

PRIVATE COMPANY OPERATING METRICS: GLOBAL ANALYSIS

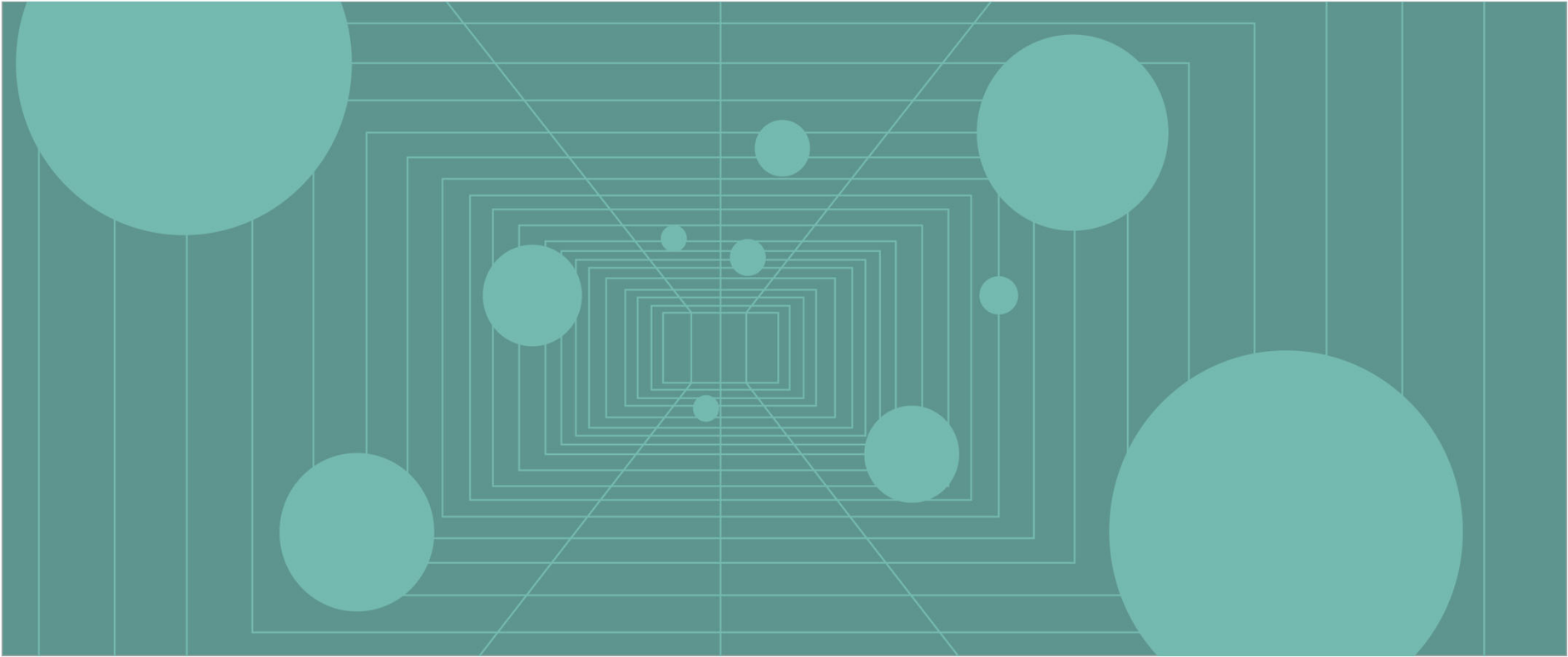


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Key Valuation Metric: Purchase Price Multiple

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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 about 11,000 companies worldwide, of which about 5,700 are based in the United States, almost 2,900 in Europe, and nearly 1,700 in Asia; they were acquired by PE firms from 2000 through 2020 and range in enterprise value from less than \$1 million to larger than \$130 billion. The universe of private investments is subject to change over time.
- 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. Finally, 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 European and Asian comparisons between the total company universe and public markets, the MSCI All Country Europe and MSCI All Country Asia Pacific indexes were selected based on the market capitalization and country exposures of the underlying stocks.
- Deal type categorizations have been made at the company level and reflect information provided by the private equity 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, so EBITDA growth rates may be muted initially, as PE owners may 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. Metrics are calculated in local currency.
- 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. As a result, there have been changes to metrics previously published. For a “club” or syndicated deal that involves two or more separate firms, there would still be two or more companies in our universe.
- When the operating metrics information is disaggregated into deal types, enterprise values, 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.

GLOBAL PRIVATE EQUITY ANALYSIS

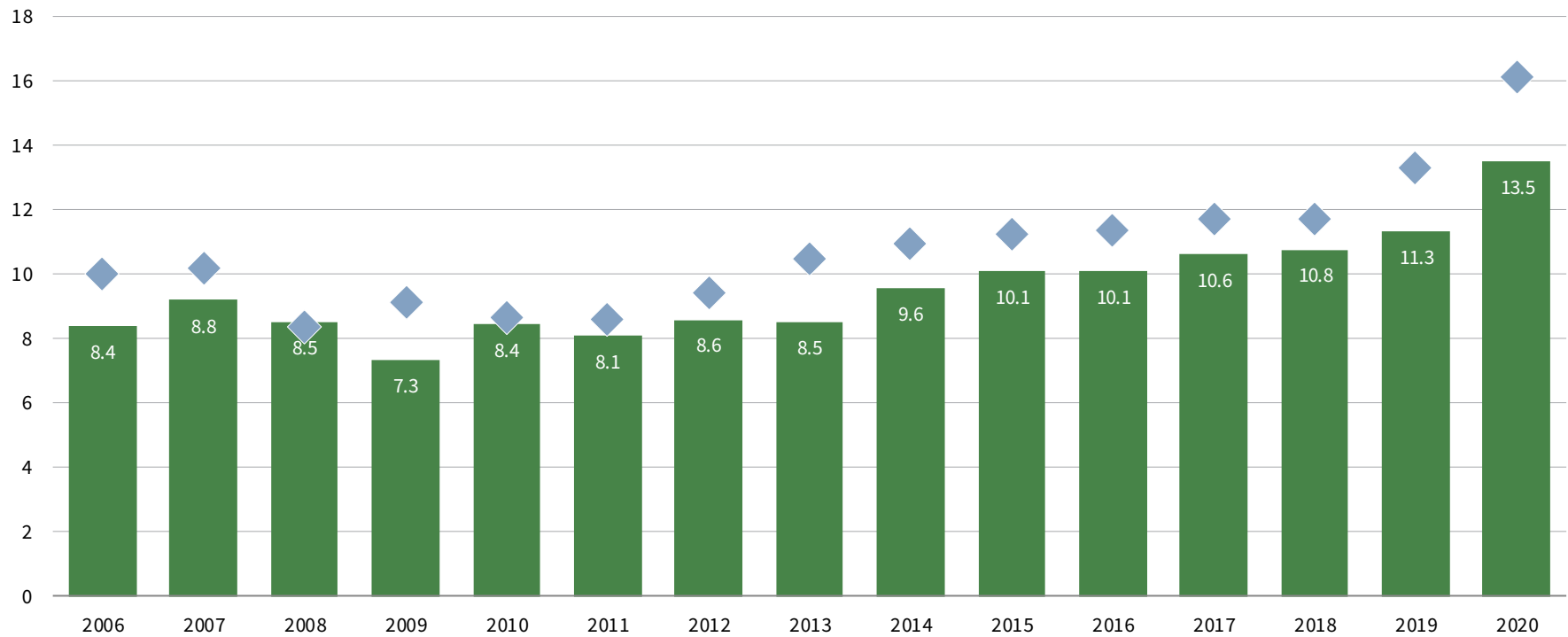
- **EBITDA Purchase Price Multiple**
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

Globally, equity valuations have trended higher since 2009

In 2020, the private discount to public counterparts grew to its largest value of the 15-year period

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL 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	533	652	478	255	544	551	536	405	523	468	453	491	459	388	298
MSCI ACWI	1,282	1,345	1,247	1,346	1,451	1,465	1,507	1,516	1,533	1,538	1,562	1,560	1,706	1,938	1,845

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

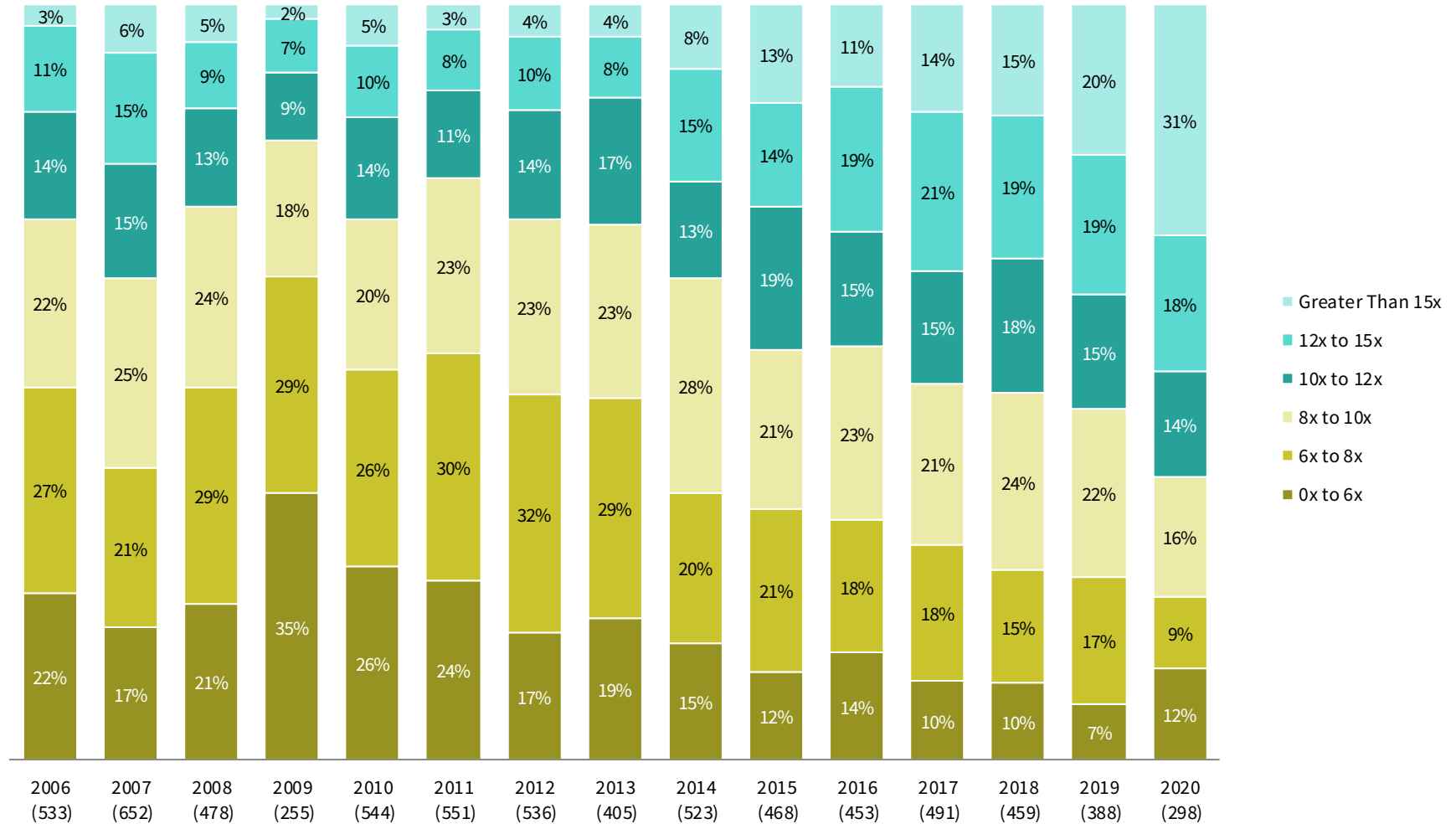
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Percentage of PE transactions completed at >15x multiples was historically high in 2020

While the percentage of transactions completed between 6x and 8x was historically low

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

As of December 31, 2020 • Enterprise Value/EBITDA



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

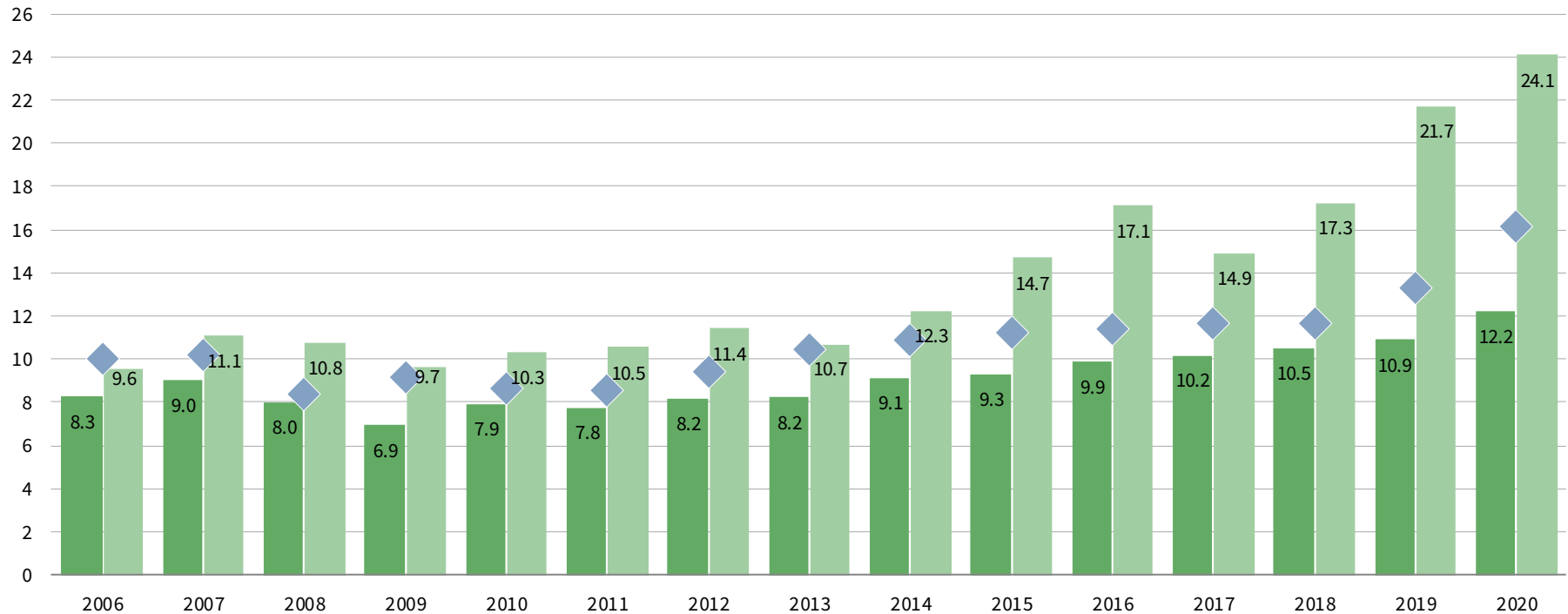
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "6x-8x" range includes companies with reported EBITDA purchase price of exactly 6x. Due to rounding, totals may not sum to 100%.

Buyout PPMs have increased every year since 2012 but they have maintained a considerable discount to publics

Growth equity multiples have increased dramatically since 2015

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL 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	451	518	347	191	405	424	399	300	408	360	361	373	351	266	186
Growth Equity Companies	80	127	113	54	141	114	123	90	107	99	93	95	92	89	82
MSCI ACWI	1,282	1,345	1,247	1,346	1,451	1,465	1,507	1,516	1,533	1,538	1,562	1,560	1,706	1,938	1,845

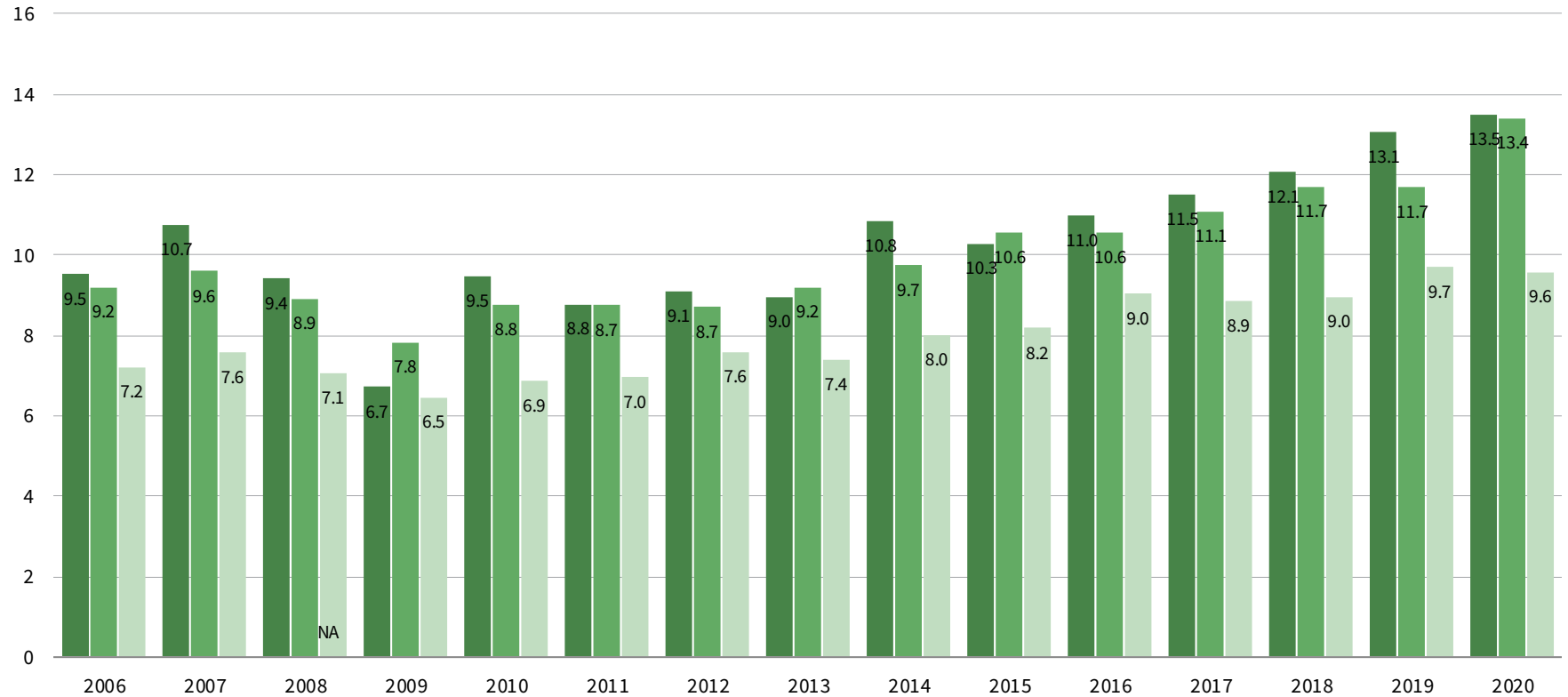
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

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

From 2006–20, small-cap buyout PPMs averaged 7.8x EBITDA, at least two turns lower than their larger peers

Over the 15-year period, mid- and large-cap companies transacted at similar multiples, 9.9x and 10.3x, respectively

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT
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
EV > \$1B	106	144	70	20	67	65	68	45	66	52	64	84	77	53	67
EV \$250M - \$1B	109	137	82	51	124	112	127	86	137	127	117	121	108	90	57
EV < \$250M	231	231	192	116	208	240	202	164	195	173	181	157	161	120	62

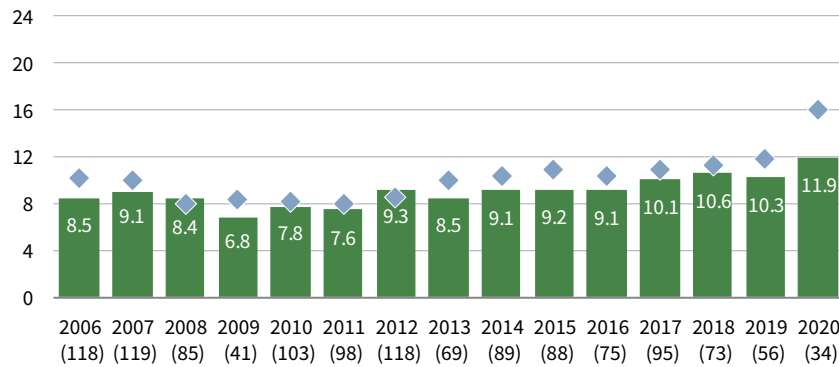
PE-backed IT company PPMs elevated in 2019 and 2020 driven by preponderance of growth equity and software transactions

PE healthcare and industrial companies have transacted at meaningfully lower multiples than public peers

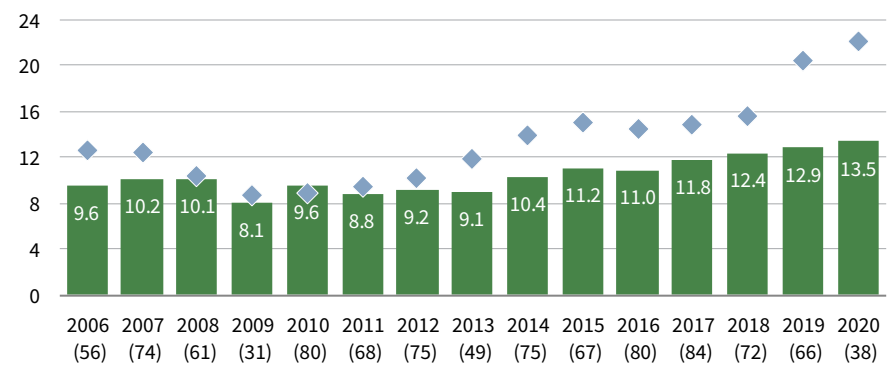
AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Enterprise Value/EBITDA

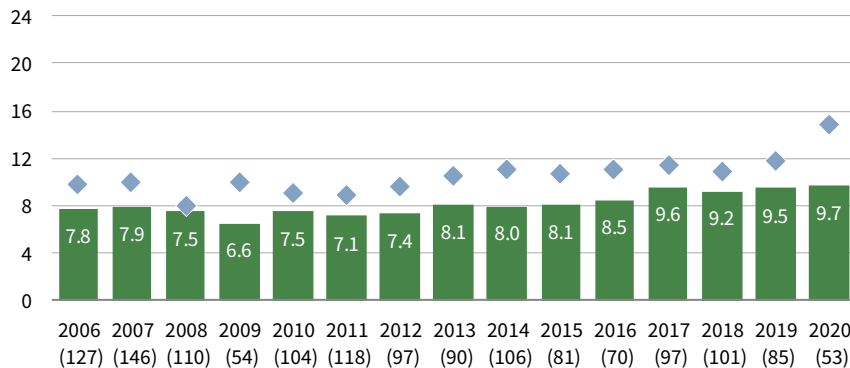
Consumer Discretionary



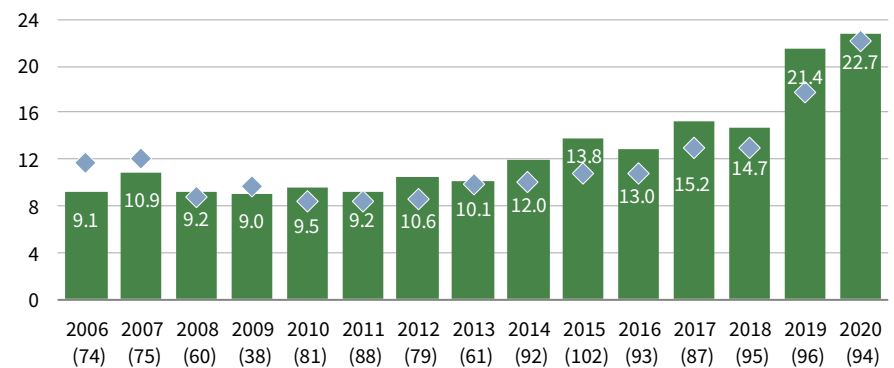
Healthcare



Industrials



Information Technology



■ Private Equity-Owned ◆ MSCI ACWI

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

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.

GLOBAL PRIVATE EQUITY ANALYSIS

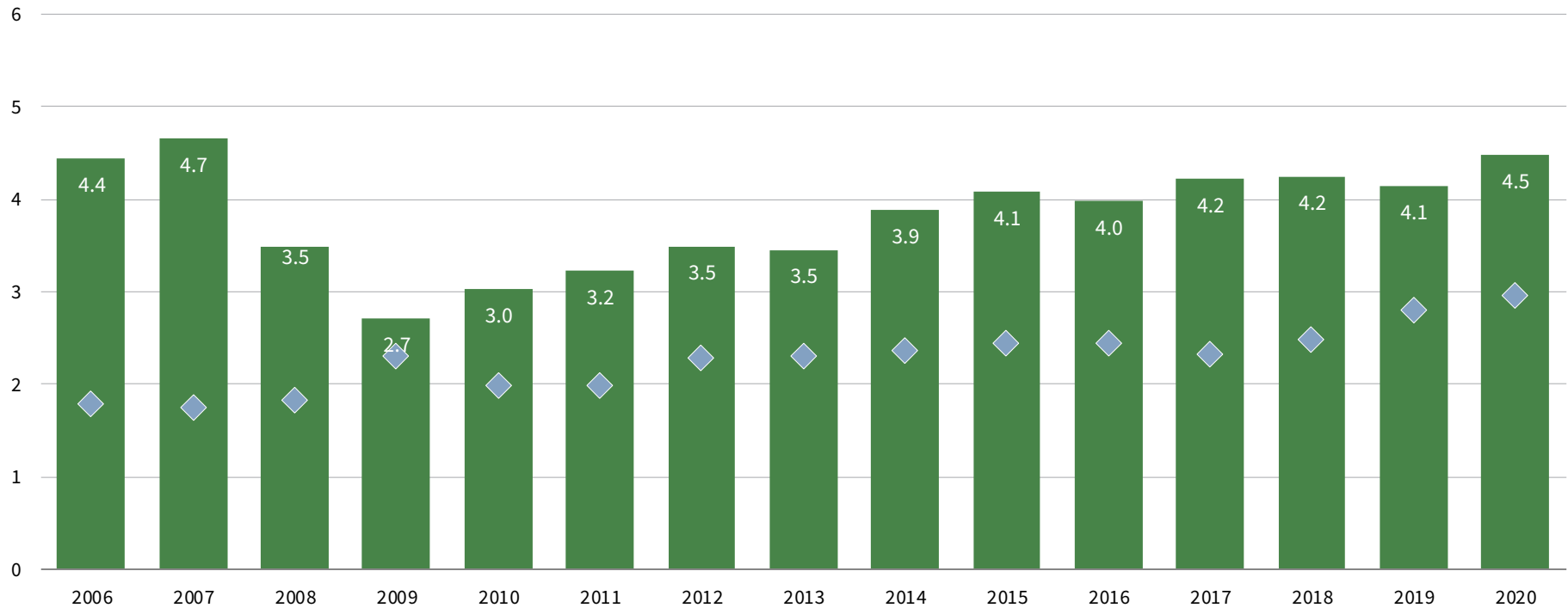
- Purchase Price Multiple
- **Leverage Multiple**
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

PE leverage levels have been largely unchanged since 2015, public company leverage has increased every year since 2018

Within the global sample, PE leverage multiples have been higher in the US and Europe than in Asia, due at least in part to higher buyout representation in the US and European samples

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL 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	497	594	423	206	475	494	479	355	471	414	412	446	449	365	277
MSCI ACWI	949	999	942	992	1,041	1,027	1,086	1,110	1,154	1,166	1,183	1,161	1,261	1,448	1,294

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

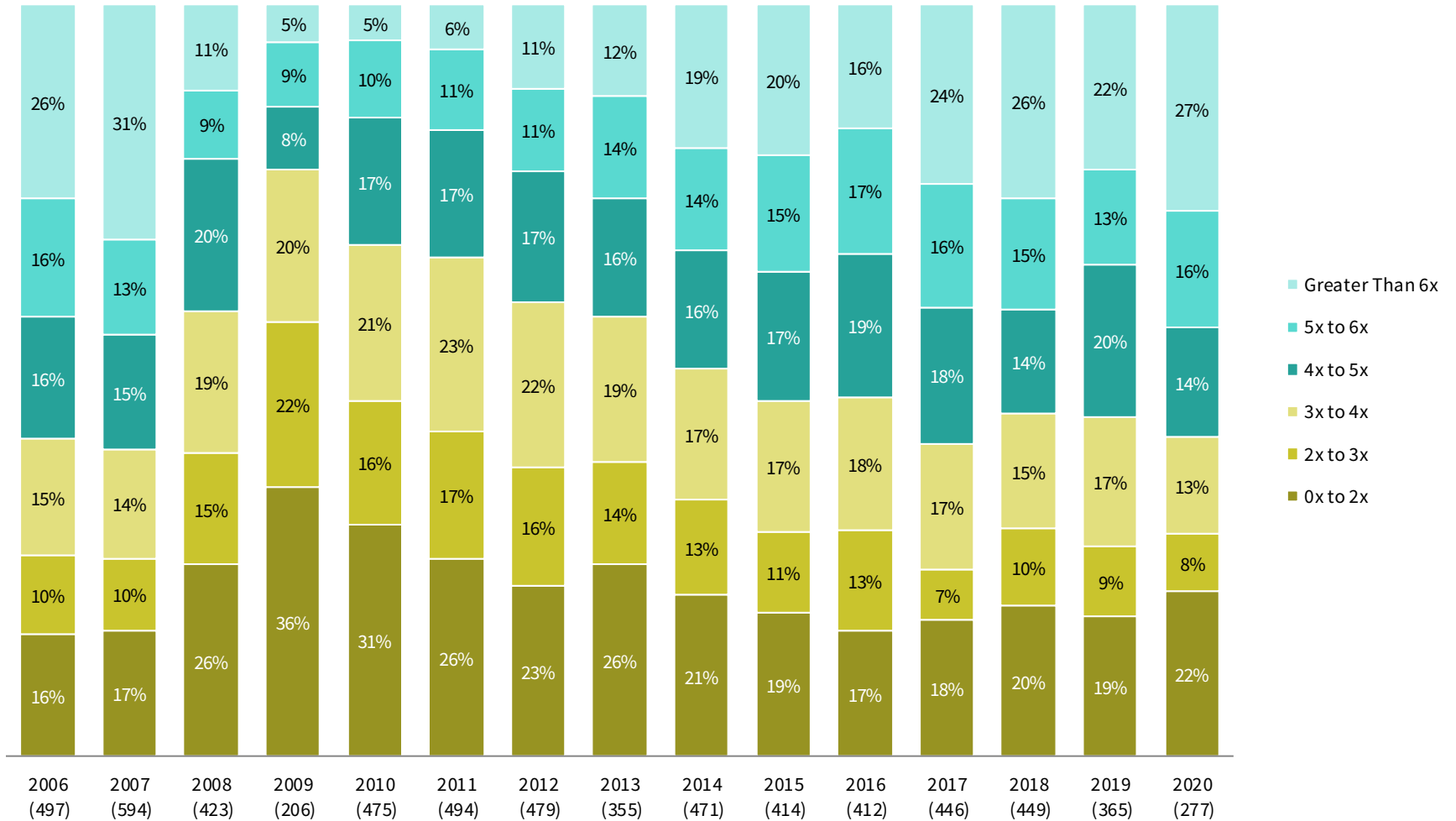
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

In every year since 2014, at least a third of PE deals were levered at 5x EBITDA or higher

In 2020, the percentage of transactions levered at 6x EBITDA or more was the highest since 2007

AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2020 • Net Debt/EBITDA



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

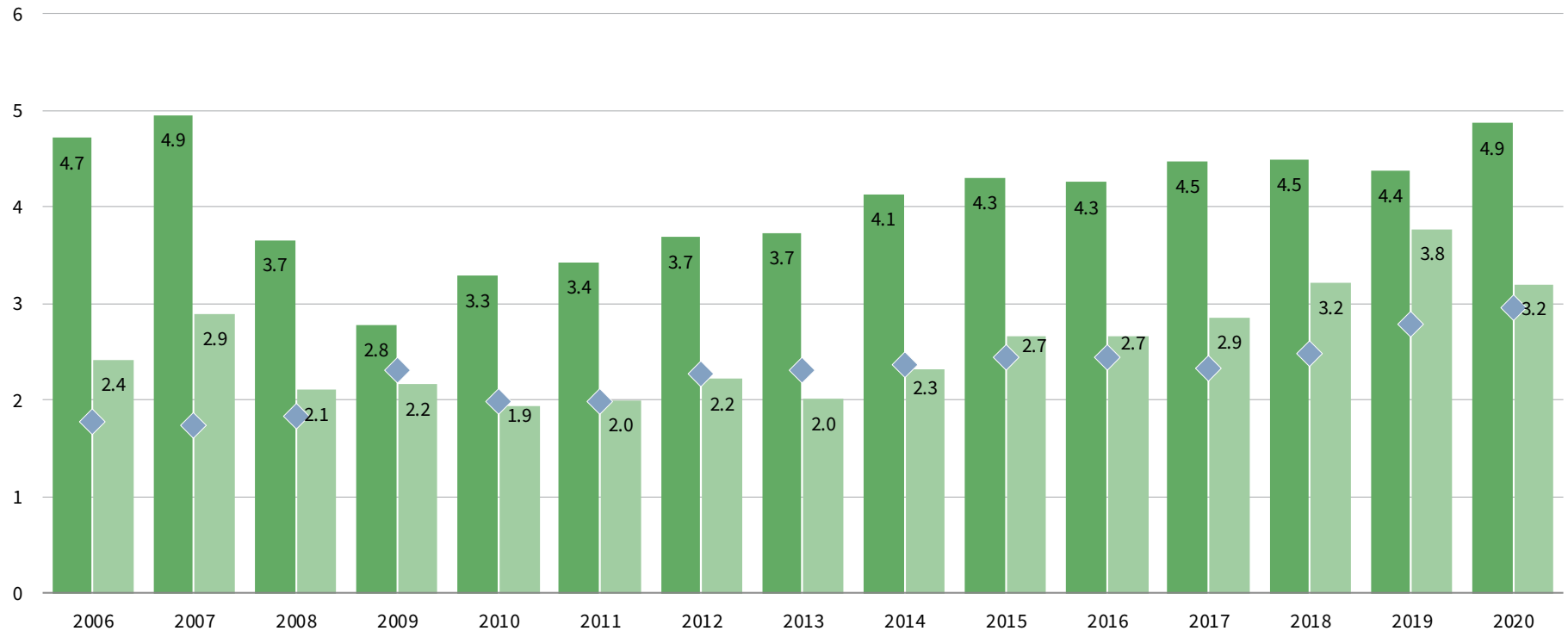
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "4x to 5x" range includes companies with reported leverage multiples of exactly 4x. Due to rounding, totals may not sum to 100%.

