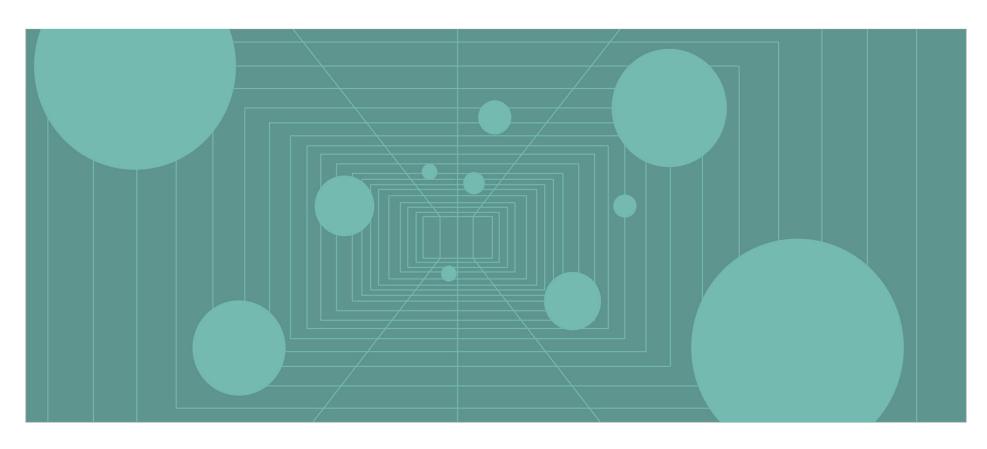
# PRIVATE COMPANY OPERATING METRICS: GLOBAL ANALYSIS





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### **Introduction to Operating Metrics**

- The data in this report on operating metrics provide insights into key parts of the process by which private equity (PE) managers execute their strategy:
  - Purchasing the company and optimizing the capital structure
  - Improving the performance of the company and transforming the business
- PE managers aim to purchase companies at attractive prices, optimize their capital structures, and then—with operational improvements, revenue growth, and/or other acquisitions—seek to sell the company at a higher price.
- Similar metrics can be used to evaluate both private and public companies, though public market analysts typically focus on company earnings and price-earnings ratios rather than EBITDA (earnings before interest, tax, depreciation, and amortization) and use EBITDA multiples as their proxy for cash flow.
- Cambridge Associates has captured and analyzed current and historical data from global PE funds since the year ending December 31, 2011. This year's report includes data through the period ended December 31, 2023.
- 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 more than 16,500 companies worldwide, of which almost 9,100 are based in the United States, about 4,100 in Europe, and 2,200 in Asia; they were acquired by PE firms from 2000 through 2023 and range in enterprise value from less than \$1 million to greater than \$100 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 PE managers.
- Sector classifications are based on the Global Industry Classification Standard (GICS®). GICS was developed by and is the exclusive property and a service mark of MSCI Inc. and S&P Global Market Intelligence LLC and is licensed for use by Cambridge Associates.
- 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 value for EBITDA, net debt, or revenue was excluded from analysis using that value. In some cases, this will have a substantial impact on sample size and calculated metric averages. 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**

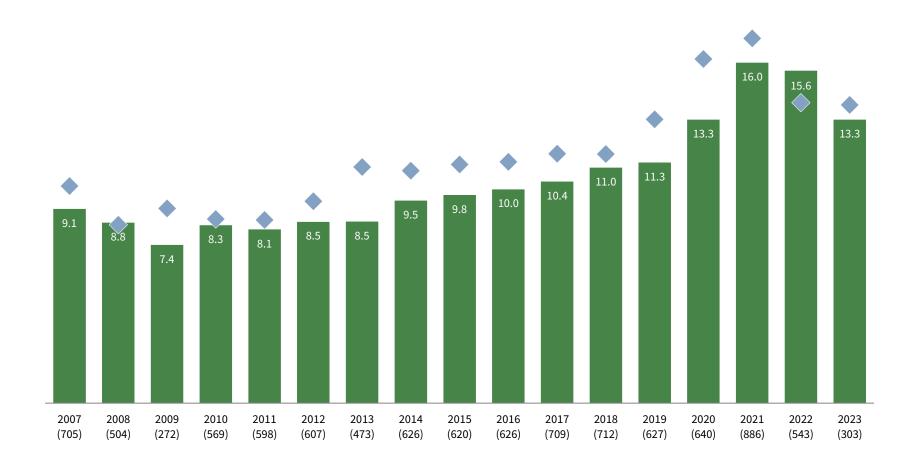
- **■** EBITDA Purchase Price Multiple
- Revenue Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



## Global PE PPMs fell in 2023, though remained higher than long-term averages

PE transacted at a meaningful discount to public markets in all but four of the years analyzed

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES As of December 31, 2023 • Enterprise Value/EBITDA



