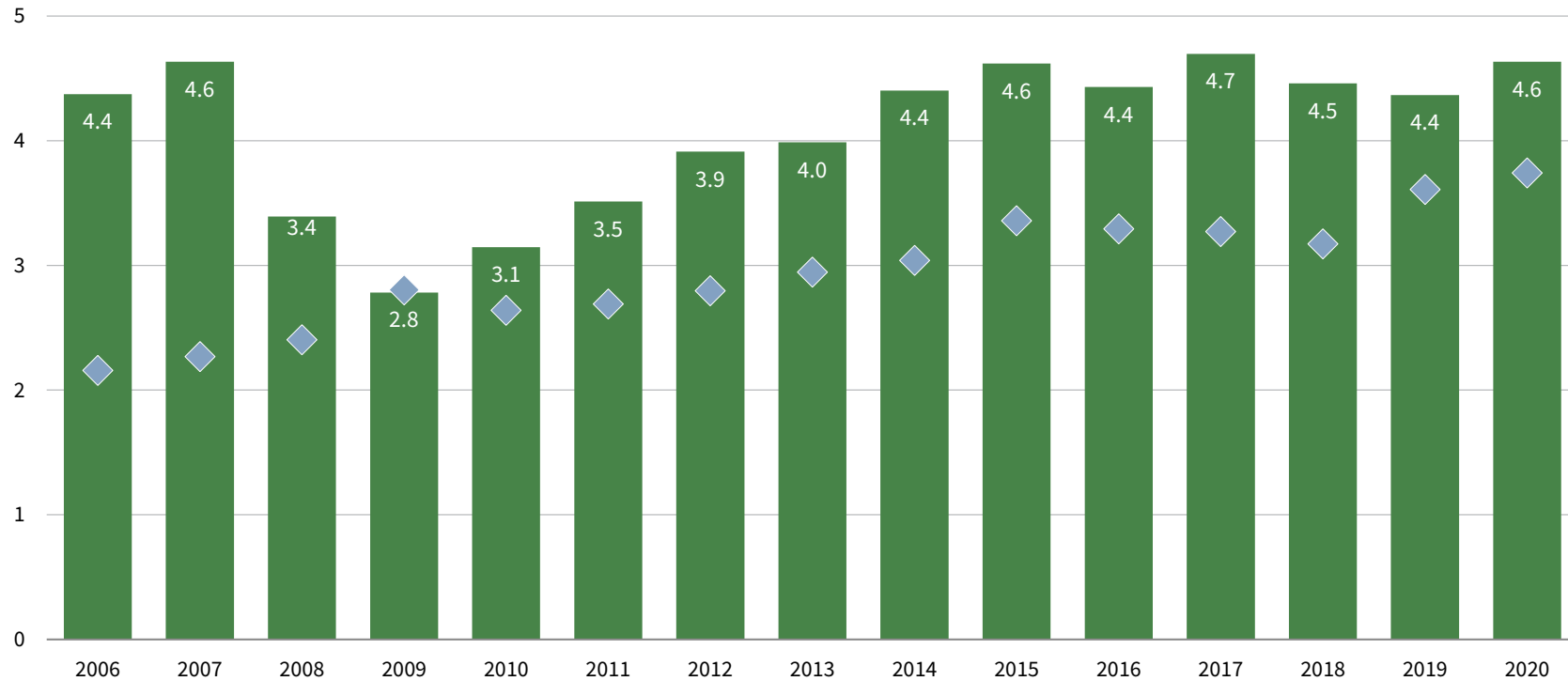
- EBITDA Purchase Price Multiple
- **Leverage Multiple**

Average PE leverage multiples have stayed within a tight range since 2014

Gap between private and public leverage has narrowed meaningfully

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

As of December 31, 2020 • Net Debt/EBITDA



Number of Companies

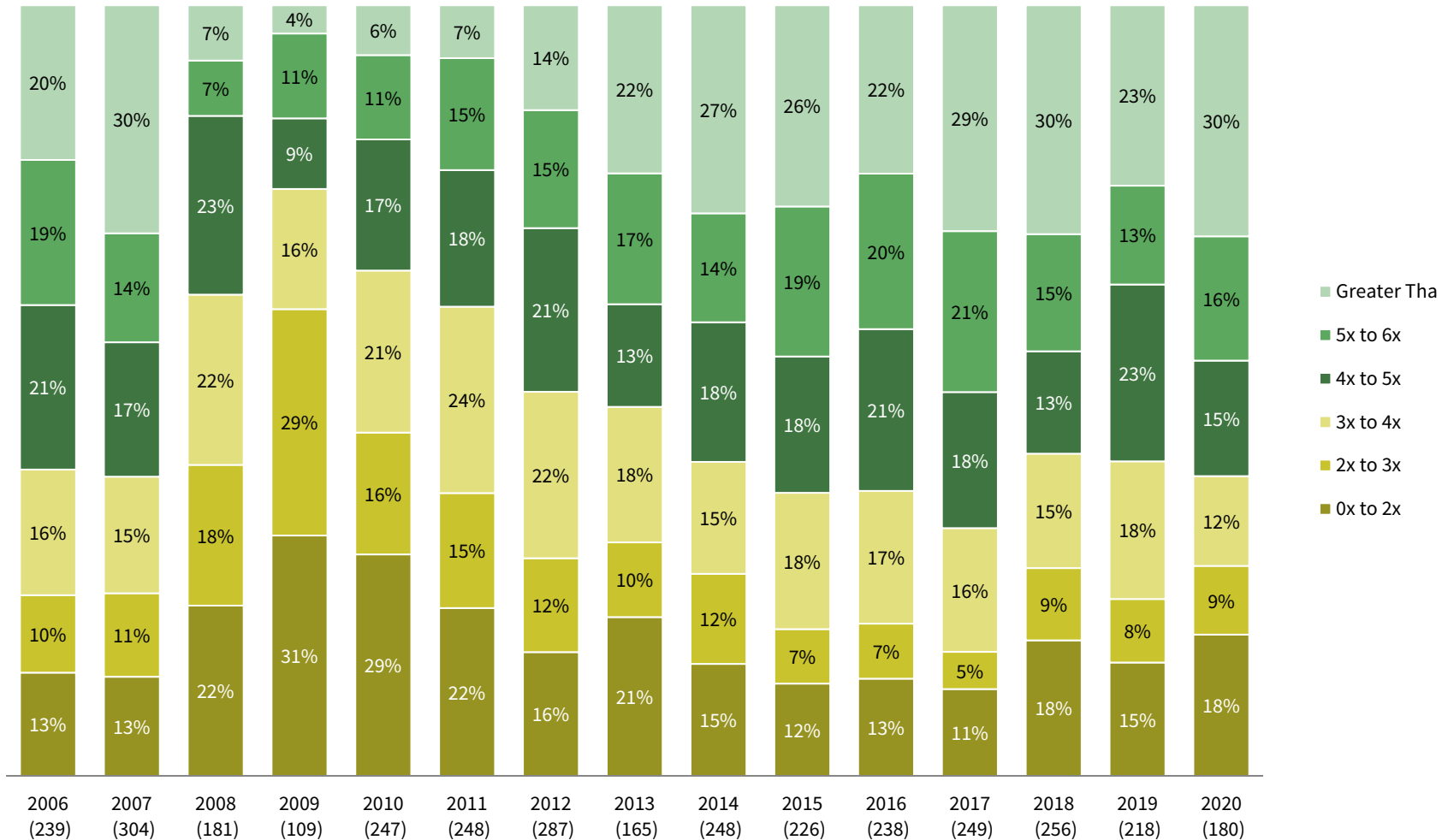
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	239	304	181	109	247	248	287	165	248	226	238	249	256	218	180
Russell 2500™ Index	990	956	998	1,022	1,012	1,000	1,119	1,137	1,189	1,219	1,211	1,227	1,226	1,277	1,128

The majority of deals completed since 2013 were levered by at least 4x EBITDA

Nearly a third of the universe were at 6x or higher

AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF US PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2020 • Net Debt/EBITDA



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "4x to 5x" range includes companies with reported leverage multiples of exactly 4x. Due to rounding, totals may not sum to 100%.

By deal type, buyout leverage hit a new height in 2020

Growth equity leverage returned to its longer-term average and in line with public companies

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

As of December 31, 2020 • Net Debt/EBITDA



Number of Companies

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	209	253	146	81	201	210	249	130	203	190	191	196	188	139	112
Growth Equity Companies	28	41	27	22	42	32	31	27	38	29	36	40	45	41	35
Russell 2500™ Index	990	956	998	1,022	1,012	1,000	1,119	1,137	1,189	1,219	1,211	1,227	1,226	1,277	1,128

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

Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Deal type classifications are at the company level.

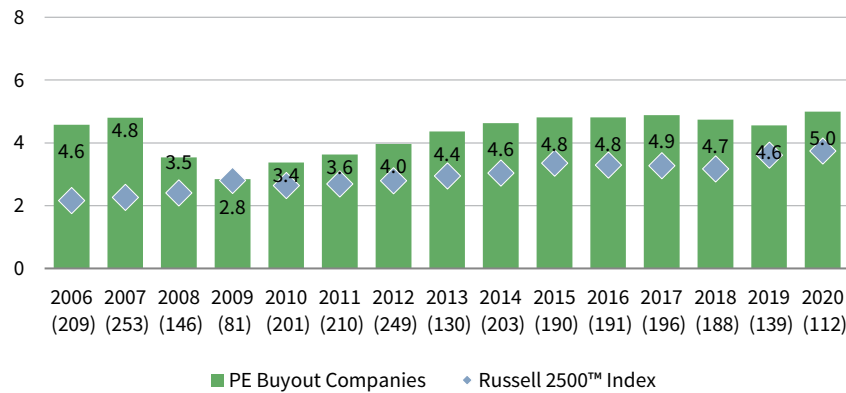
By size, large buyouts remained the most levered; with leverage multiples nearly twice those for small ones

In the small company universe, public company leverage multiples have equaled or exceeded those for small buyouts since 2009

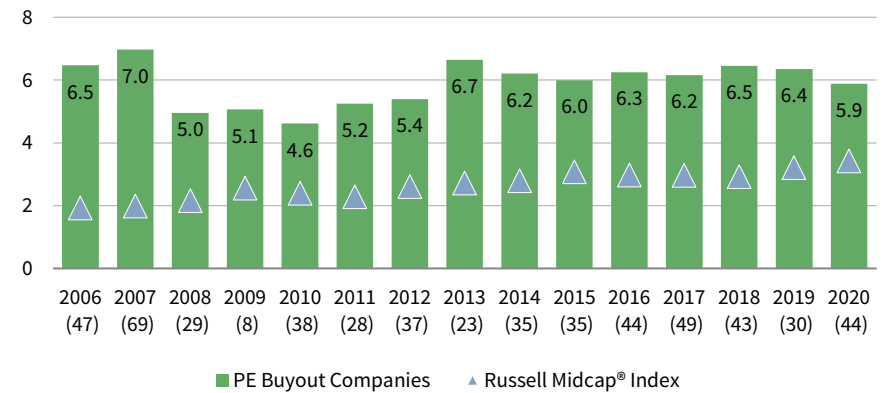
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2020 • Net Debt/EBITDA

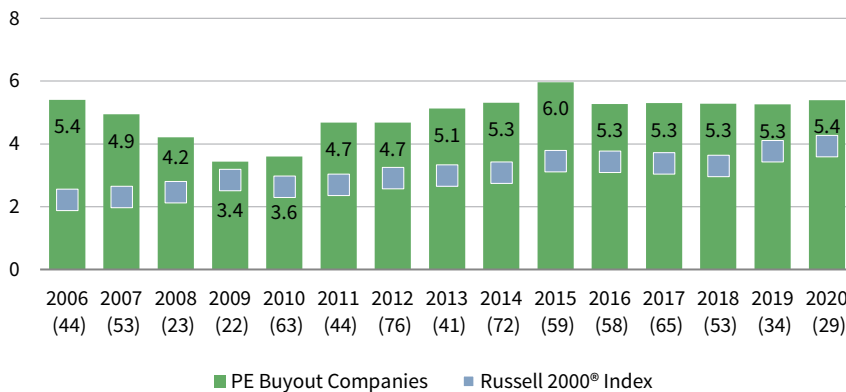
Total Universe



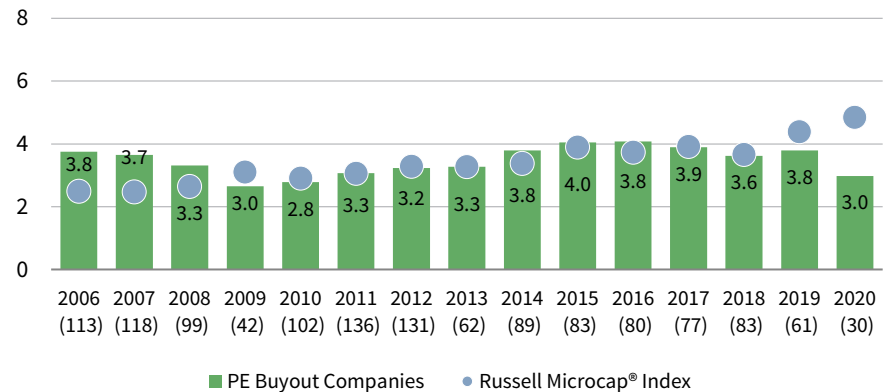
Enterprise Value > \$1B



Enterprise Value \$250M – \$1B



Enterprise Value < \$250M



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

Notes: 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.