In 2020, buyout leverage multiples reached highest level since 2007; public company leverage continued to climb

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

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL 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	431	498	325	156	371	403	388	280	384	335	333	348	344	253	182
Growth Equity Companies	62	85	75	38	98	79	75	58	69	66	60	72	75	66	57
MSCI ACWI	949	999	942	992	1,041	1,027	1,086	1,110	1,154	1,166	1,183	1,161	1,261	1,448	1,294

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

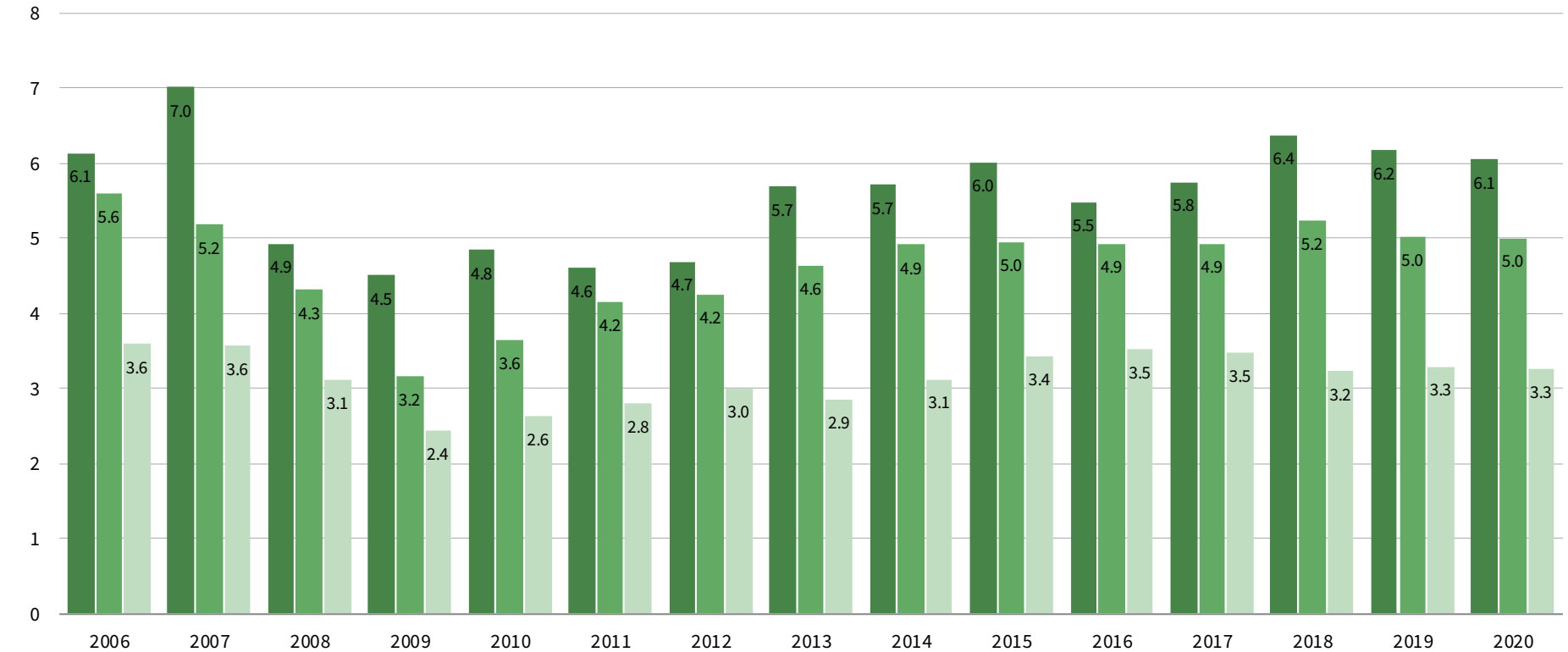
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Leverage multiples and enterprise value have been positively correlated

Over the period analyzed, small buyout leverage multiples have averaged 3.2x EBITDA compared with 4.6x and 5.6x for mid and large buyouts, respectively

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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
EV > \$1B	102	137	71	17	59	64	68	43	65	48	62	81	74	49	64
EV \$250M - \$1B	103	135	77	45	118	101	118	79	130	121	108	118	104	80	51
EV < \$250M	216	218	178	91	192	236	196	154	182	156	161	138	149	105	57

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

Note: Outliers were identified and excluded from the private equity company universes.

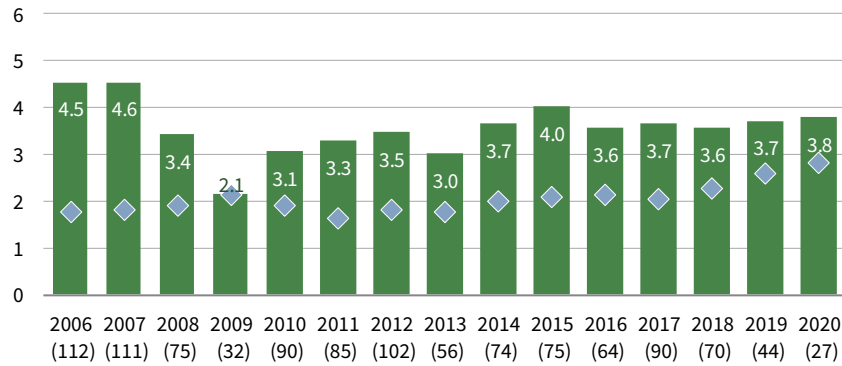
In all sectors, PE-backed companies have been more highly levered than public peers since 2010

Over the full time period, leverage multiples have been most aligned in industrials and consumer discretionary and least aligned in IT

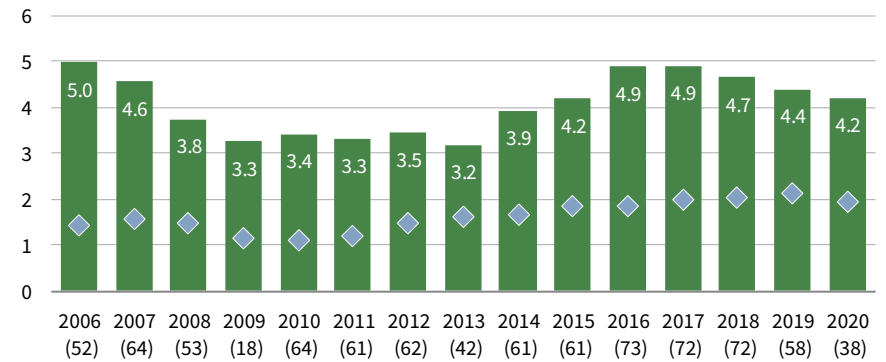
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2020 • Net Debt/EBITDA

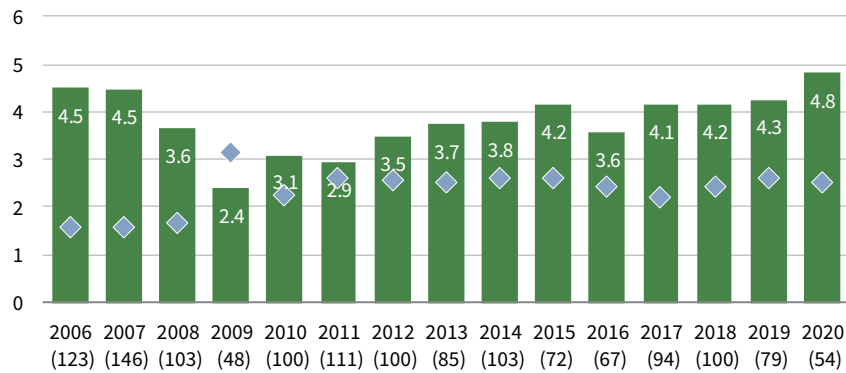
Consumer Discretionary



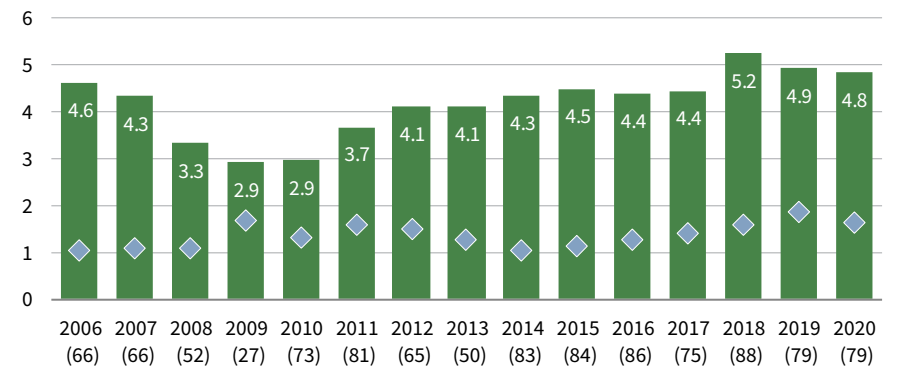
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ MSCI ACWI

GLOBAL PRIVATE EQUITY ANALYSIS

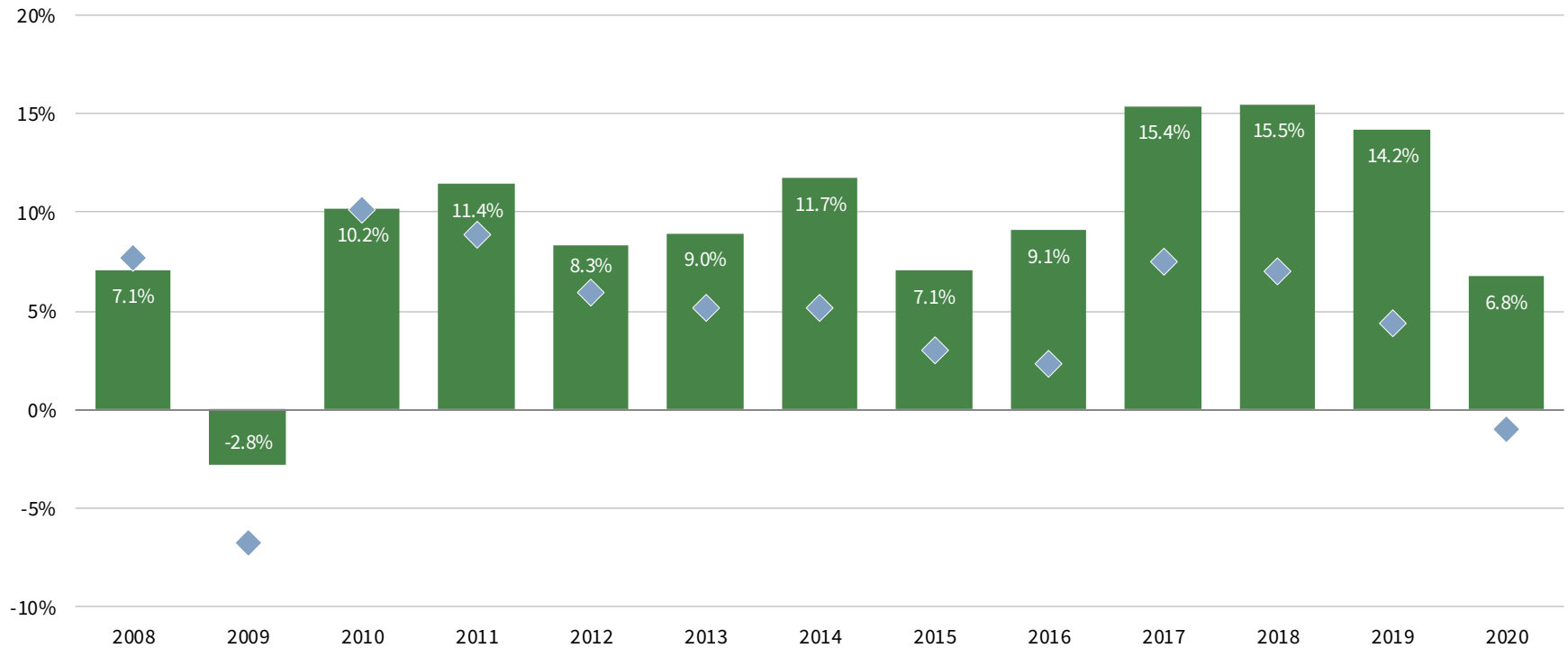
- Purchase Price Multiple
- Leverage Multiple
- **Revenue Growth**
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

Over the 13 years, PE companies averaged more than twice the annual revenue growth of public companies (9.8% vs 4.8%)

Over the past four years, PE companies have widened their lead (12.9% vs 4.7%)

AVERAGE ANNUAL REVENUE GROWTH OF GLOBAL 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	623	1,015	1,231	1,539	1,588	1,481	1,393	1,261	1,193	1,218	1,371	1,469	1,698
MSCI ACWI	1,838	1,949	1,906	1,991	2,058	2,052	2,112	2,061	2,151	2,133	2,105	2,332	2,435

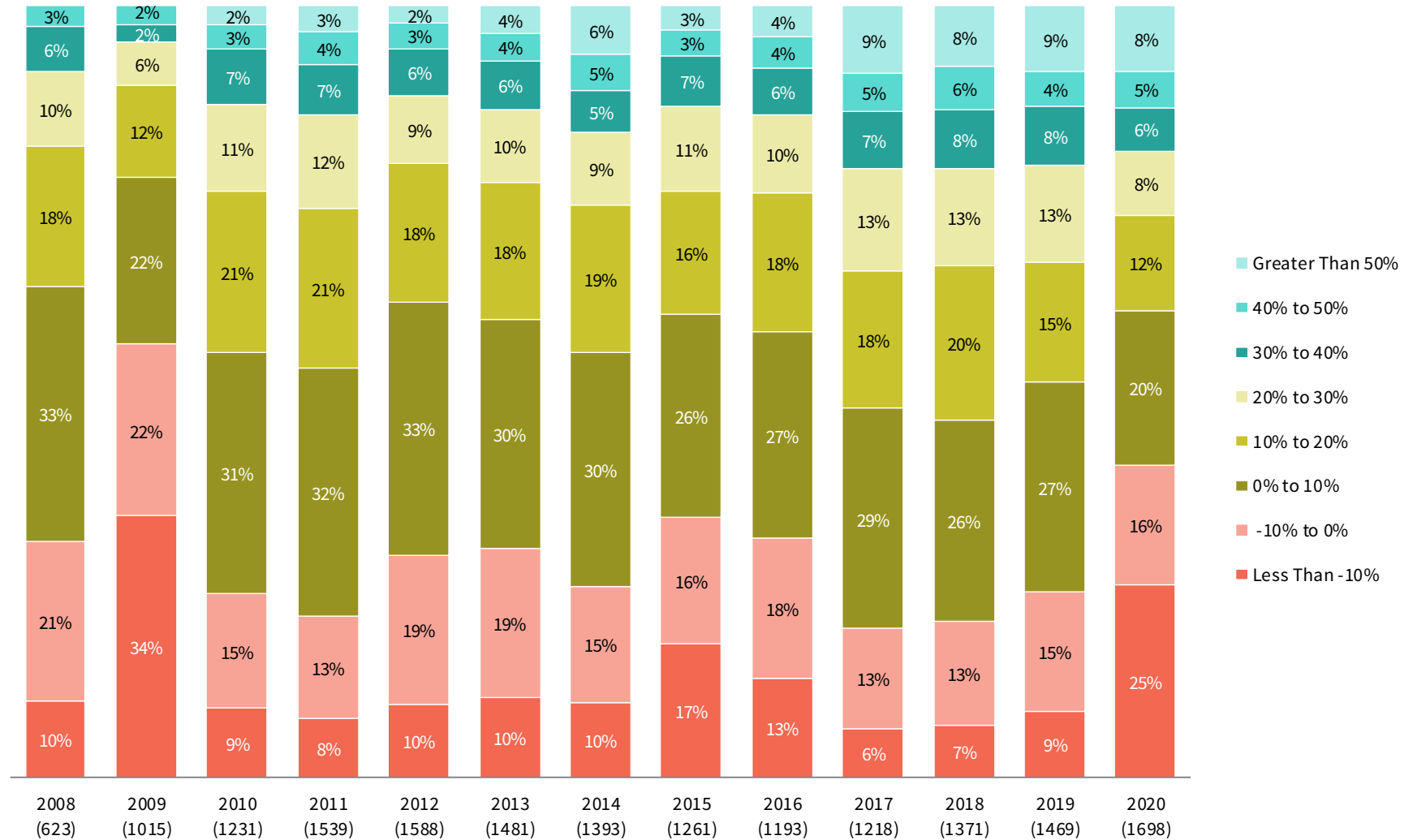
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

For the first time since 2009, revenue declined for more than 40% of the universe in 2020

But despite the pandemic, nearly 40% of the PE universe grew revenue by at least 10%

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

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

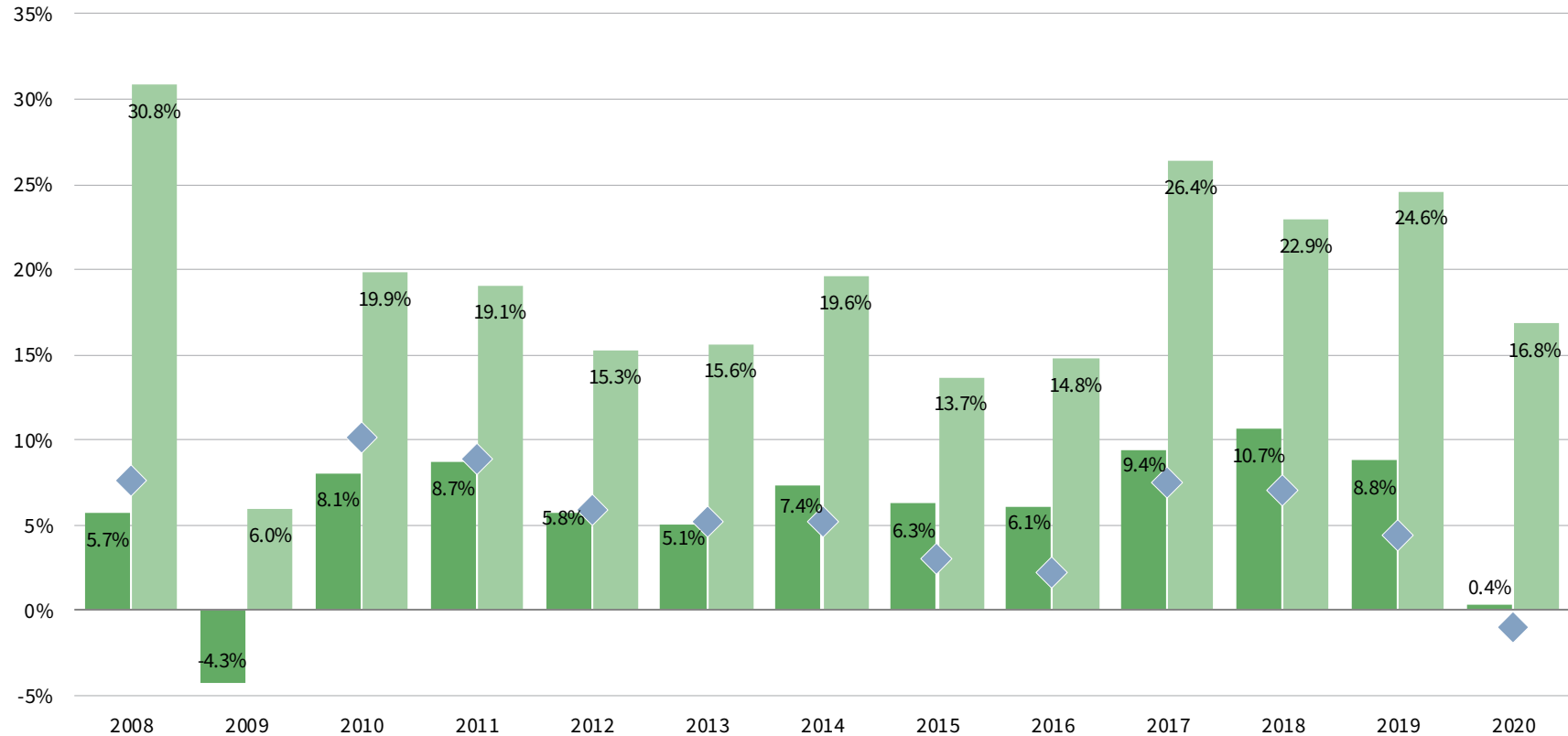


Excepting 2009, growth equity companies have averaged double-digit annual revenue growth

Average buyout revenue growth exceeded that of public peers (6.2% vs 4.7%) during the time period analyzed

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

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



Number of Companies

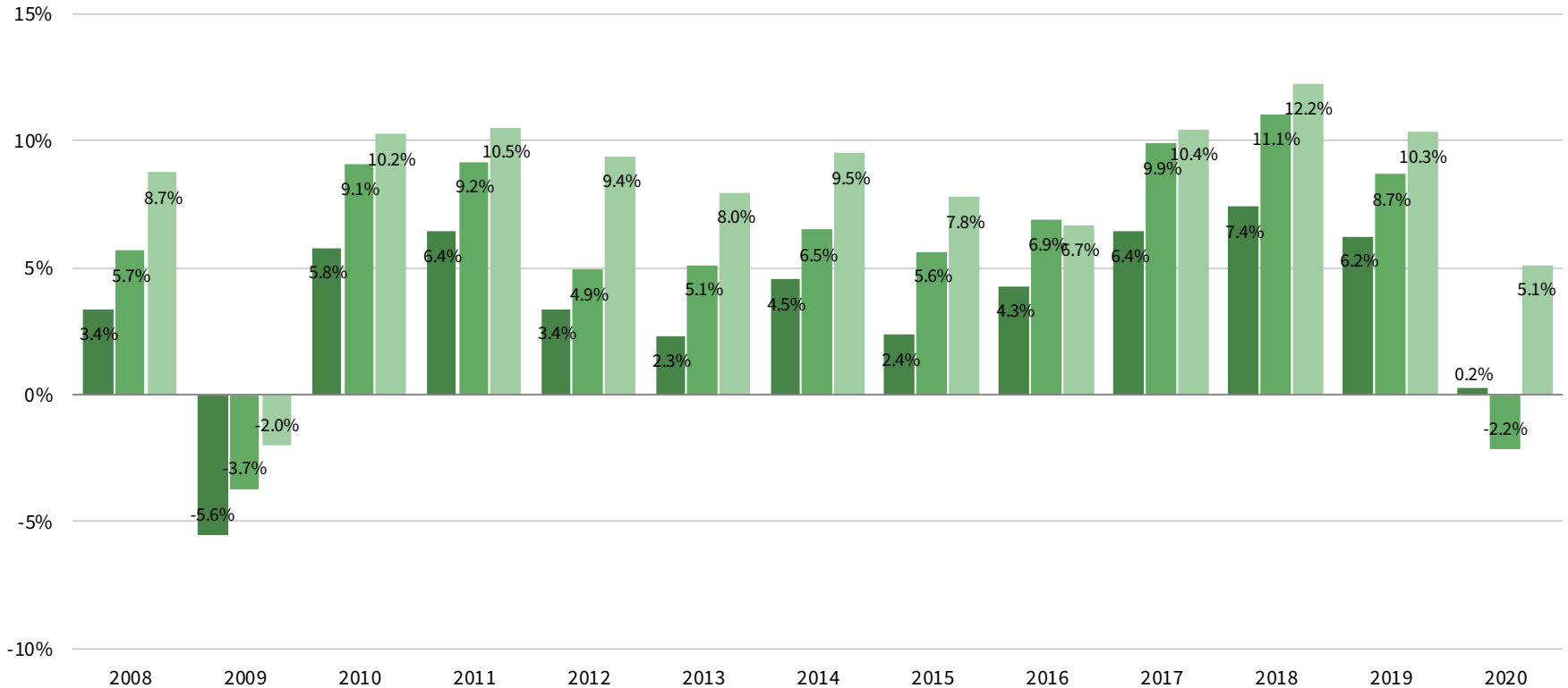
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Buyout Companies	545	832	951	1121	1067	923	827	726	724	720	807	832	893
Growth Equity Companies	97	167	241	342	414	450	469	444	420	416	499	569	692
MSCI ACWI	1,838	1,949	1,906	1,991	2,058	2,052	2,112	2,061	2,151	2,133	2,105	2,332	2,435

Company size and revenue growth have had an inverse relationship, with small companies outpacing their larger brethren

Amid the pandemic, small buyouts were the only size segment to average meaningful revenue growth

AVERAGE ANNUAL REVENUE GROWTH OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	198	274	273	312	268	210	165	141	154	134	135	187	205
EV \$250M - \$1B	121	206	261	301	285	248	212	216	211	250	284	266	284
EV < \$250M	228	356	417	502	511	463	438	359	355	320	385	369	399

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

Note: Outliers were identified and excluded from the private equity company universes.

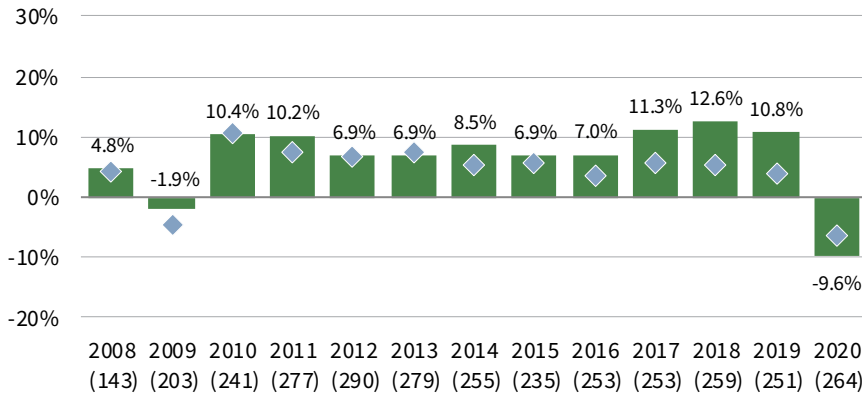
When measured over the full time period, average PE company revenue growth exceeded that of publics across all sectors

Despite the pandemic, in 2020, PE-backed IT companies extended their streak of 20% average annual revenue growth to four years

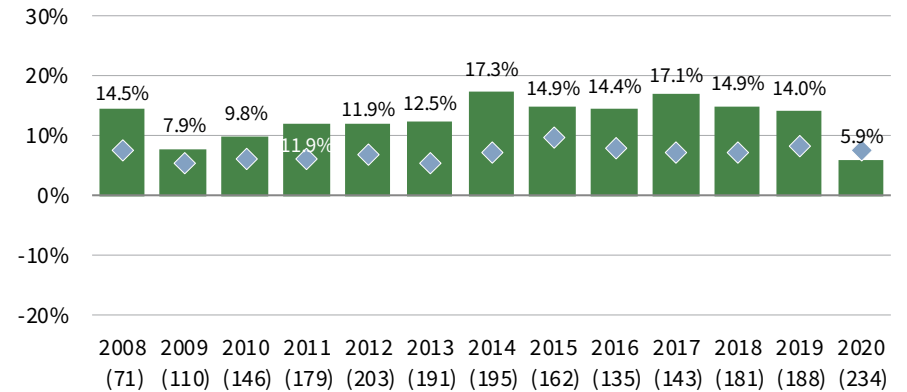
AVERAGE ANNUAL REVENUE GROWTH OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

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

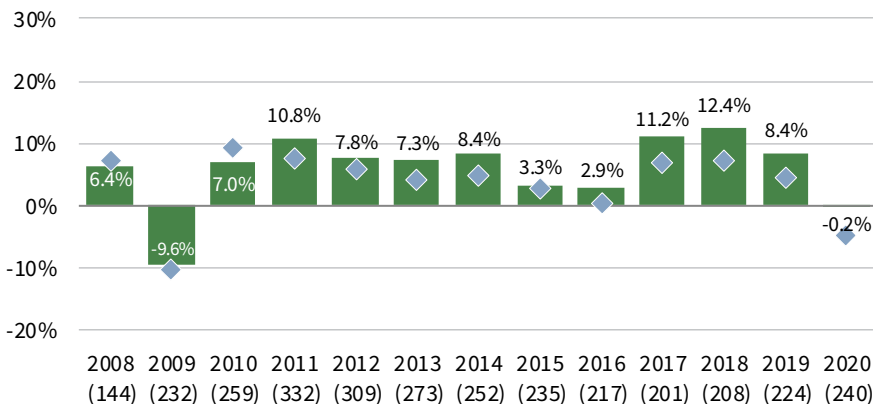
Consumer Discretionary



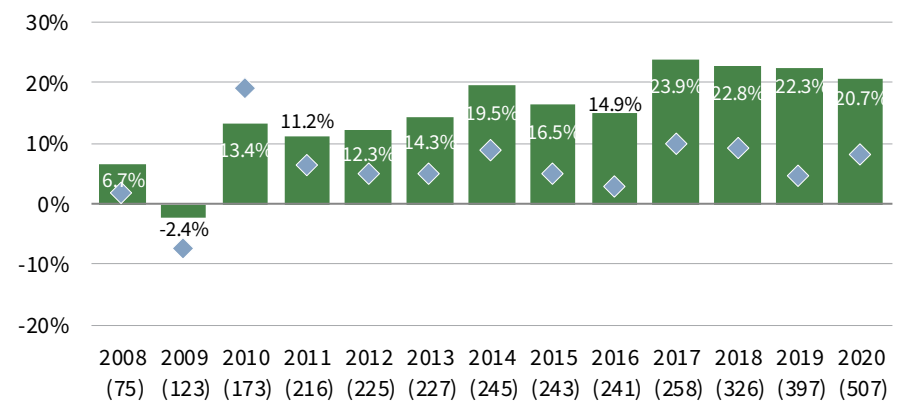
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ MSCI ACWI

GLOBAL PRIVATE EQUITY ANALYSIS

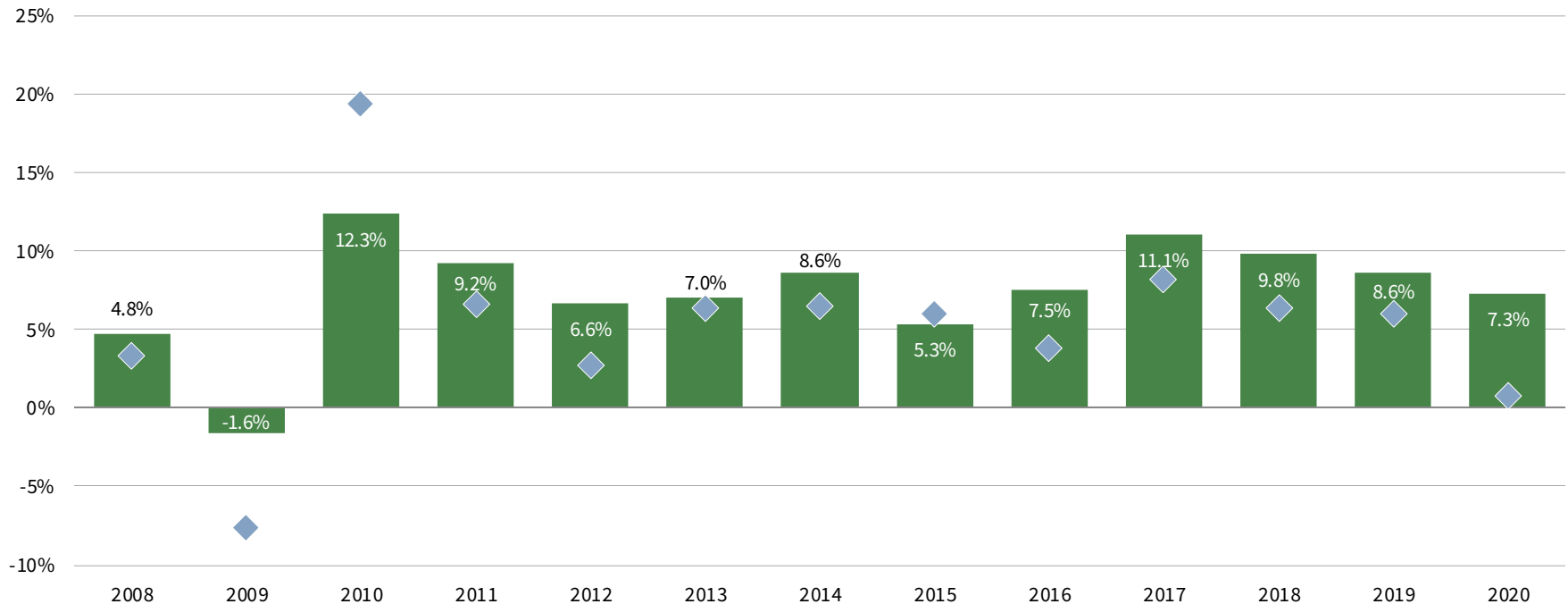
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- **EBITDA Growth**
- EBITDA Margin
- Exit Metrics

Post GFC, PE companies have averaged better annual EBITDA growth than public companies (8.4% vs 6.1%)

EBITDA growth has trended downward in PE and public company universes over the last three years

AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL 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	584	889	1,068	1,335	1,334	1,176	1,113	1,011	930	916	1,021	1,057	1,167
MSCI ACWI	1,320	1,408	1,465	1,583	1,683	1,670	1,696	1,688	1,751	1,738	1,758	1,961	1,996

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

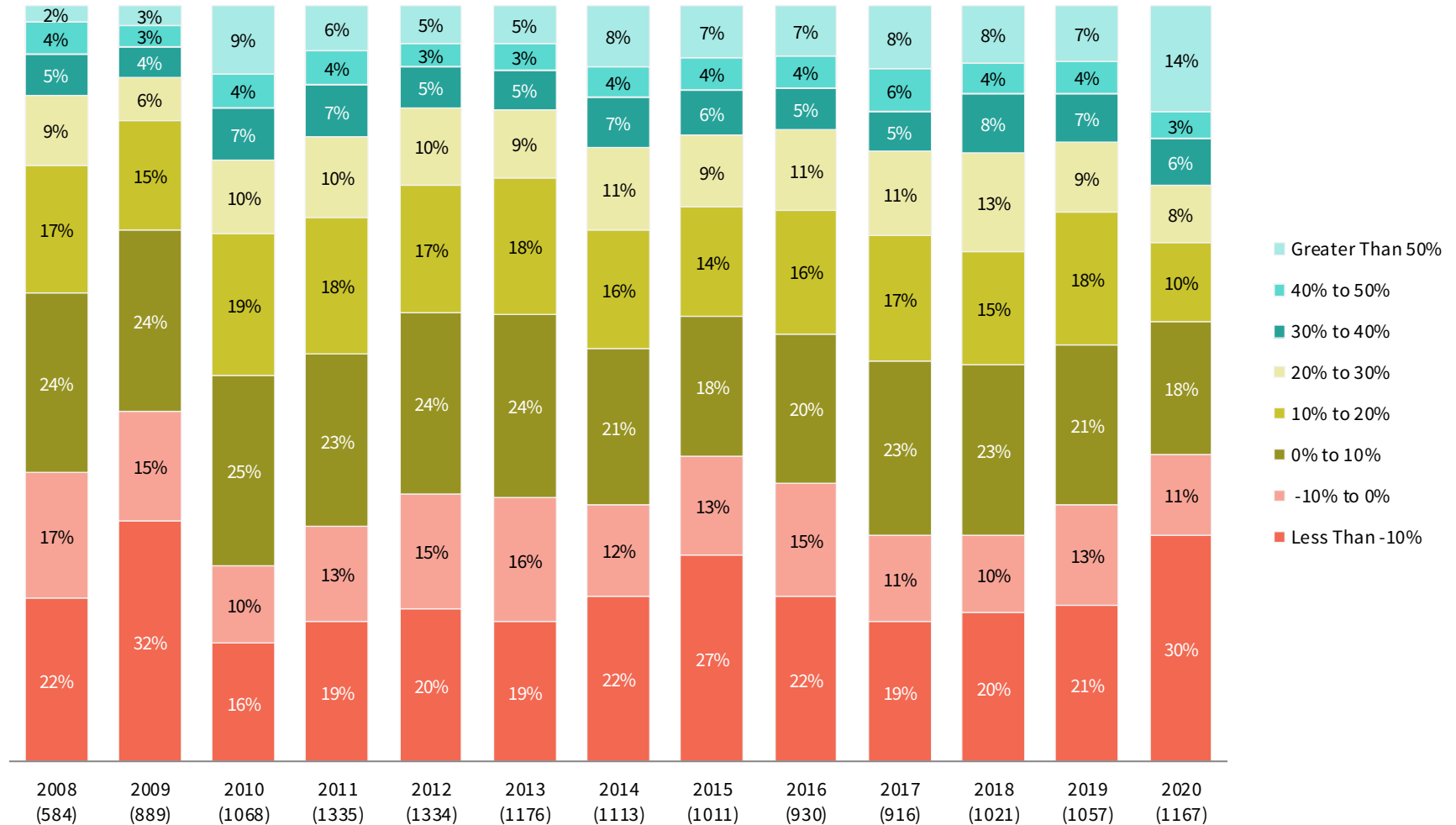
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Pandemic headwinds and tailwinds evidenced in the distribution of EBITDA growth in 2020

EBITDA declined for 41% of companies, while it grew by more than 30% for almost a quarter of the universe (the largest amount over the full period)

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

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



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

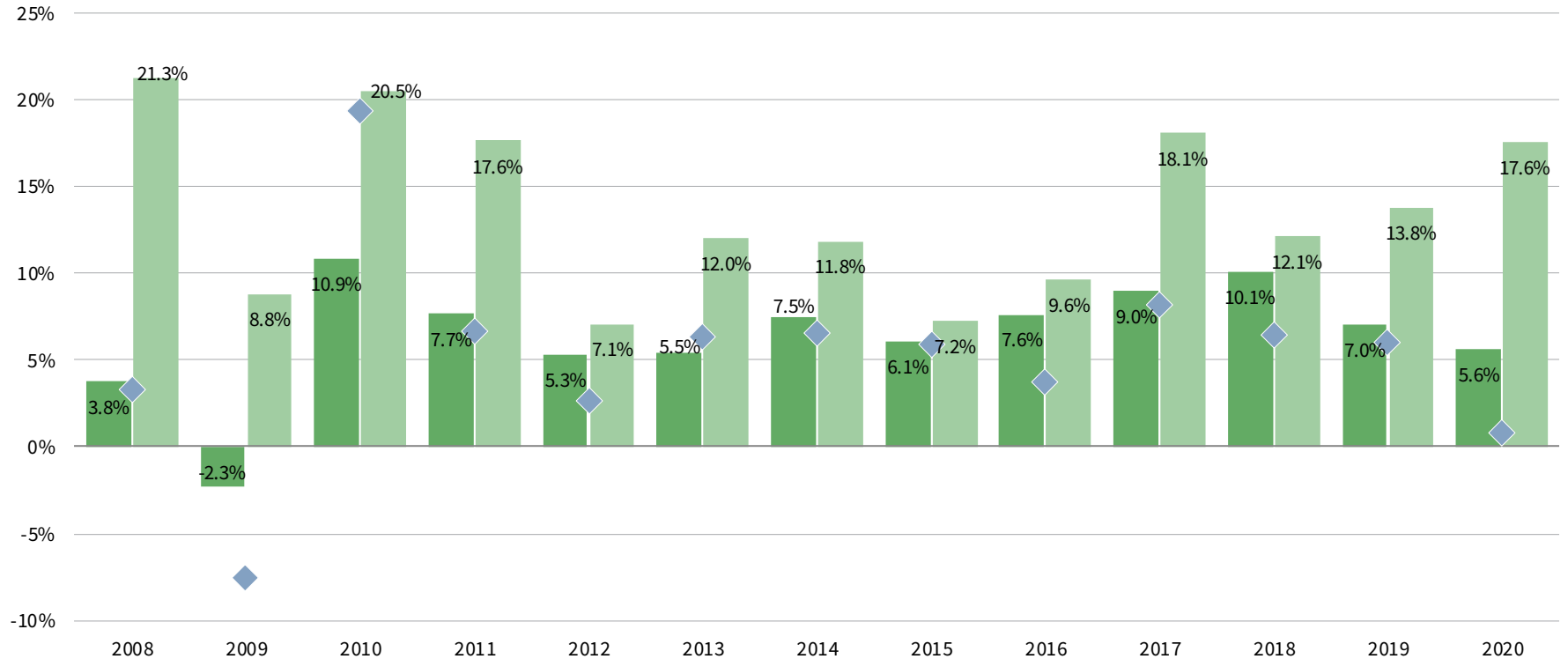
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "0%–10%" range includes companies with reported growth of exactly 0%. Due to rounding, totals may not sum to 100%.