MSCI All Country World Index



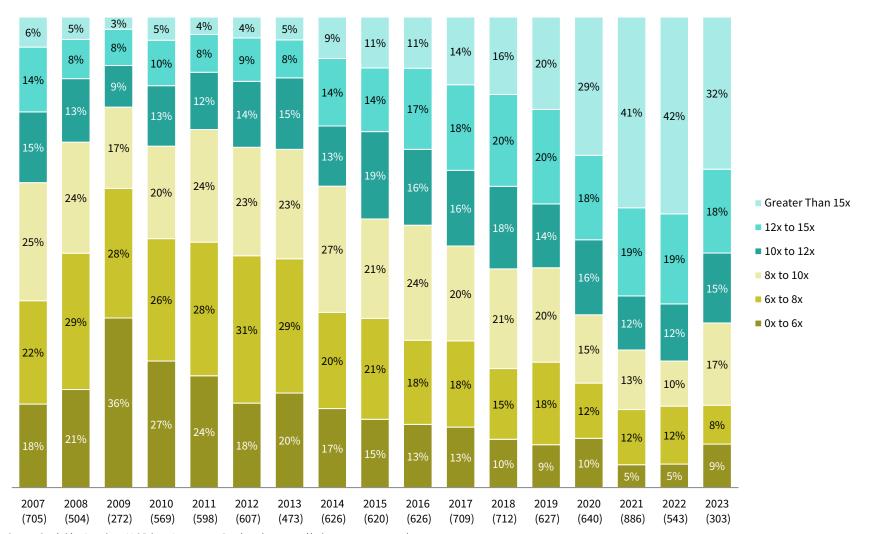
■ PE Owned

# In 2023, there was a noticeable drop in the percentage of PE transactions completed at multiples >15x EBITDA

While more than one-third of the deals were valued at <10x EBITDA

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

As of December 31, 2023 • Enterprise Value/EBITDA



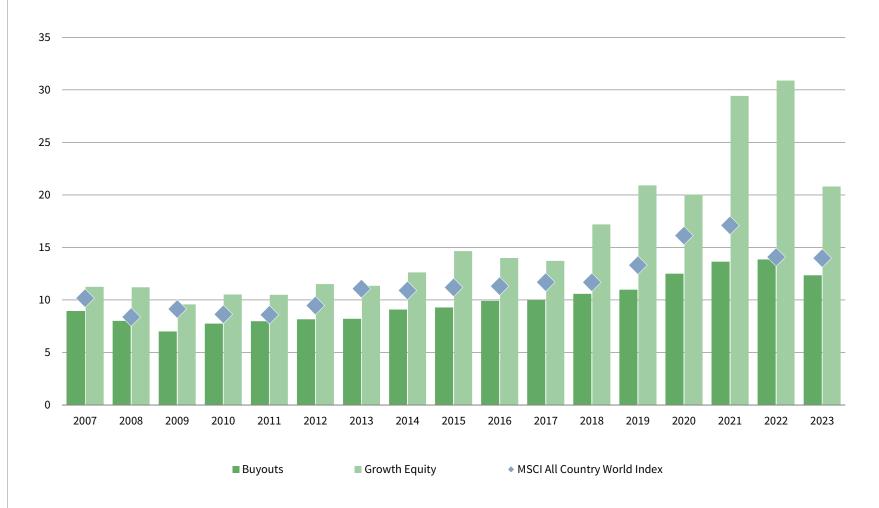


## Buyout PPMs fell in 2023, ending a 13-year streak of increases

Growth equity acquisition multiples are not typically grounded in EBITDA, highlighted by the >20x average multiples since 2019

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

As of December 31, 2023 • Enterprise Value/EBITDA

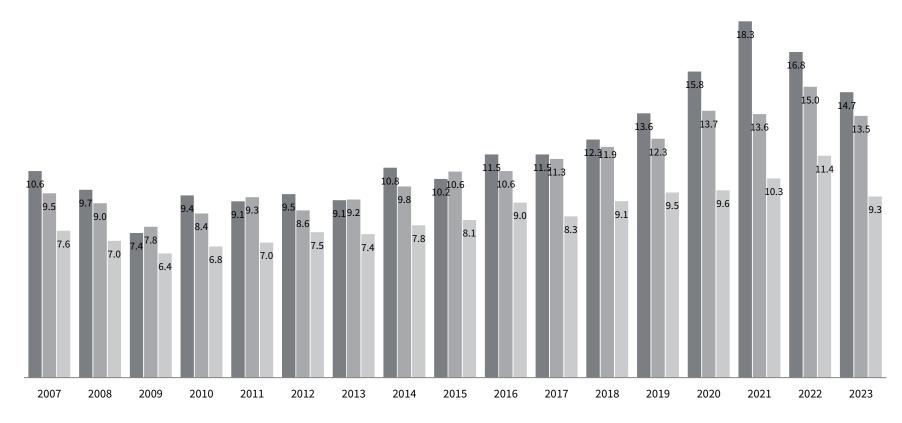


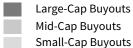
# Over the last five years, small buyout PPMs averaged 10x EBITDA, a more than six turn discount to large buyouts

In 2023, PPMs fell for all size ranges, but the declines were more significant in the large and small cohorts than in mid-cap buyouts