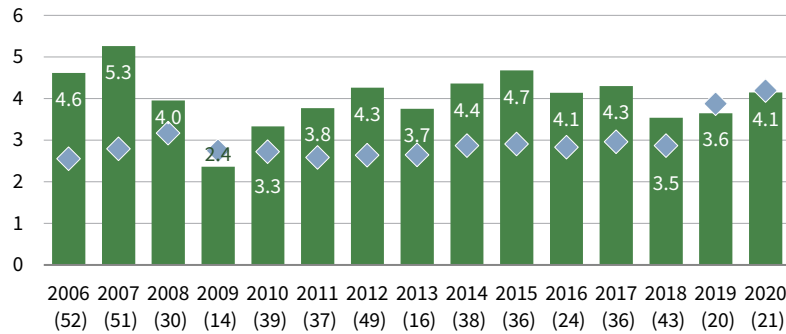
Differences in leverage levels by sector narrowed in 2020

Industrials and consumer increased, while healthcare and IT plateaued

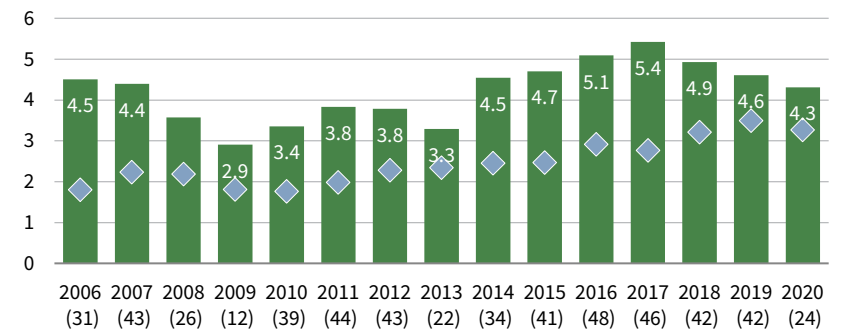
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Net Debt/EBITDA

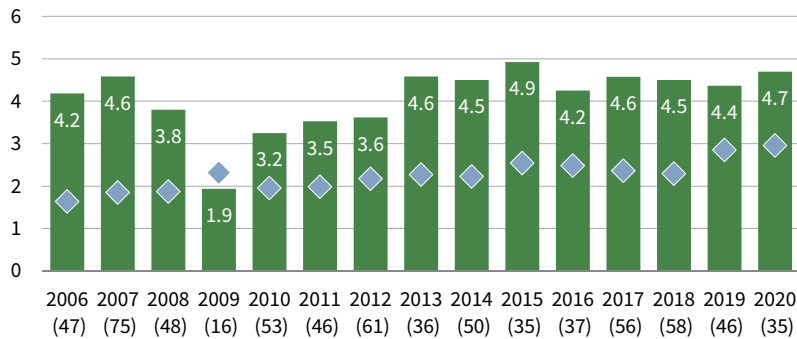
Consumer Discretionary



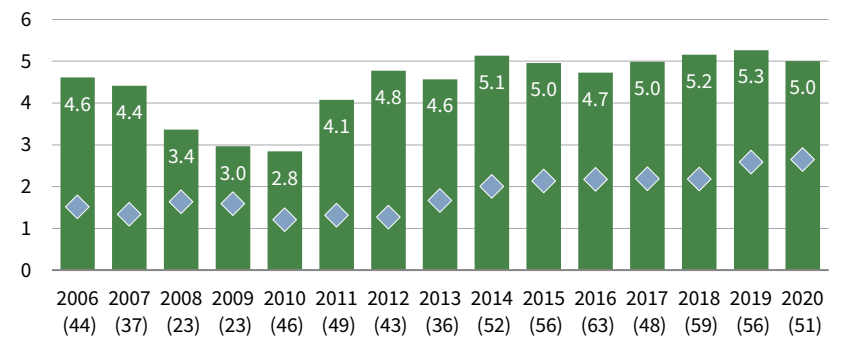
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

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

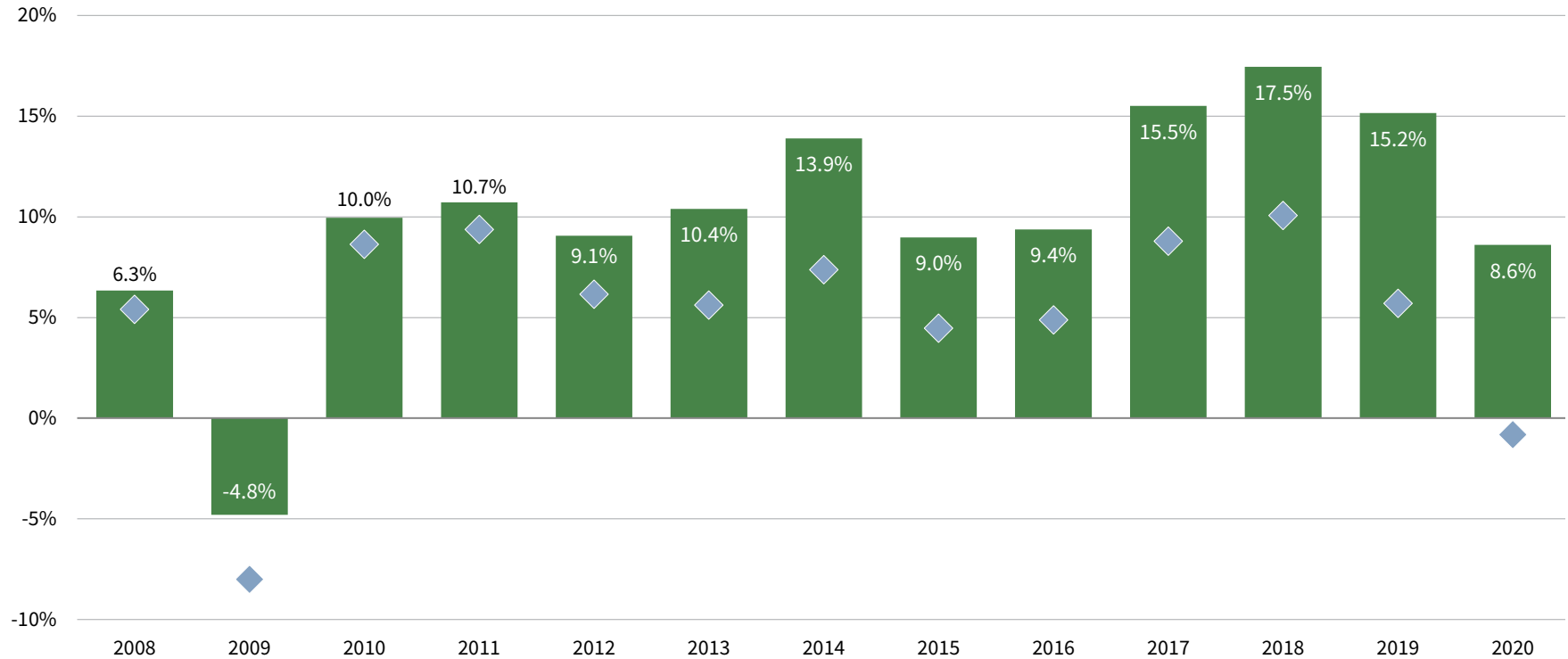
- **Revenue Growth**
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

PE companies proved resilient, delivering strong revenue growth, amid a 2020 recession and pandemic

PE-backed company revenue growth has maintained its dominance over public company performance

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

As of December 31, 2020 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	295	509	633	766	790	720	745	661	667	663	747	839	1,018
Russell 2500™ Index	2,026	2,020	2,050	2,042	2,058	2,031	2,042	2,035	2,005	1,973	1,998	1,991	1,991

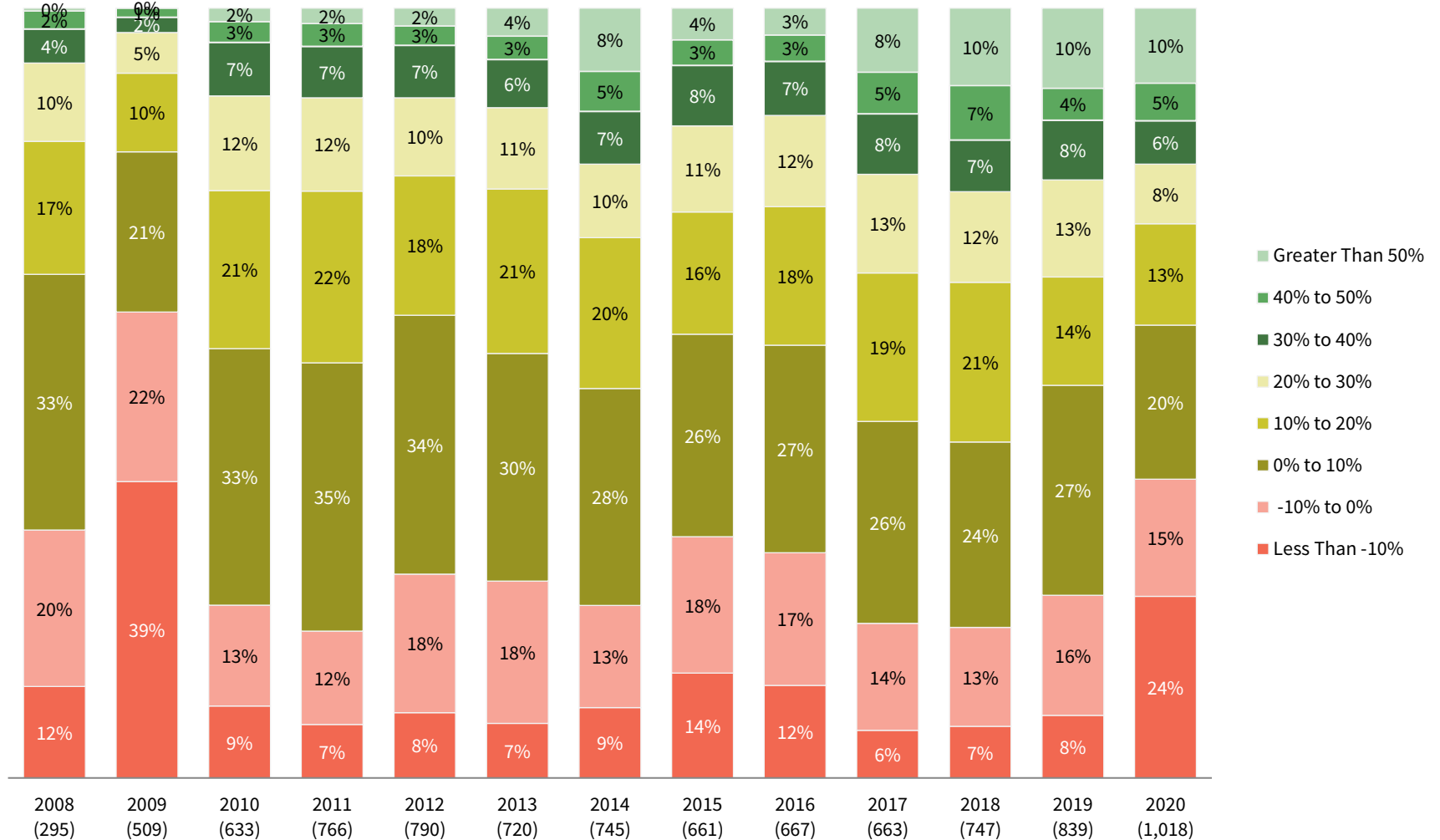
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and Frank Russell Company.
 Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

For only the second time over the period, revenue declined for more than a third of the universe in 2020

But despite the pandemic, 42% of the PE universe grew revenue by at least 10%

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

As of December 31, 2020 • Annual Growth Rate (%)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

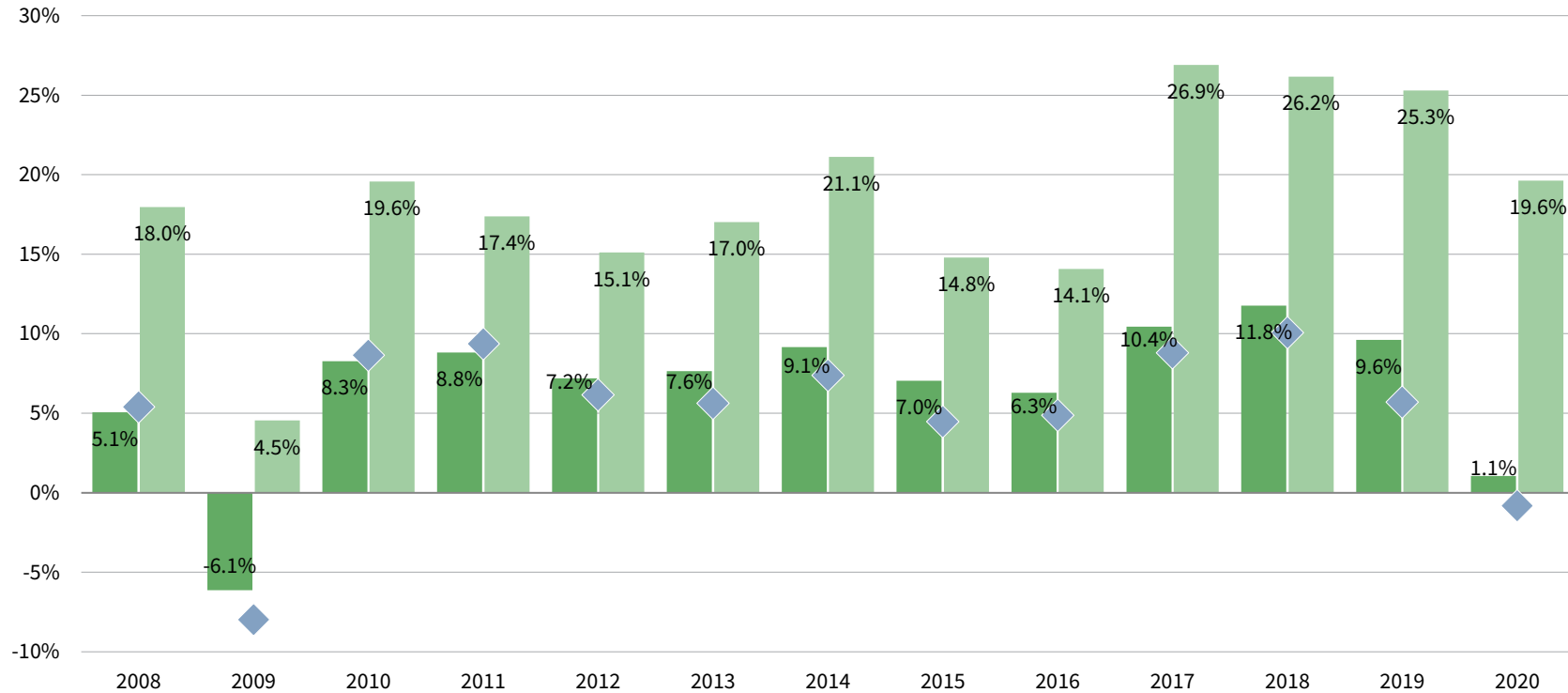
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "0%-10%" range includes companies with reported growth of exactly 0%.