Growth equity stood above the rest, averaging 12.2% annual EBITDA growth from 2008–20

Over the same time period, buyouts averaged 6.4% annual EBITDA growth, which outpaced publics at 5.4%

AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL 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	526	759	867	1,052	1,011	867	792	697	662	651	739	748	795
Growth Equity Companies	66	123	191	257	279	272	280	261	230	215	246	268	308
MSCI ACWI	1,320	1,408	1,465	1,583	1,683	1,670	1,696	1,688	1,751	1,738	1,758	1,961	1,996

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

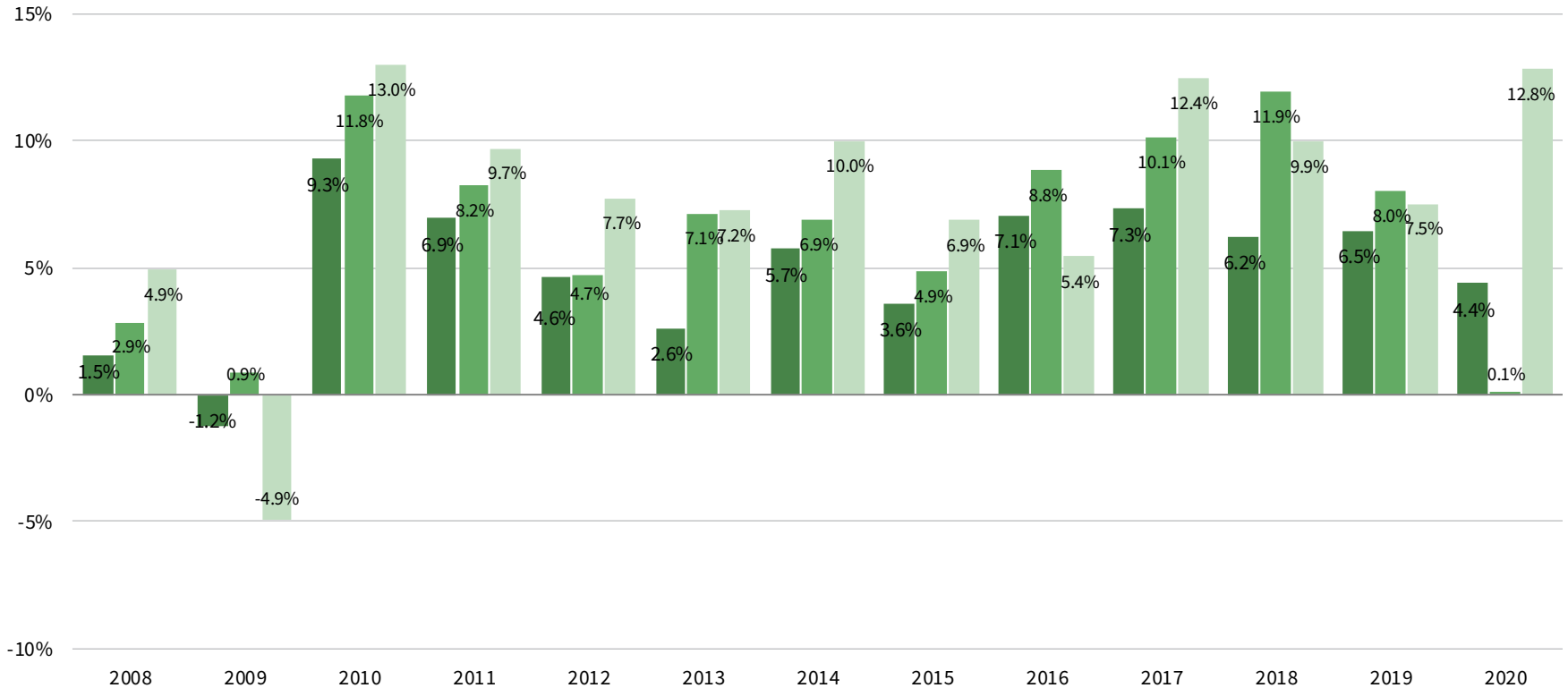
Note: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes.

Within buyouts, small companies have generally outperformed other size segments

Amid the pandemic, small buyouts grew EBITDA at the fastest pace since 2010 while mid-sized companies had their worst year of the period

AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	205	253	278	316	267	215	169	142	154	130	127	176	185
EV \$250M - \$1B	125	191	234	296	285	241	215	212	205	236	271	248	270
EV < \$250M	213	317	349	446	463	421	415	333	313	295	349	330	333

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

Note: Outliers were identified and excluded from the private equity company universes.

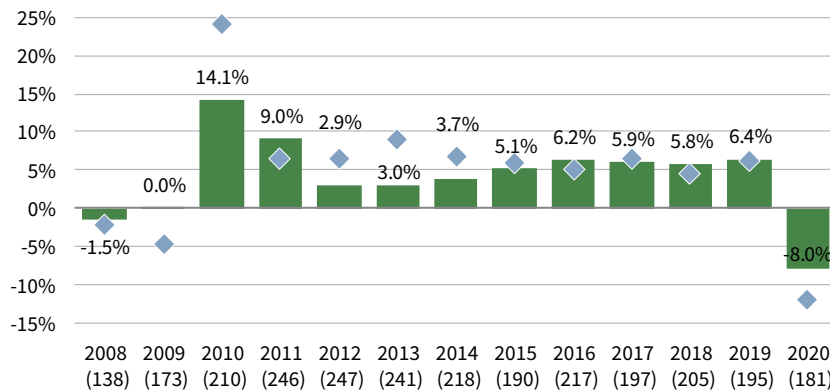
PE-backed healthcare and IT averaged double-digit EBITDA growth over the time period

Pandemic experience borne out as consumer discretionary EBITDA fell while IT had its best year of the period

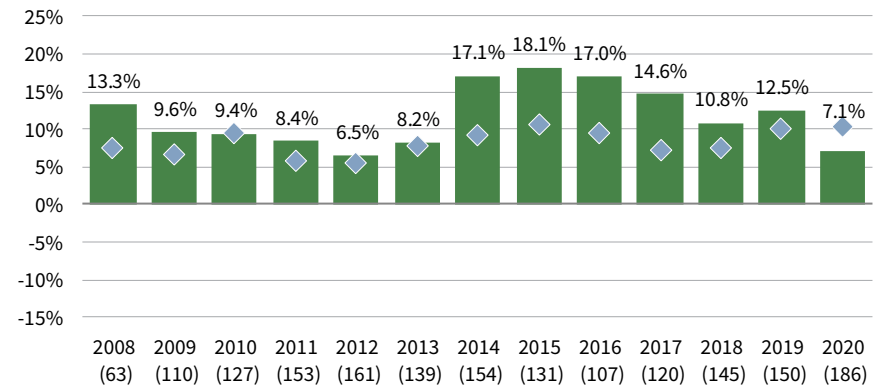
AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

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

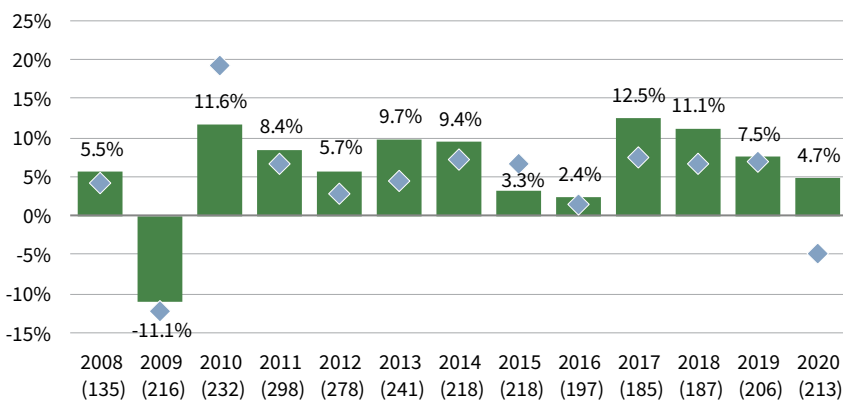
Consumer Discretionary



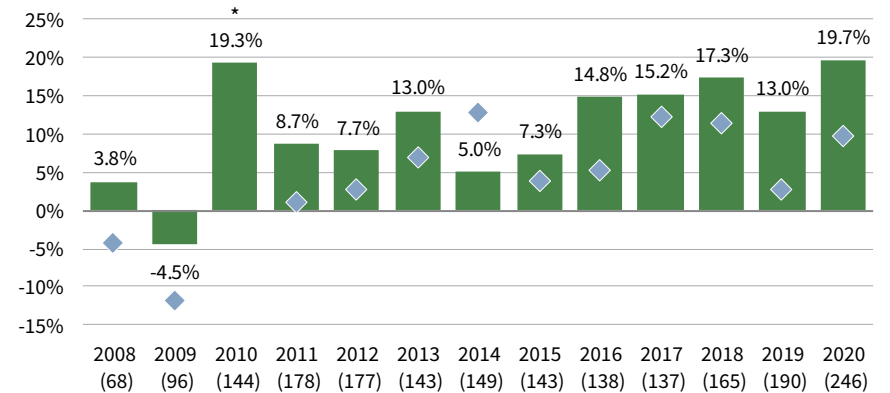
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ MSCI ACWI

* Axis has been capped at -15% and 25% for scaling purposes. Information technology in the MSCI ACWI saw EBITDA growth of 33.0% in 2010.

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

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.

GLOBAL PRIVATE EQUITY ANALYSIS

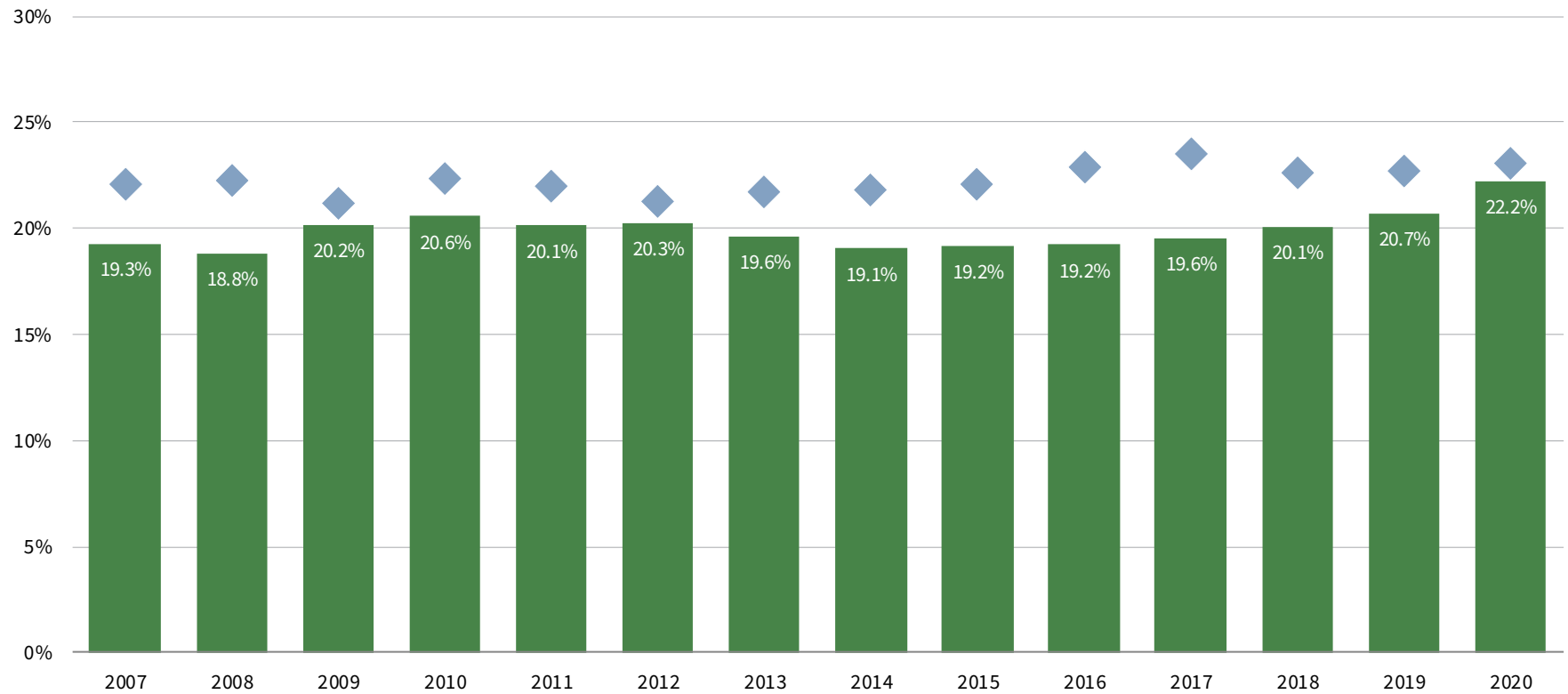
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- **EBITDA Margin**
- Exit Metrics

Despite averaging 20%, PE margins have lagged those of public companies

In 2020, PE-backed companies operated at their highest margins over the years analyzed

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

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



Number of Companies

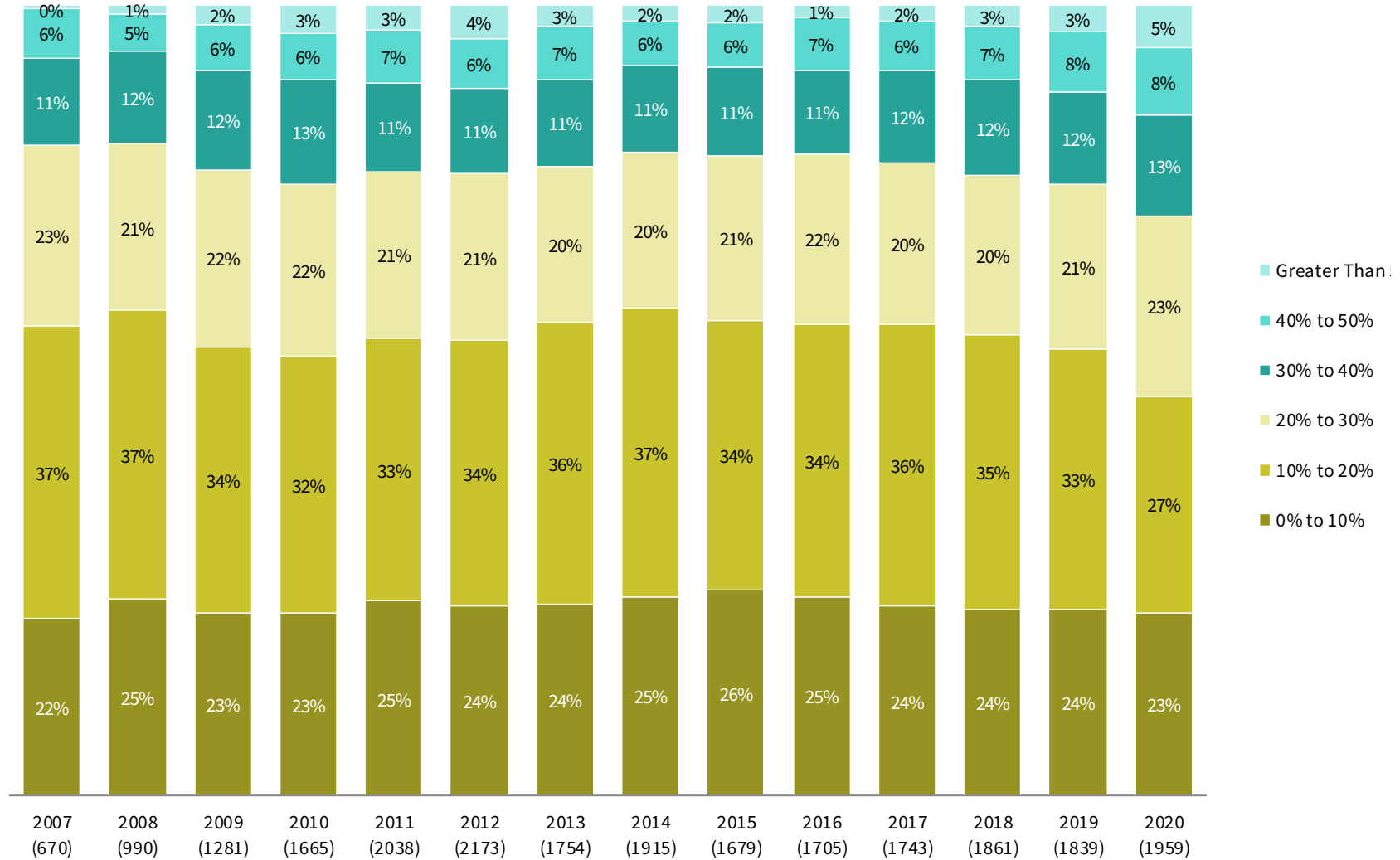
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019	2020
PE-Owned Companies	670	990	1,281	1,665	2,039	2,172	1,754	1,925	1,670	1,704	1,743	1,861	1,839	1,839	1,959
MSCI ACWI	1,885	1,616	1,723	1,867	1,910	1,932	1,941	1,969	1,978	1,999	2,019	2,231	2,502	2,502	2,385

EBITDA margins have remained consistent

The percentage of companies with margins higher than 30% has increased each year since 2017 and in 2020; those companies accounted for over a quarter of the sample

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

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

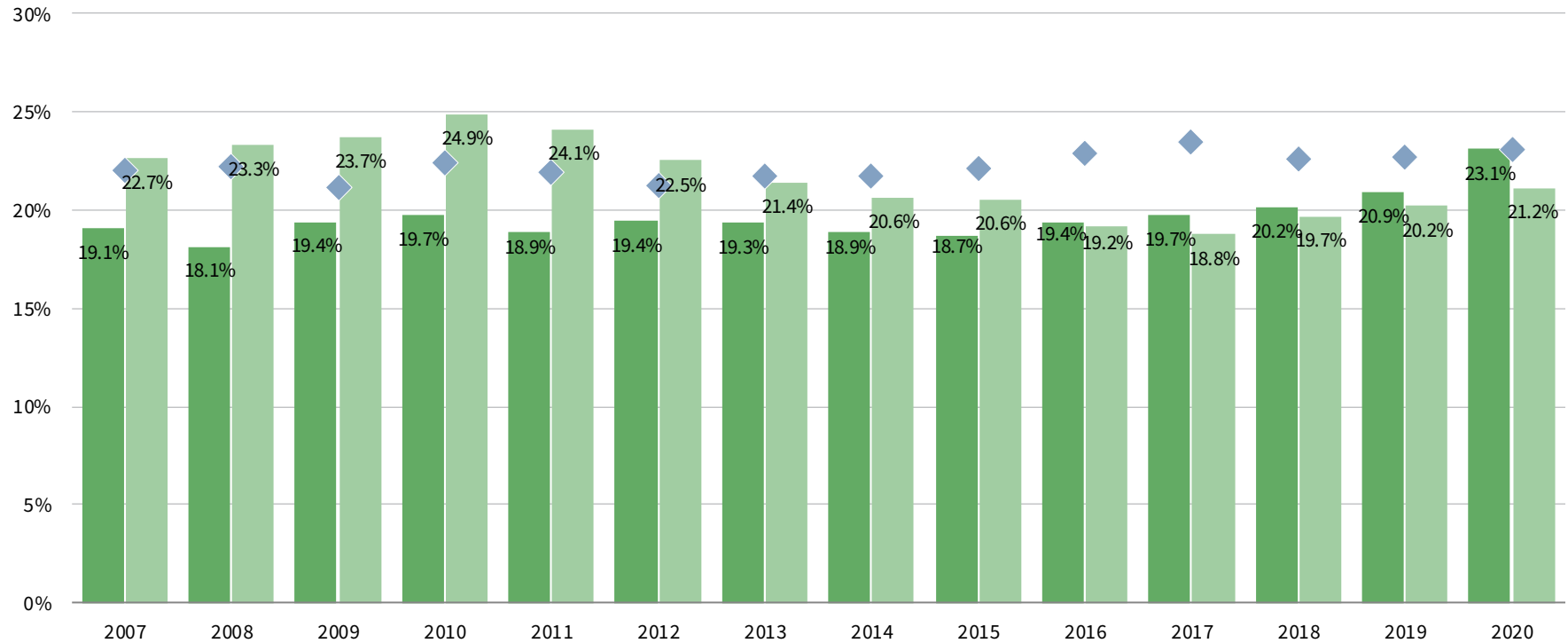


Buyout margins have trended upward since 2016, equaling those of publics for the first time in 2020

Growth equity margins have been on a similar trajectory but still trail those of buyouts and public companies

AVERAGE ANNUAL EBITDA MARGIN OF GLOBAL 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	590	833	1,024	1,283	1,544	1,569	1,273	1,368	1,148	1,231	1,251	1,327	1,268	1,282
Growth Equity Companies	83	146	227	349	393	499	435	487	423	405	401	452	471	563
MSCI All Country World Index	1,885	1,616	1,723	1,867	1,910	1,932	1,941	1,969	1,978	1,999	2,019	2,231	2,502	2,385

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

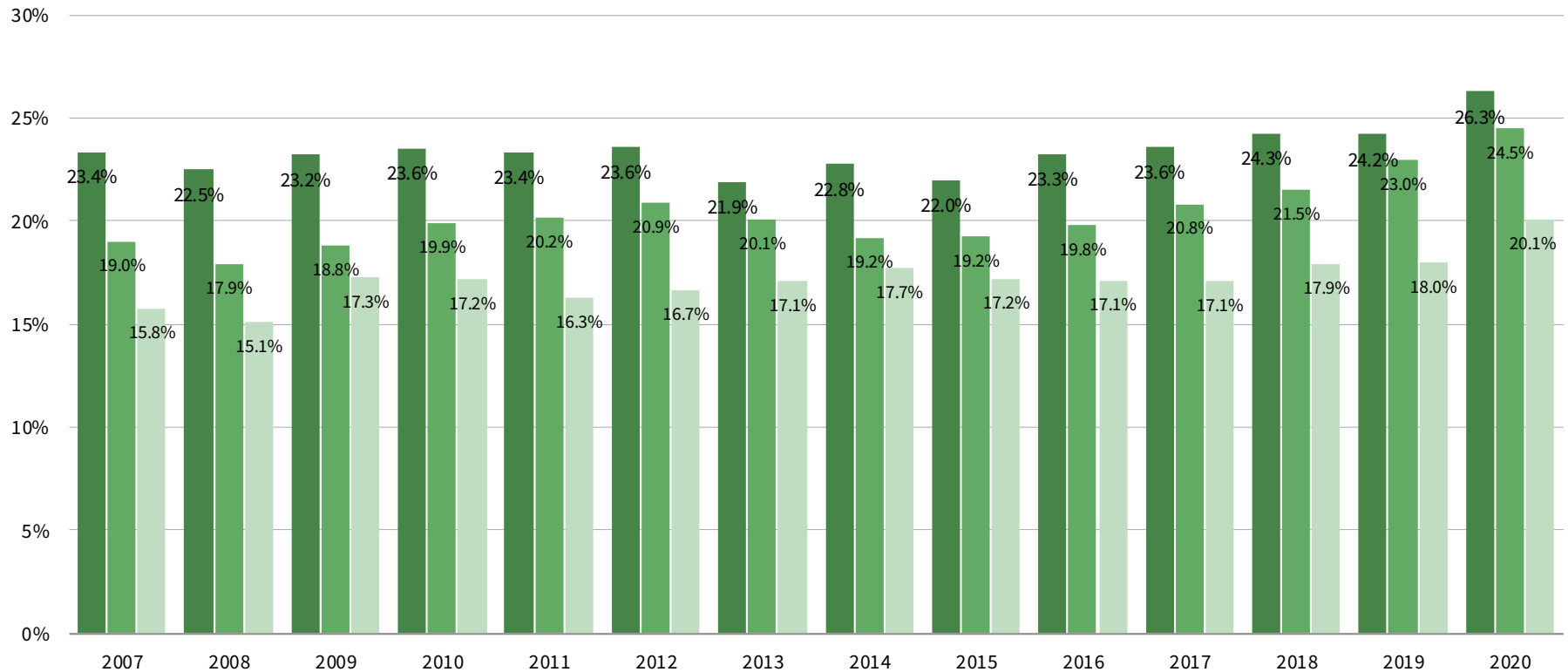
Note: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes.

For buyouts, the larger the company, the higher the margins

Among the groups, mid-sized buyout EBITDA margins have risen the most since 2015

AVERAGE ANNUAL EBITDA MARGIN OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	210	275	307	351	392	360	291	250	239	265	266	259	285	315
EV \$250M - \$1B	133	208	266	357	425	438	365	379	355	416	425	434	405	412
EV < \$250M	247	345	442	565	722	735	598	725	541	529	547	629	549	534

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

Note: Outliers were identified and excluded from the private equity company universes.

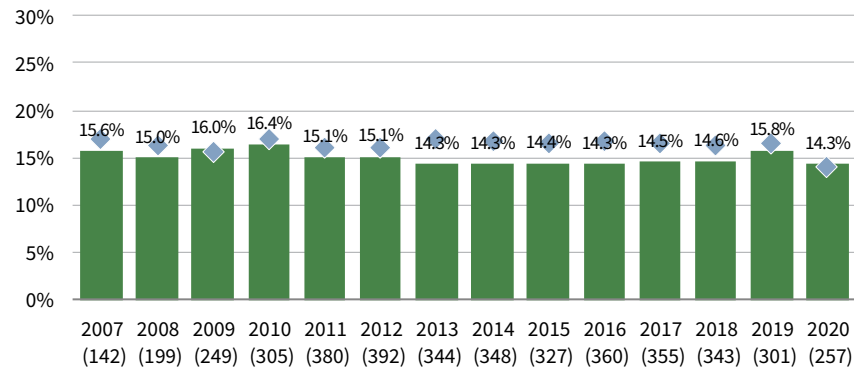
Private equity IT companies continued to operate at the highest margins

Healthcare has remained the only sector where PE margins are consistently lower than those of public peers

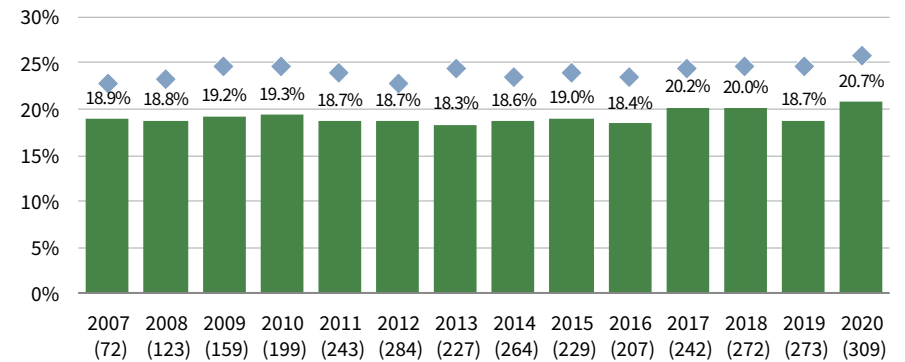
AVERAGE ANNUAL EBITDA MARGIN OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

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

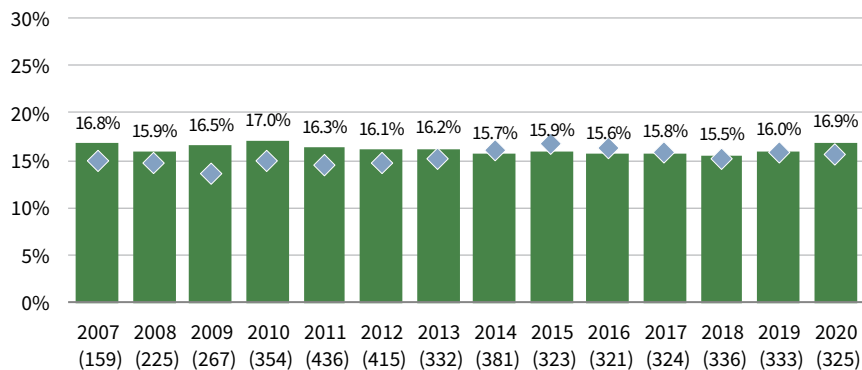
Consumer Discretionary



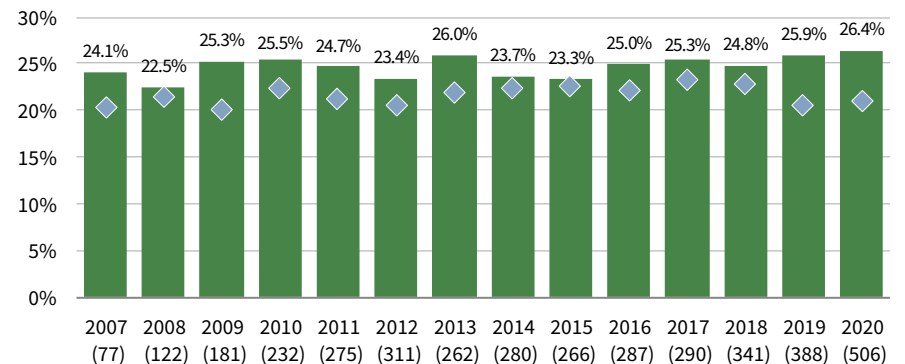
Healthcare



Industrials



Information Technology



■ Private Equity-Owned

◆ MSCI ACWI

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

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.