Growth equity has continued to deliver; outperformance of buyouts and publics has been most pronounced since 2017

Buyout revenue growth has roughly equaled or exceeded that of public peers

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

As of December 31, 2020 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	254	414	484	572	548	459	464	365	405	395	441	471	547
Growth Equity Companies	47	89	137	171	201	232	238	249	239	234	284	334	394
Russell 2500™ Index	2,026	2,020	2,050	2,042	2,058	2,031	2,042	2,035	2,005	1,973	1,998	1,991	1,991

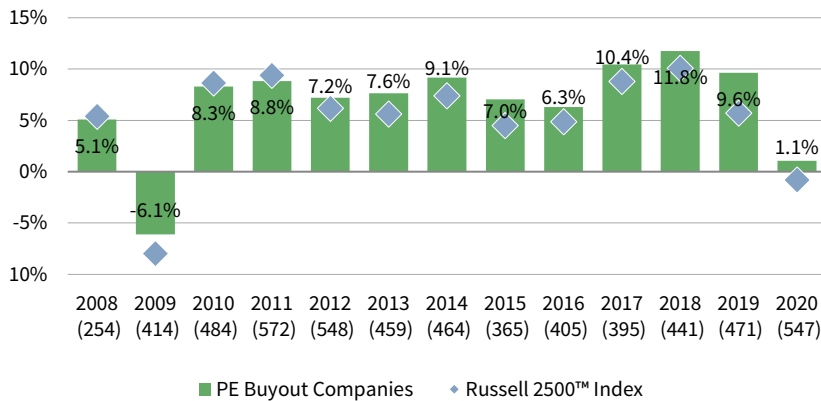
Small buyouts' revenue growth continued to dramatically outpace that of public and private peers in 2019 and 2020

Mid-sized buyouts struggled the most during the pandemic

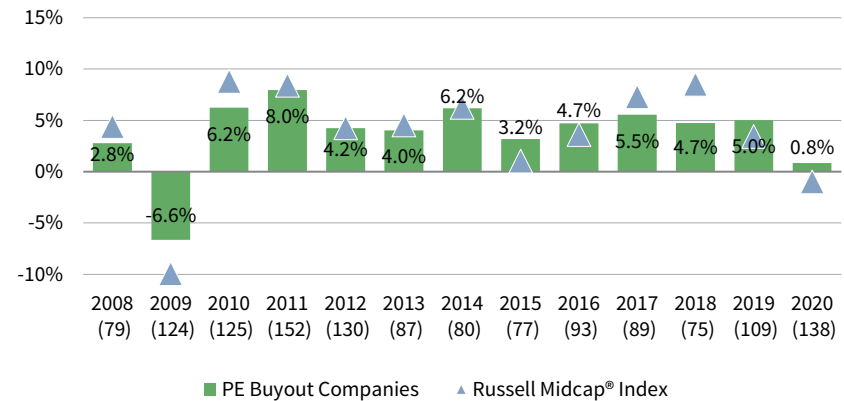
AVERAGE ANNUAL REVENUE GROWTH OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2020 • Annual Growth Rate (%)

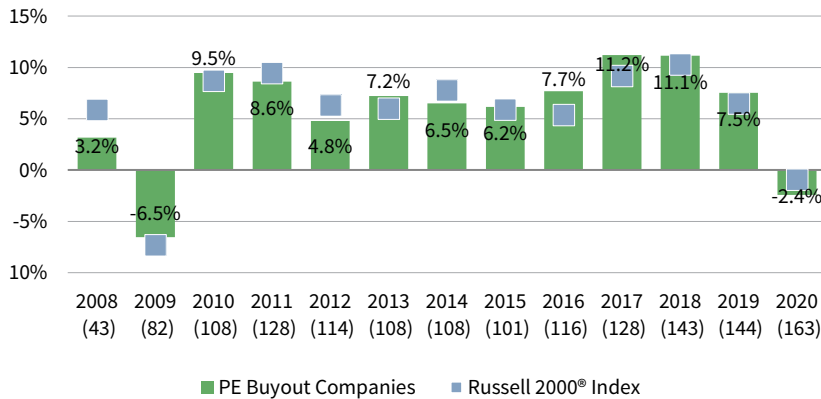
Total Universe



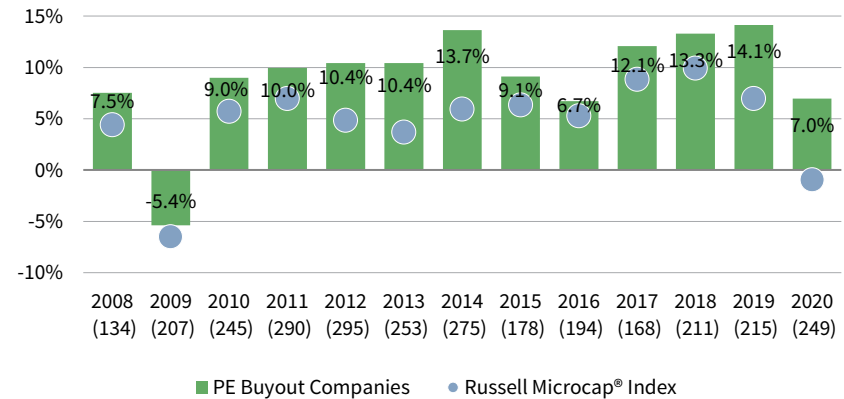
EV > \$1B



EV \$250M – \$1B



EV < \$250M



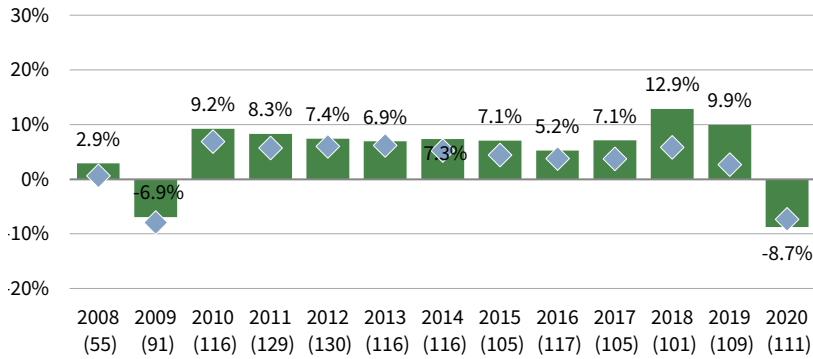
Consumer discretionary and industrials impacted the most by pandemic

IT and healthcare were resilient

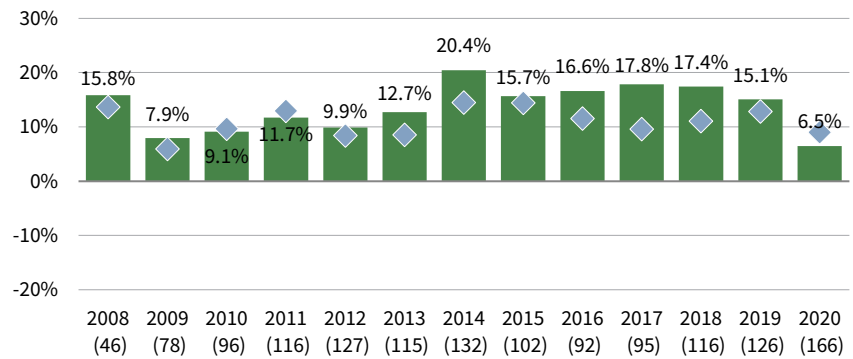
AVERAGE ANNUAL REVENUE GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Annual Growth Rate (%)

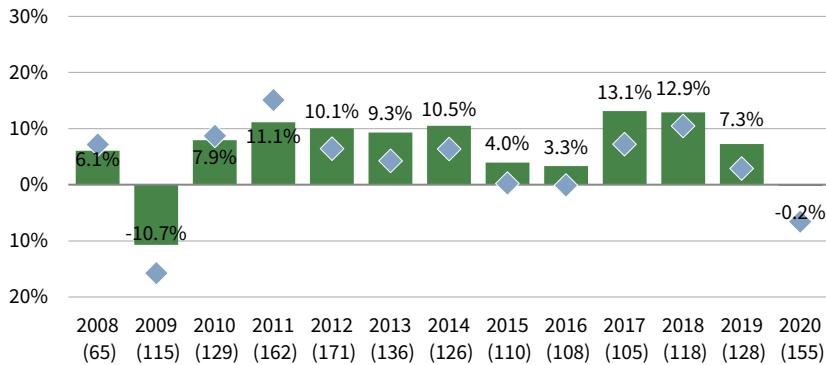
Consumer Discretionary



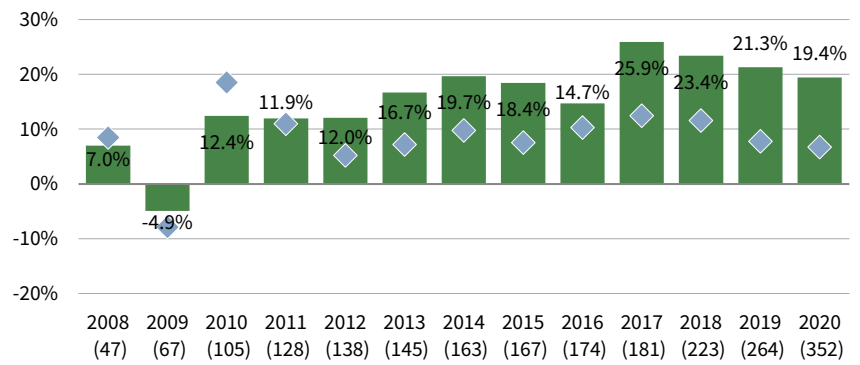
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

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

Notes: 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

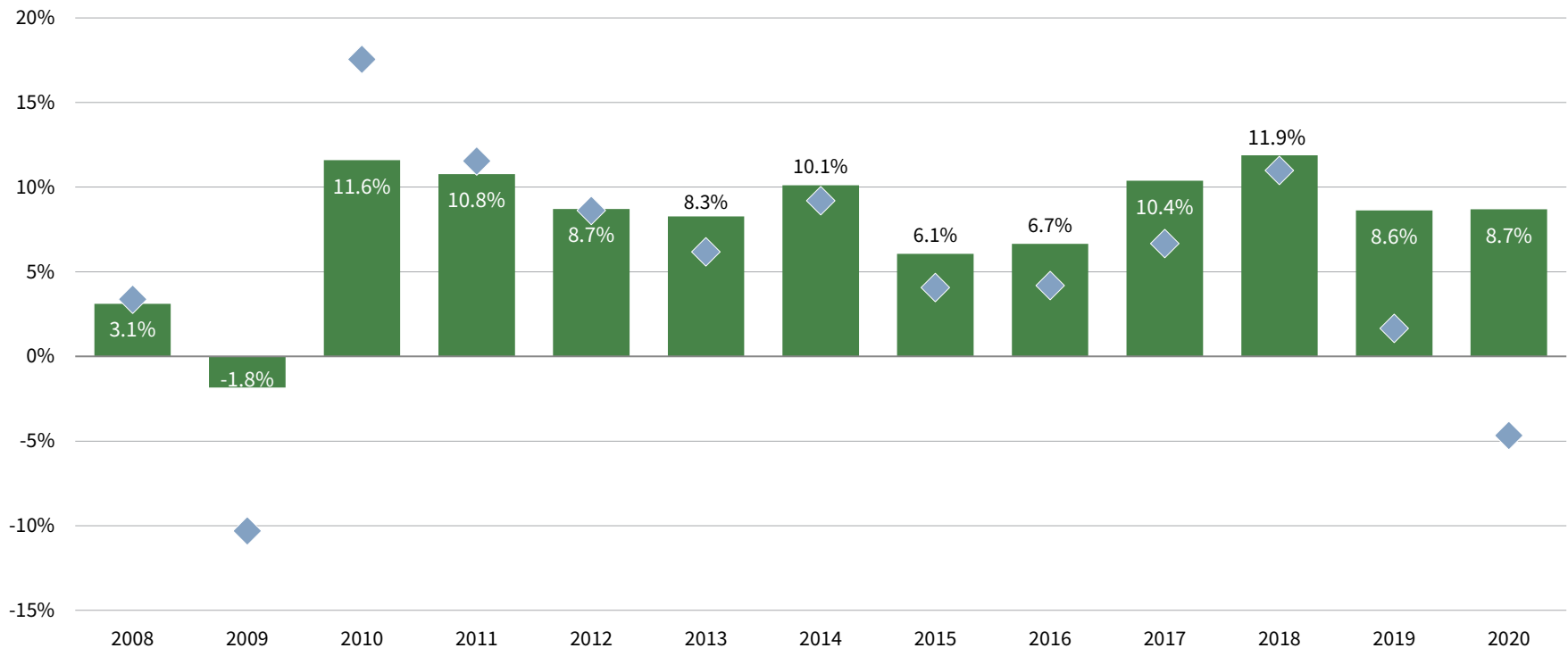
- Revenue Growth
- **EBITDA Growth**
- EBITDA Margin
- Exit Metrics

PE-backed companies maintained EBITDA growth and widened outperformance of publics

EBITDA growth for public companies fell for the second year in a row, turning negative in 2020

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

As of December 31, 2020 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	276	448	542	678	686	600	610	510	497	486	531	591	700
Russell 2500™ Index	1,314	1,293	1,386	1,467	1,483	1,468	1,451	1,433	1,399	1,395	1,385	1,390	1,314