GLOBAL PRIVATE EQUITY ANALYSIS

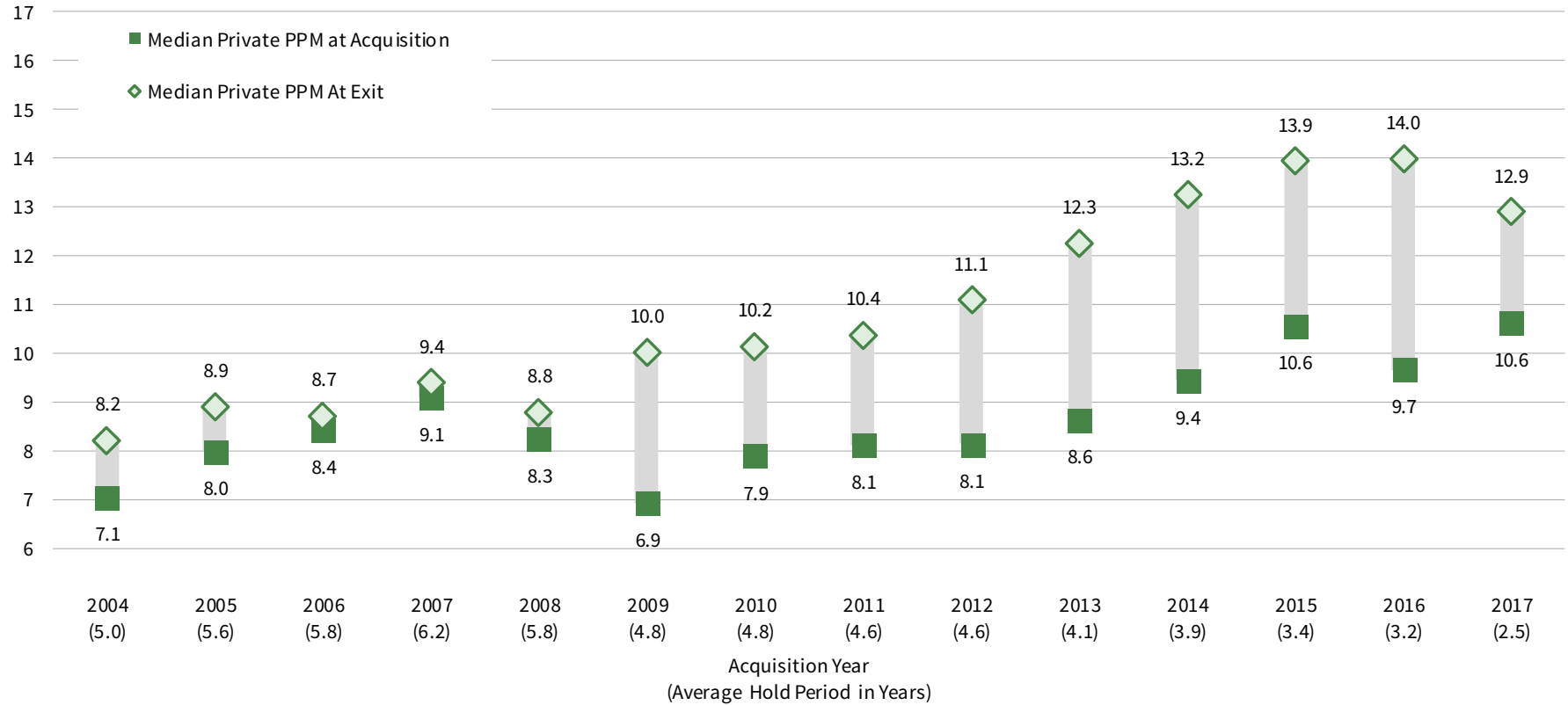
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- **Exit Metrics**

Despite increasing entry valuations, there has still been significant multiple expansion for exited companies acquired from 2009–17

Median expansion for companies acquired from 2013 to 2016 has been particularly meaningful (3.8X)

MEDIAN EBITDA MULTIPLE EXPANSION OF EXITED GLOBAL 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	174	242	376	410	322	166	351	270	258	180	192	136	86	28

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

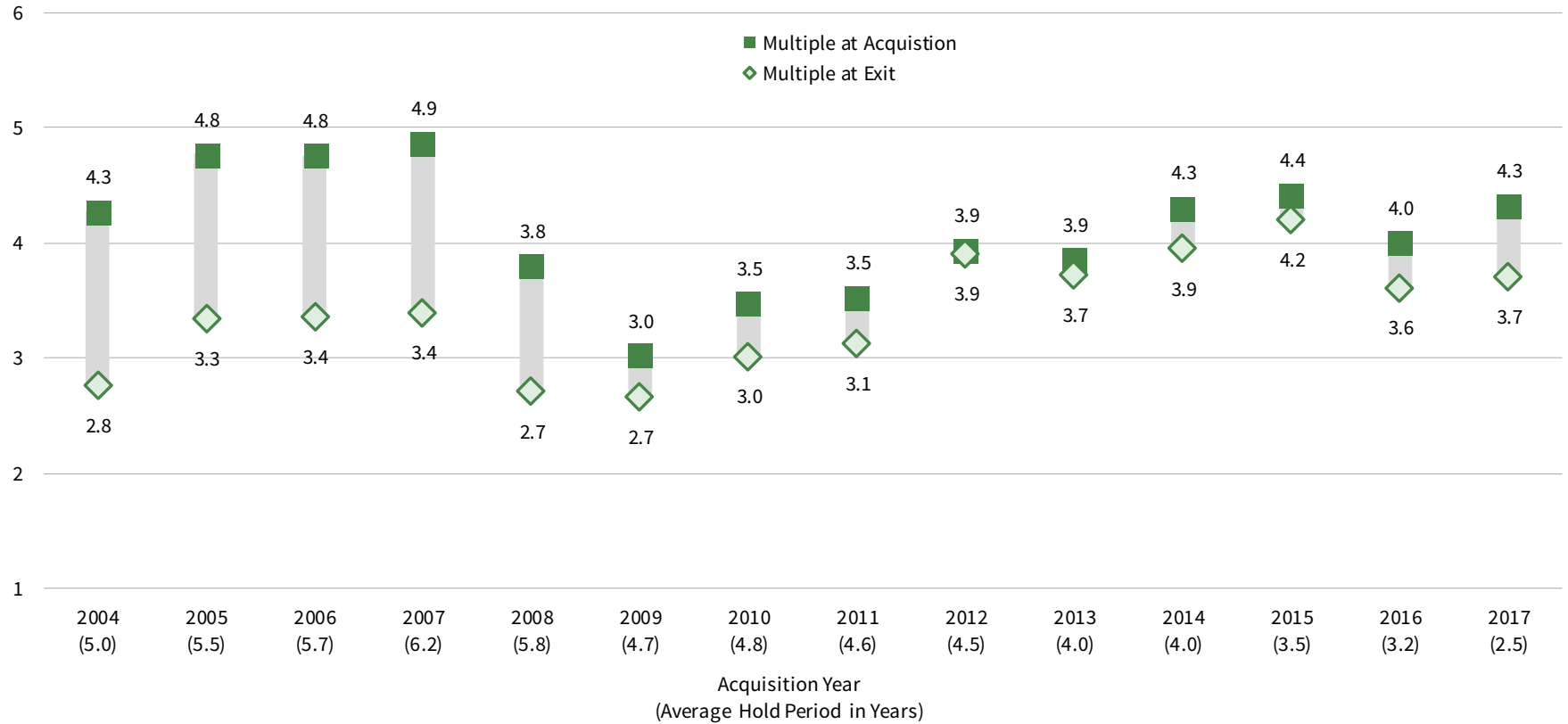
Note: Analysis only includes companies that have both acquisition and exit data.

Except for companies acquired in 2012, leverage multiples have generally decreased during PE ownership

Deleveraging, however, has been limited for exited companies acquired after 2008

EBITDA LEVERAGE MULTIPLE COMPRESSION OF GLOBAL 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	164	215	323	361	263	116	281	220	213	142	155	116	79	27	

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

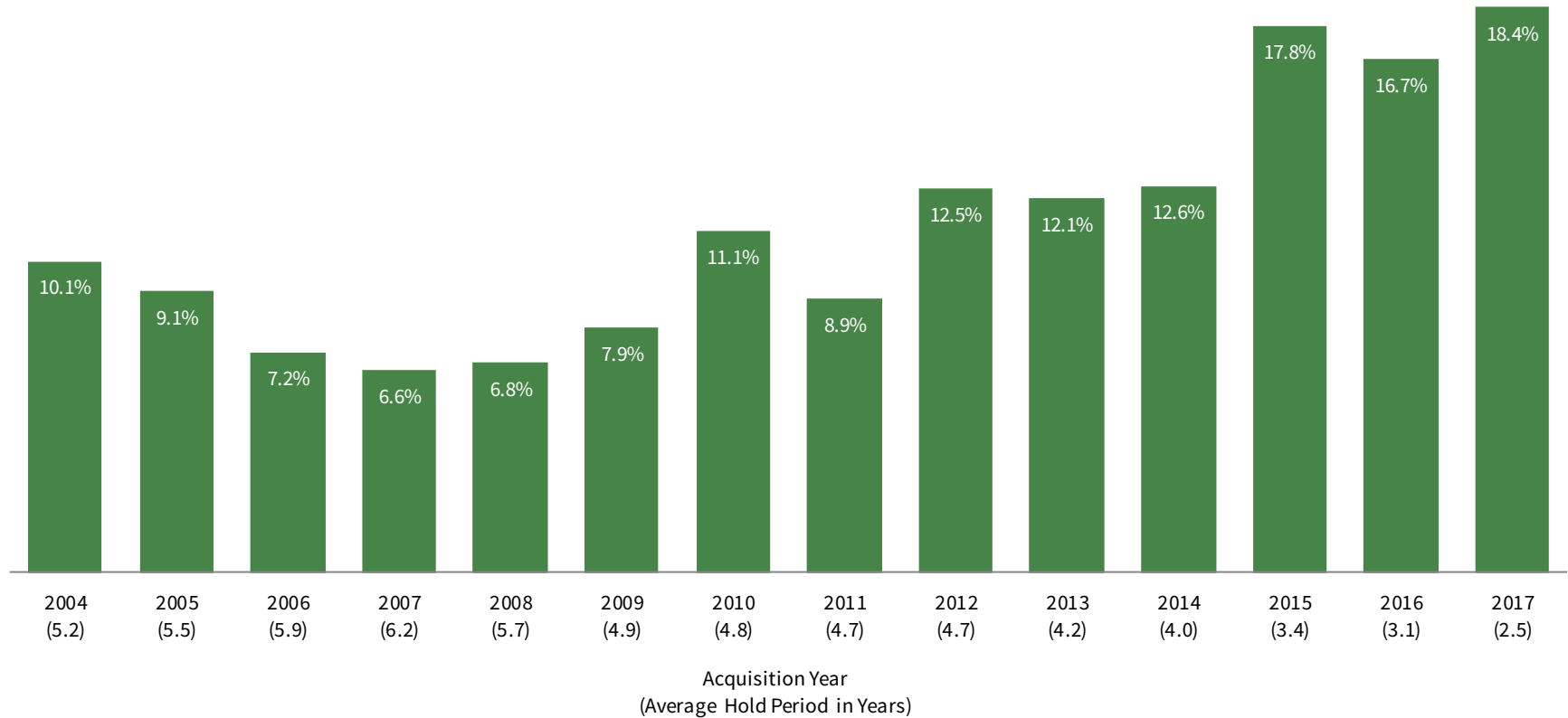
Note: Analysis only includes companies that have both acquisition and exit data.

Revenue growth during PE ownership has been strongest for companies acquired from 2015–17 (17.6% median)

For those acquired from 2004–14, the median revenue CAGR was 9.5%

MEDIAN REVENUE CAGR OF EXITED GLOBAL 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	217	287	439	495	373	208	415	335	306	220	244	184	113	54

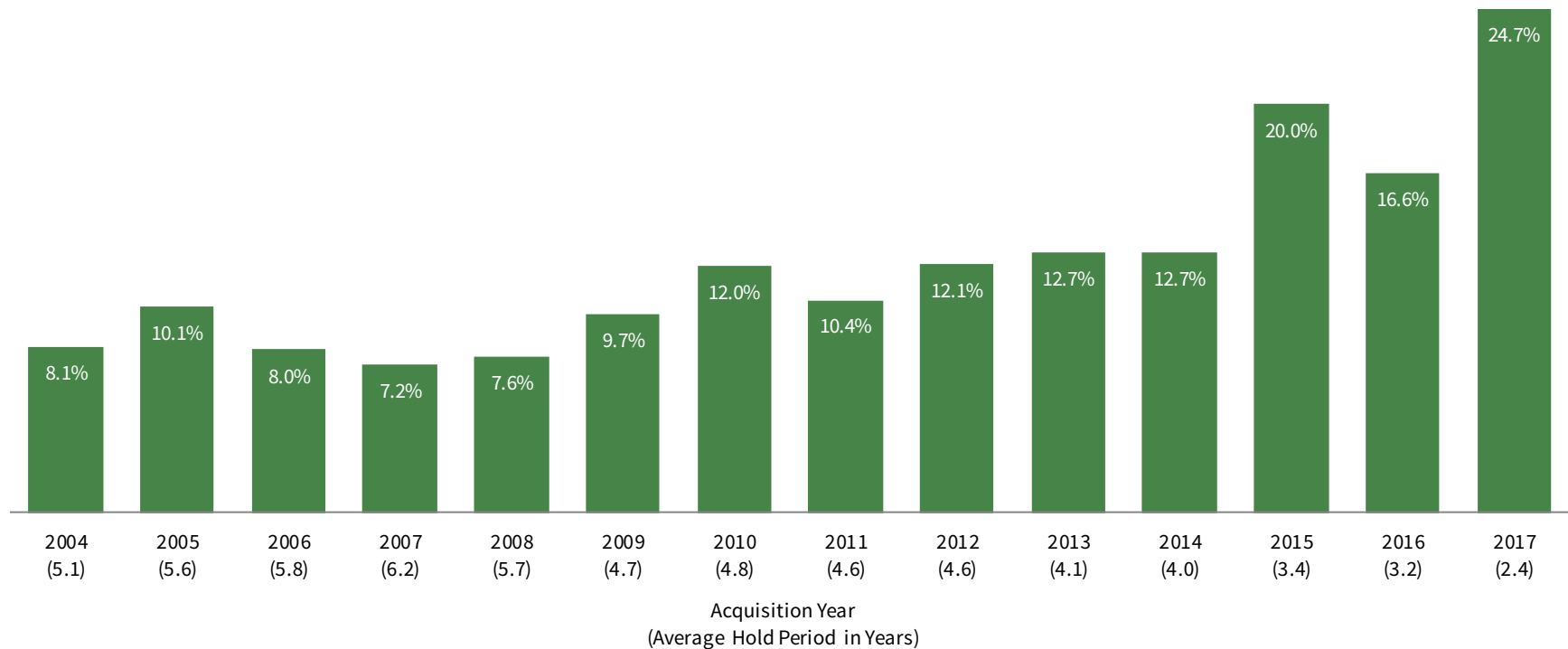
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Acknowledging the short average hold periods, median EBITDA CAGR for exited companies acquired from 2015–17 spiked to 18.5%

For exited companies with longer average hold periods, like those acquired between 2004 and 2008, the median EBITDA CAGR was 7.7%

MEDIAN EBITDA CAGR OF EXITED GLOBAL 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	190	267	397	447	344	174	363	283	268	186	203	142	89	33

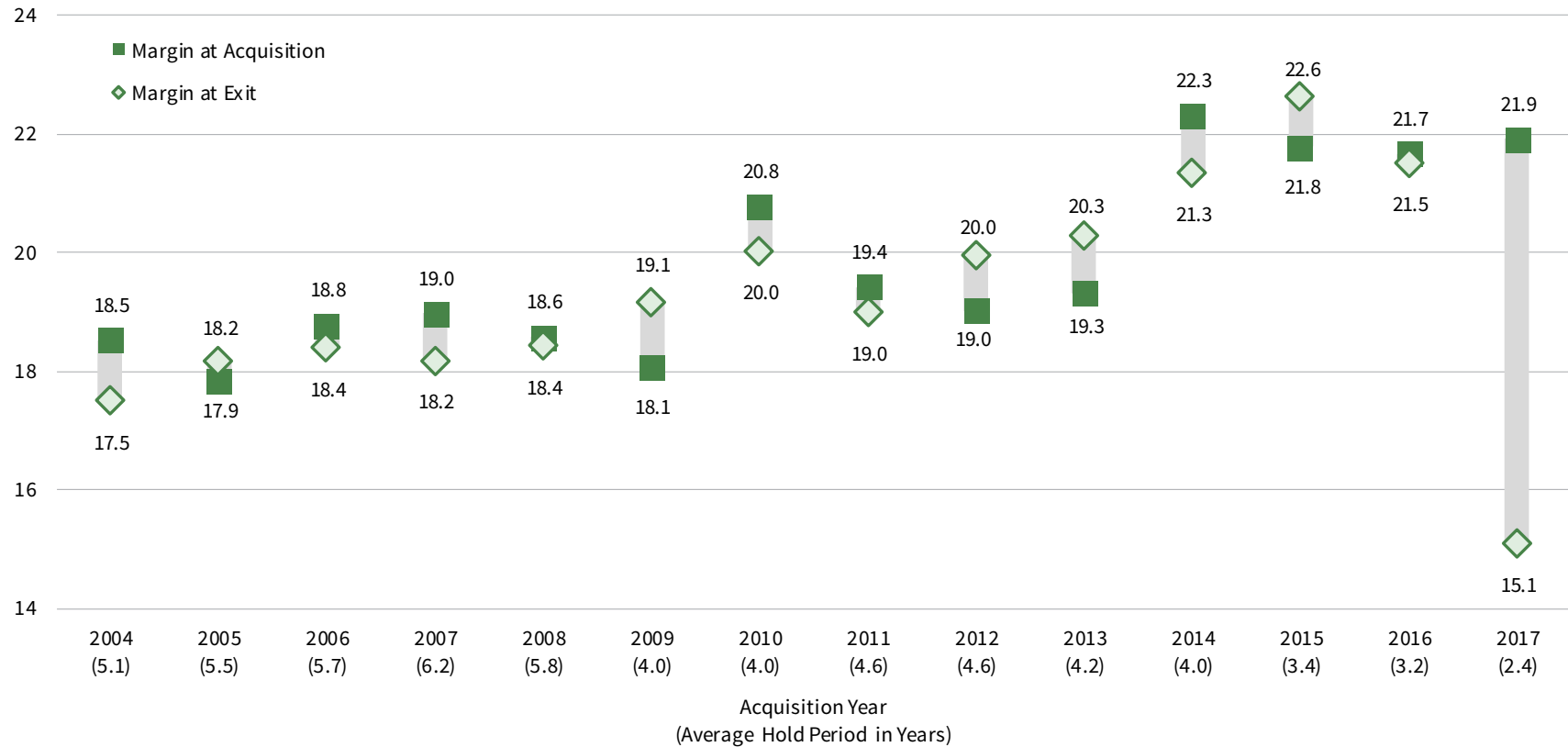
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

EBITDA margins have historically been relatively stable from acquisition to exit

Given strong revenue and EBITDA CAGRs, the 2017 vintage companies exited to this point have sacrificed margins for growth

MEDIAN EBITDA MARGIN EXPANSION OF EXITED GLOBAL 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	183	257	383	429	329	170	355	278	263	184	201	144	90	34

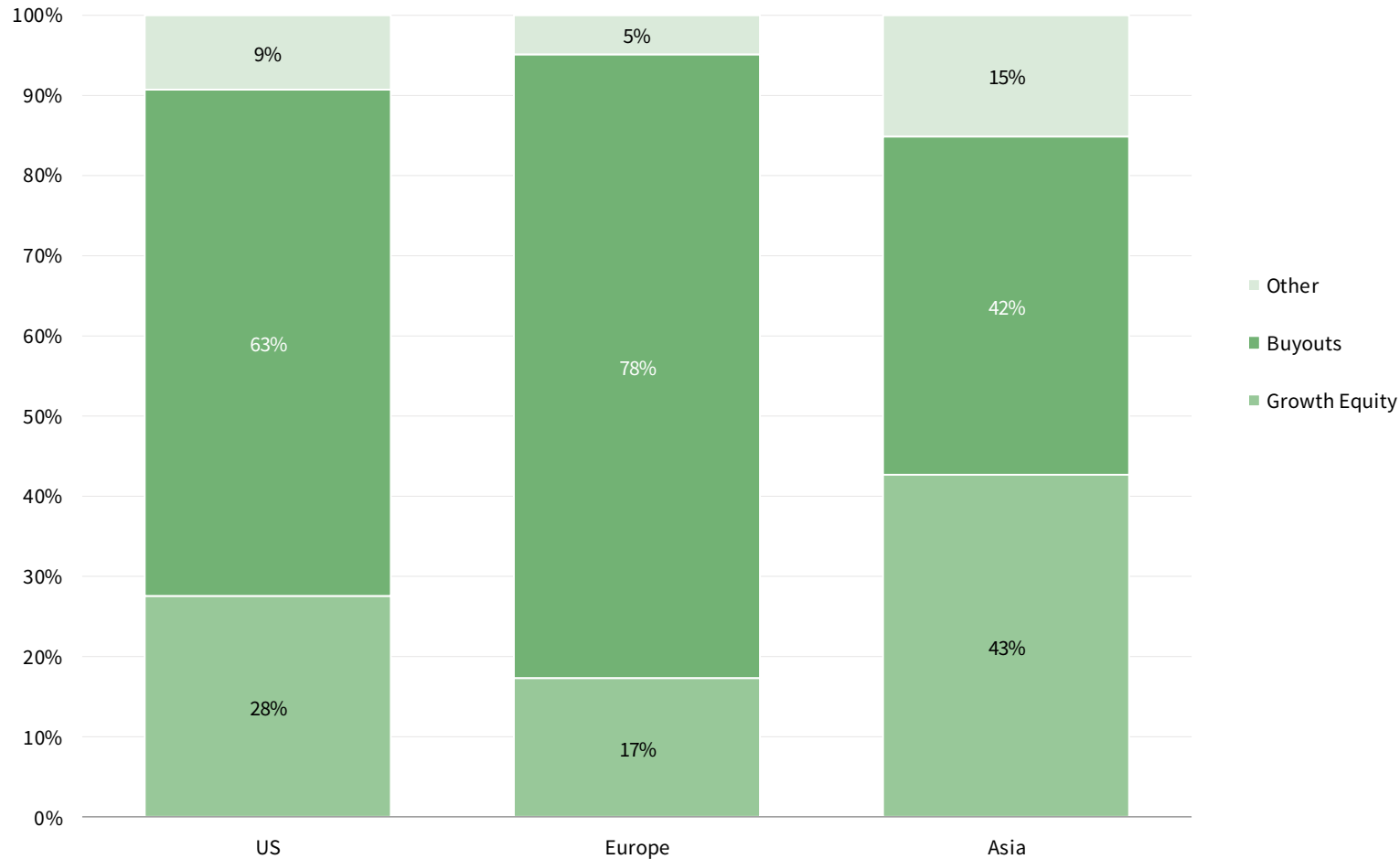


**REGIONAL COMPARISONS:
ASIA, EUROPE, AND THE UNITED STATES**

Among the regions, the European sample has the largest concentration in buyouts and the Asia universe has substantially more growth equity than the other two regions

BREAKDOWN OF INVESTMENT STRATEGIES BY REGION

As of December 31, 2020 • Percent (%)



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

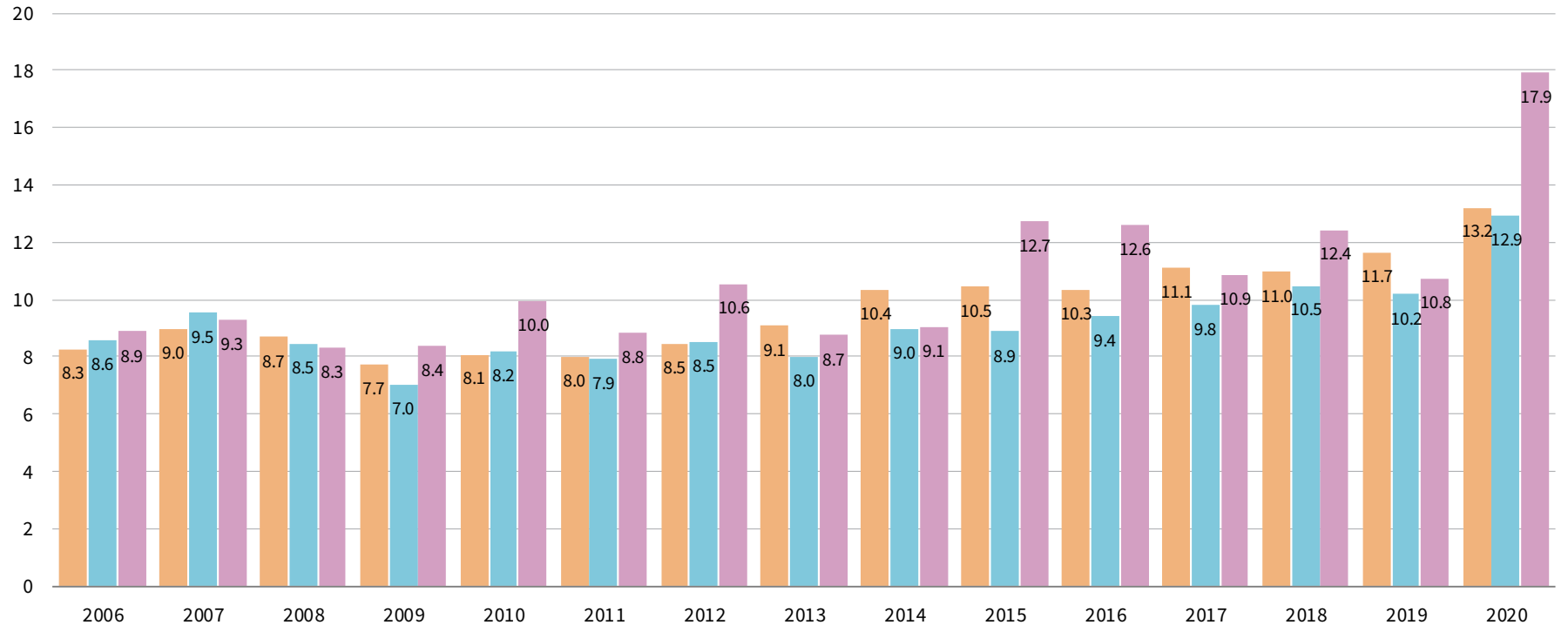
Notes: "Other" includes strategies reported as: 'Venture' (including late stage), 'Debt' and other strategies that do not fit into any of the categories. The breakdown of these regions includes investments for which we have one usable data point (e.g., enterprise value).

In 2020, PPMs across regions climbed to their highest levels of the time period

Acquisition multiples for Asia-based companies have historically been the highest among the regions, due to the growth bias and sector breakdown of the sample

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF PRIVATE COMPANIES BY REGION

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
United States	249	327	208	124	266	256	316	181	263	244	247	266	250	214	189
Europe	192	188	147	71	160	173	127	125	146	128	127	140	142	98	76
Asia	69	100	79	46	96	88	68	71	69	57	55	68	48	45	24

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

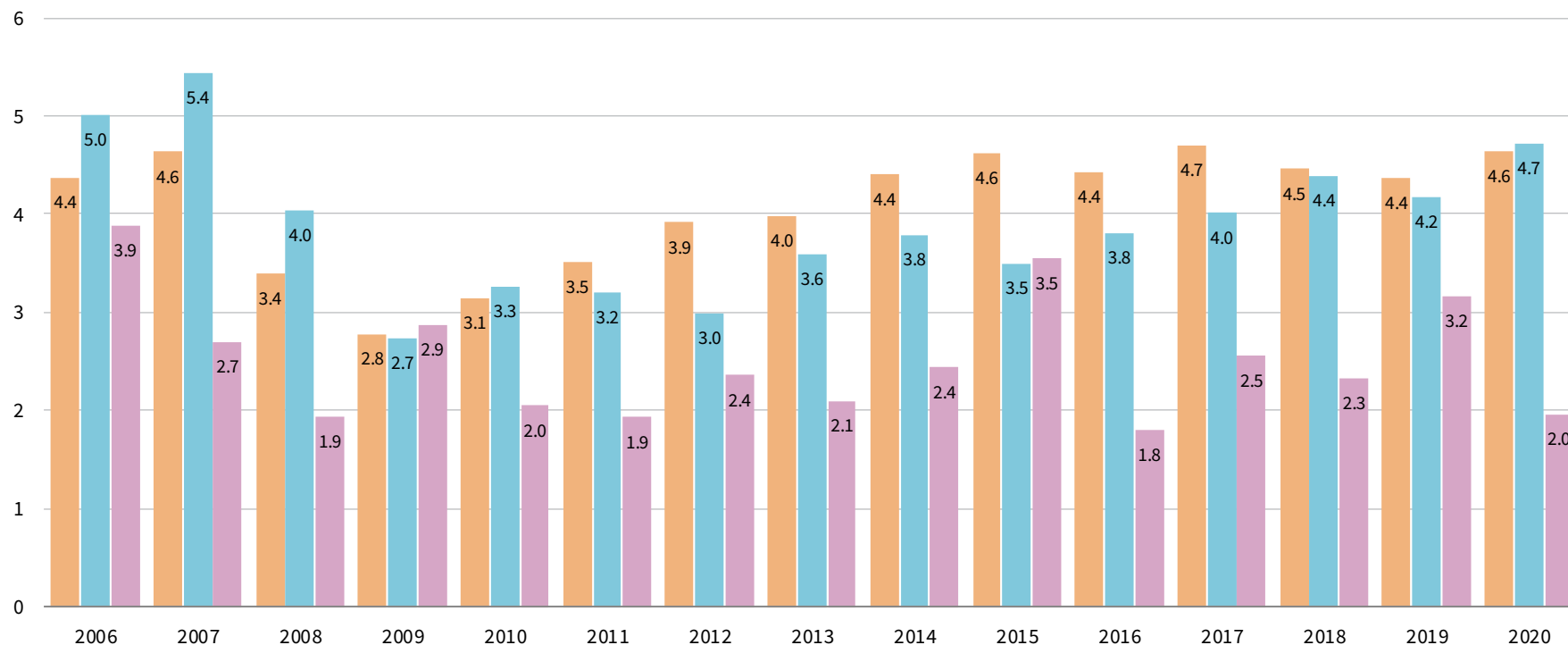
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Leverage multiples in Europe have moved higher since 2013, overtaking those in the US in 2020

With few exceptions, leverage levels in the US and Europe have been meaningfully higher than those in Asia

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF PRIVATE COMPANIES BY REGION

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
United States	239	304	181	109	247	248	287	165	248	226	238	249	256	218	180
Europe	186	185	144	56	148	162	118	113	143	122	119	131	133	86	71
Asia	51	68	57	26	58	49	45	52	46	31	31	50	33	35	17

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

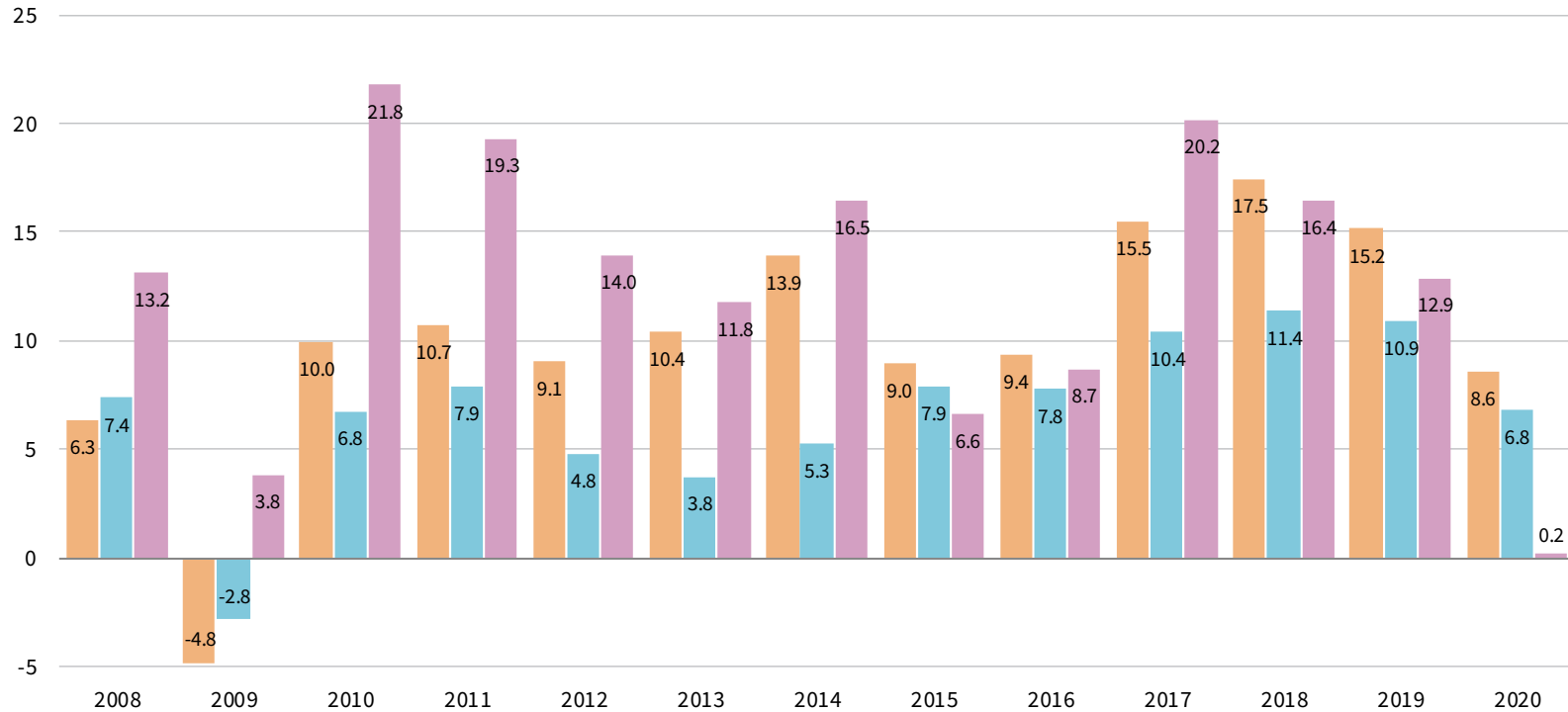
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Pandemic-related disruption apparent as revenue growth dipped significantly for all regions in 2020

The most pronounced impact was seen in Asia where growth was the lowest for any year of the period analyzed

AVERAGE ANNUAL REVENUE GROWTH OF PRIVATE EQUITY-OWNED COMPANIES BY REGION

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States	295	509	633	766	790	720	745	661	667	663	747	839	1018
Europe	254	340	402	466	474	406	340	338	289	293	319	311	311
Asia	62	121	139	225	243	262	226	184	151	172	197	218	268

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

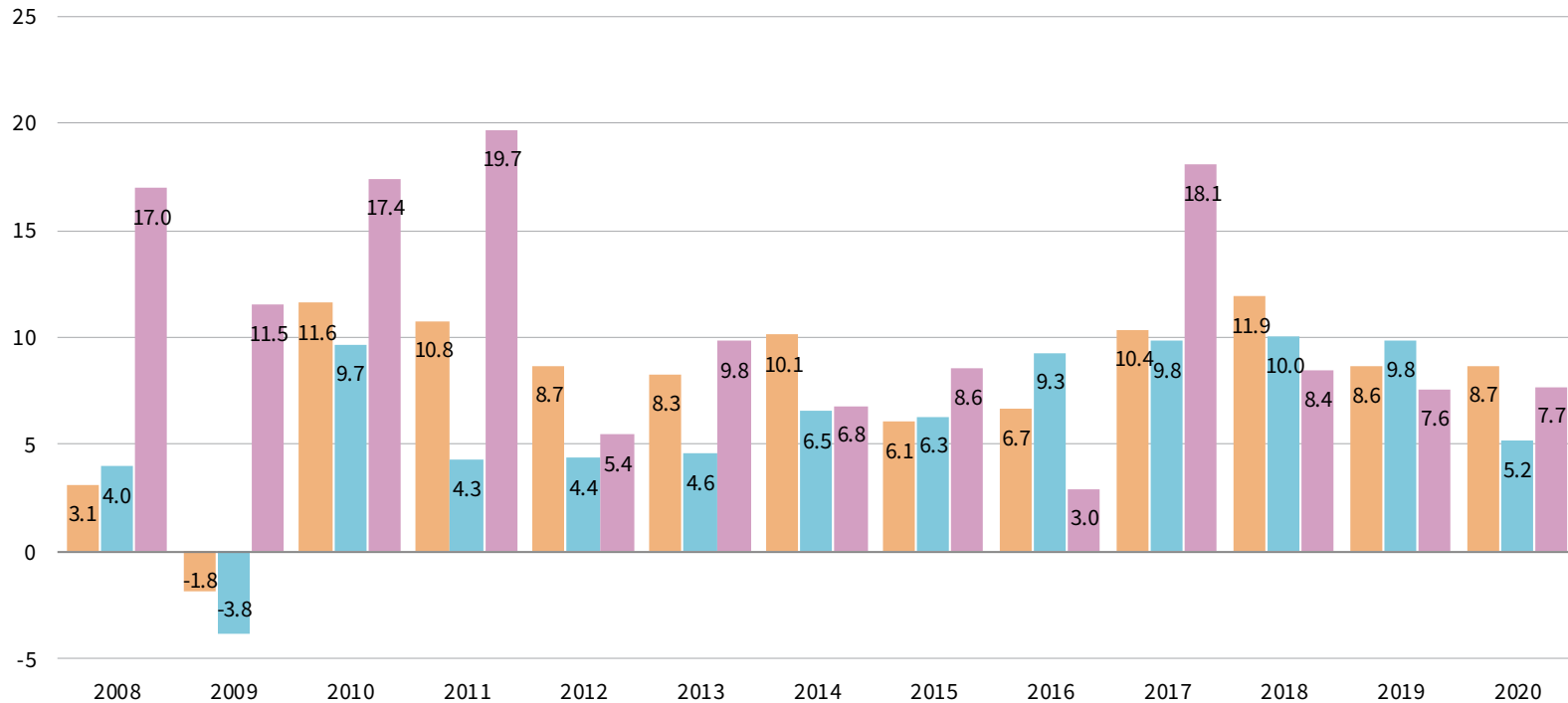
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