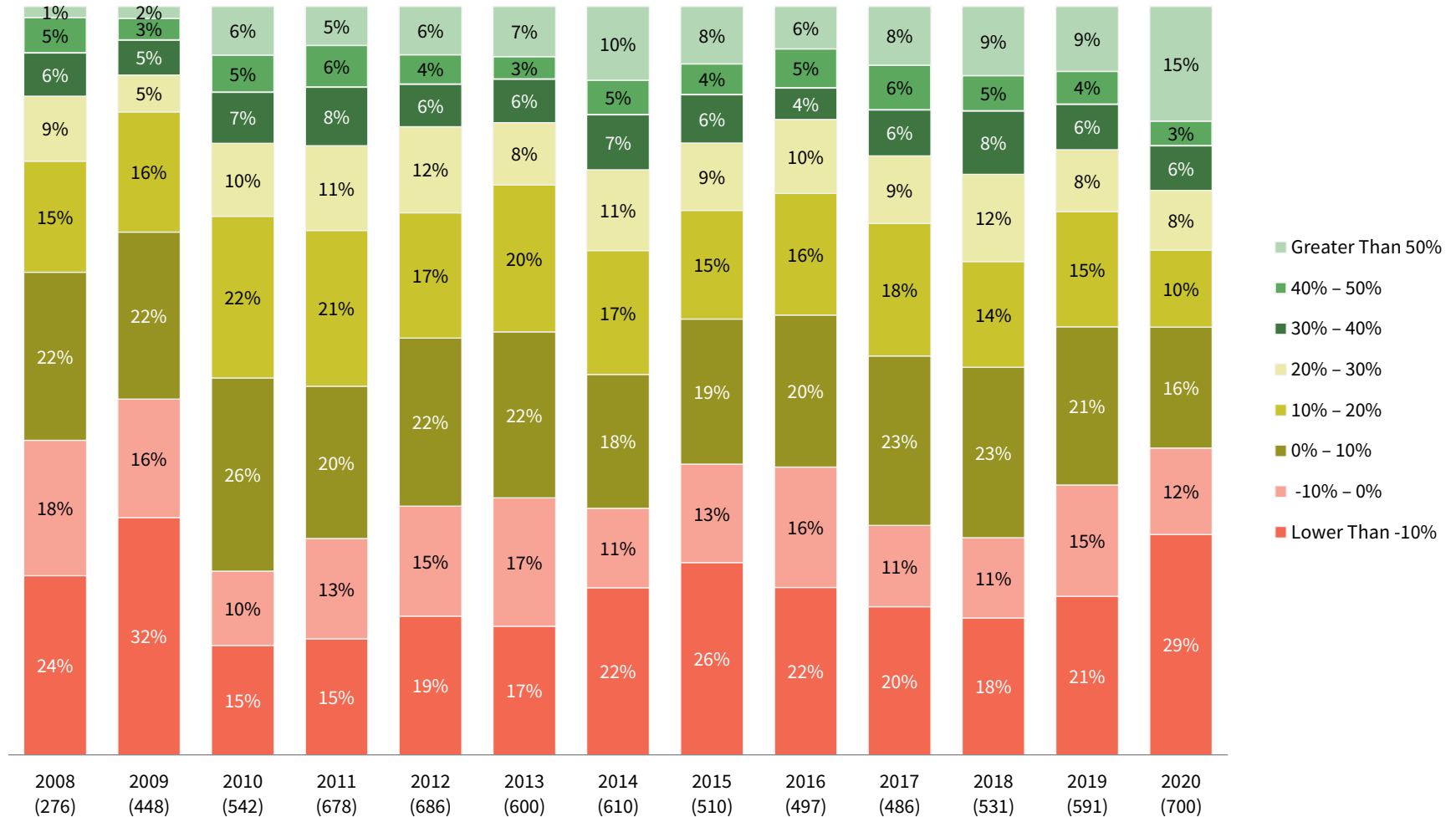
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and Frank Russell Company.

Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Widest divergence yet in EBITDA performance; more high growth, more declines in 2020

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

As of December 31, 2020 • Annual Growth Rate (%)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

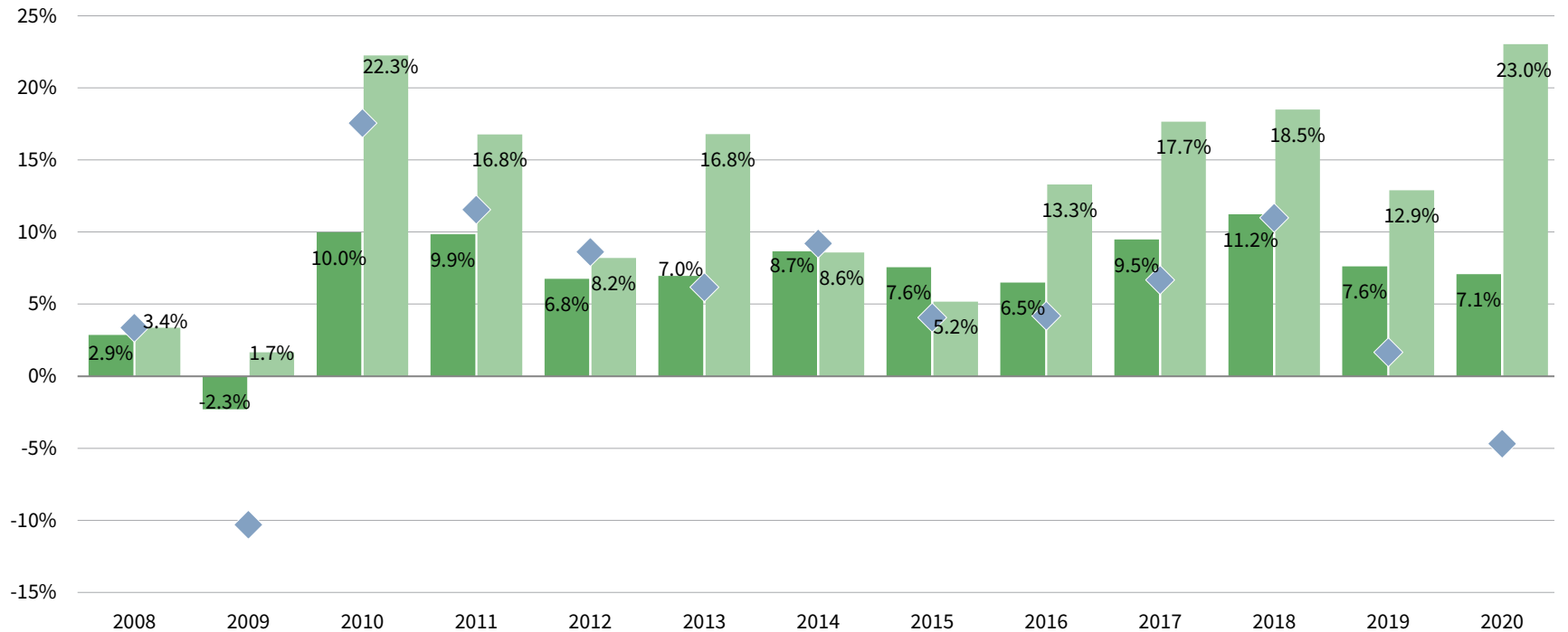
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "0%–10%" range includes companies with reported growth of exactly 0%. Due to rounding, totals may not sum to 100%.

Growth equity accelerated growth and tacked on fifth straight year of double-digit EBITDA increases

Buyouts delivered meaningful growth while substantially outperforming public companies

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

As of December 31, 2020 • Annual Growth Rate (%)



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	242	382	424	537	518	432	448	348	360	365	407	432	495
Growth Equity Companies	32	61	104	132	145	147	145	134	116	103	125	143	155
Russell 2500™ Index	1,314	1,293	1,386	1,467	1,483	1,468	1,451	1,433	1,399	1,395	1,385	1,390	1,314

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

Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Deal type classifications are at company level.

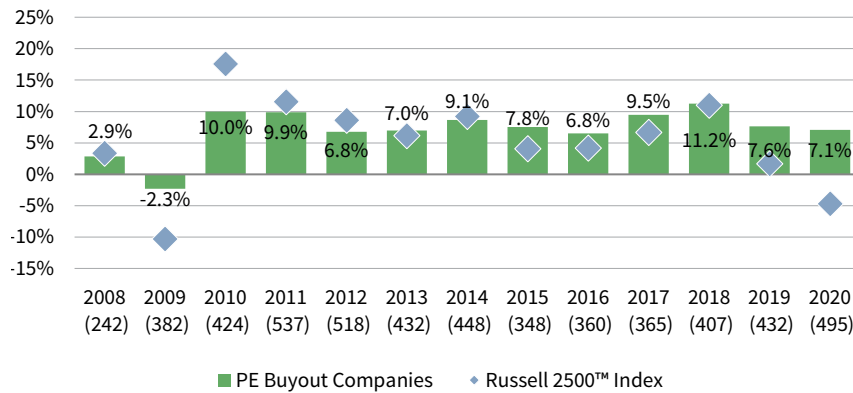
Small-cap buyouts continued to deliver strong growth, in stark contrast to public and larger peers

All PE cap ranges' EBITDA growth exceeded that of public peers

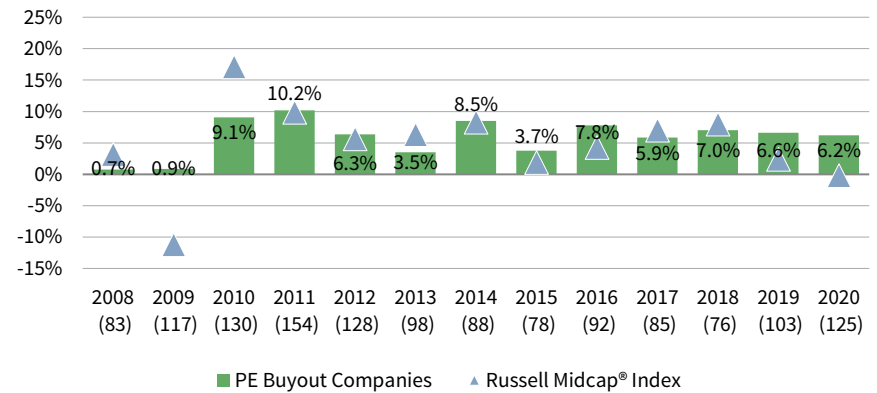
AVERAGE ANNUAL EBITDA GROWTH OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2020 • Annual Growth Rate (%)

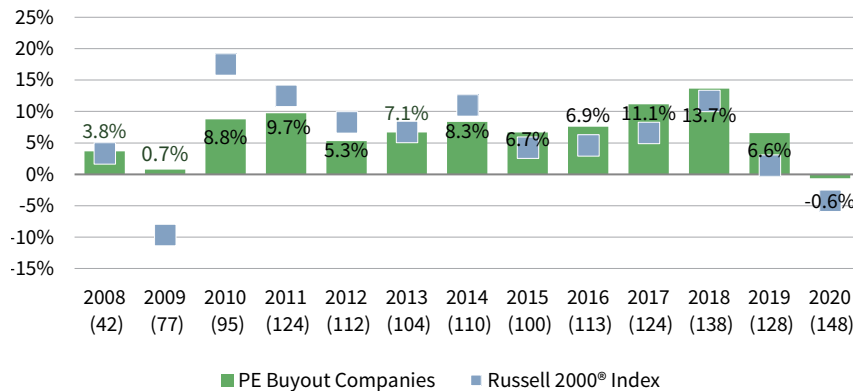
Total Universe



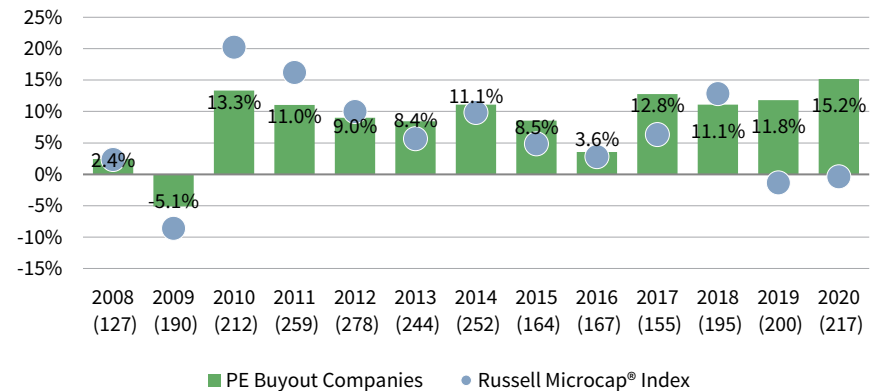
Enterprise Value > \$1B



Enterprise Value \$250M – \$1B



Enterprise Value < \$250M



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

Notes: 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.

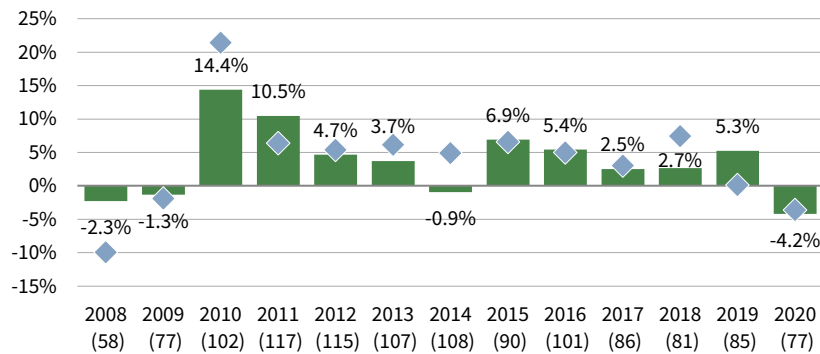
IT and healthcare companies have delivered strong EBITDA growth

Growth for consumer and industrials is meaningfully lower across time (and mostly negative in 2020)

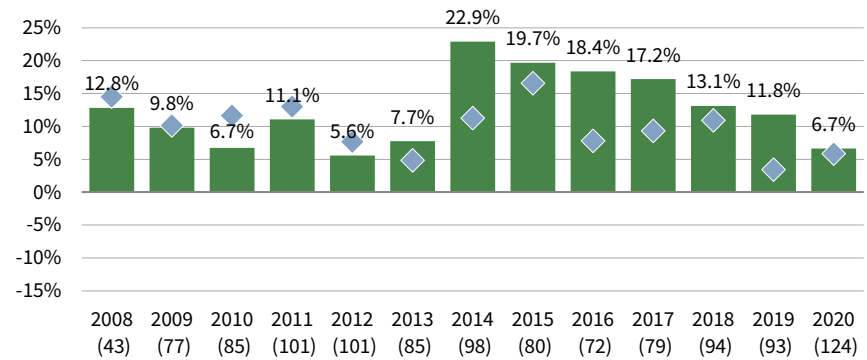
AVERAGE ANNUAL EBITDA GROWTH OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Annual Growth Rate (%)

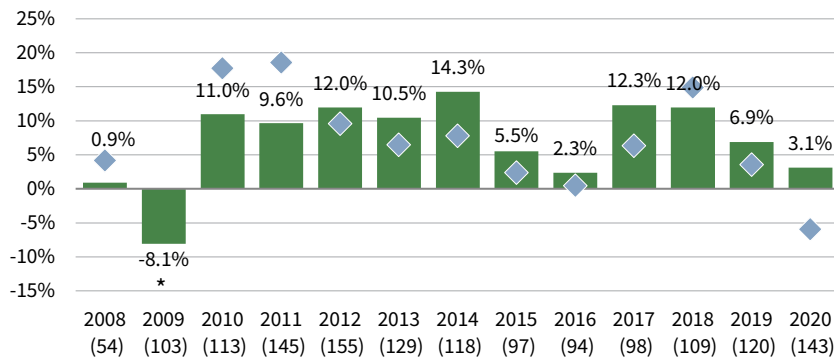
Consumer Discretionary



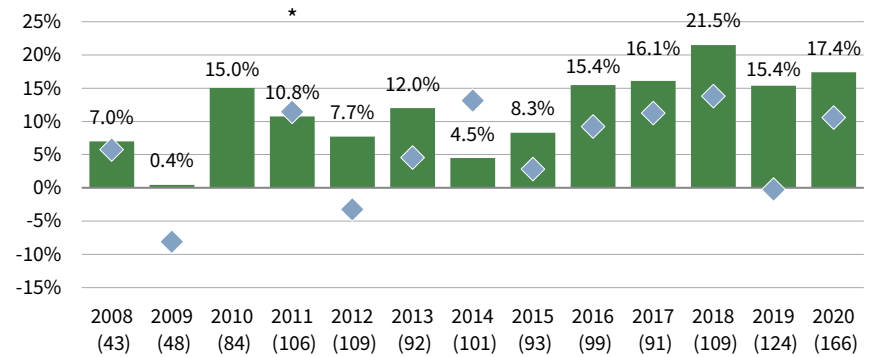
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

* Axis has been capped at -15% and 25% for scaling purposes. Industrials in the Russell 2500™ saw EBITDA growth of -22.7% in 2009; IT companies in the Russell 2500™ saw EBITDA growth of 34.6% in 2010.