PE-backed companies were able to maintain EBITDA growth amid the pandemic

Over the full time period, Asia-based companies have averaged much faster annual EBITDA growth (10.4%) than their counterparts in the US and Europe (8.3% and 6.0%, respectively)

AVERAGE ANNUAL EBITDA GROWTH OF PRIVATE EQUITY-OWNED COMPANIES BY REGION

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States	276	448	542	678	686	600	610	510	497	486	531	591	700
Europe	234	314	348	431	438	363	308	313	257	244	274	258	235
Asia	65	108	134	173	156	153	128	120	109	124	131	145	170

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

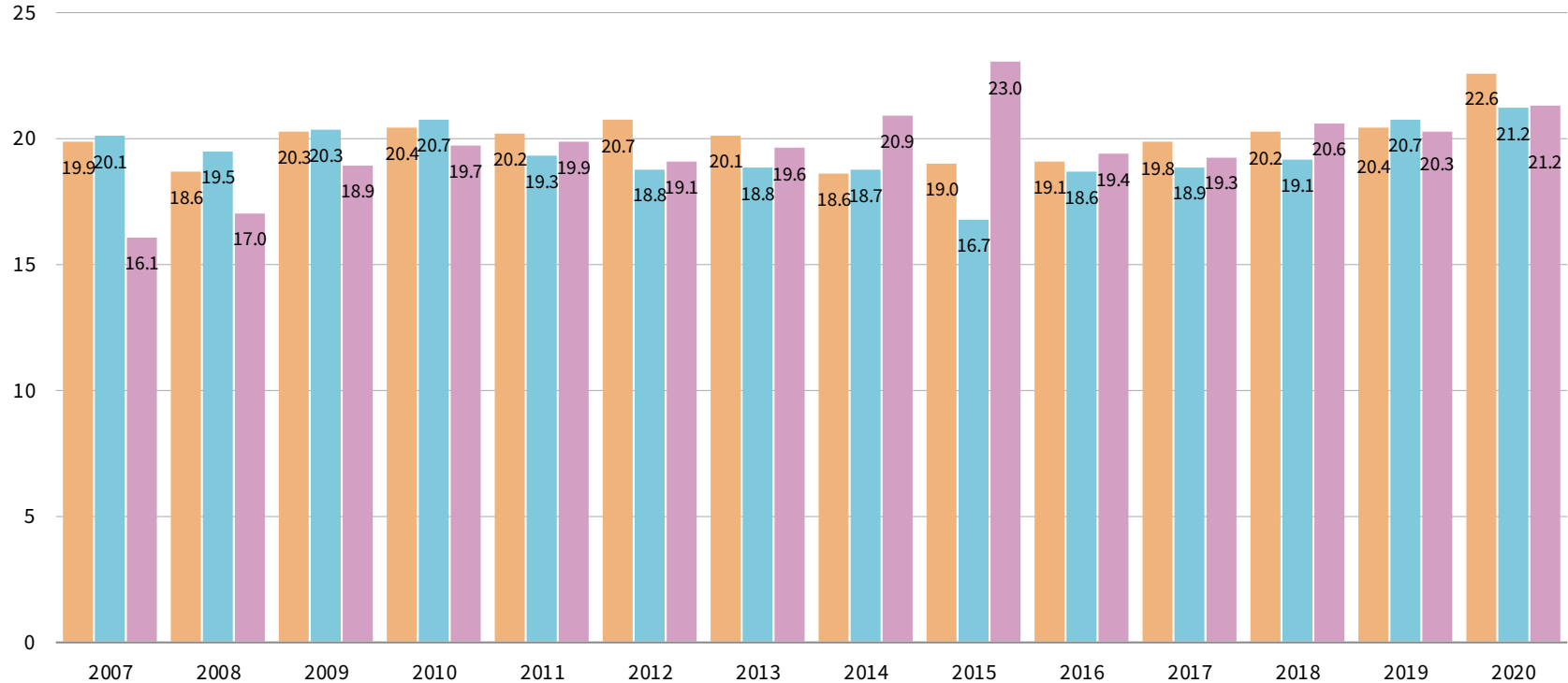
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

EBITDA margins in the US and Europe have improved every year since 2016

Over the full time period, PE-backed companies across the globe have averaged around 20% annual margins

AVERAGE ANNUAL EBITDA MARGIN OF PRIVATE EQUITY-OWNED COMPANIES BY REGION

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



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States	320	489	654	848	1,047	1,160	884	974	832	899	915	984	1,029	1,162
Europe	276	347	430	530	629	618	516	557	487	468	445	513	402	417
Asia	63	116	140	206	256	263	231	269	220	207	255	225	281	265

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

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

EUROPEAN PRIVATE EQUITY ANALYSIS

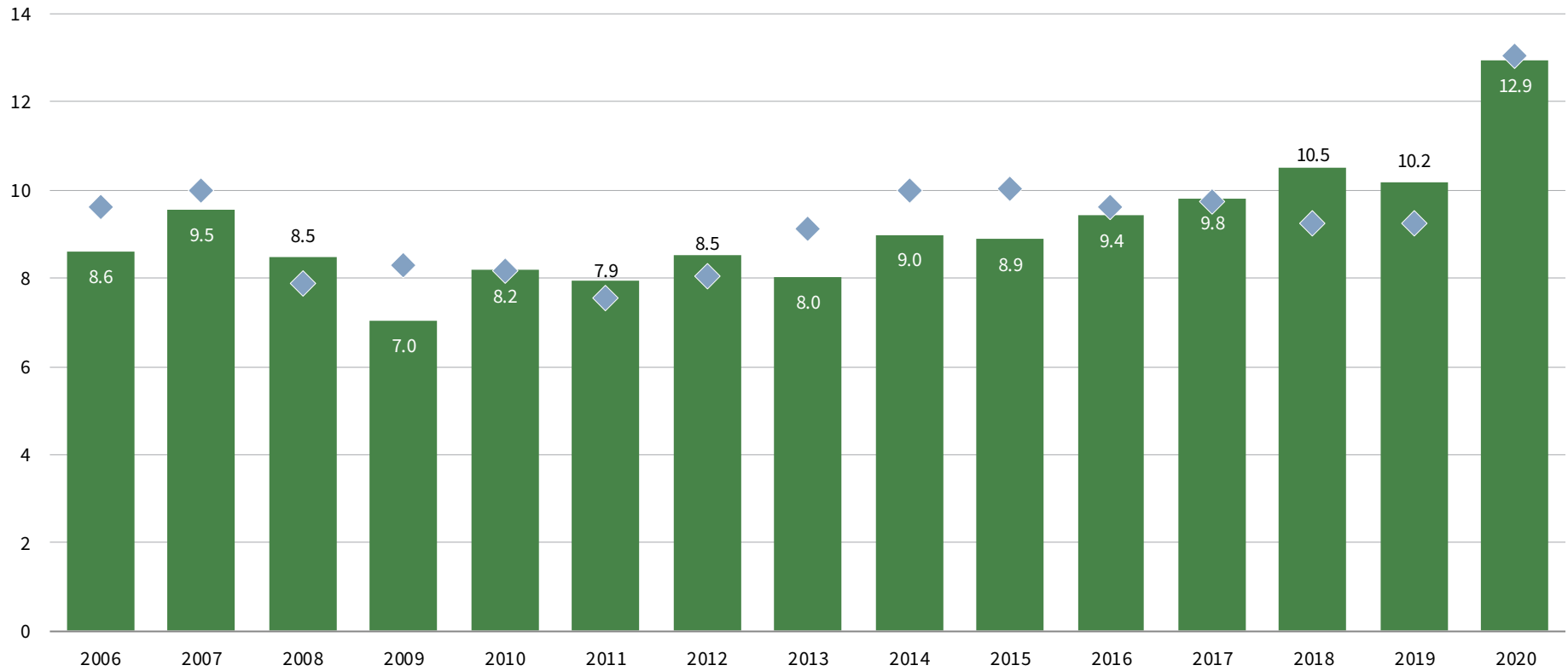
- **Purchase Price Multiple**
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

On average, over the 15-year period, private PPMs closely tracked public ones (9.0 vs 9.1)

Both hit new heights in 2020

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF EUROPEAN 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	192	188	147	71	160	173	127	125	146	128	127	140	142	98	76
MSCI AC Europe Index	292	321	239	221	229	237	231	225	226	229	224	223	207	197	193

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

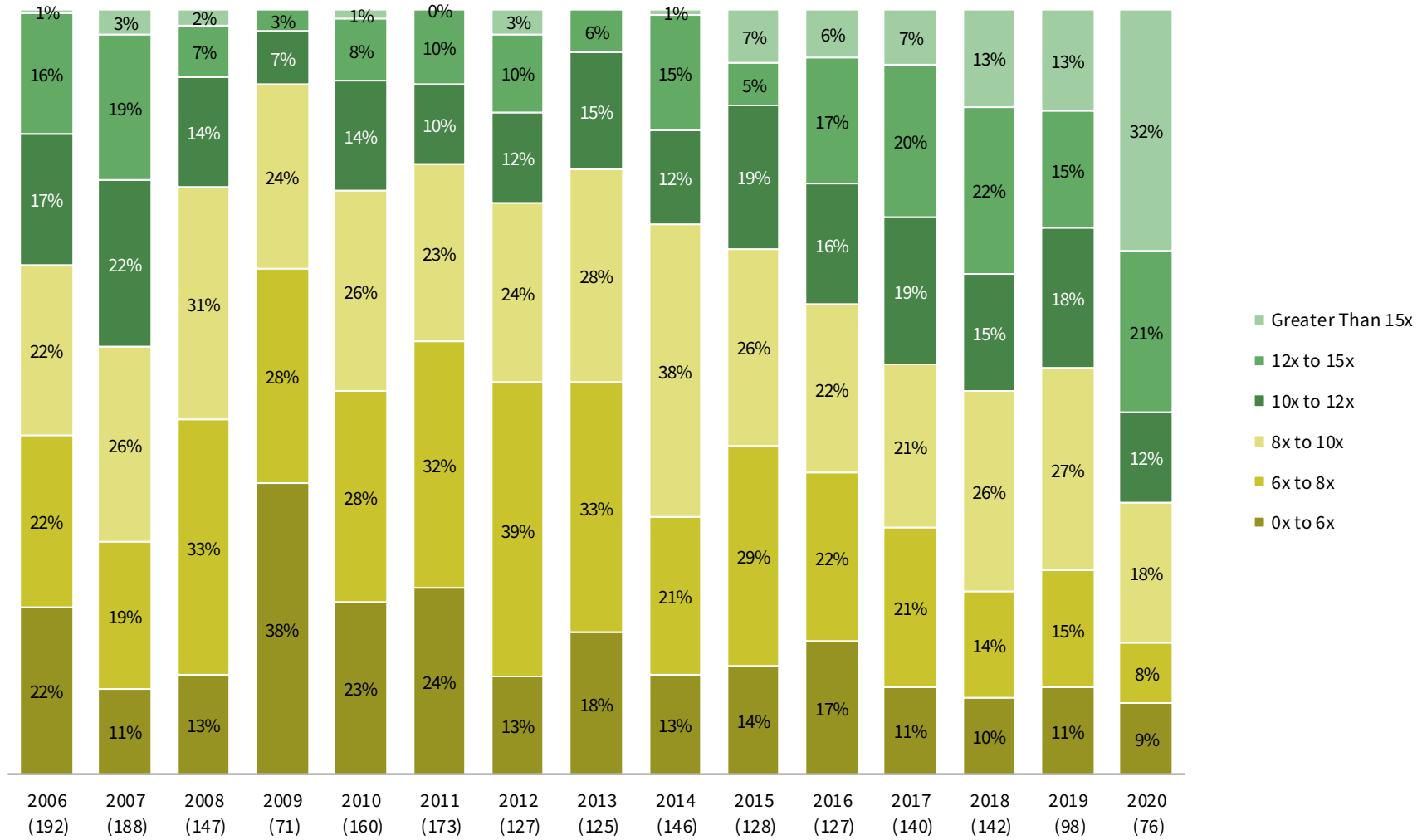
Notes: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes. The majority of deals in the European private equity PPM sample are buyouts.

From 2013–20, the percentage of deals acquired at 10X EBITDA or higher has more than tripled (21% to 66%)

In 2020, PPMs for nearly a third of acquisitions were higher than 15x EBITDA, by far the most of any year analyzed.

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

As of December 31, 2020 • Enterprise Value/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 "6x–8x" range includes companies with reported EBITDA purchase price of exactly 6x. The majority of deals in the European private equity PPM sample are buyouts.

Small buyout average PPMs have increased in each of the last three years

Over the full time period, PPMs for mid-sized buyouts have averaged over two turns higher (9.7x) than those of small buyouts (7.6x)

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

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
EV €250M – €1B	46	59	45	NA	40	46	29	23	43	42	47	40	41	34	18
EV <€250M	85	73	61	37	78	91	52	69	74	55	62	58	57	29	22

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

Notes: Outliers were identified and excluded from the private equity company universes. Companies with an enterprise value over €1B were excluded from this analysis due to lack of data, however the average PPMs have increased significantly in recent years.

EUROPEAN PRIVATE EQUITY ANALYSIS

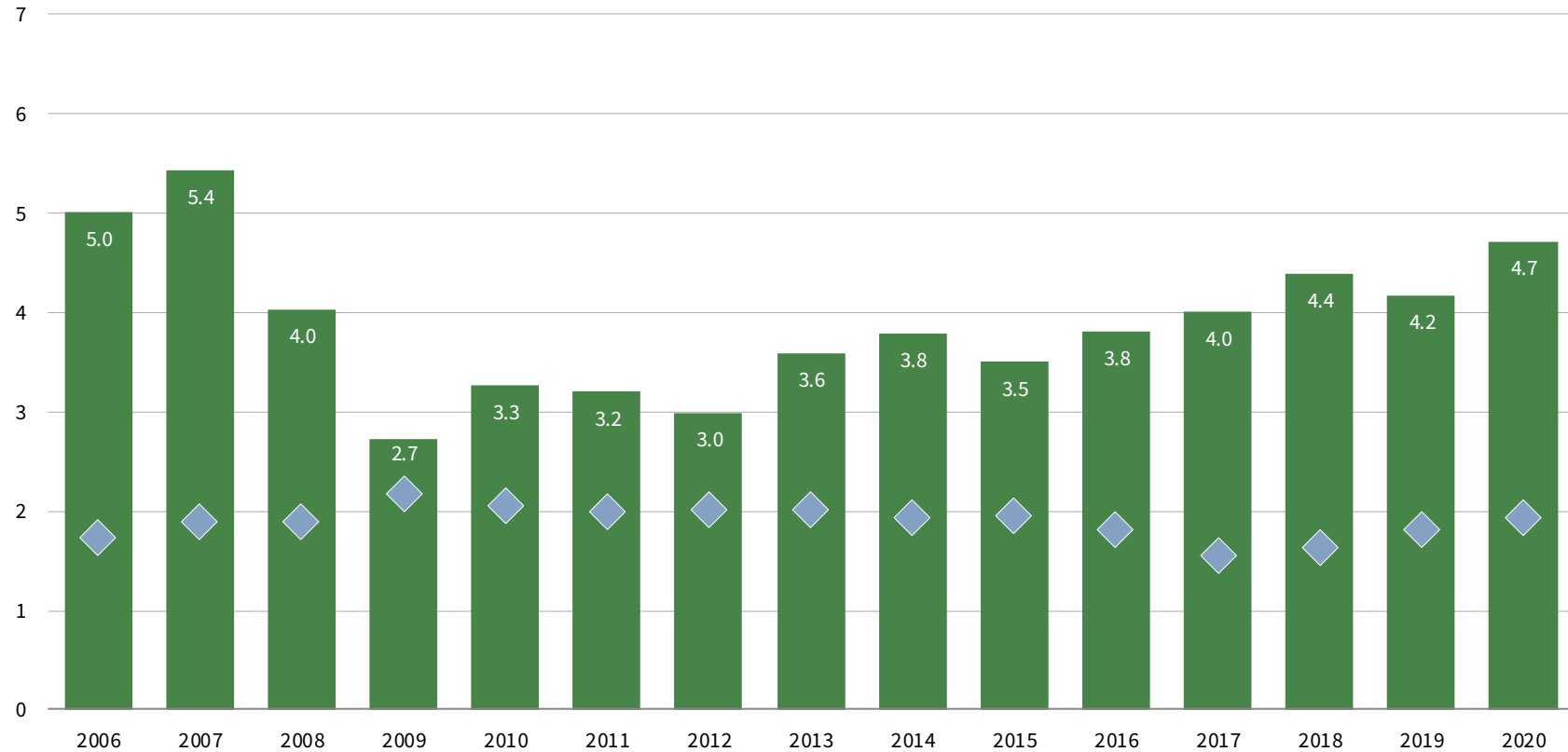
- Purchase Price Multiple
- **Leverage Multiple**
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

In 2020, PE leverage multiples continued their ten-year climb, and reached their highest level since 2007

Public leverage levels have remained relatively consistent across the full time period

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF EUROPEAN 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	186	185	144	56	148	162	118	113	143	122	119	131	133	86	71
MSCI AC Europe Index	226	258	204	186	181	184	183	186	194	187	185	184	176	175	159

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

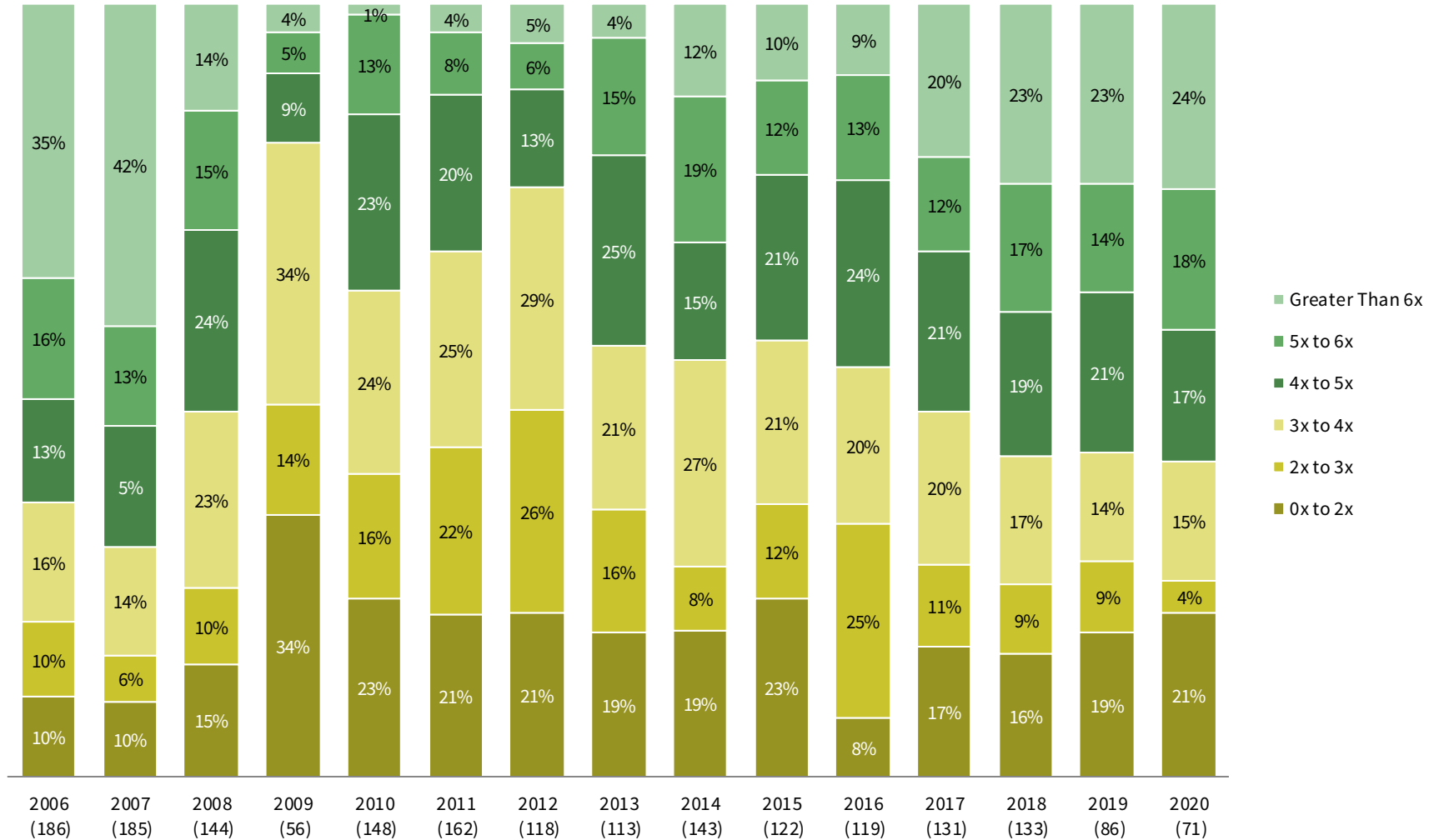
Notes: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes. The majority of deals in the European private equity LM sample are buyouts.

From 2018–20, the distribution of leverage multiples was fairly consistent

The percentage of deals levered at 4x or greater has generally increased since 2013

AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF EUROPEAN PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2020 • Net Debt/EBITDA



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

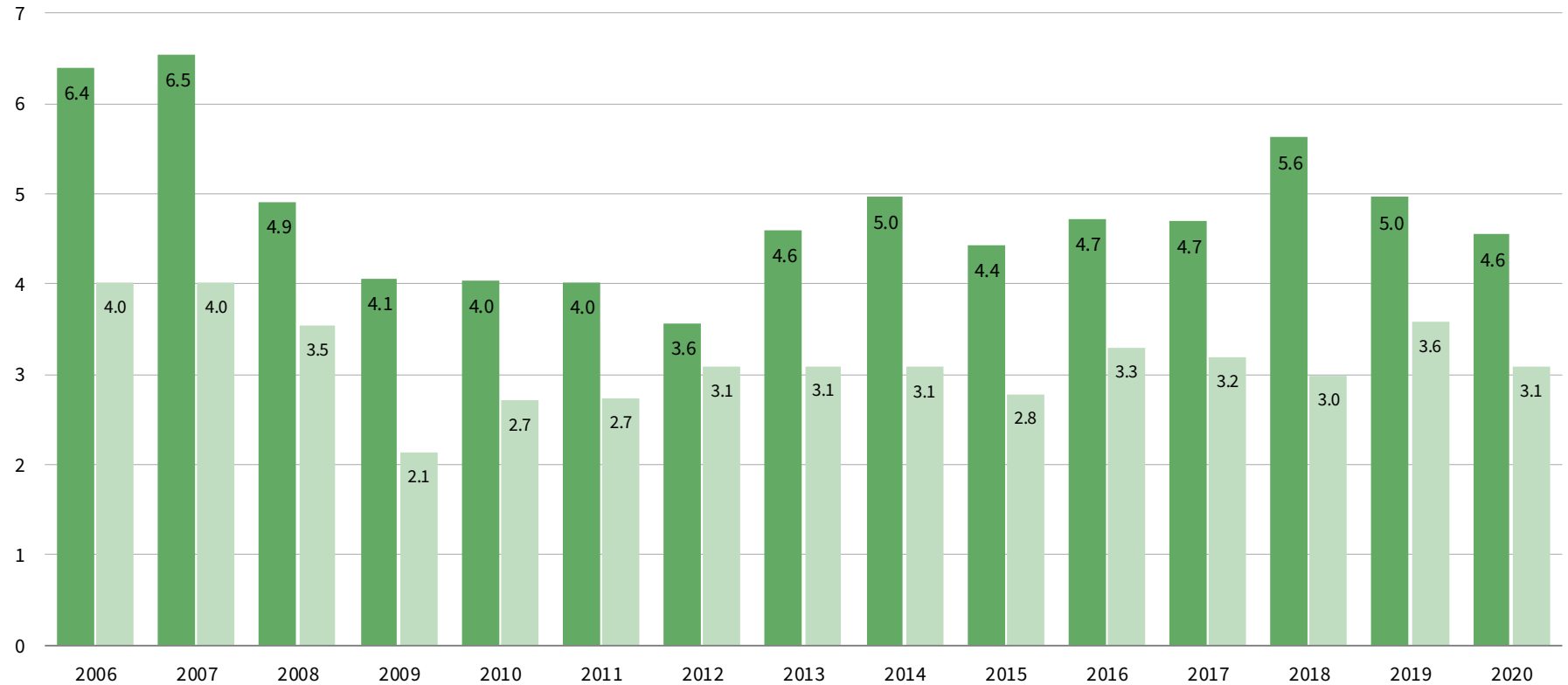
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "4x to 5x" range includes companies with reported leverage multiples of exactly 4x. The majority of deals in the European private equity LM sample are buyouts.

After climbing from 2015–18, mid-sized buyout leverage multiples fell in 2019 and 2020

Small buyouts have remained less levered than larger peers

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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
EV €250M – €1B	42	59	44	16	41	45	27	23	43	37	45	40	39	28	20
EV <€250M	82	70	60	28	70	85	44	64	70	55	54	48	54	22	18

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

Notes: Outliers were identified and excluded from the private equity company universes. Companies with an enterprise value over €1B were excluded from this analysis due to lack of data.

EUROPEAN PRIVATE EQUITY ANALYSIS

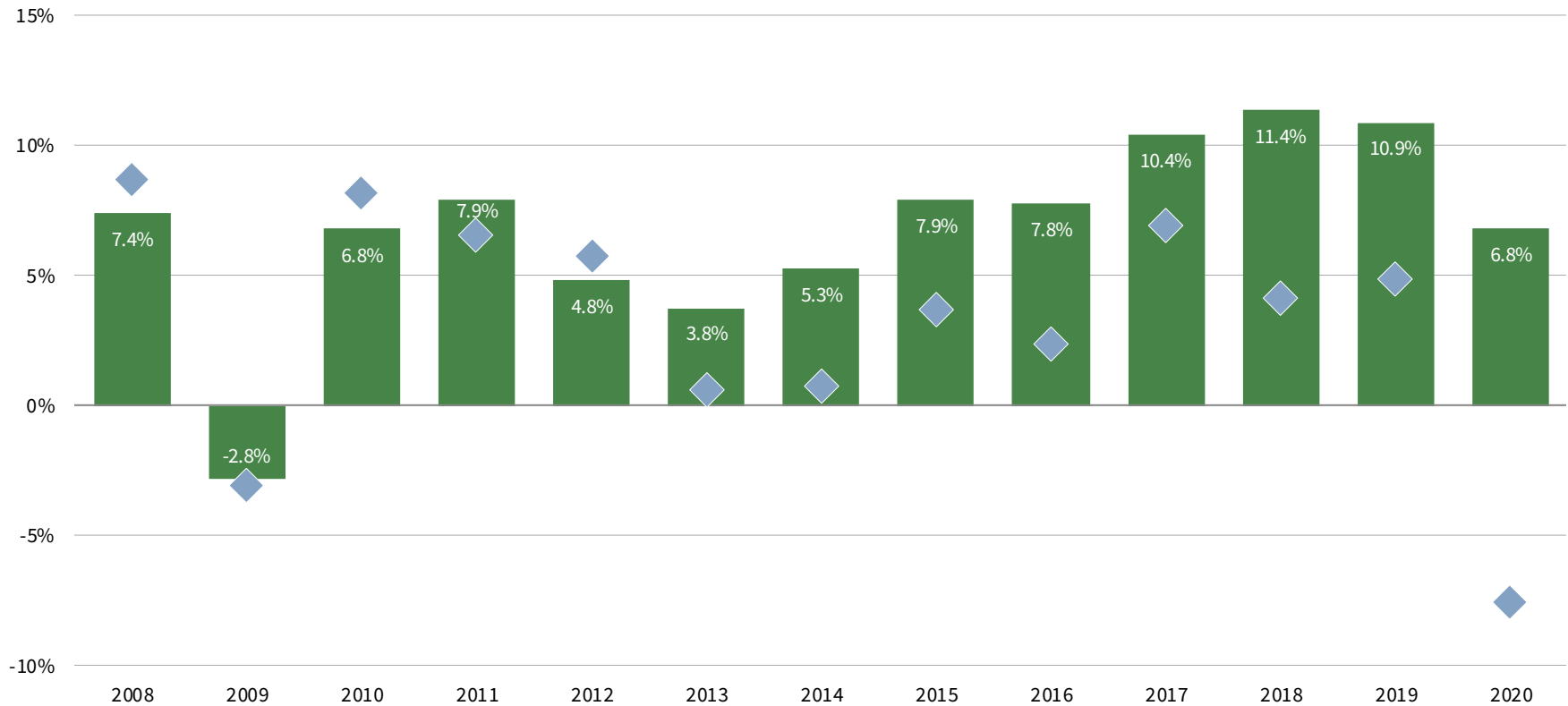
- Purchase Price Multiple
- Leverage Multiple
- **Revenue Growth**
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

PE company revenue growth proved resilient in the pandemic, and had its best year relative to publics in 2020

Over the full time period, PE companies averaged 6.7% revenue growth, almost twice public counterparts (3.4%)

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

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



Number of Companies

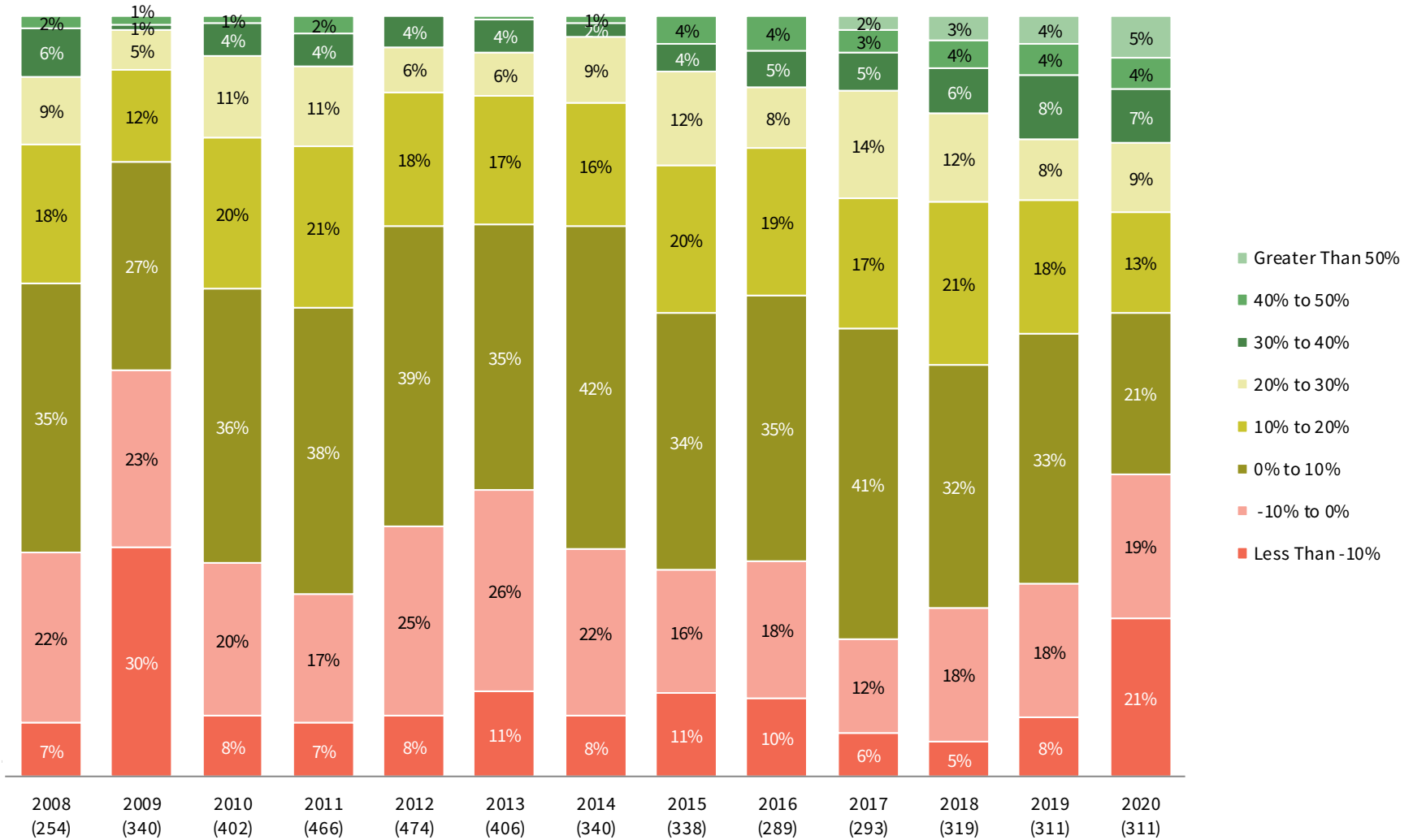
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	254	340	402	466	474	406	340	338	289	293	319	311	311
MSCI AC Europe Index	457	428	442	422	427	417	449	455	451	451	411	419	413

For the first time since 2009, revenue declined for 40% of the universe in 2020

At the same time, nearly 40% of companies grew revenue by at least 10%

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

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



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

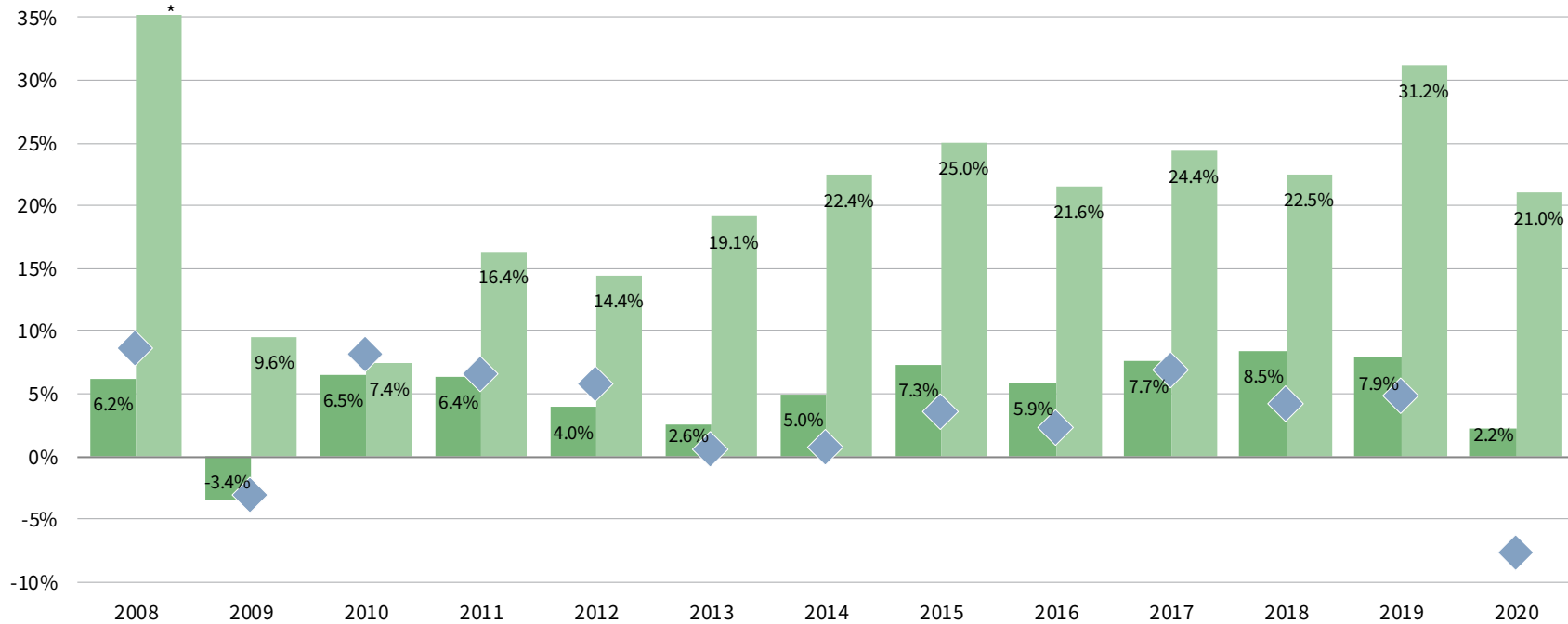
Notes: Outliers were identified and excluded. Numbers in parentheses represent total private companies in a year. Each range includes the lower bound value. For example the "0%-10%" range includes companies with reported growth of exactly 0%.

Amid the pandemic, growth equity's average revenue increase was 21%, just beating its long-term norm

Over the full time period, buyouts have averaged the same or faster revenue growth as publics in every year but three

AVERAGE ANNUAL REVENUE GROWTH OF EUROPEAN 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	239	312	342	389	391	338	267	261	219	214	236	230	194
Growth Equity Companies	21	27	46	60	73	60	74	70	60	63	68	77	106
MSCI AC Europe Index	457	428	442	422	427	417	449	455	451	451	411	419	413

*Axis capped for scaling purposes. The 2008 Growth Equity average is 37.8%.

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

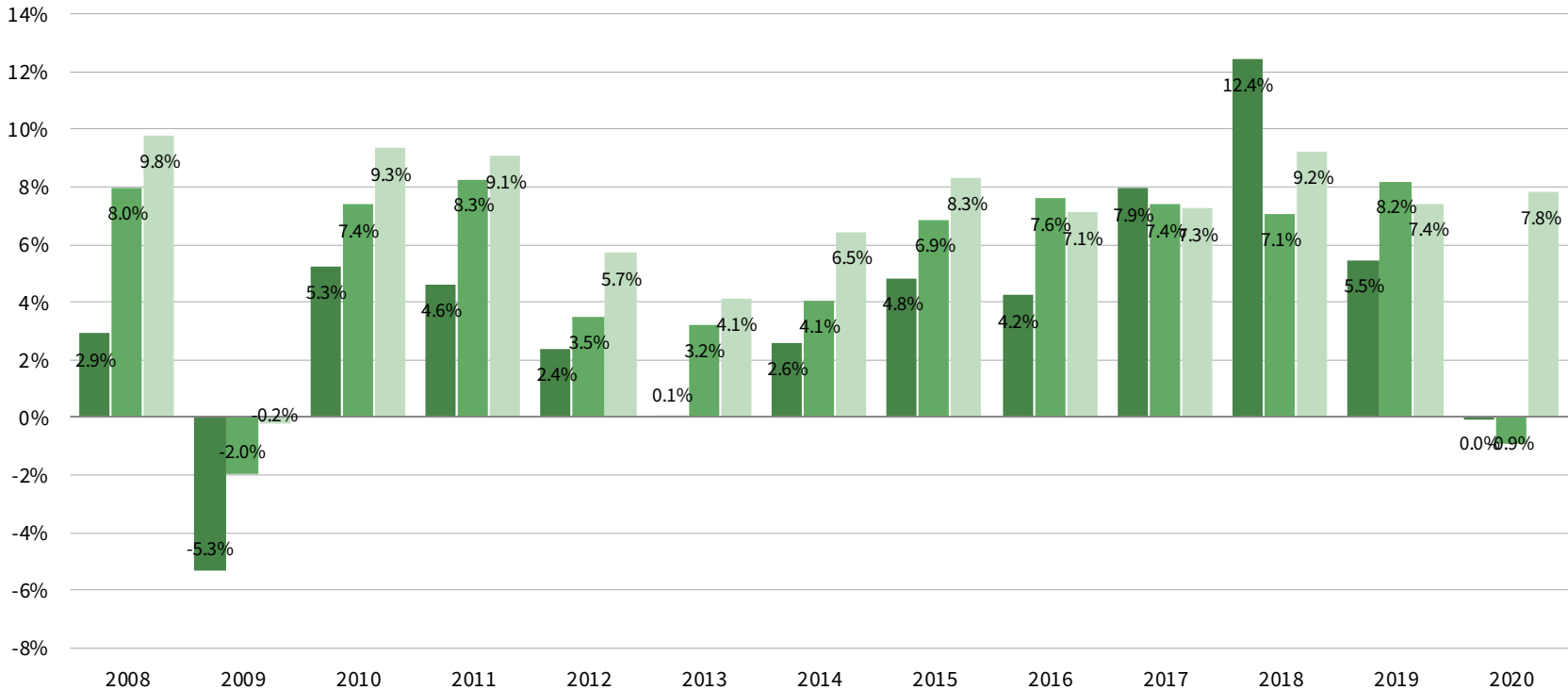
Note: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes.

In 2020, small buyouts were the only size segment to grow revenue

Over the longer term, small buyouts averaged 6.8% annual revenue growth, outpacing mid and large counterparts (5.5% and 2.8%, respectively)

AVERAGE ANNUAL REVENUE GROWTH OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > €1B	88	105	108	113	85	72	44	34	28	20	25	36	34
EV €250M - €1B	74	101	123	144	125	98	76	80	73	88	91	87	84
EV < €250M	78	106	117	141	178	169	146	151	119	104	121	99	73

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

Note: Outliers were identified and excluded from the private equity company universes.

EUROPEAN PRIVATE EQUITY ANALYSIS

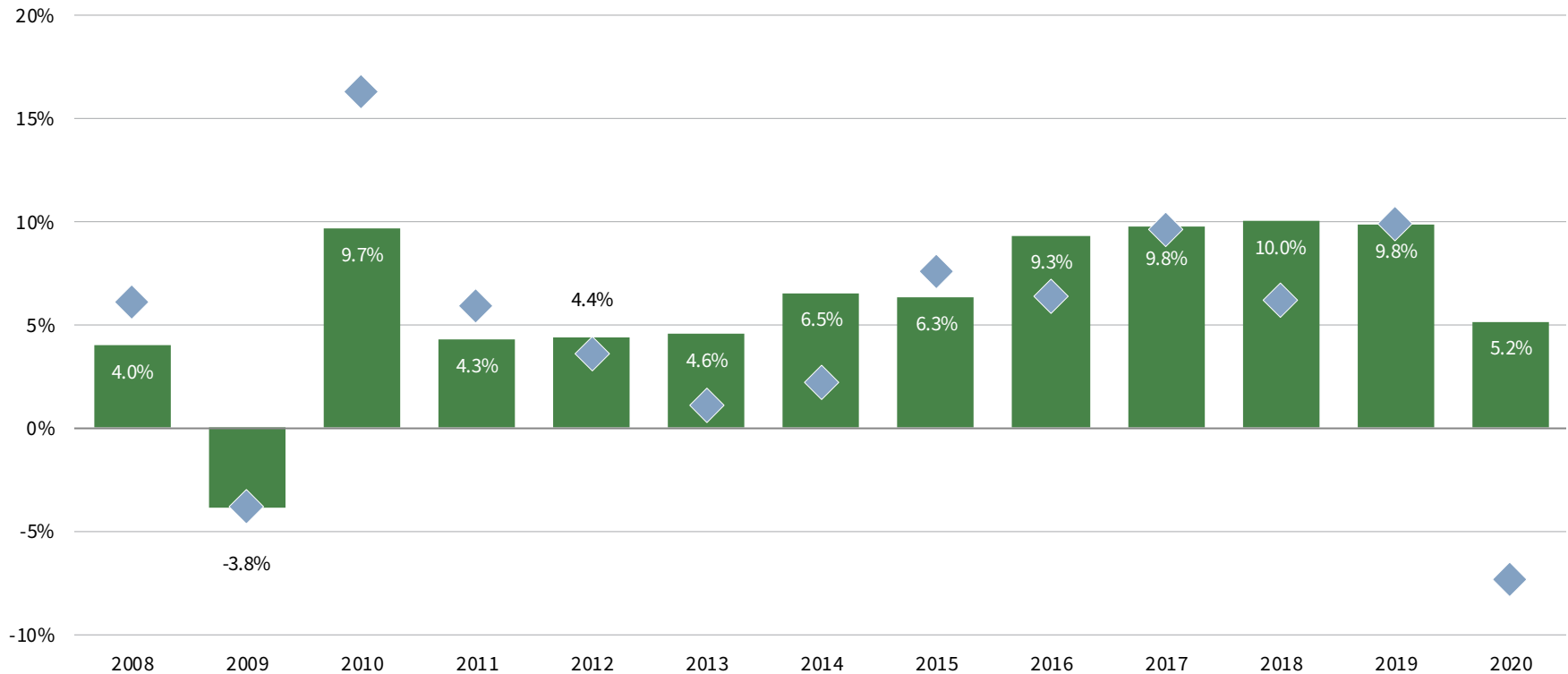
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- **EBITDA Growth**
- EBITDA Margin
- Exit Metrics

Relative to public company EBITDA growth, PE-backed companies had their best year in 2020

Over the full period, PE-backed companies averaged only slightly better annual EBITDA growth than their public peers

AVERAGE ANNUAL EBITDA GROWTH OF EUROPEAN 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	234	314	348	431	438	363	308	313	257	244	274	258	235
MSCI AC Europe Index	340	303	326	336	345	334	354	352	352	362	352	354	323

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

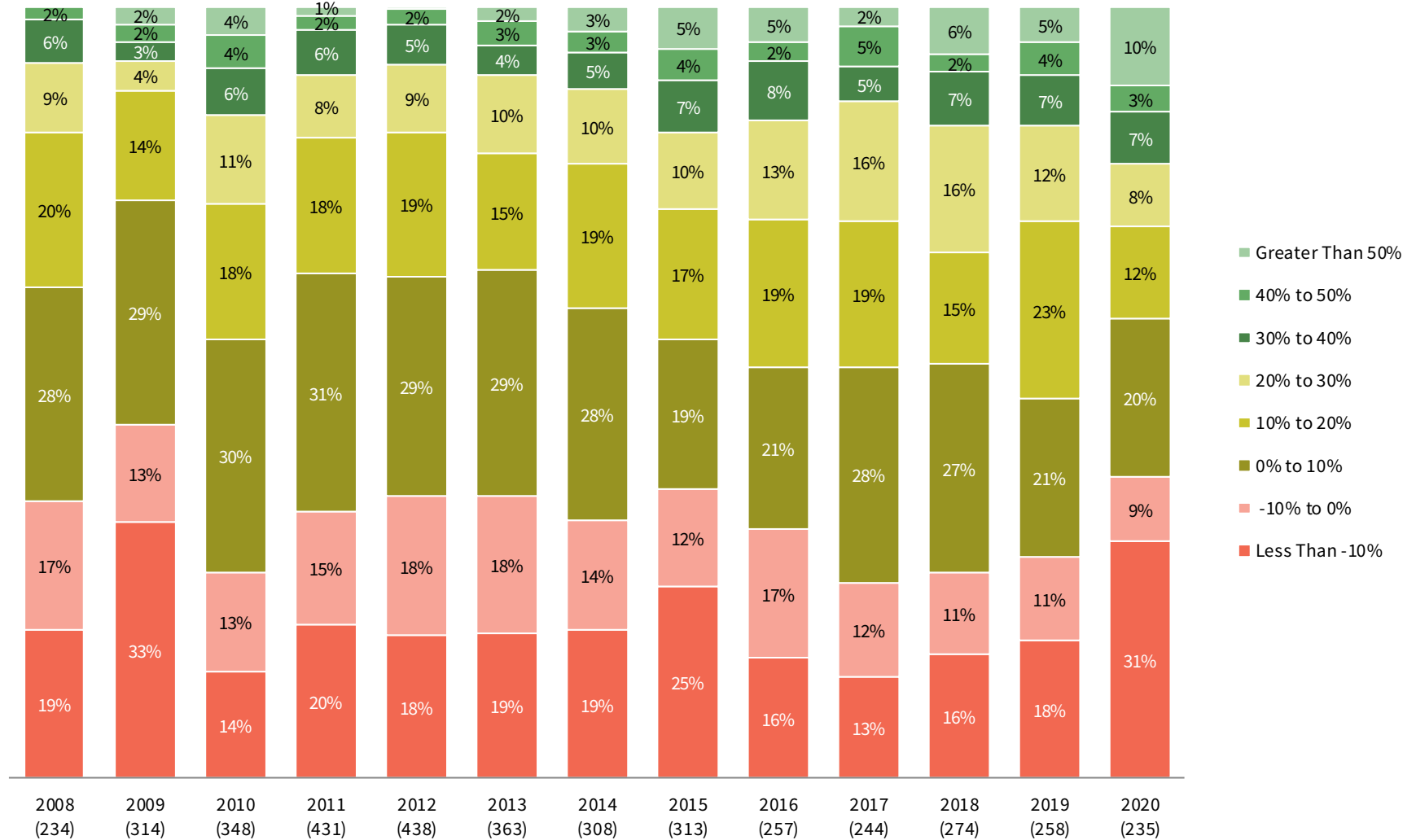
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

On average, about 34% of European PE companies suffered EBITDA declines per year

In 2020, 40% of the universe experienced EBITDA decline, the largest amount since 2009

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

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

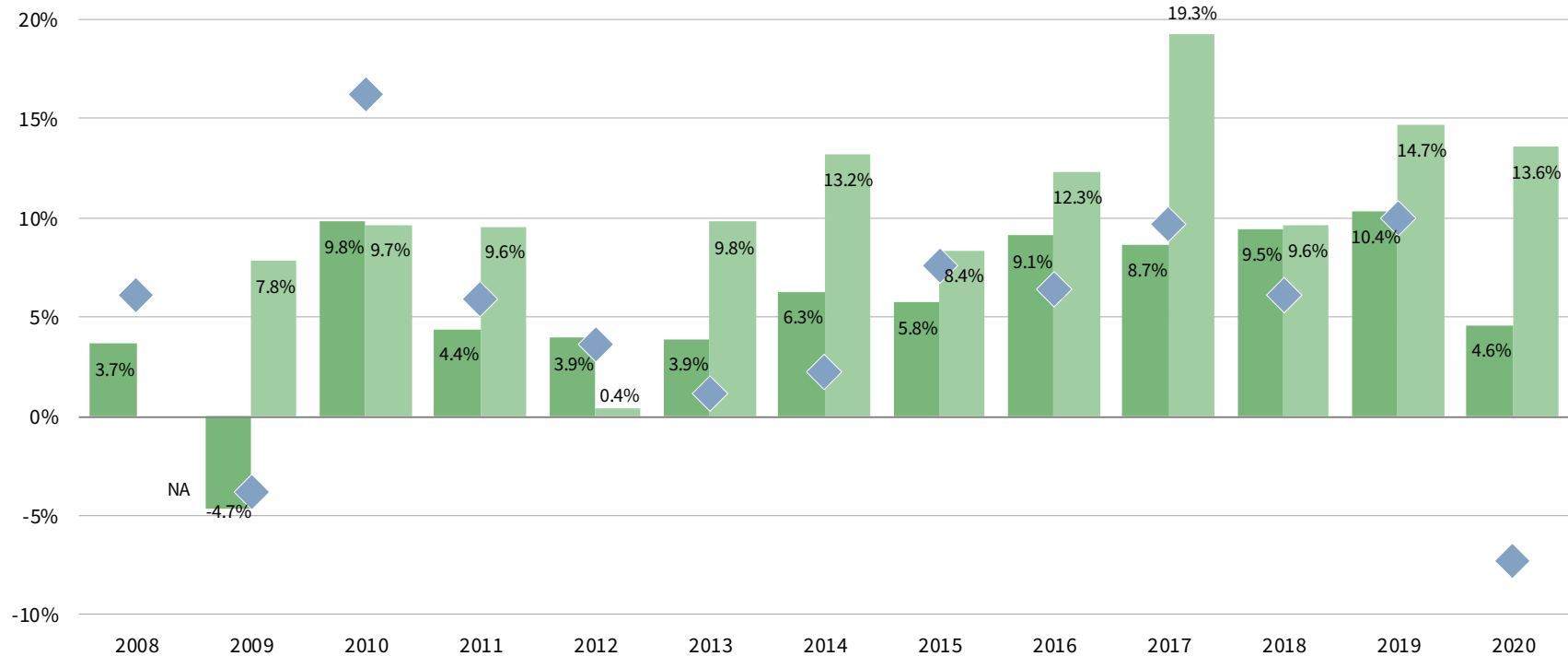


Growth equity businesses averaged the fastest EBITDA growth eight years in a row (2013–20)

Buyout EBITDA growth approximated or exceeded that of public companies in eight of the 13 years analyzed

AVERAGE ANNUAL EBITDA GROWTH OF EUROPEAN 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	227	294	308	376	380	319	258	258	213	200	227	215	178
Growth Equity Companies	NA	18	35	49	57	40	49	42	31	38	36	30	44
MSCI AC Europe Index	340	303	326	336	345	334	354	352	352	362	352	354	323

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

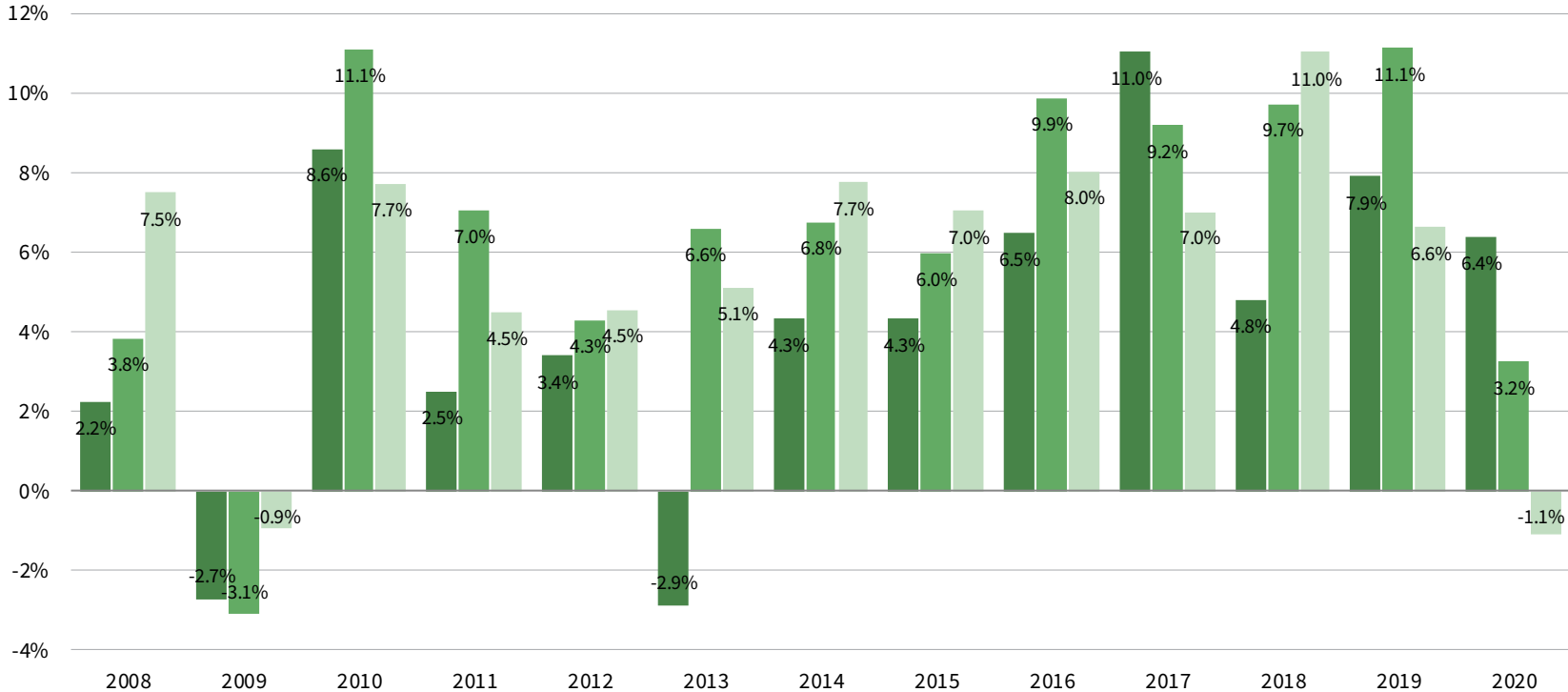
Notes: Outliers were identified and excluded, and the same methodology was applied to the private equity and public company universes. Private equity-owned companies were identified by the manager's strategy.

Among the size segments, mid-sized buyouts had strongest EBITDA growth, averaging 6.7% compared to 5.9% (small) and 3.6% (large)

Large buyouts averaged the best annual growth in only two of the years observed (2017 and 2020)

AVERAGE ANNUAL EBITDA GROWTH OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > €1B	88	97	101	108	80	70	45	36	27	21	23	42	34
EV €250M - €1B	73	101	113	140	131	100	76	80	67	89	94	80	83
EV < €250M	70	98	96	129	164	149	134	142	117	92	106	90	54

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

Note: Outliers were identified and excluded from the private equity company universes.

EUROPEAN PRIVATE EQUITY ANALYSIS

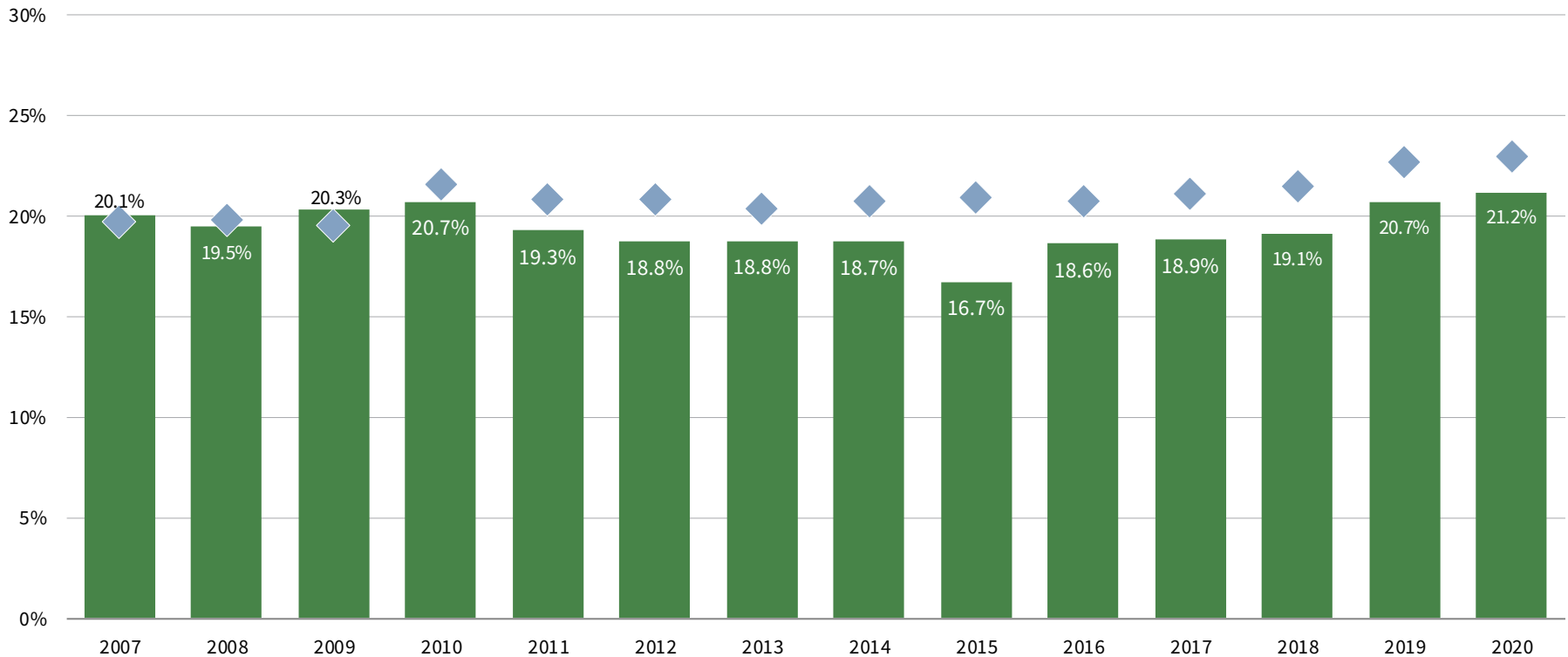
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- **EBITDA Margin**
- Exit Metrics

EBITDA margins have trended upward since 2016, and in 2020, they hit a new peak for the time period

Public companies have consistently operated at higher margins than PE-backed ones

AVERAGE ANNUAL EBITDA MARGIN OF EUROPEAN 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	276	347	430	530	629	618	516	557	487	468	445	513	402	417
MSCI AC Europe Index	519	402	379	402	388	388	395	403	410	406	409	398	390	379

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

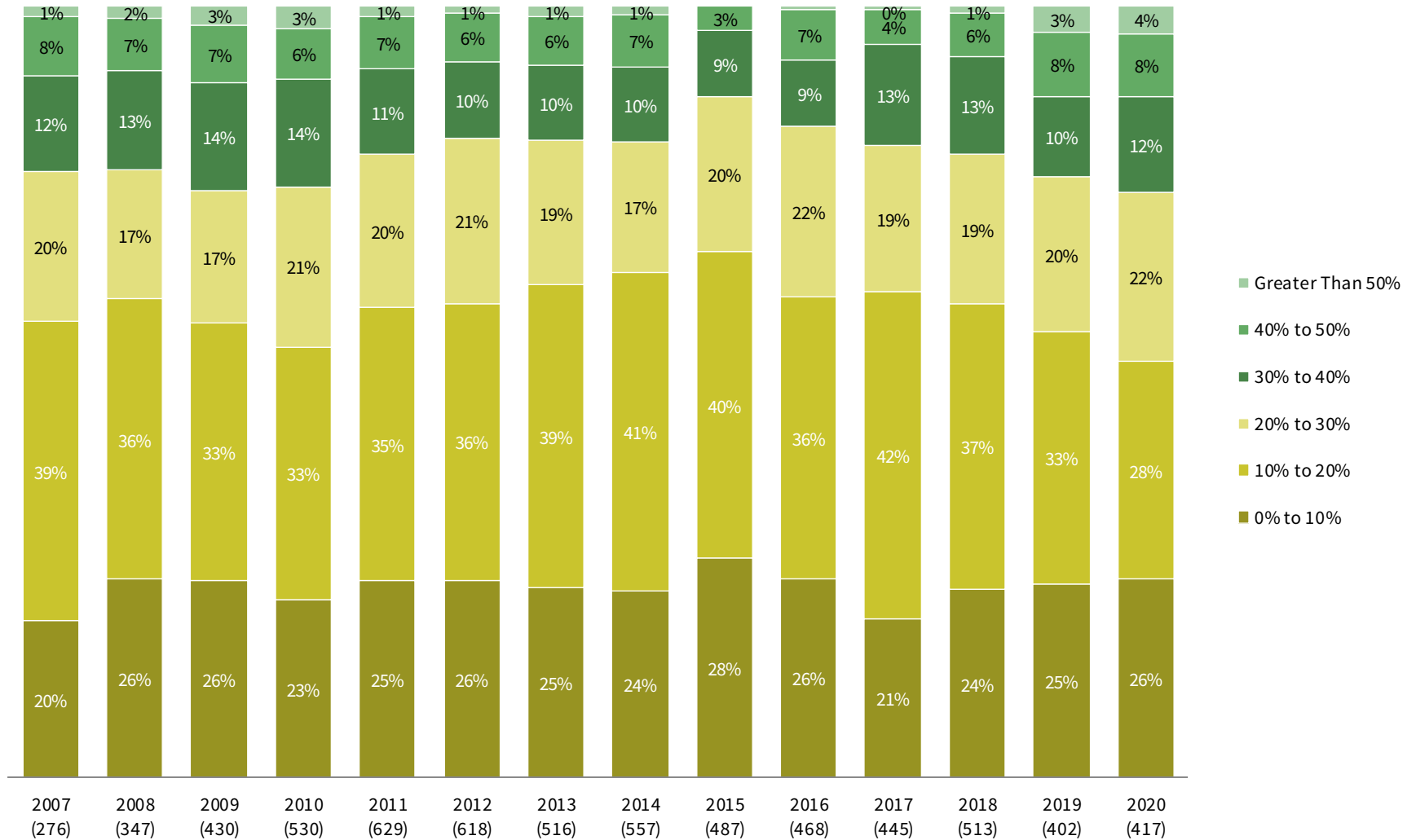
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

The percentage of companies operating at margins above 30% has expanded since 2016

There has been a concomitant reduction in the percentage of companies with EBITDA margins below 20%

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

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

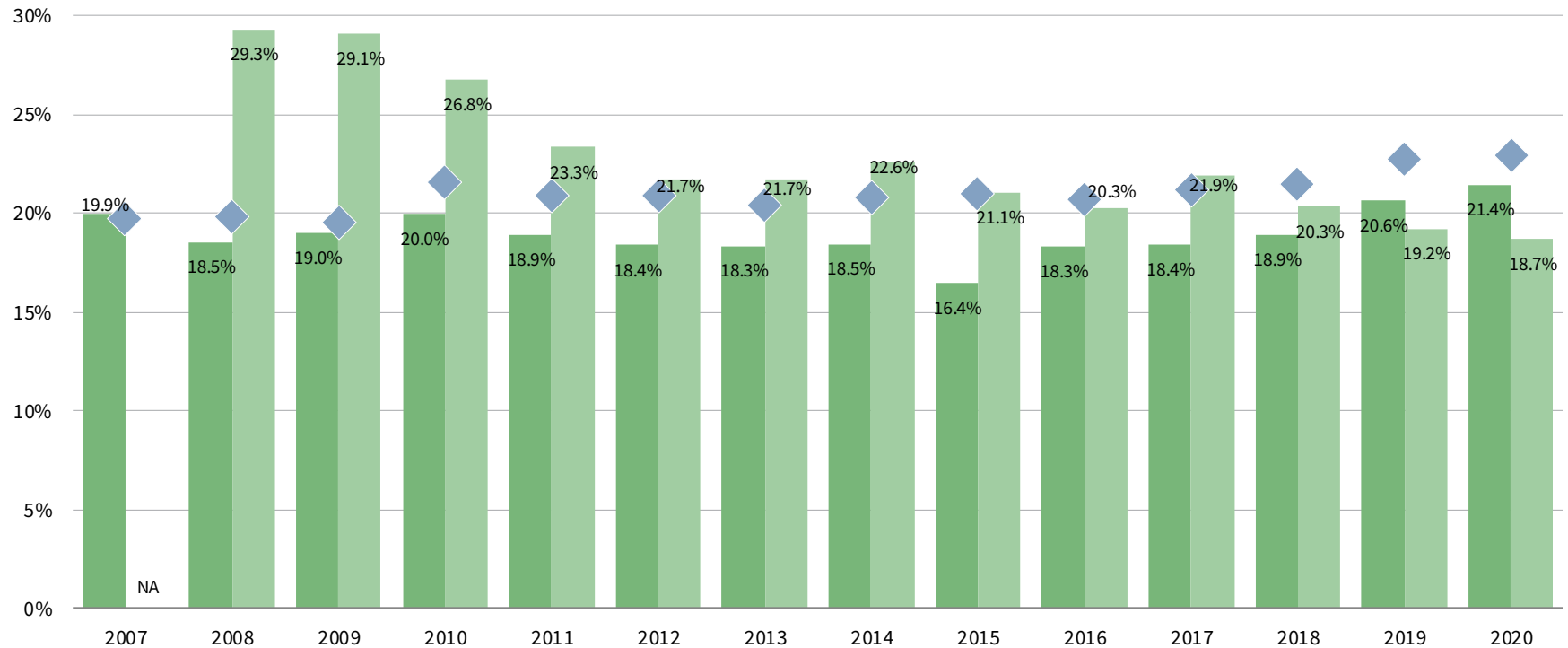


European buyout and public companies have increased EBITDA margins in recent years

Conversely, growth equity margins have decreased, ending with their lowest level in 2020

AVERAGE ANNUAL EBITDA MARGIN OF EUROPEAN 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	263	320	377	462	544	507	440	462	391	392	352	435	325	310
Growth Equity Companies	NA	22	41	59	76	100	65	78	73	53	69	61	58	90
MSCI AC Europe Index	519	402	379	402	388	388	395	403	410	406	409	398	390	379

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

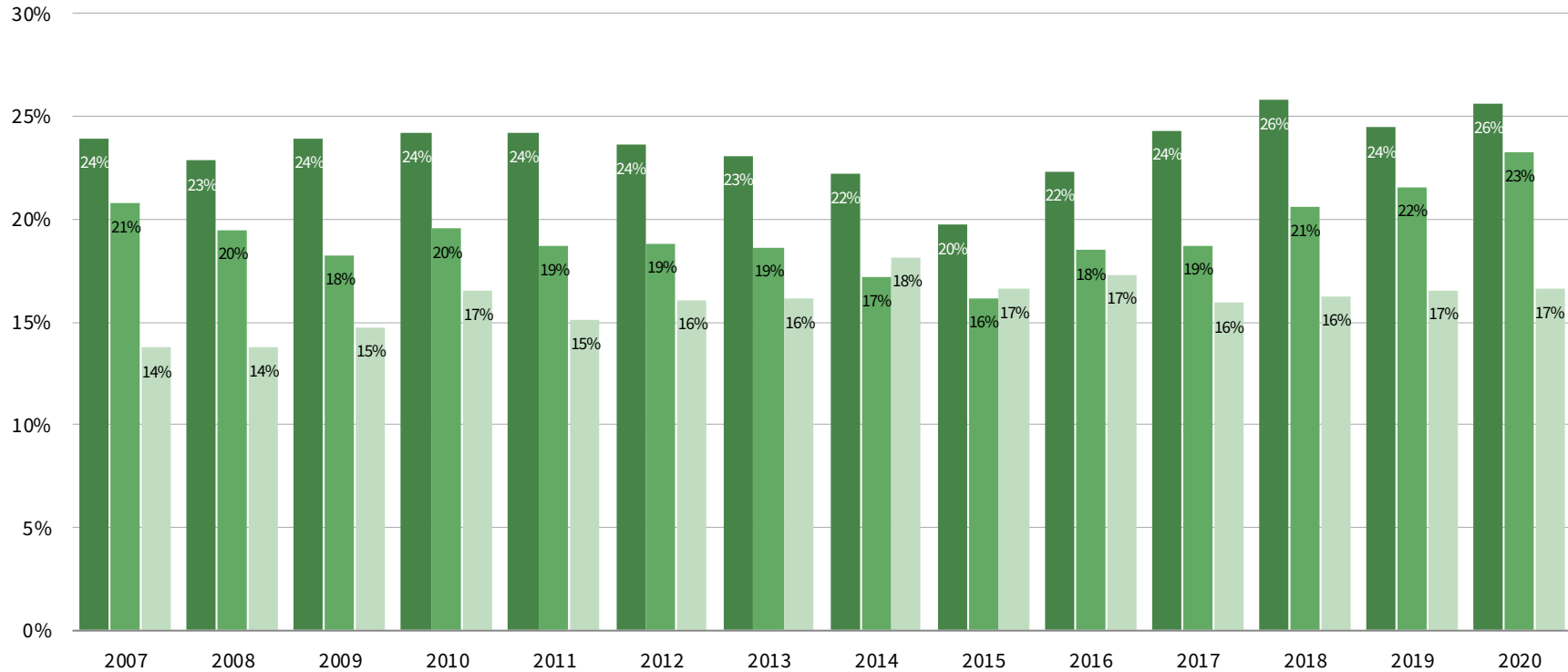
Notes: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes. Private equity-owned companies were identified by the manager's strategy.