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

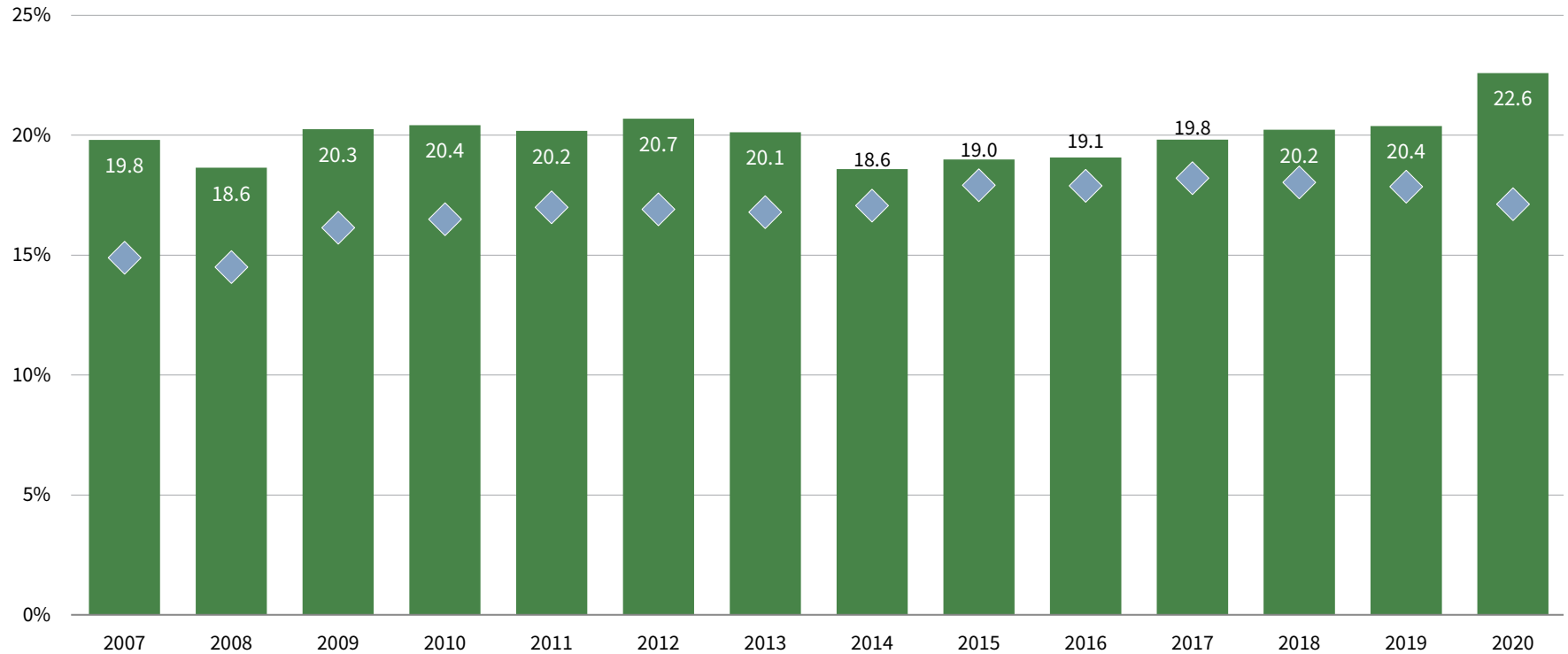
- Revenue Growth
- EBITDA Growth
- **EBITDA Margin**
- Exit Metrics

PE company EBITDA margins hit a high for the period in 2020

PE outperformance in 2020 was highest since 2007, as public company margins deteriorated from 2017 to 2020

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

As of December 31, 2020 • EBITDA/Revenue (%)



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	321	489	654	848	1,047	1,160	884	974	832	899	915	984	1,029	1,161
Russell 2500™ Index	1,565	1,563	1,724	1,750	1,741	1,714	1,686	1,711	1,699	1,629	1,609	1,587	1,539	1,473

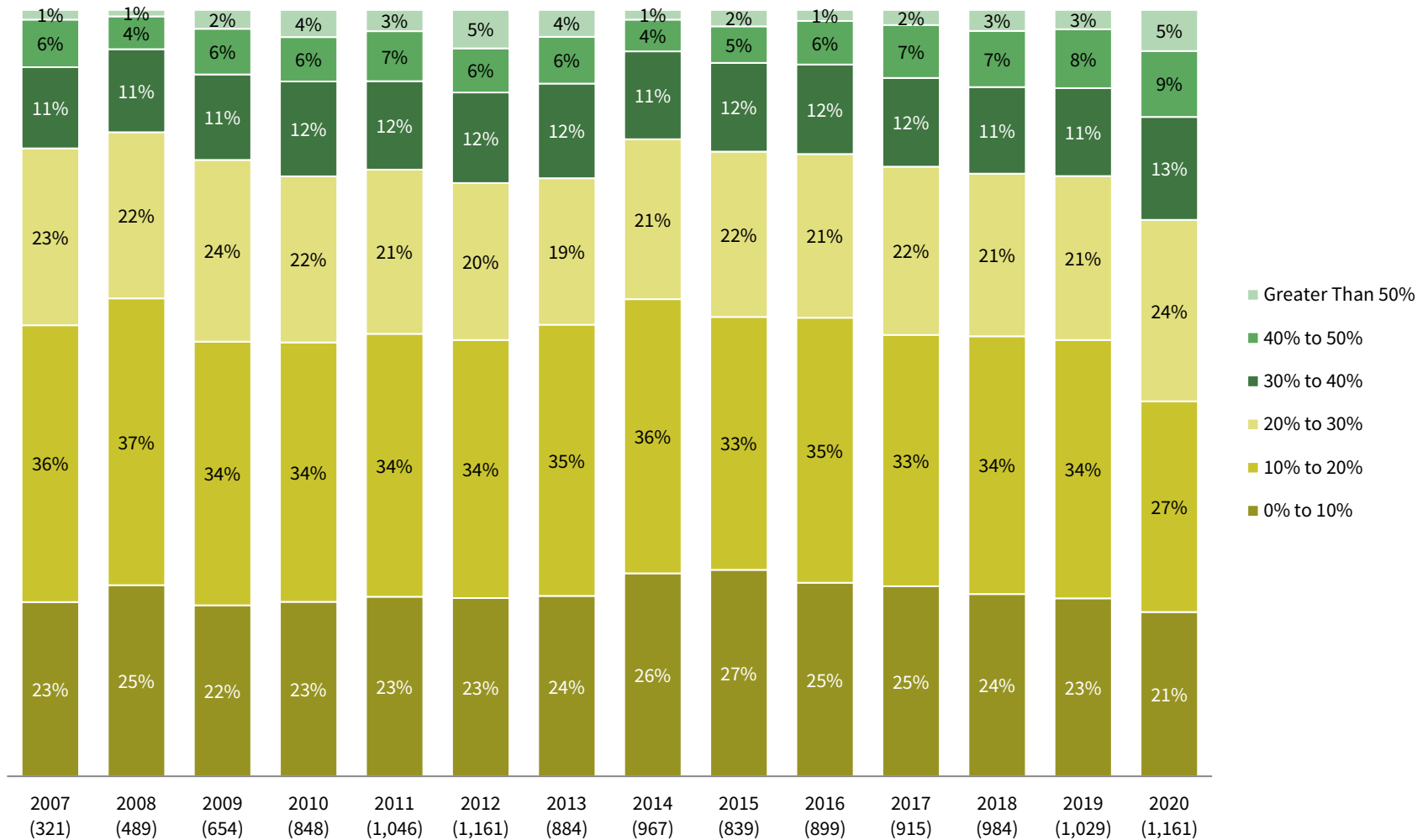
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and Frank Russell Company.
 Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Distribution of PE EBITDA margins highlights consistency

In 2020, the majority of the PE universe reported 20%+ EBITDA margins

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

As of December 31, 2020 • EBITDA/Revenue (%)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

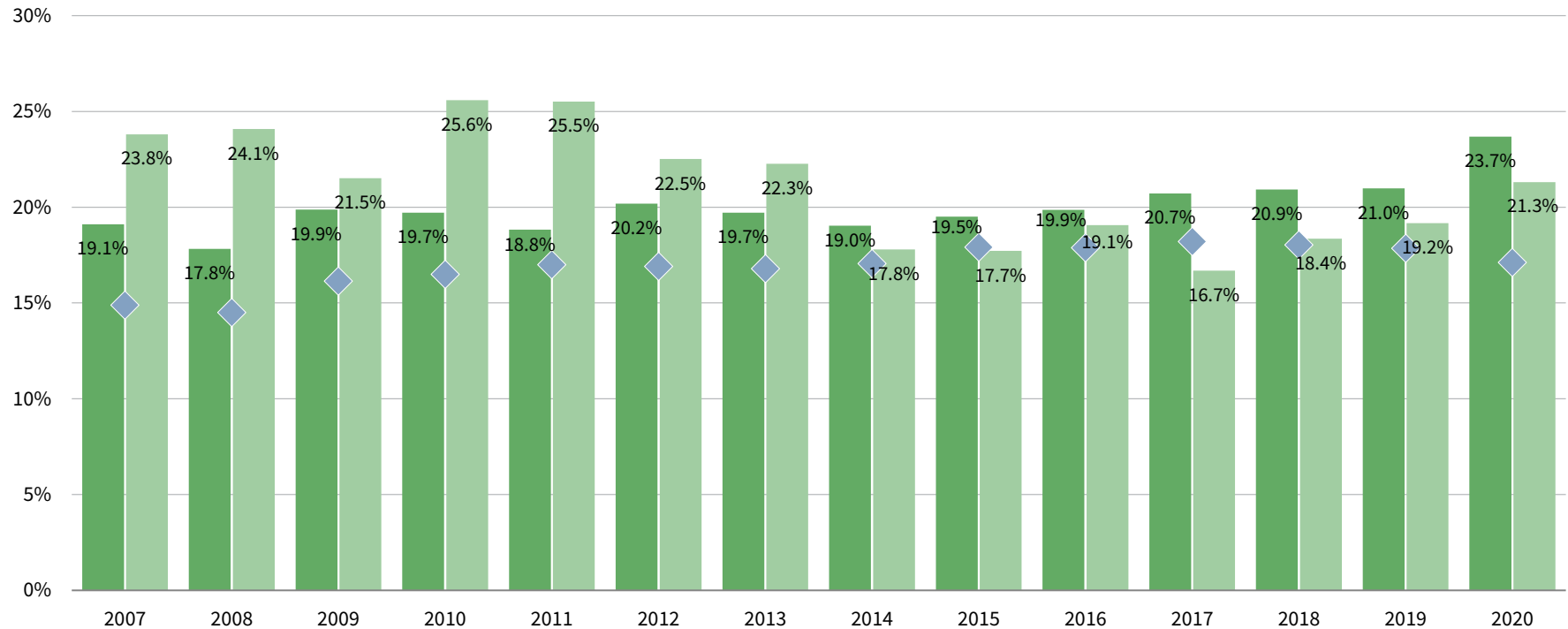
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "0%–10%" range includes companies with reported margins of exactly 0%. Due to rounding, totals may not sum to 100%.

Buyout and growth equity margins sustained their upward trend in 2020

Buyout and growth equity companies generally operate at higher margins than their public peers

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

As of December 31, 2020 • EBITDA/Revenue (%)



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	274	410	515	657	792	848	642	723	585	658	672	714	737	780
Growth Equity Companies	46	73	122	185	198	246	215	212	195	218	197	231	237	303
Russell 2500™ Index	1,565	1,563	1,724	1,750	1,741	1,714	1,686	1,711	1,699	1,629	1,609	1,587	1,539	1,473

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

Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Deal type classifications are at the company level.