EBITDA margins and enterprise value have been positively correlated with large buyouts consistently operating at the highest margins

Margins for mid-cap buyouts have improved since 2016, while those for small buyouts plateaued

AVERAGE ANNUAL EBITDA MARGIN OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > €1B	92	109	119	122	126	98	98	67	51	50	46	59	65	61
EV €250M - €1B	82	107	130	173	187	171	143	132	117	147	143	155	131	125
EV < €250M	87	105	124	161	221	234	198	259	220	192	155	218	118	112

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

Note: Outliers were identified and excluded from the private equity company universes.

EUROPEAN PRIVATE EQUITY ANALYSIS

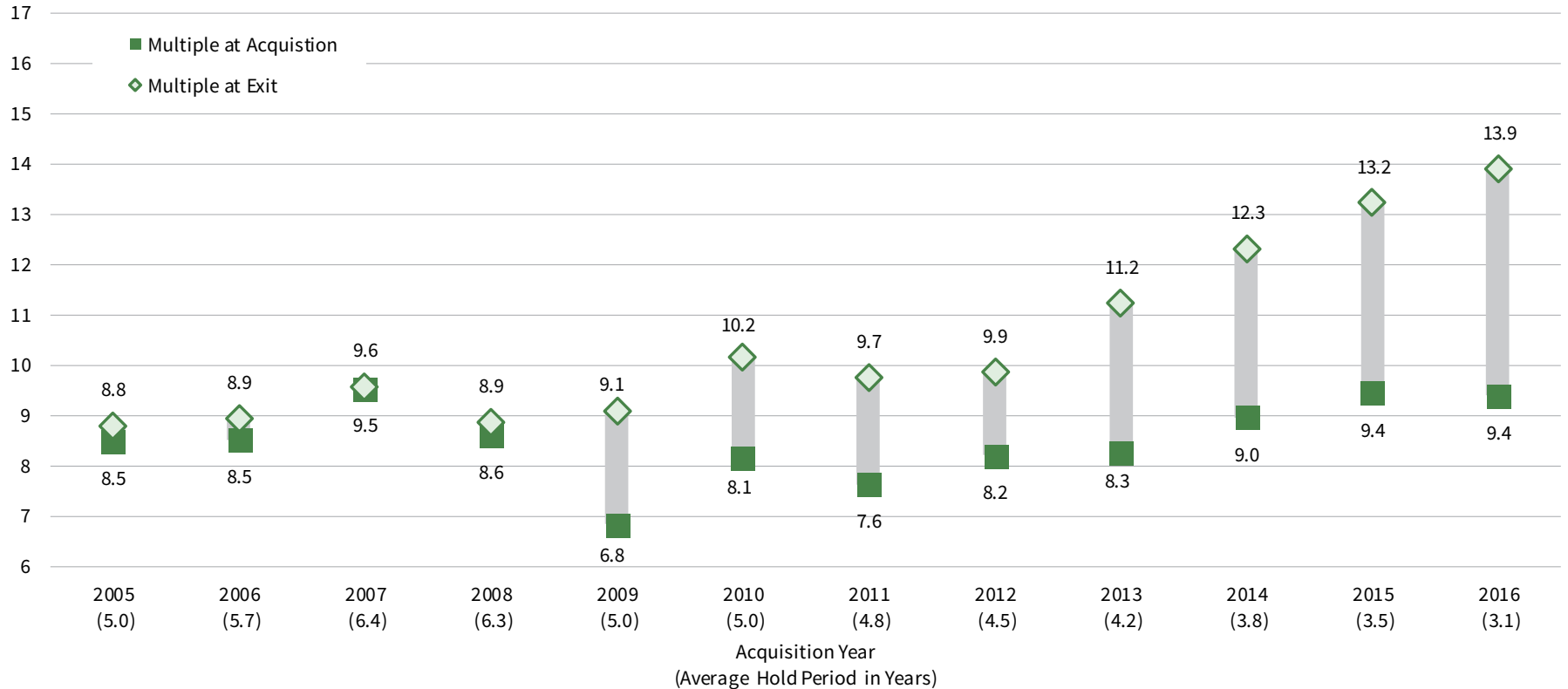
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- **Exit Metrics**

For realized companies acquired since 2009, median multiple expansion at exit has been 2.8X

In general, multiple expansion has been greatest for companies held the shortest amount of time

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

As of December 31, 2020 • Enterprise Value/EBITDA



Number of Companies

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE-Owned Companies	94	133	124	102	51	109	93	61	61	61	45	28

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

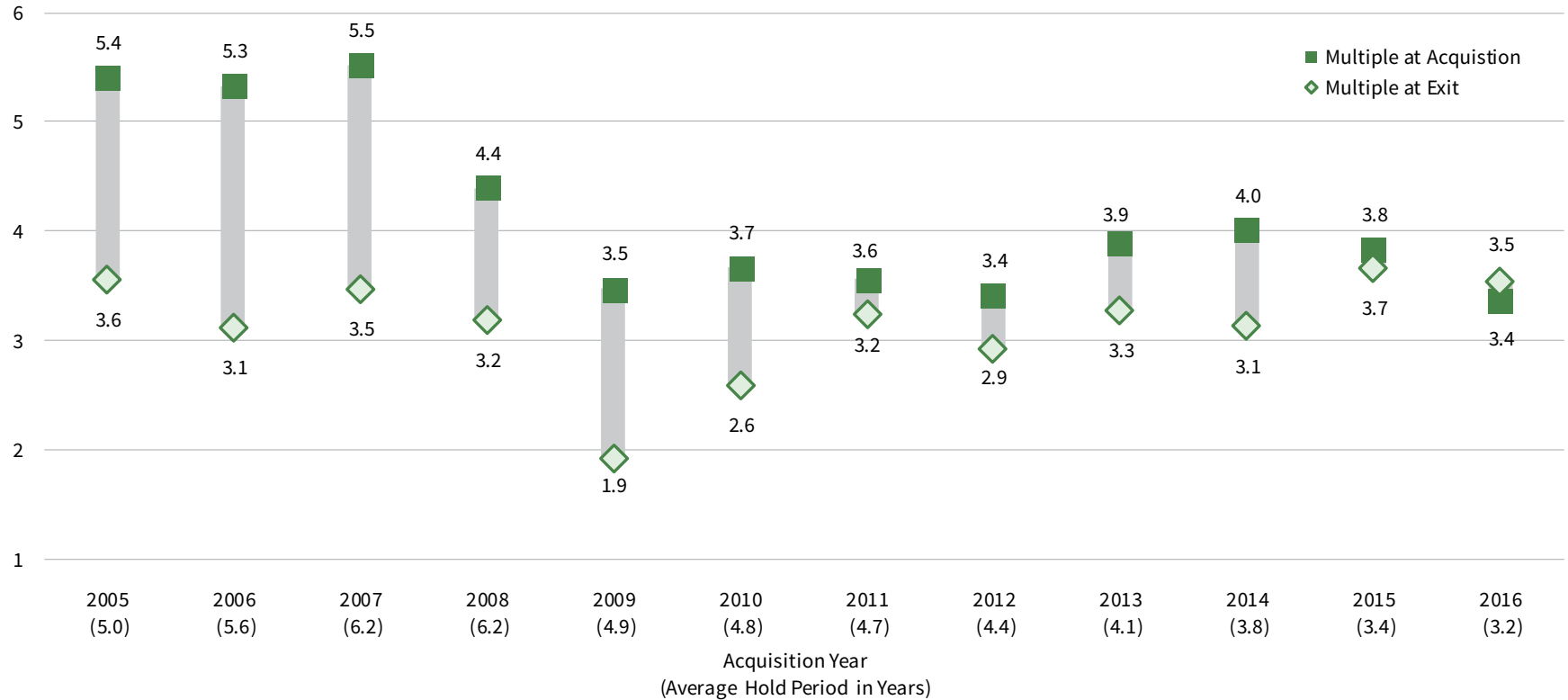
Note: All companies with negative EBITDA and negative enterprise value were excluded from the analysis.

In Europe, leverage multiples have generally fallen during PE ownership

But the difference between multiples at acquisition and multiples at exit has declined over time.

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

As of December 31, 2020 • Net Debt/EBITDA



Number of Companies

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE-Owned Companies	91	127	118	93	35	90	80	52	55	55	41	27

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

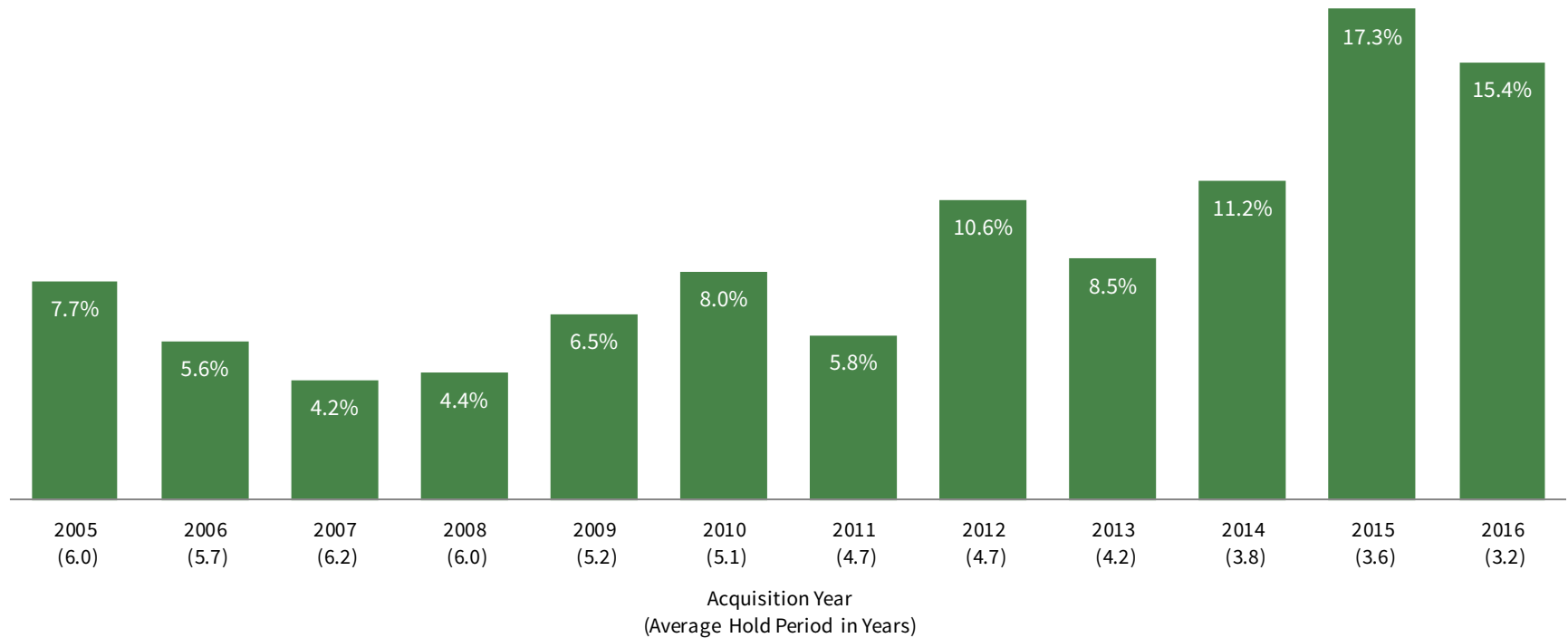
Note: All companies with negative EBITDA and negative net debt were excluded from the analysis.

For realized companies acquired since 2012, the median revenue CAGR was about 12%

For those acquired before 2012, the median CAGR was around 6%

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

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



	Number of Companies											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE-Owned Companies	104	137	144	108	54	115	96	68	67	67	49	30

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

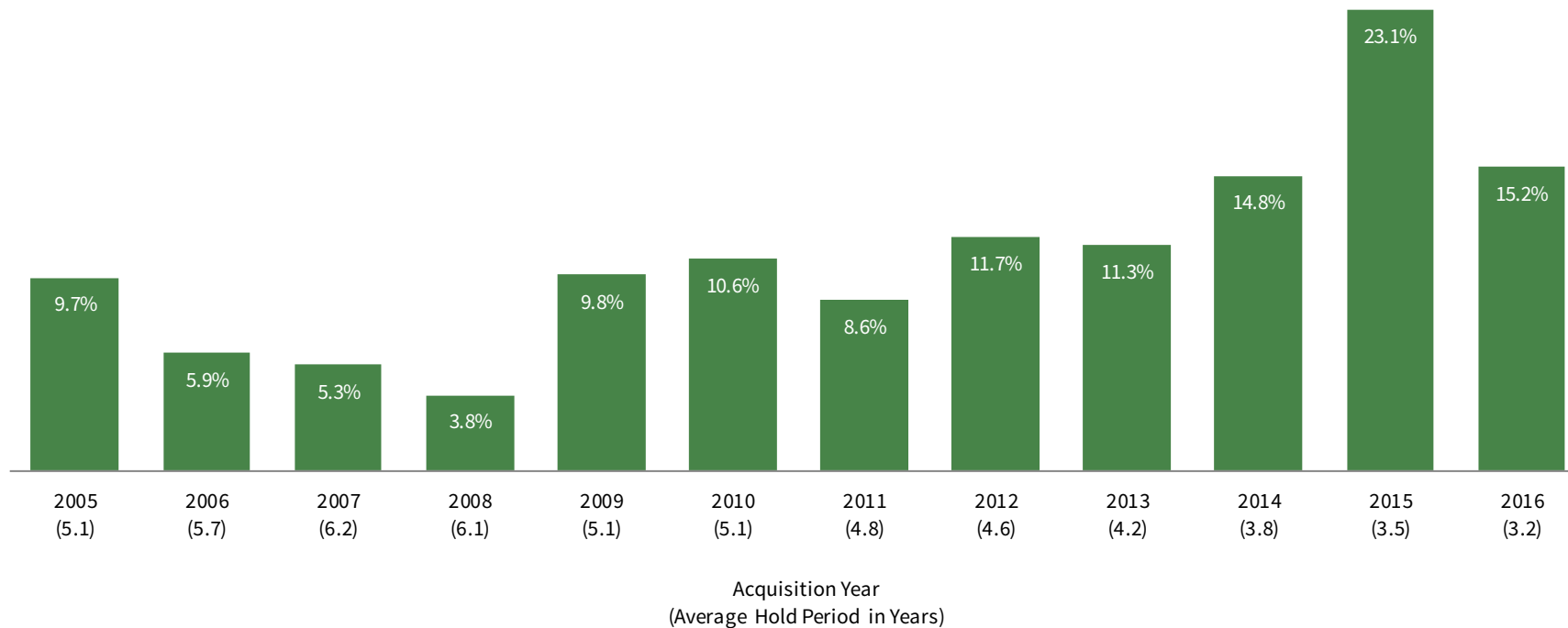
Note: All companies with negative revenue were excluded from the analysis.

Median EBITDA CAGRs have been north of 10% for half of the acquisition years analyzed

For exited companies acquired since 2009, the median EBITDA CAGR was 11.8%, twice what it was for companies acquired before then

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

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



	Number of Companies											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE-Owned Companies	102	136	136	108	53	111	94	63	64	63	44	28

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

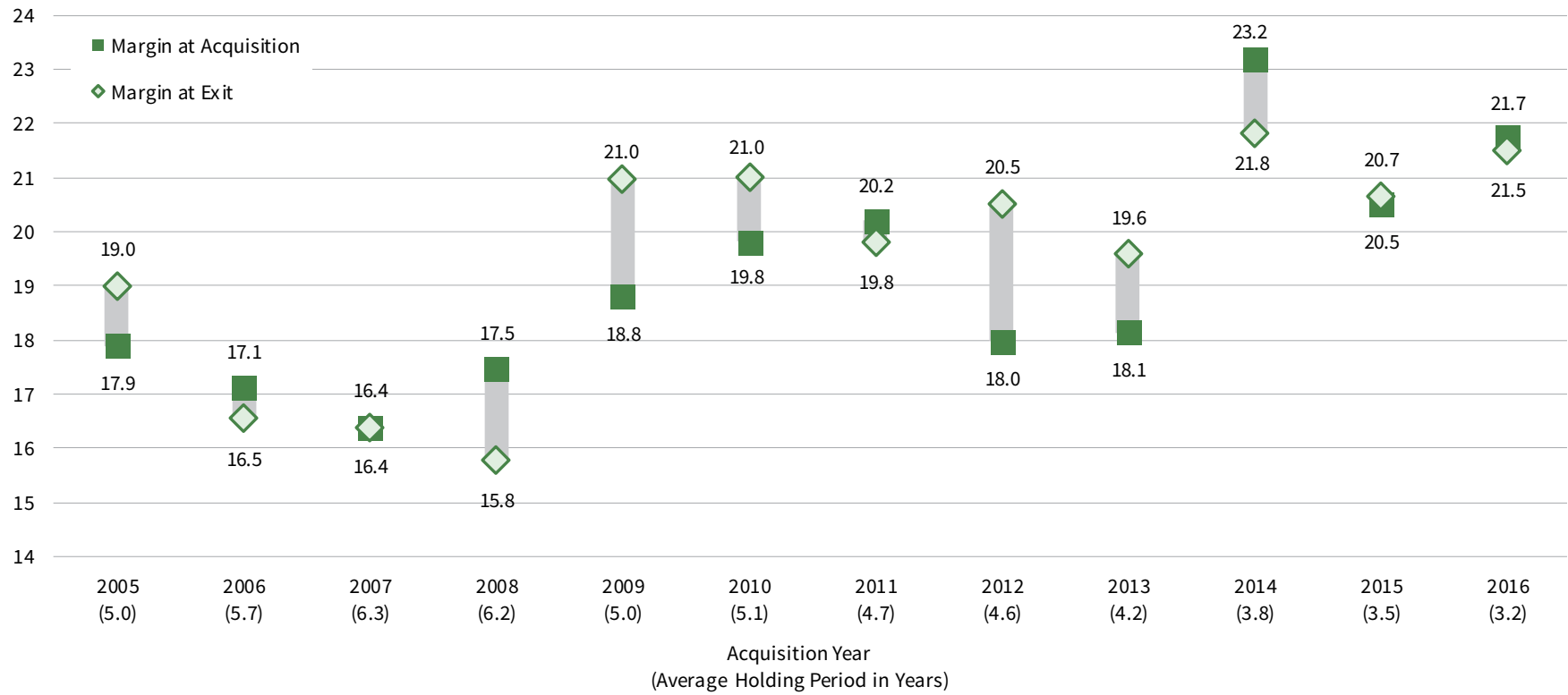
Note: All companies with negative EBITDA were excluded from the analysis.

Median EBITDA margins expanded during PE ownership for half of the acquisition years observed

Margins at both acquisition and exit have trended higher

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

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



	Number of Companies											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE-Owned Companies	98	130	130	97	49	107	90	61	62	61	46	30

Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
 Note: All companies with negative EBITDA were excluded from the analysis.

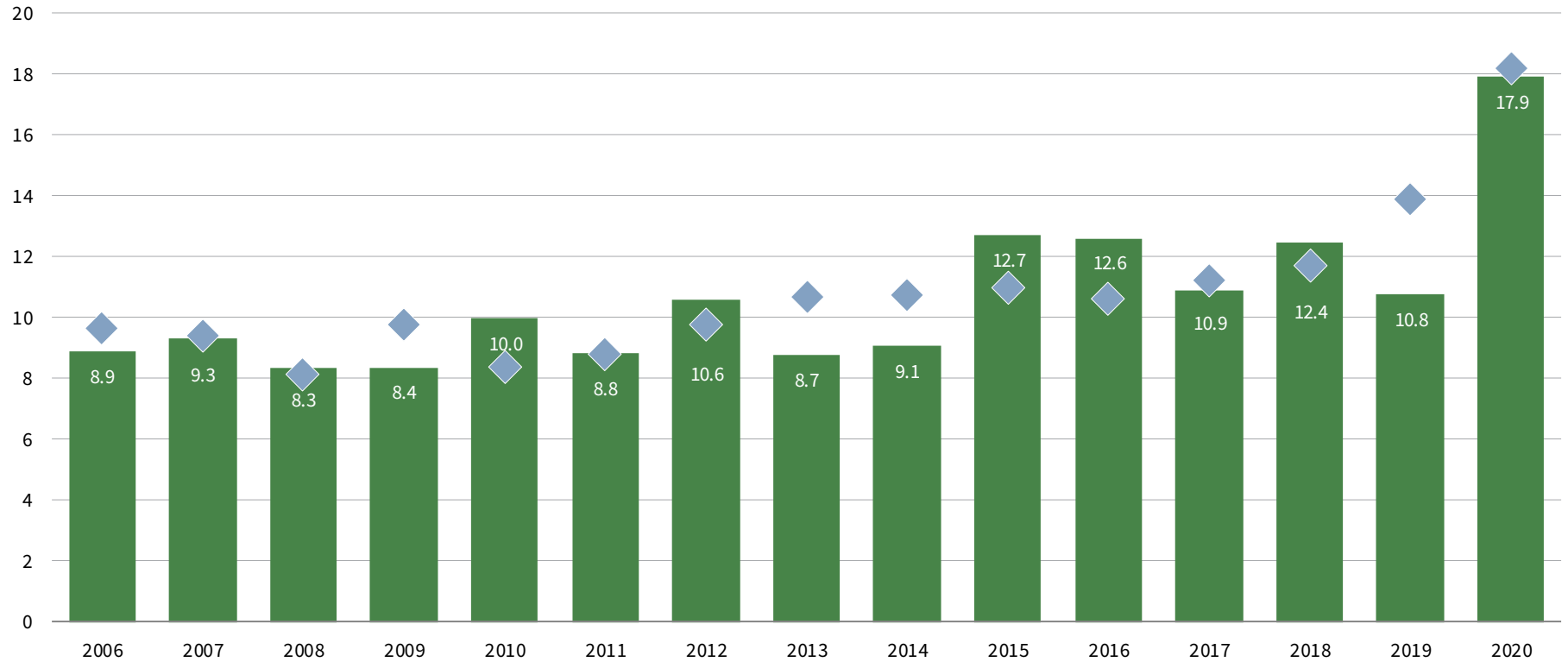
ASIAN PRIVATE EQUITY ANALYSIS

Private equity PPMs trailed public valuations by roughly a turn of EBITDA over the 15-year period

During the pandemic, acquisition multiples soared to a new high for the region

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

As of December 31, 2020 • Enterprise Value/EBITDA



Number of Companies

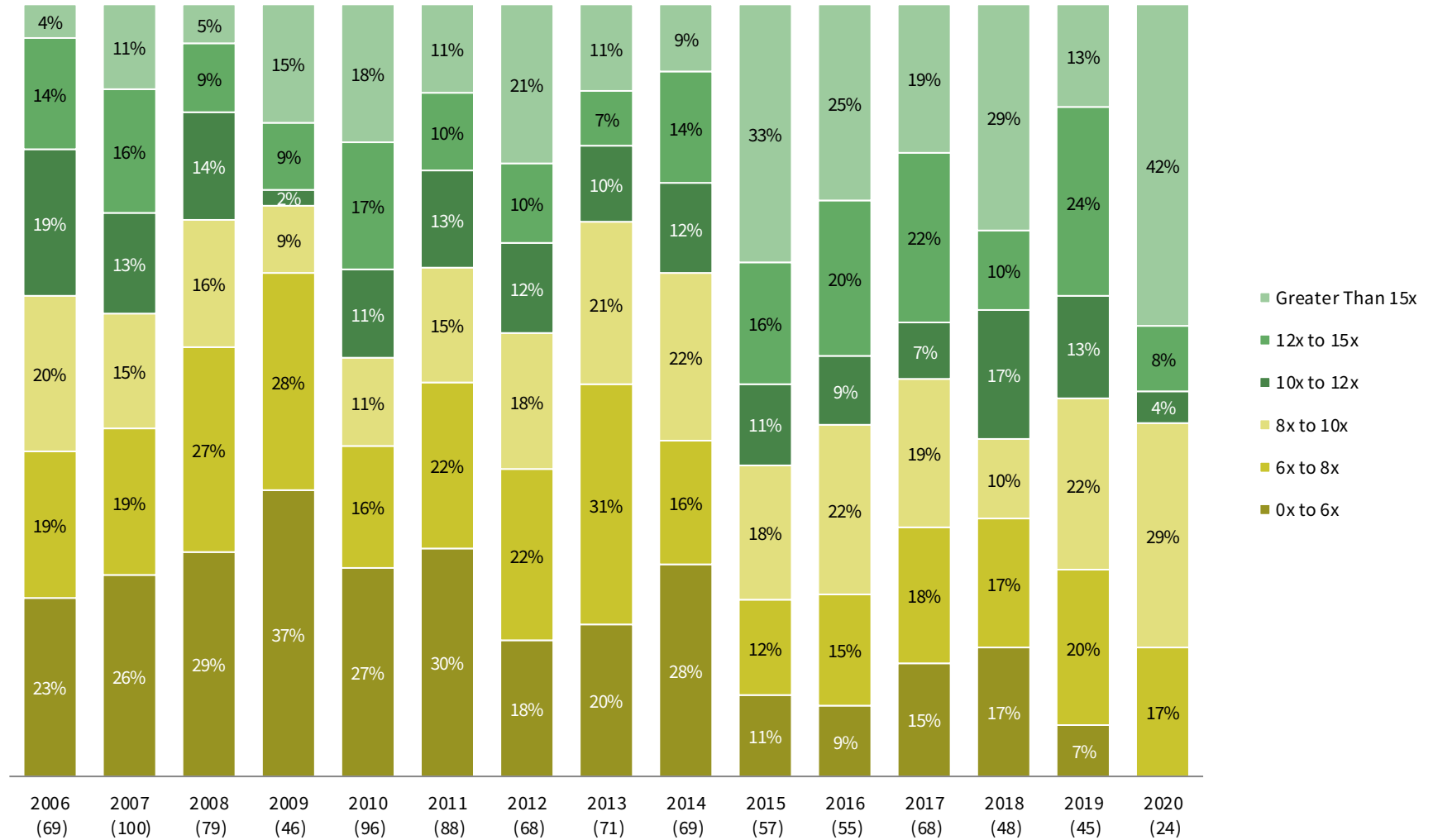
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	69	100	79	46	96	88	68	71	69	57	55	68	48	45	24
MSCI AC Asia Pacific Index	320	339	357	458	546	550	570	579	580	586	599	609	783	1,009	980

PPMs have trended higher since 2015

In every year since then, about half or more of the companies acquired transacted at multiples greater than 10x EBITDA

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

As of December 31, 2020 • Enterprise Value/EBITDA

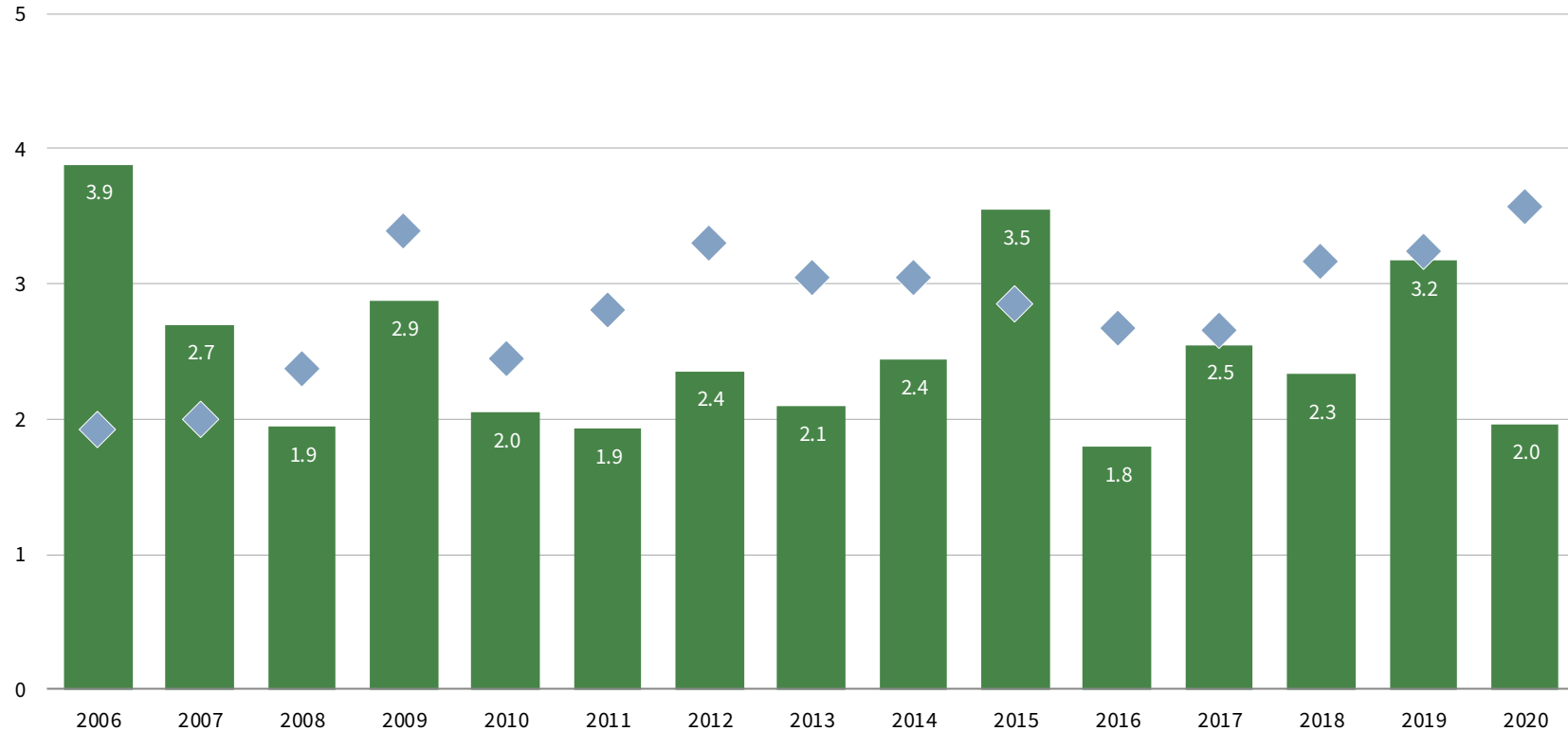


Unlike in other regions, leverage multiples for PE-backed companies in Asia have generally trailed those of public counterparts

Private company leverage levels are driven at least in part to the heavy weighting toward growth equity in the Asia Pacific sample

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF ASIAN 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	51	68	57	26	58	49	45	52	46	31	31	50	33	35	17
MSCI AC Asia Pacific Index	206	223	230	301	345	339	360	359	363	362	369	366	487	628	545

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

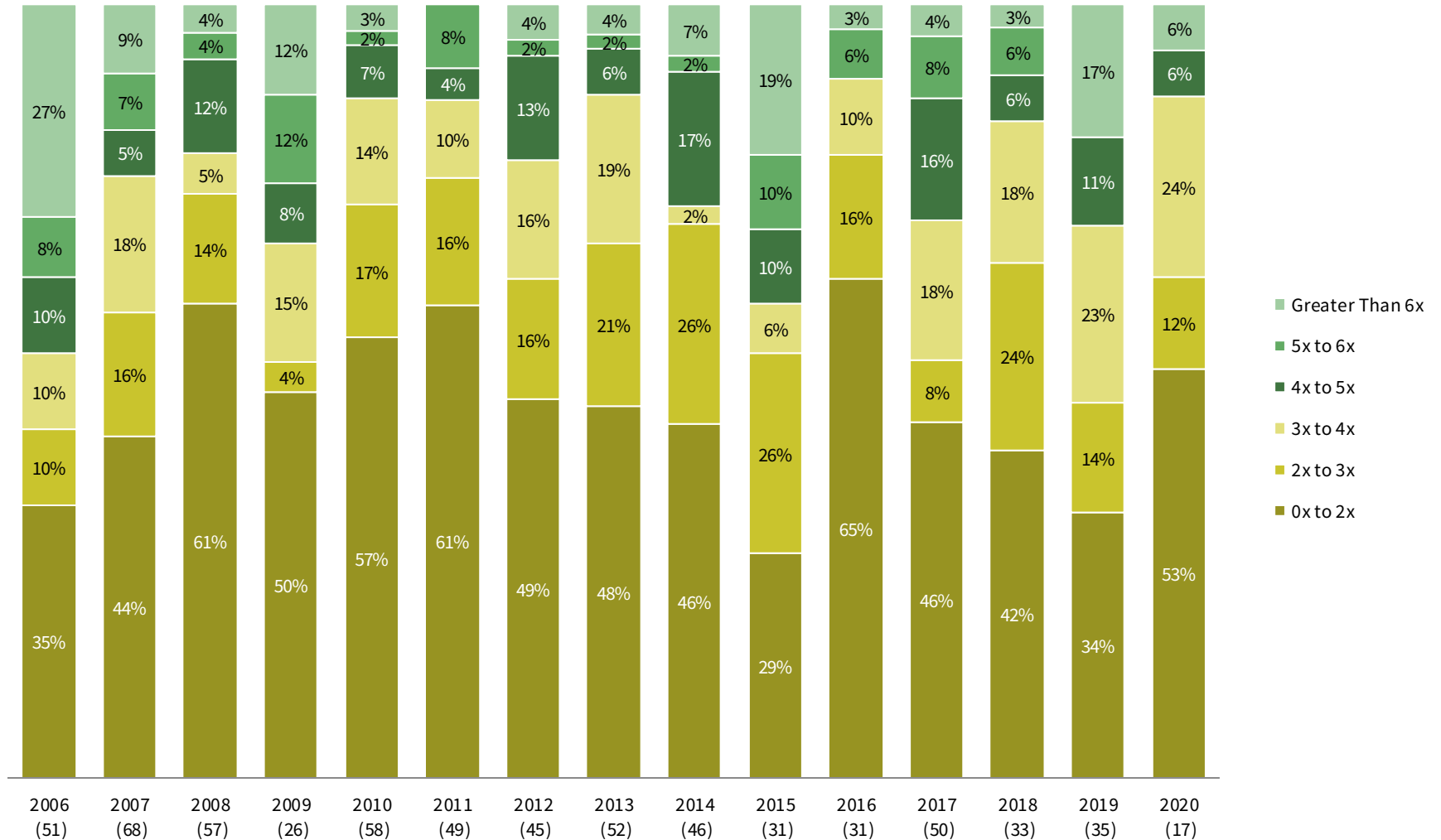
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Low leverage multiples are characteristic of the Asian PE sample

Since 2006, just 13% of deals were levered at greater than 5x, while almost 50% of deals were levered below 2x

AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF ASIAN PRIVATE EQUITY-OWNED COMPANIES

As of December 31, 2020 • Net Debt/EBITDA

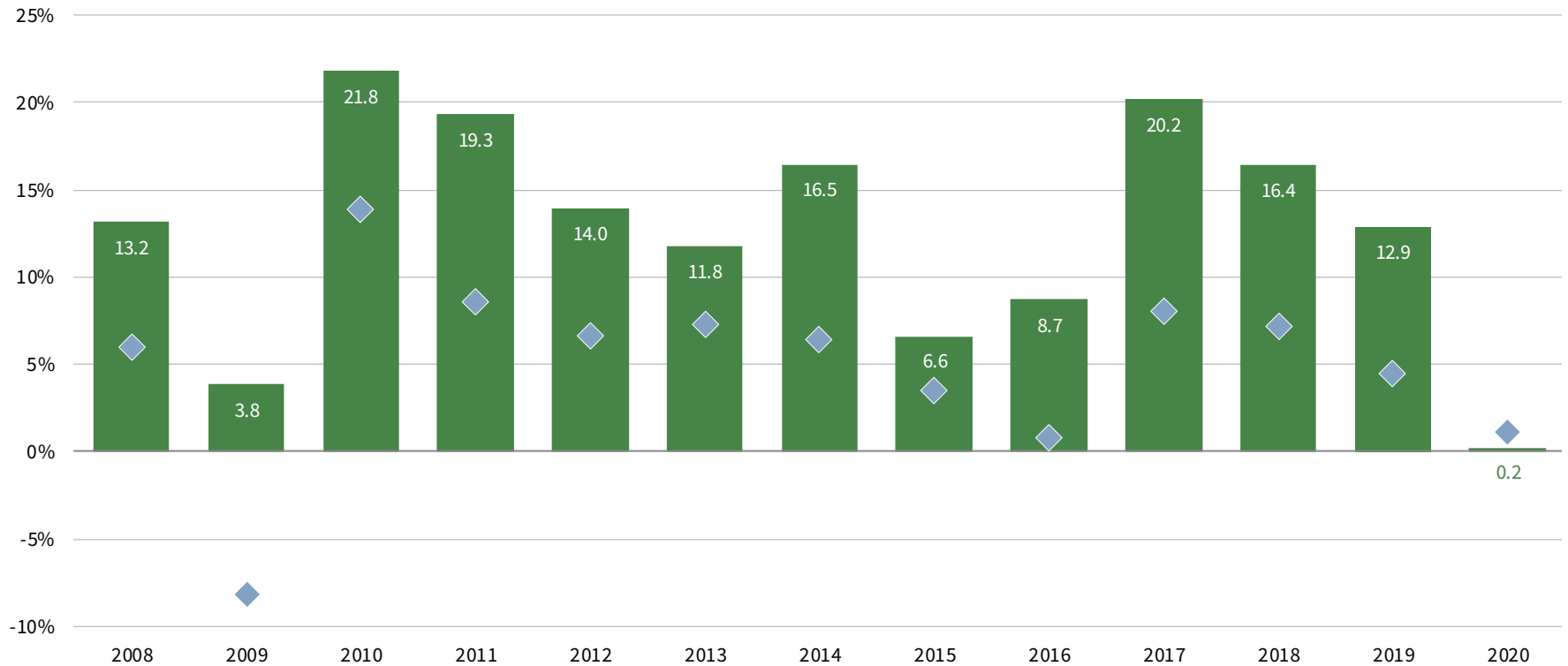


PE-backed companies have typically averaged much stronger revenue growth than public counterparts

During the pandemic, public and private universes struggled to grow revenue

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

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



Number of Companies

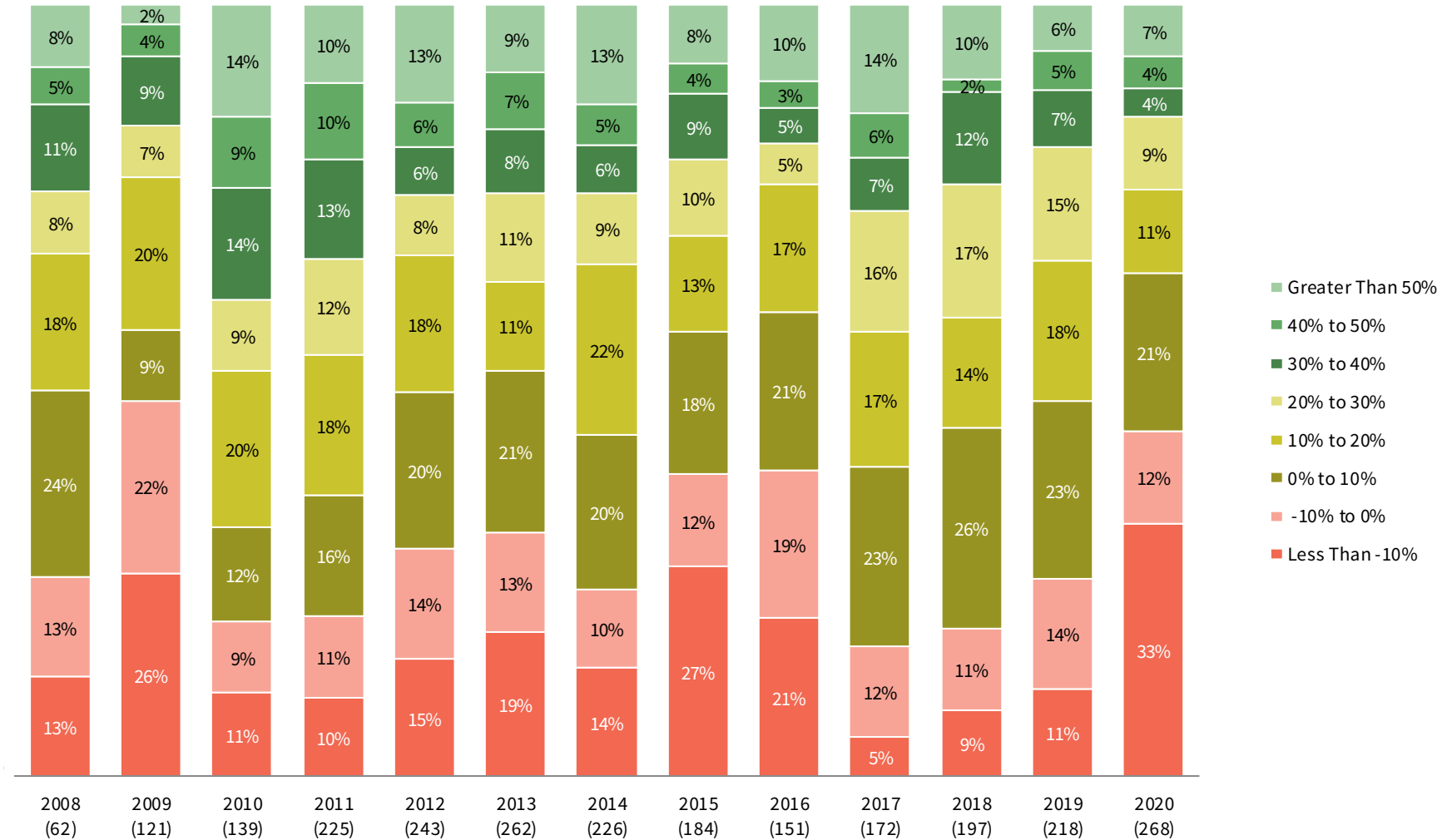
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE-Owned Companies	62	121	139	225	243	262	226	184	151	172	197	218	268
MSCI AC Asia Pacific Index	684	742	750	778	833	814	833	803	865	860	847	1,119	1,242

Pandemic impact visible in 2020 as 45% of companies experienced revenue declines, the most since 2009

In every year from 2008–19, at least 40% of PE-backed companies grew revenue by 10% or more; in 2020, that number was 35%

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

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

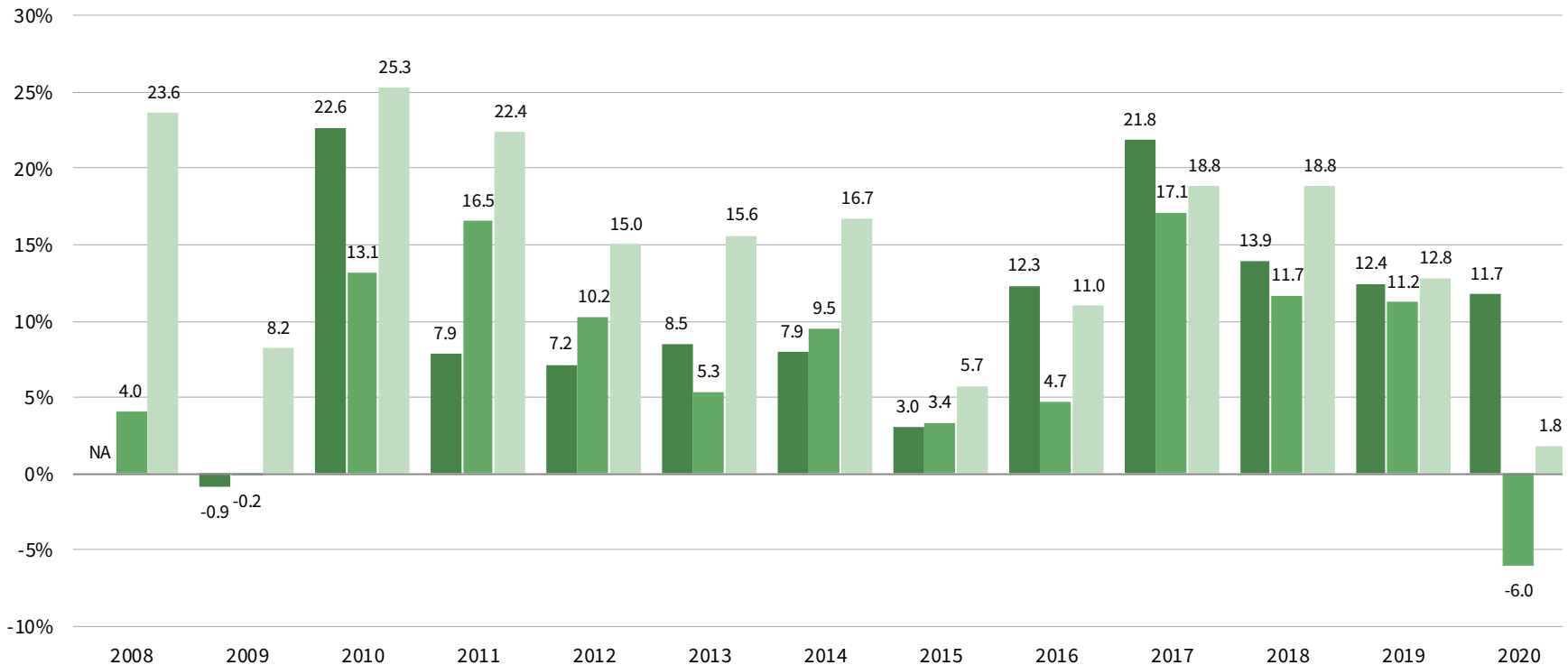


Large companies averaged double-digit revenue growth every year from 2016–20

Mid-cap companies were most severely impacted by the pandemic in 2020

AVERAGE ANNUAL REVENUE GROWTH OF ASIAN PRIVATE EQUITY-OWNED COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	NA	18	19	25	33	30	20	21	25	19	28	33	42
EV \$250M - \$1B	16	28	32	52	54	64	40	45	39	44	55	60	76
EV < \$250M	35	71	87	136	146	164	161	118	72	92	93	107	139

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

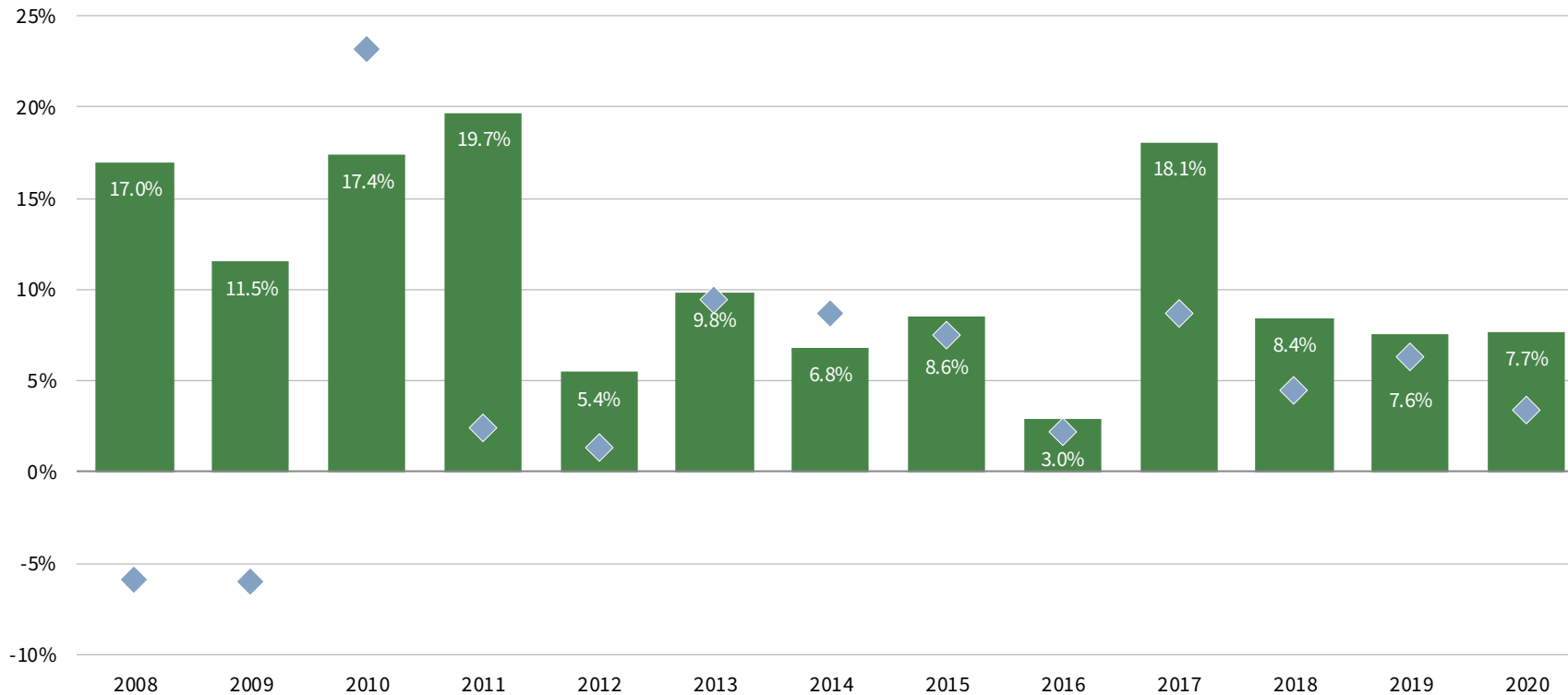
Note: Outliers were identified and excluded from the private equity company universes.

EBITDA growth has fluctuated since 2008, but on average, PE-backed companies grew EBITDA by 10.4% annually

In all but two of the years analyzed, PE company EBITDA growth exceeded that of public universe

AVERAGE ANNUAL EBITDA GROWTH OF ASIAN 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	65	108	134	173	156	153	128	120	109	124	131	145	170
MSCI AC Asia Pacific Index	428	441	539	615	654	669	657	669	715	721	732	946	1,041

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

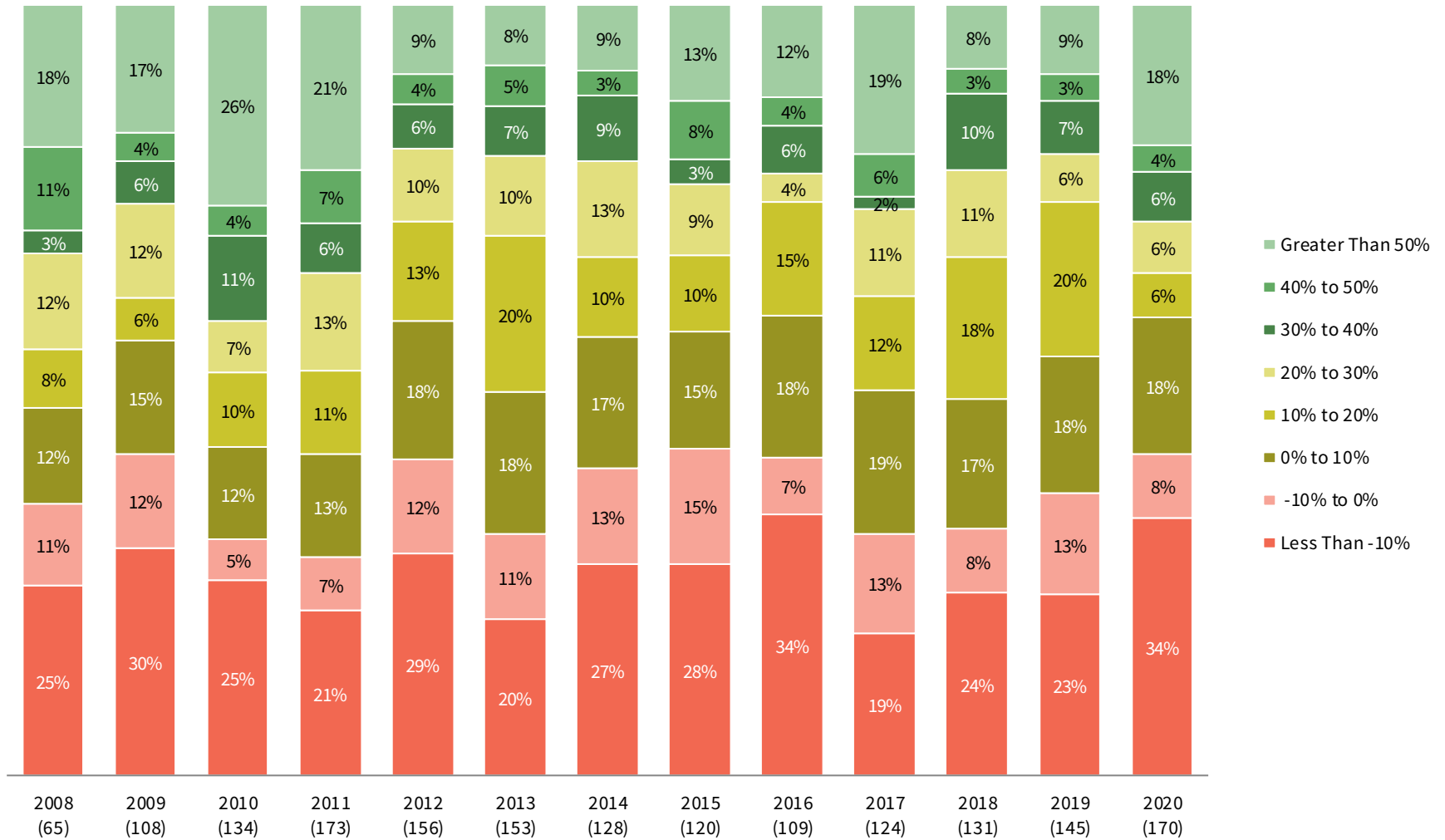
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

In 2020, while 40% of companies grew EBITDA by at least 10%...

...42% of the universe suffered EBITDA declines

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

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

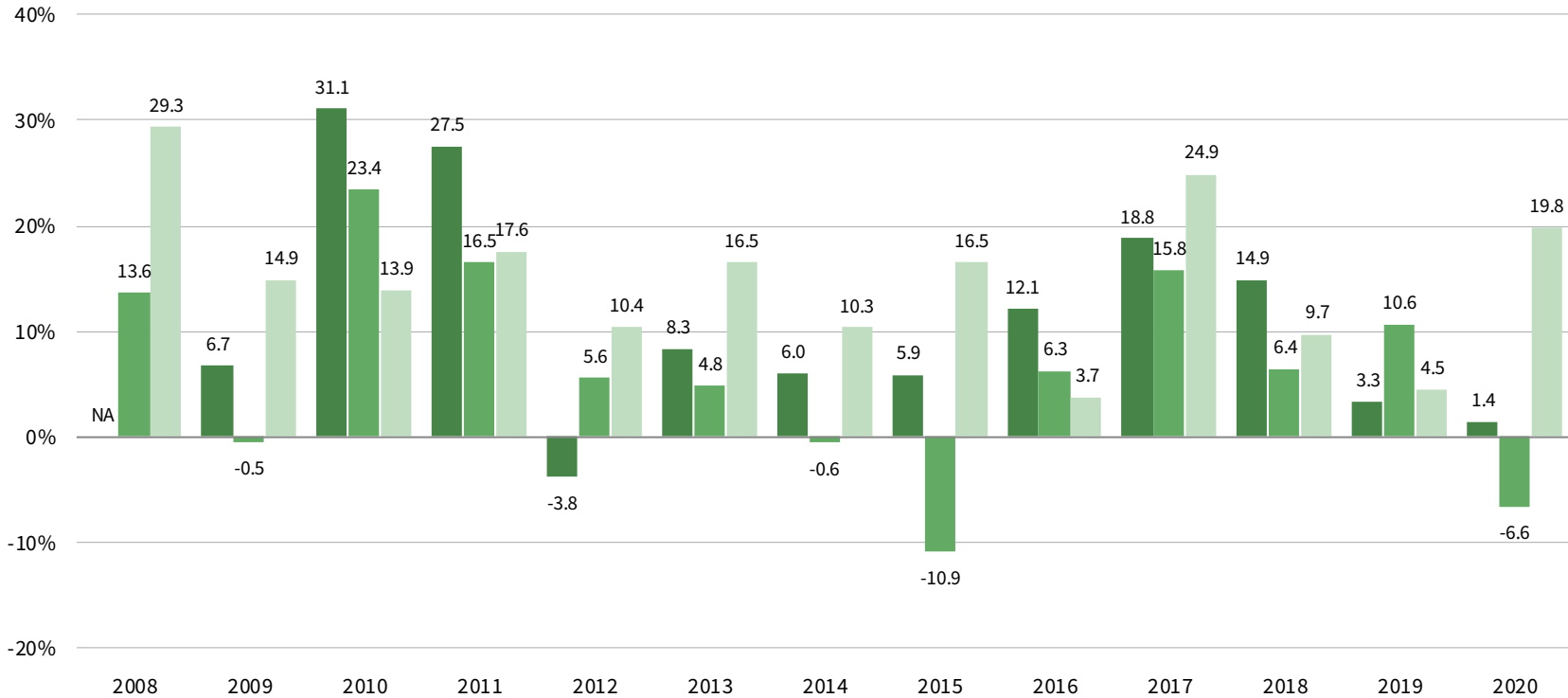


From 2008–20, small companies averaged 12.8% annual EBITDA growth, outpacing their larger peers by more than 5%

Mid-size businesses averaged EBITDA declines in four of the 13 years observed

AVERAGE ANNUAL EBITDA GROWTH OF ASIAN PRIVATE EQUITY-OWNED COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	NA	19	17	24	34	28	20	19	23	18	24	25	25
EV \$250M - \$1B	21	25	31	47	46	49	38	44	33	37	43	50	54
EV < \$250M	33	63	80	98	74	70	69	56	50	64	64	72	92

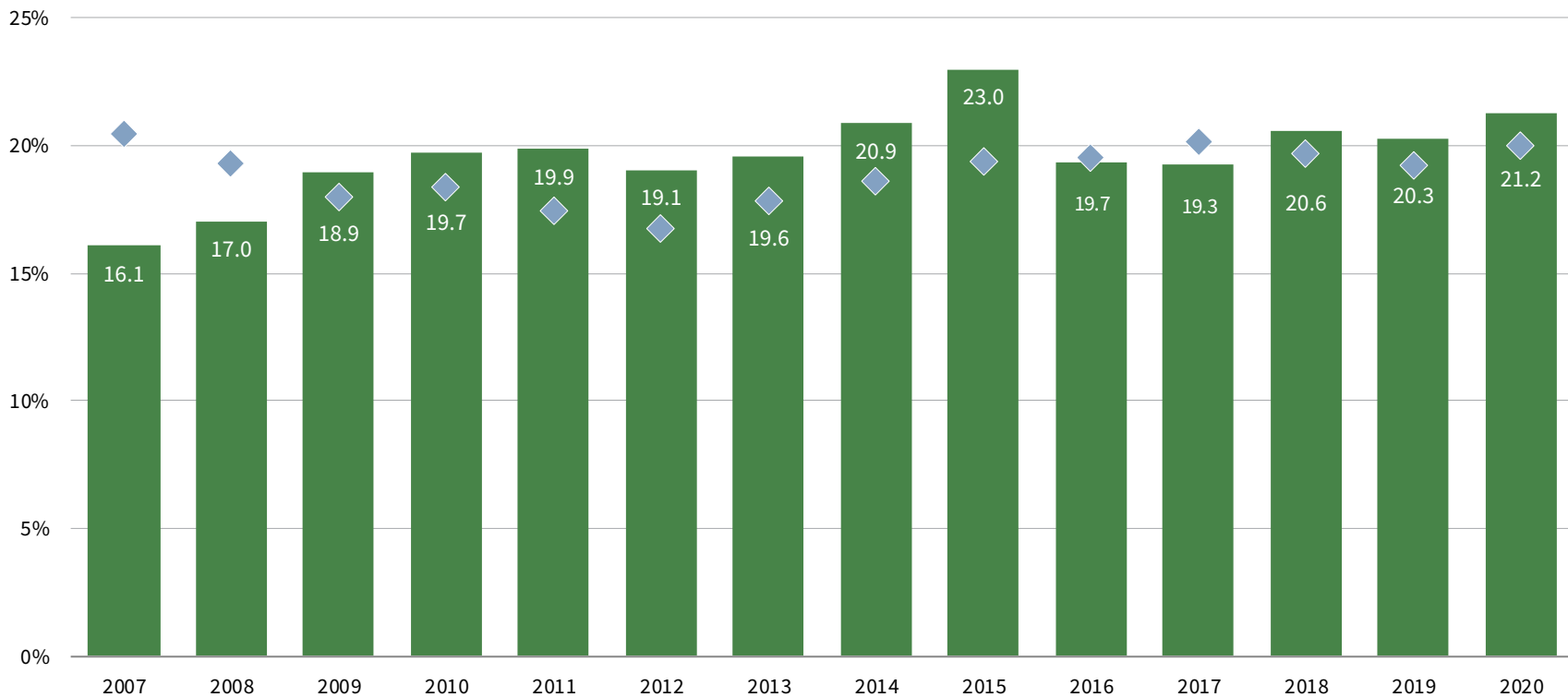
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
 Note: Outliers were identified and excluded from the private equity company universes.

EBITDA margins have remained relatively consistent for PE and public companies

While there are meaningful differences between PE and public company margins in some years, across the full time period, the gap is less than 1% (favoring PE)

AVERAGE ANNUAL EBITDA MARGIN OF ASIAN 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	63	116	140	206	256	263	231	269	220	207	255	225	281	265
MSCI AC Asia Pacific Index	620	515	617	719	743	752	762	776	787	790	801	1,063	1,289	1,233

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), FactSet Research Systems, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

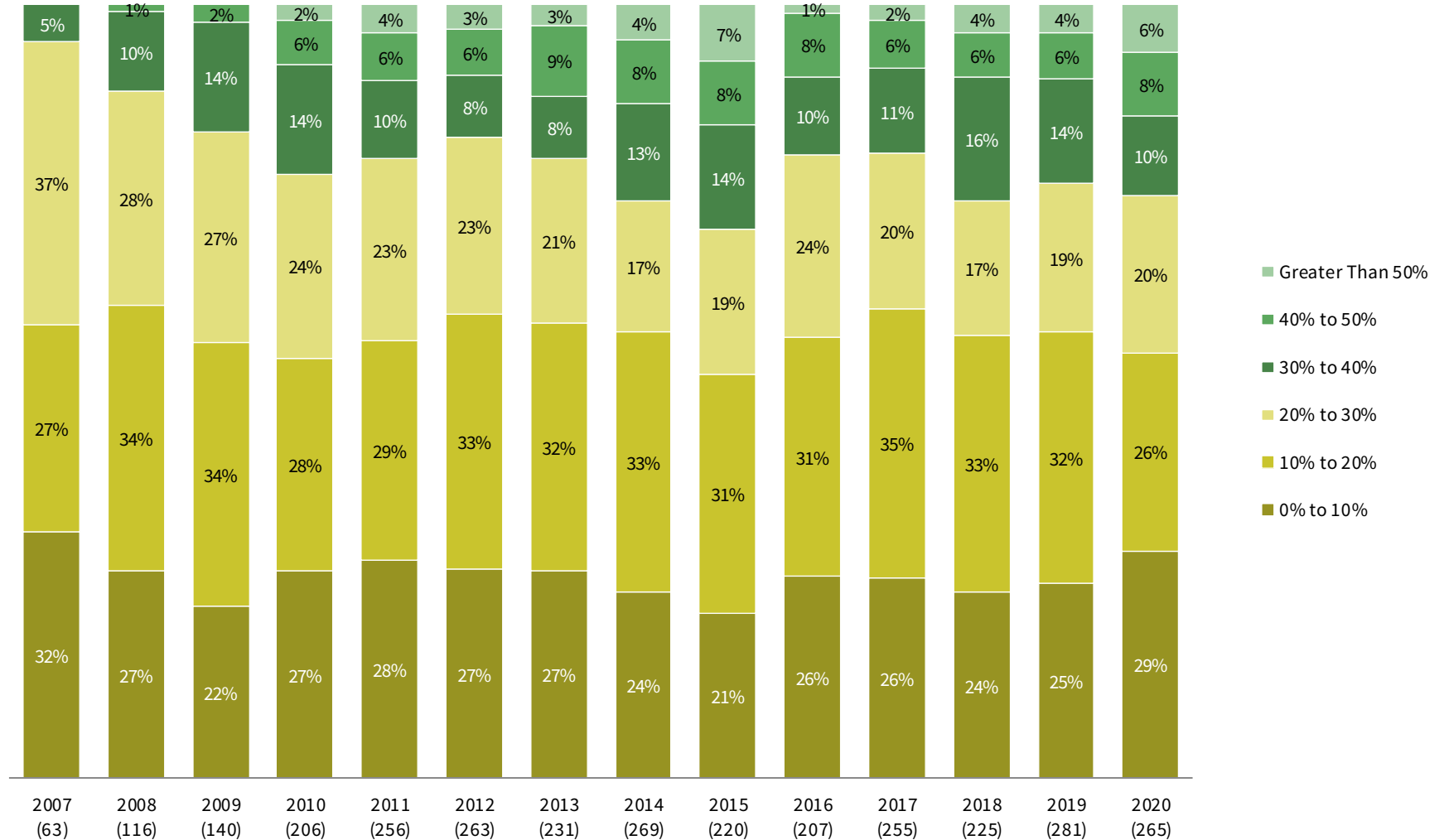
Note: Outliers were identified and excluded and the same methodology was applied to the private equity and public company universes.

Within the PE sample, the distribution of EBITDA margins has remained relatively stable regardless of market environment

In every year analyzed, almost 40% of companies operated at margins of 20% or higher and at least 21% operated at margins of 10% or lower

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

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

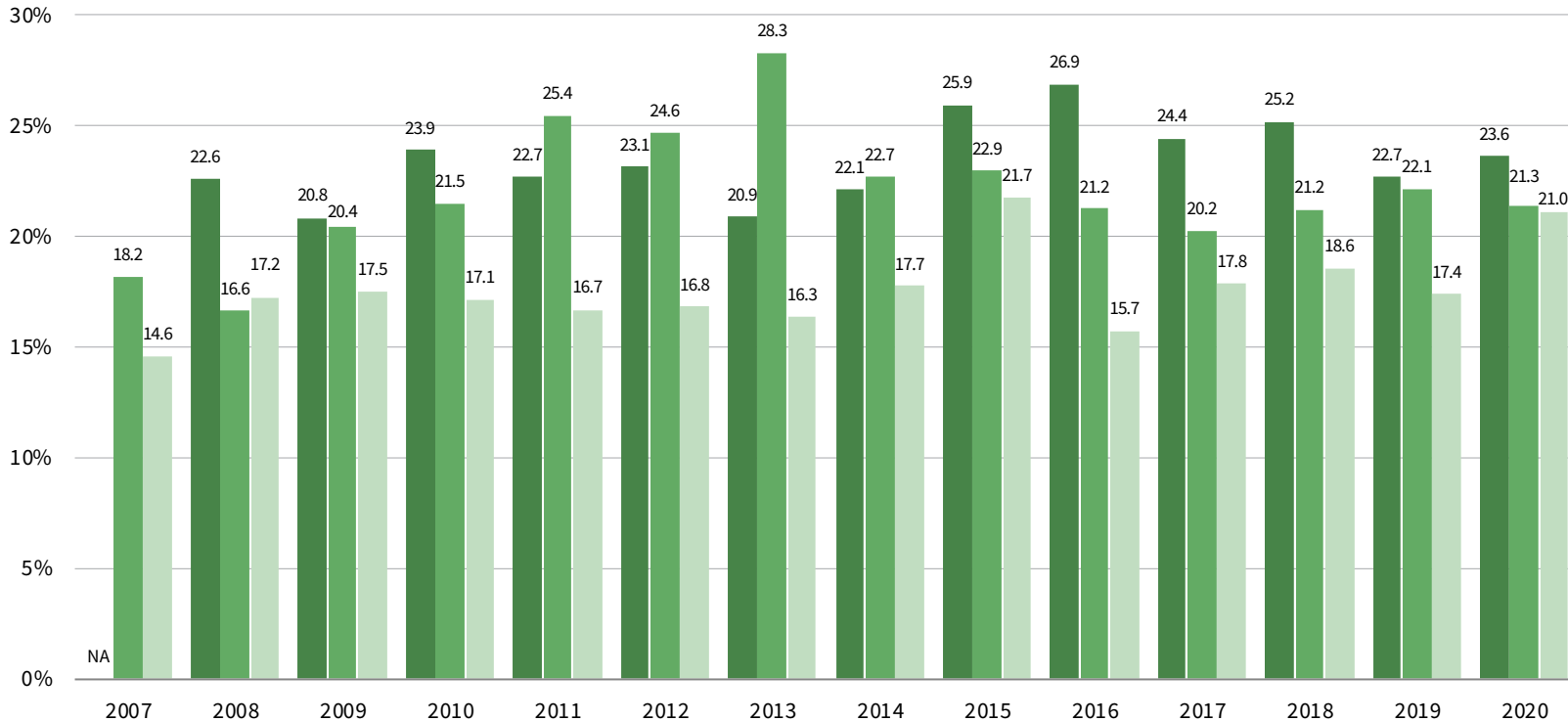


Over the full time period, large companies averaged the highest EBITDA margins at 24%, leading both mid and small deals

Small companies have historically operated at the lowest margins among the size segments; in 2020, they hit their highest level since 2007

AVERAGE ANNUAL EBITDA MARGIN OF ASIAN PRIVATE EQUITY-OWNED COMPANIES BY ENTERPRISE VALUE SEGMENT

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



Number of Companies

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EV > \$1B	NA	19	20	33	43	45	34	38	47	32	42	35	47	47
EV \$250M - \$1B	16	28	33	54	71	87	71	82	71	57	84	63	87	75
EV < \$250M	36	71	85	111	136	135	123	135	95	105	124	121	131	138

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

Note: Outliers were identified and excluded from the private equity company universes.



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