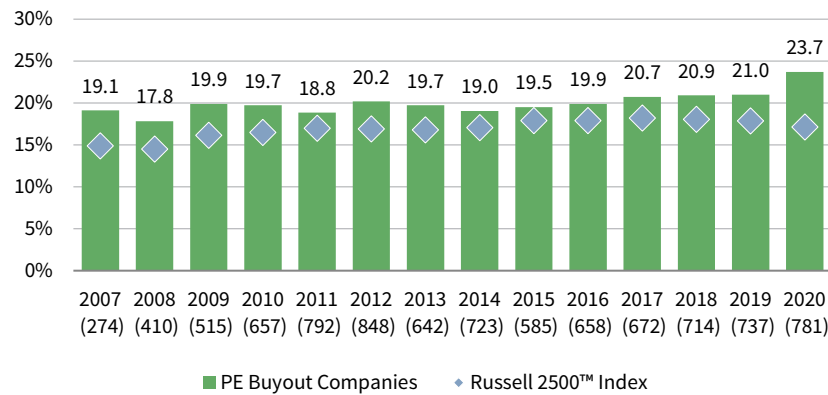
Large companies display notably higher margin profiles

By size, all buyouts operate with better margin profiles than their public counterparts

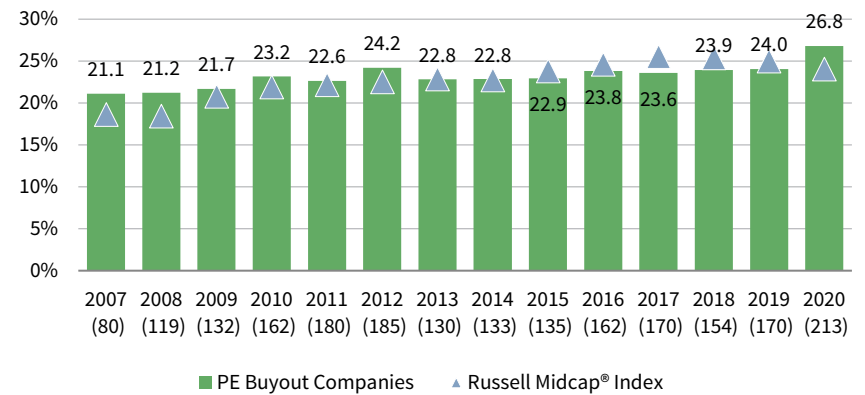
AVERAGE ANNUAL EBITDA MARGIN OF US PRIVATE EQUITY BUYOUT COMPANIES VS PUBLIC COMPANIES BY ENTERPRISE VALUE SEGMENT

As of December 31, 2020 • EBITDA/Revenue (%)

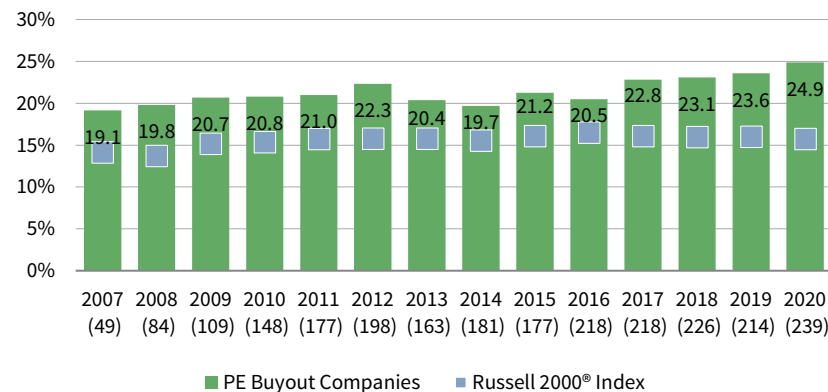
Total Universe



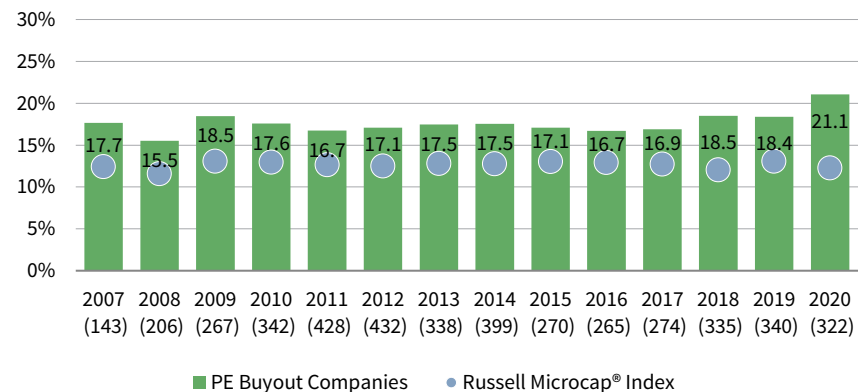
Enterprise Value > \$1B



Enterprise Value \$250M – \$1B



Enterprise Value < \$250M



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

Notes: 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.

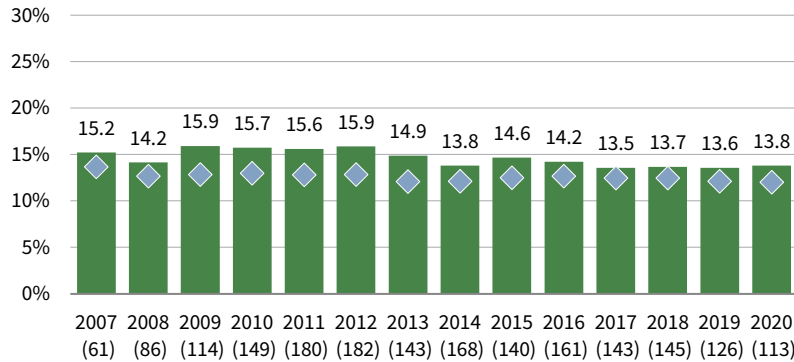
For three of the four sectors, margins were better in 2020 than in 2019

PE-backed IT companies have continued to operate at the highest margins of all, reaching a new peak in 2020

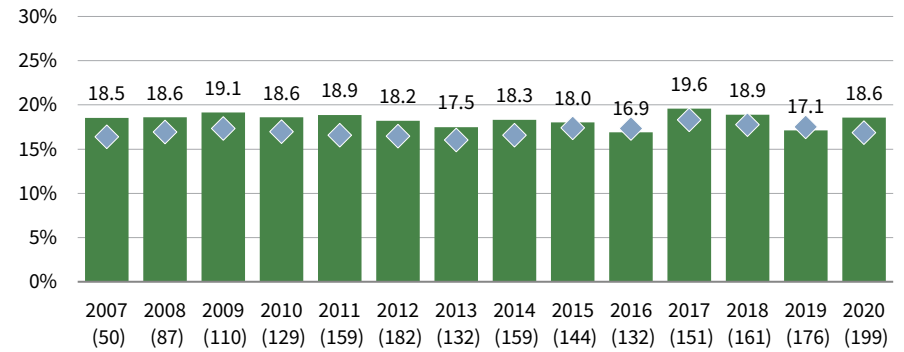
AVERAGE ANNUAL EBITDA MARGIN OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • EBITDA/Revenue (%)

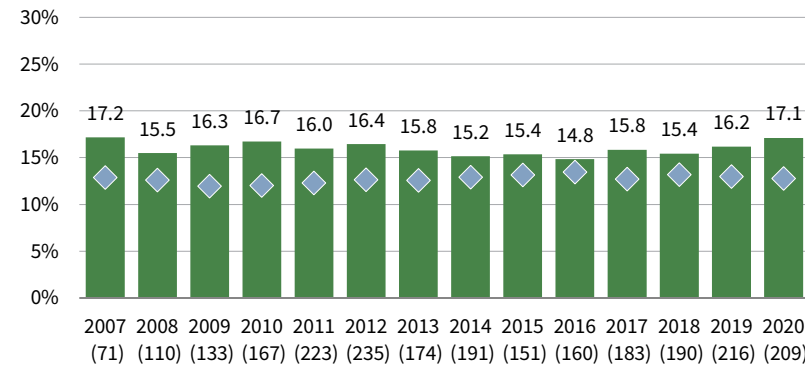
Consumer Discretionary



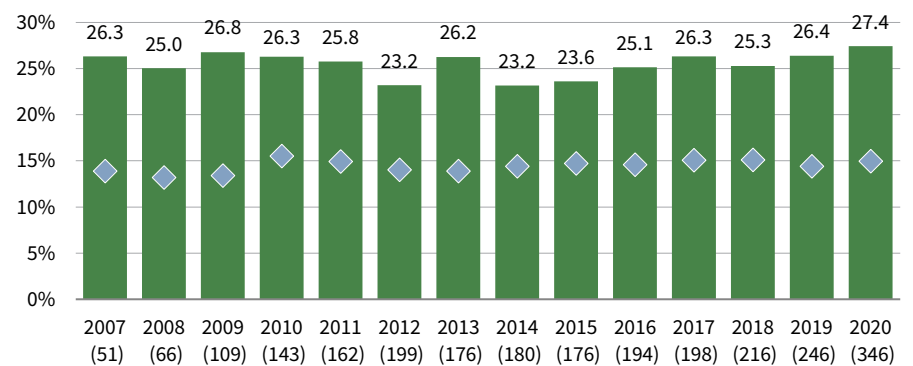
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

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

Notes: 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

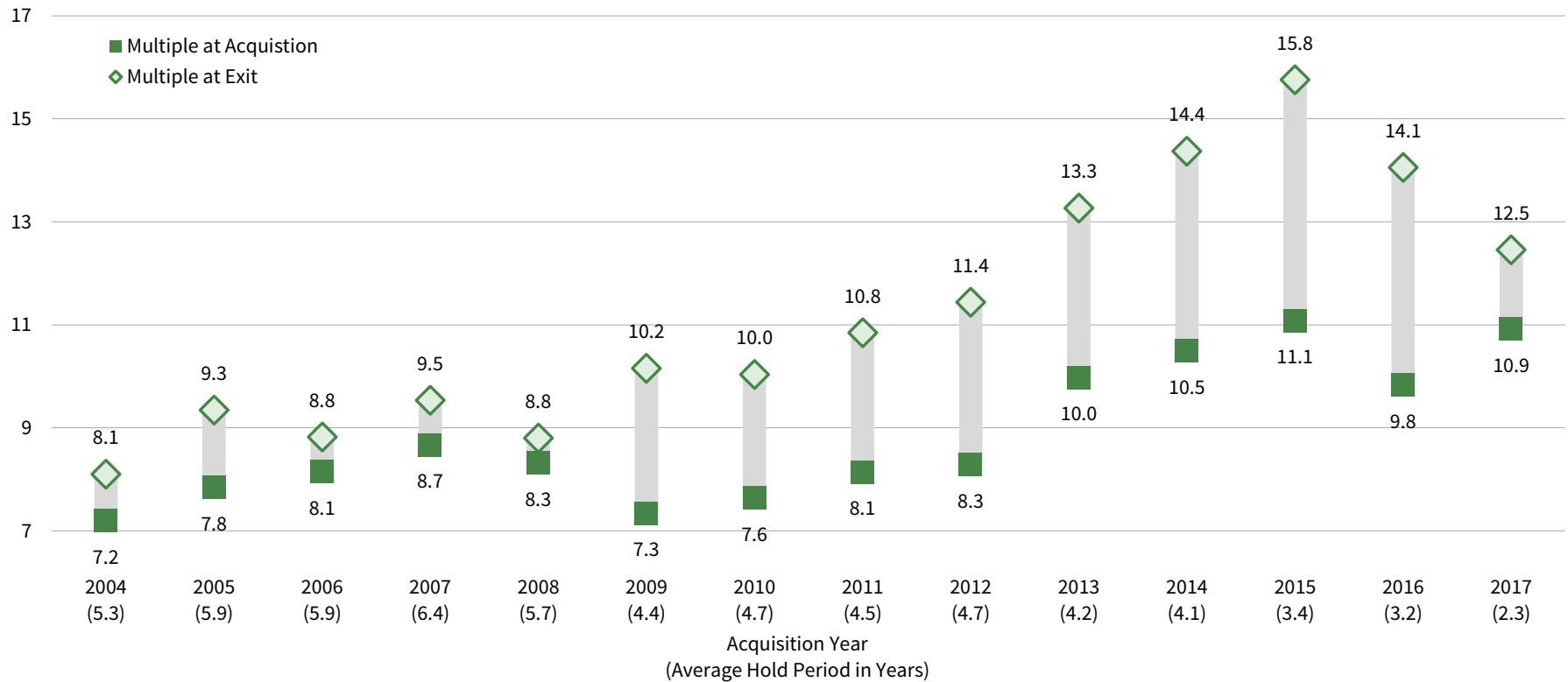
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- **Exit Analyses**

Despite generally rising entry multiples, exit multiples for companies acquired since 2009 were meaningfully higher

Realized companies acquired from 2009 to 2017 have all demonstrated meaningful multiple expansion

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

As of December 31, 2020 • Enterprise Value/EBITDA



	Number of Companies													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	91	113	169	207	137	82	176	129	159	91	104	72	51	22

Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

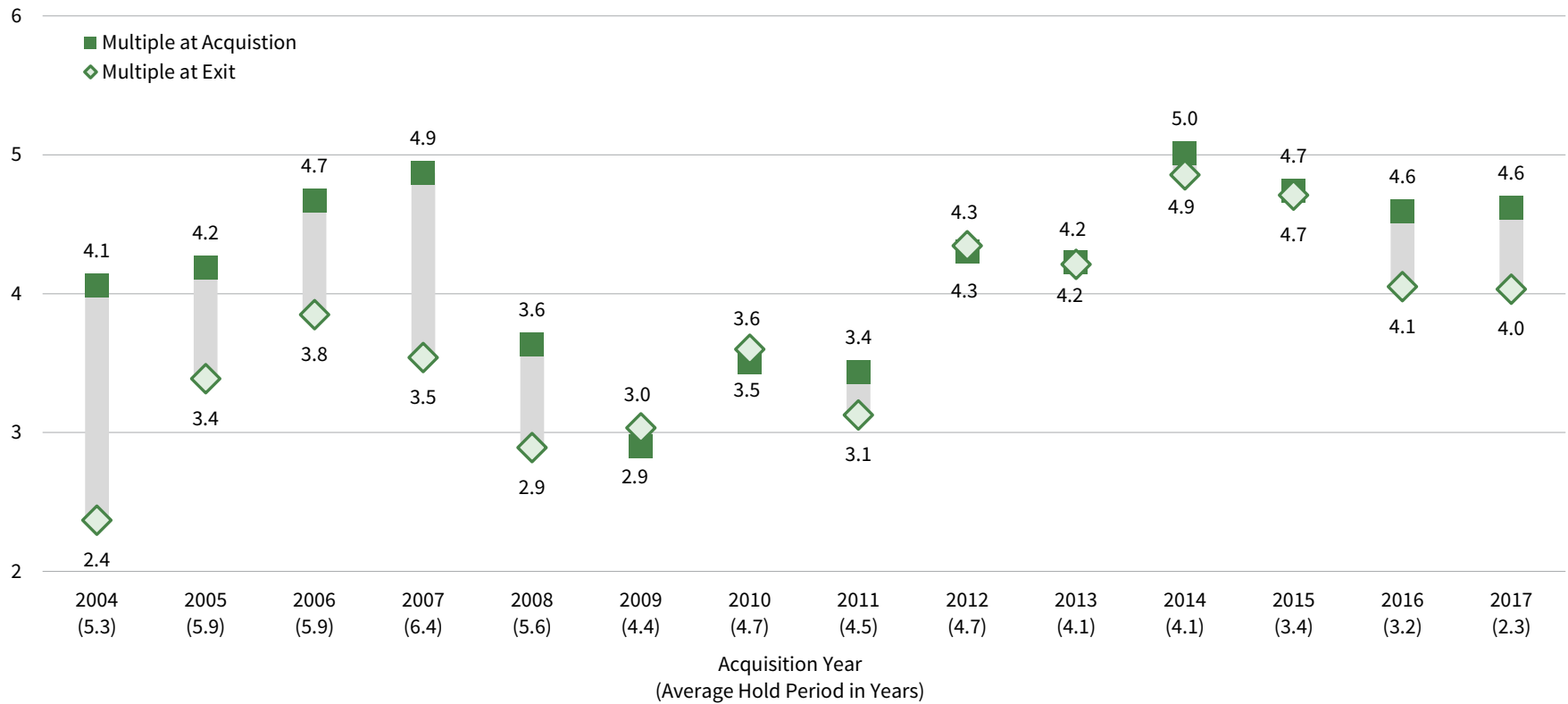
Note: Analysis only includes companies that have both acquisition and exit data.

High leverage multiples at entry have been followed by deleveraging during PE ownership

Leverage multiples for exited companies acquired from 2009 to 2015 experienced de minimis or no reduction at all

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

As of December 31, 2020 • Net Debt/EBITDA



Number of Companies

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	87	103	149	190	115	62	155	118	138	70	86	61	46	21

Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

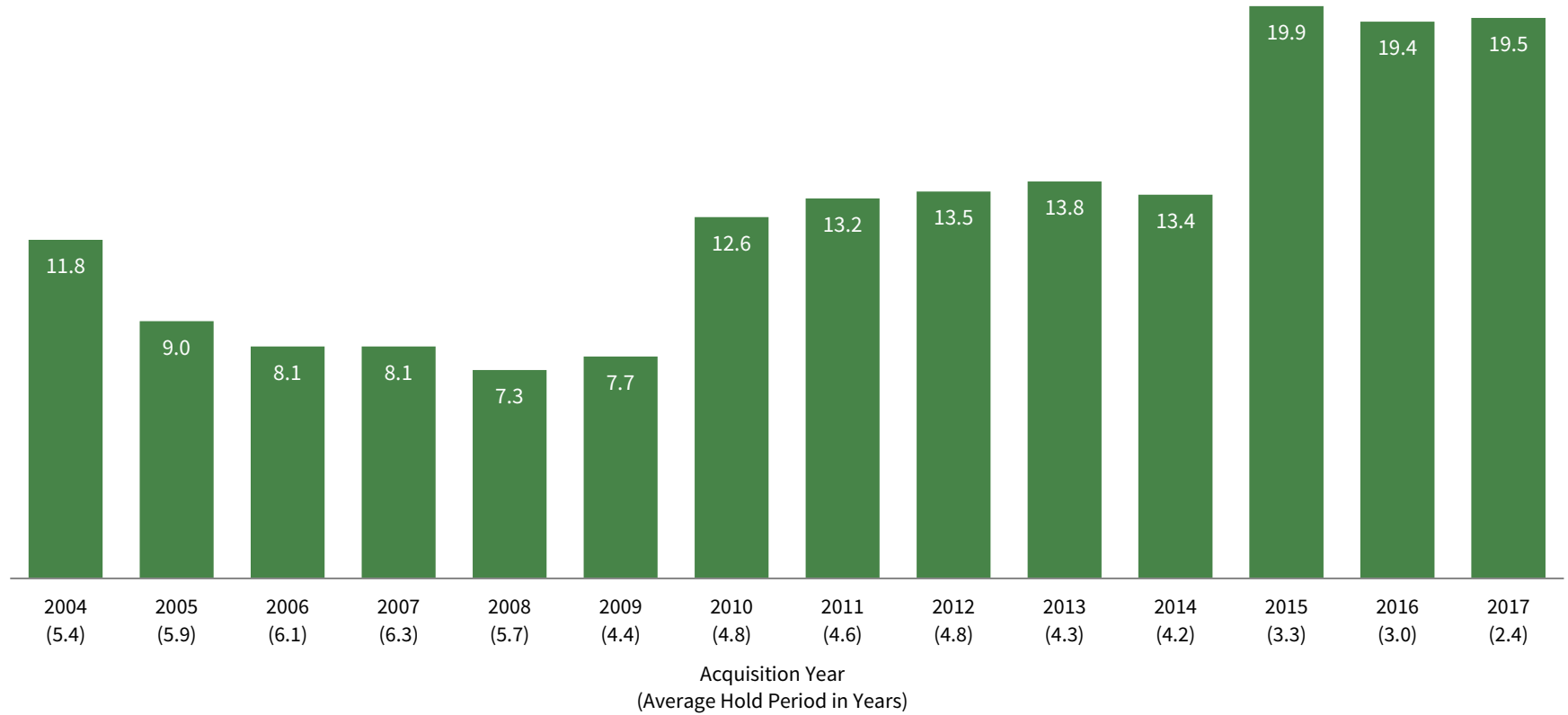
Note: Analysis only includes companies that have both acquisition and exit data.

Revenue CAGRs have expanded over time, suggesting an increased focus on growth

Software companies represented 36% of the exited companies acquired in 2015–17

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

As of December 31, 2020 • Compound Annual Growth Rate (%)



	Number of Companies													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	116	136	210	256	162	110	214	162	190	119	142	105	71	42

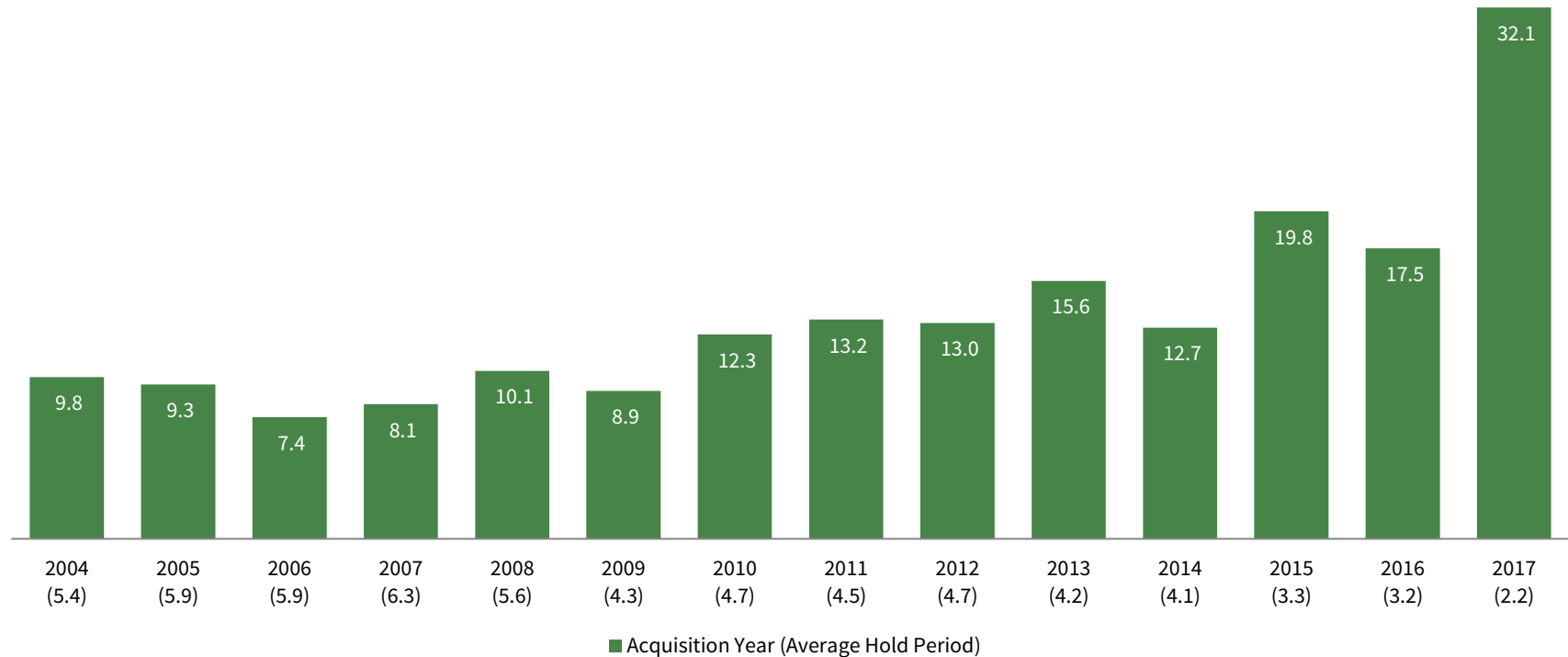
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Like revenue, EBITDA CAGRs have generally trended upward since 2010

Strong EBITDA growth and shorter hold periods could indicate a willingness to sell winners

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

As of December 31, 2020 • Compound Annual Growth Rate (%)



	Number of Companies													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	100	124	180	226	148	86	183	135	163	93	113	78	52	26

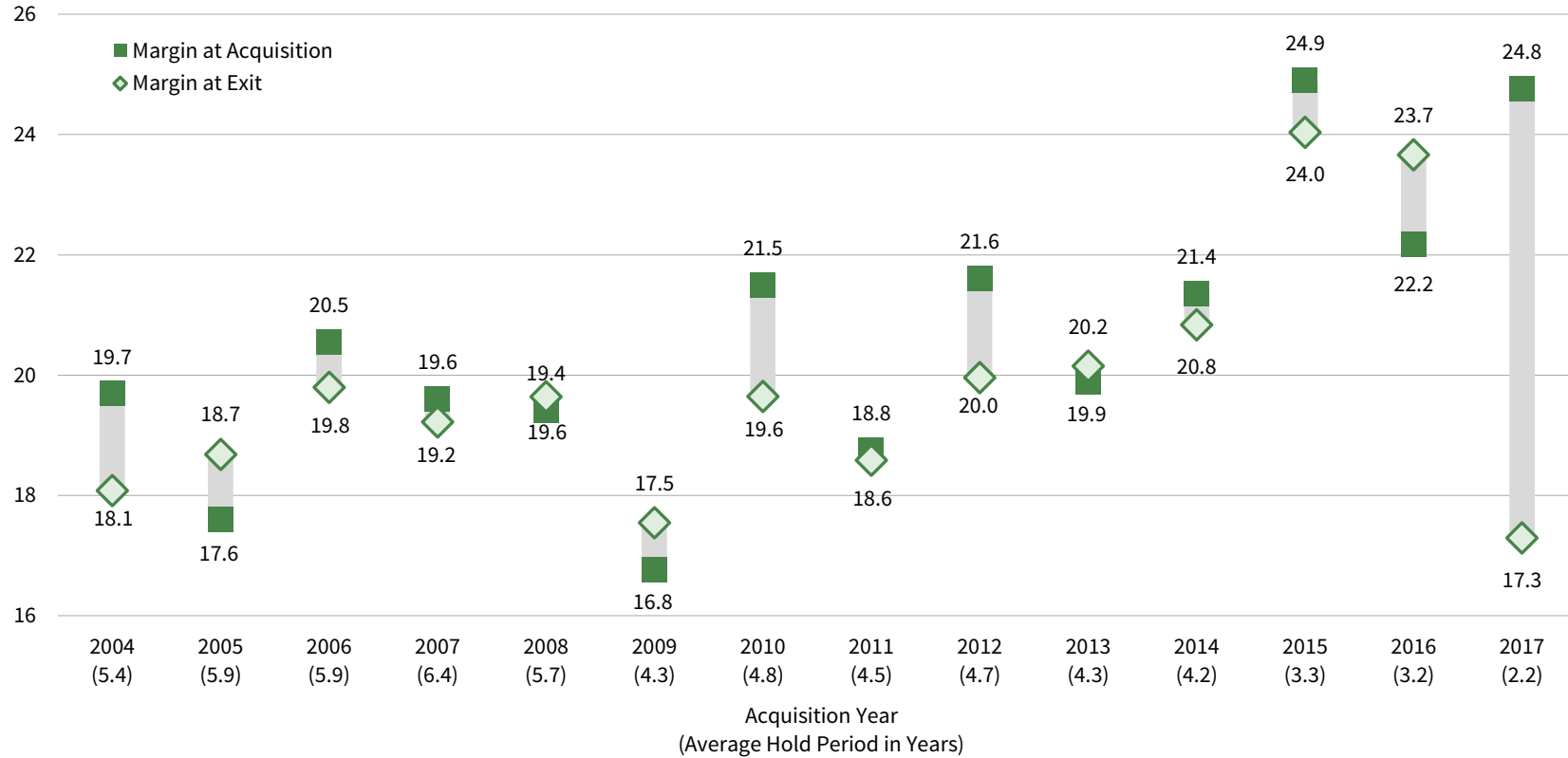
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Excepting only the shortest held companies, EBITDA margins relatively stable from acquisition to exit

2017 vintage companies exited to this point have sacrificed margins for growth

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

As of December 31, 2020 • EBITDA/Revenue (%)



Number of Companies

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	97	120	173	214	146	86	181	136	161	95	112	78	52	27

Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

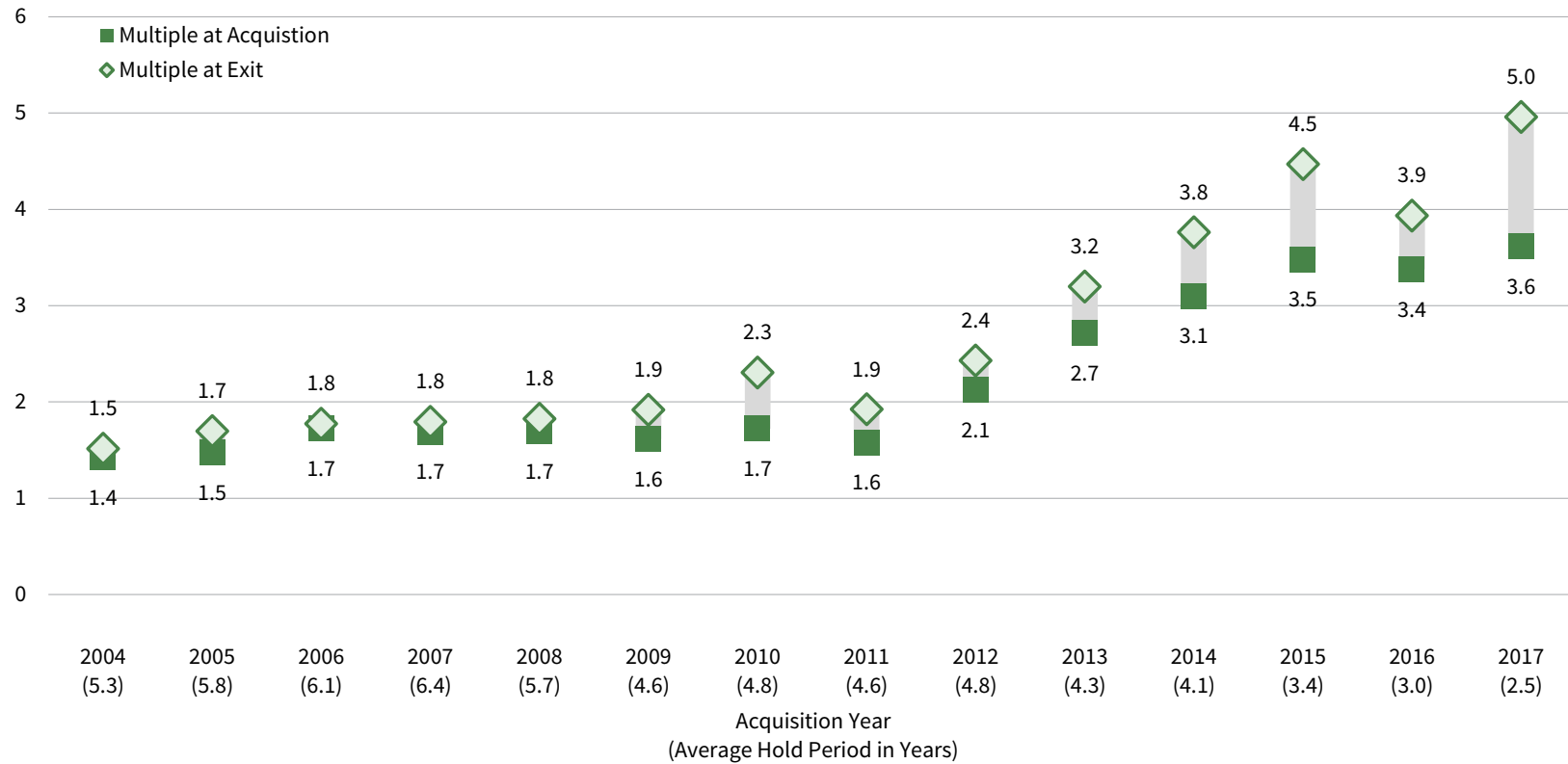
Note: Analysis only includes companies that have both acquisition and exit data.

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

The expansion was generally higher for realized companies acquired since 2012 than for those acquired from 2004 to 2011

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

As of December 31, 2020 • Enterprise Value/EBITDA



	Number of Companies													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PE-Owned Companies	103	123	196	232	150	102	205	154	185	116	131	98	70	39



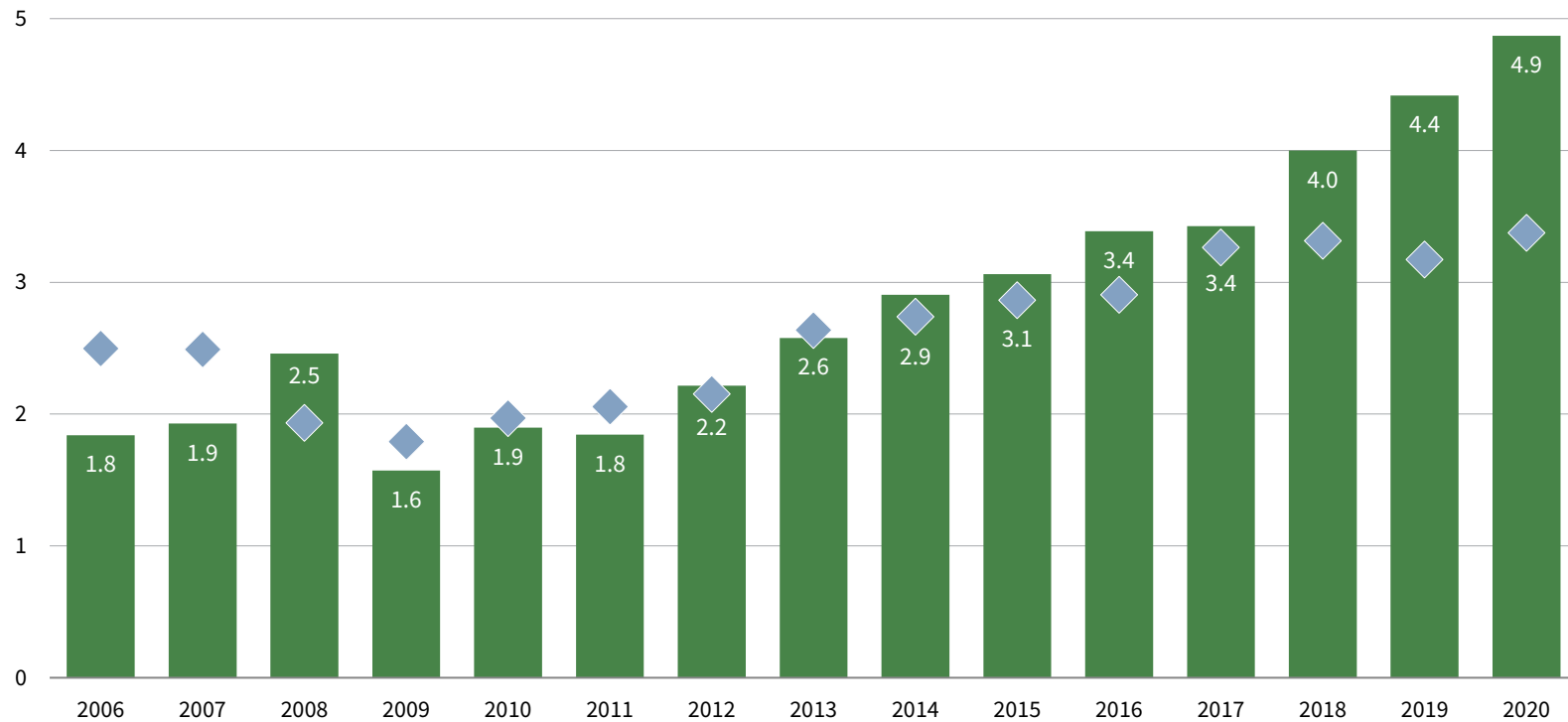
APPENDIX: REVENUE PURCHASE PRICE MULTIPLE

PE company revenue PPMs have continued to trend upward, driven in part by the industry's increasing investment in IT businesses

The difference between private and public revenue PPMs was at its largest in 2019 and 2020

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

As of December 31, 2020 • Enterprise Value/LTM Revenue



Number of Companies

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	270	350	230	140	298	289	349	222	320	298	308	351	328	300	254
Russell 2500™ Index	2,357	2,257	2,291	2,228	2,235	2,175	2,194	2,220	2,262	2,264	2,222	2,236	2,268	2,193	2,220

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.

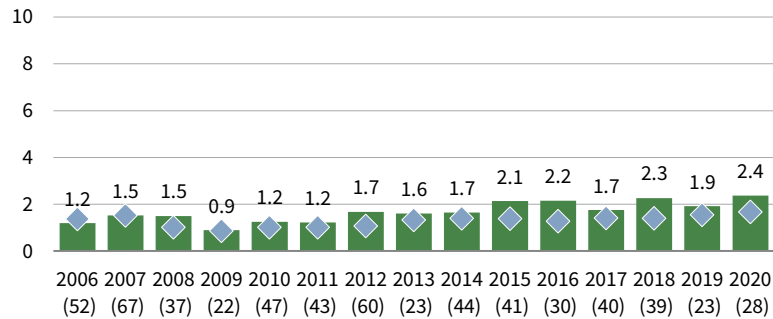
Private IT companies transact at much higher revenue PPMs than public peers

In healthcare, public valuations dwarf the private ones (this could be driven by differing subsector composition)

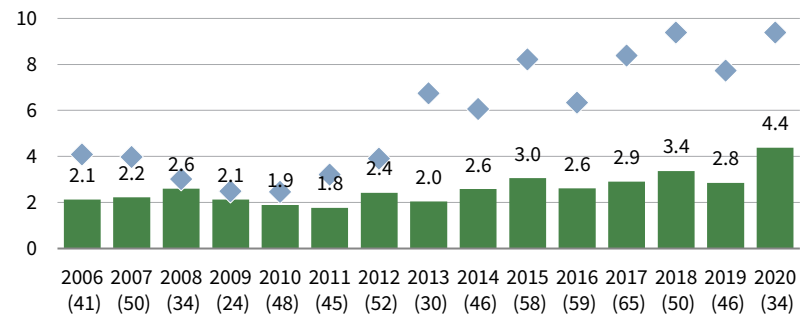
AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION OF US PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Enterprise Value/Revenue

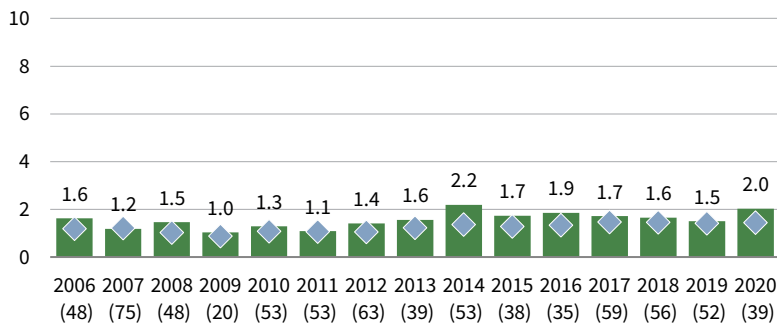
Consumer Discretionary



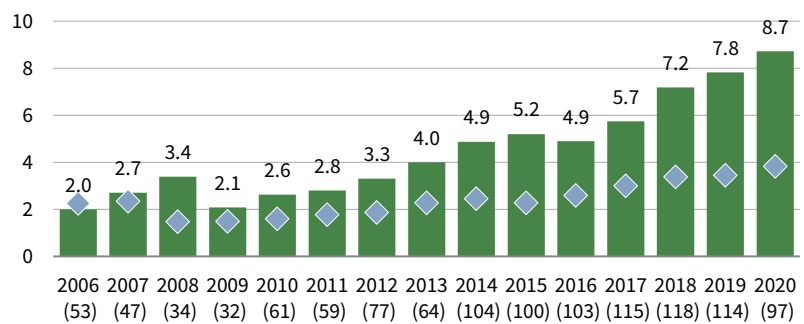
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ Russell 2500™

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

Notes: 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.

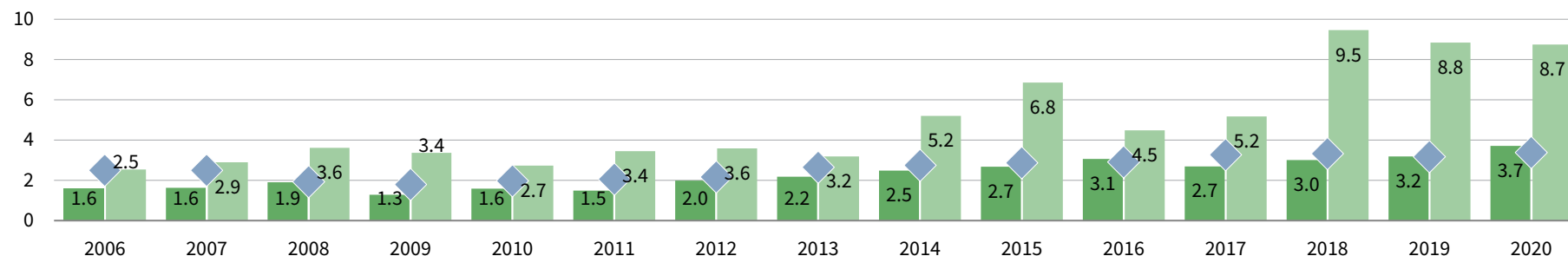
From 2018–20, average revenue multiples for growth equity and growth equity IT companies were more than double those from 2006–17

Revenue PPMs for buyouts and buyout IT companies have increased more gradually, keeping more in line with publics

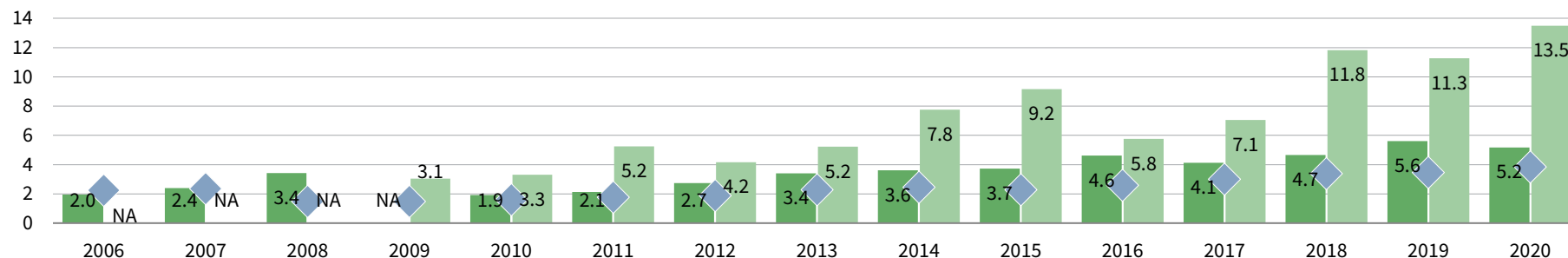
AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION BY US DEAL TYPE AND SECTOR VS PUBLIC COMPANIES

As of December 31, 2020 • Enterprise Value/LTM Revenue

Deal Type



Deal Type: IT Companies



Number of Companies

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	210	250	160	99	221	215	266	147	224	210	210	219	210	152	131
Growth Equity Companies	48	76	51	39	65	67	77	59	97	94	88	115	107	113	94
Russell 2500™ Index	2,357	2,257	2,291	2,228	2,235	2,175	2,194	2,220	2,262	2,264	2,222	2,236	2,268	2,193	2,220
IT Buyout Companies	39	28	21	NA	33	39	43	35	57	55	58	49	64	51	42
IT Growth Equity Companies	NA	NA	NA	16	26	24	32	29	47	48	48	63	50	68	56
Russell 2500™ Index IT Companies	433	400	413	392	387	382	388	385	398	366	354	340	341	318	316

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

Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Deal type classifications are at the company level.



CAMBRIDGE
ASSOCIATES

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