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

As of December 31, 2023 • Enterprise Value/EBITDA





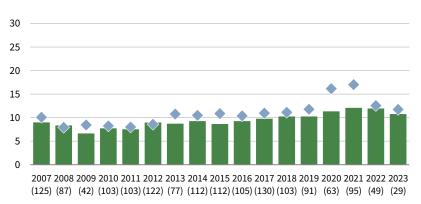
## Among sectors, PE and public PPMs are most similar for IT companies

And PPMs differ most in the healthcare sector, likely due in part to dissimilarities in the underlying industries

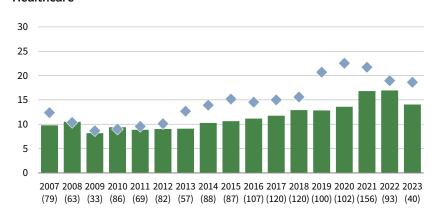
### AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISTION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2023 • Enterprise Value/EBITDA

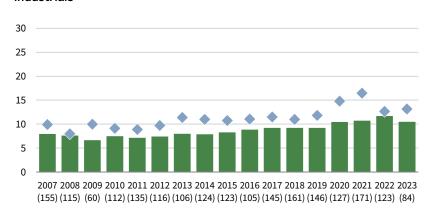
#### **Consumer Discretionary**



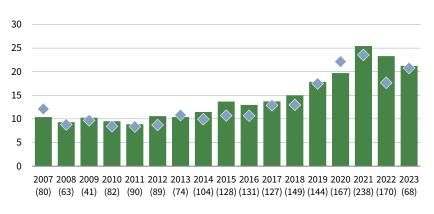
#### Healthcare



#### **Industrials**



#### Information Technology



■ PE Owned

MSCI All Country World Index



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**

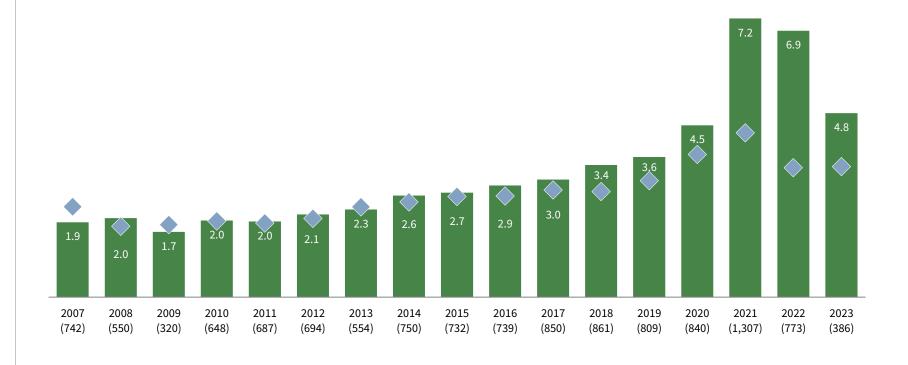
- EBITDA Purchase Price Multiple
- Revenue Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



# Revenue PPMs fell sharply in 2023 in PE but for public companies, they were roughly the same as in 2022

The investment pace for 2023 was the slowest since 2009

AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES As of December 31, 2023 • Enterprise Value/LTM Revenue





■ PE Owned

MSCI All Country World Index

## Like EBITDA multiples, buyout revenue PPMs ended their 13-year climb in 2023

Growth equity revenue-based valuations in general and particularly those for investments in IT companies continued to decline from 2021 peaks

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

As of December 31, 2023 • Enterprise Value/LTM Revenue

#### Deal Type



#### **Deal Type: IT Companies**



### PE revenue PPMs declined across all sectors in 2023, with the largest drop in IT

Public multiples for all sectors were either flat or higher than in 2022

#### AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISTION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES **VS PUBLIC COMPANIES BY SECTOR**

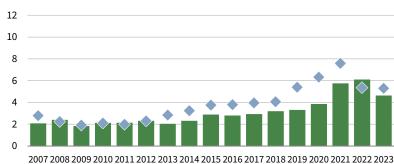
As of December 31, 2023 • Enterprise Value/Revenue

#### **Consumer Discretionary**



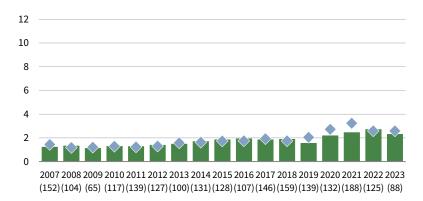
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#### Healthcare

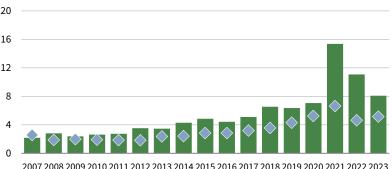


(81) (68) (38) (94) (76) (89) (64) (98) (103)(114)(131)(127)(112)(119)(203)(122) (50)

#### Industrials



#### Information Technology



2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 (88) (81) (51) (96) (114) (125) (108) (164) (185) (196) (218) (261) (251) (277) (524) (313) (123)

■ PE Owned

MSCI All Country World Index



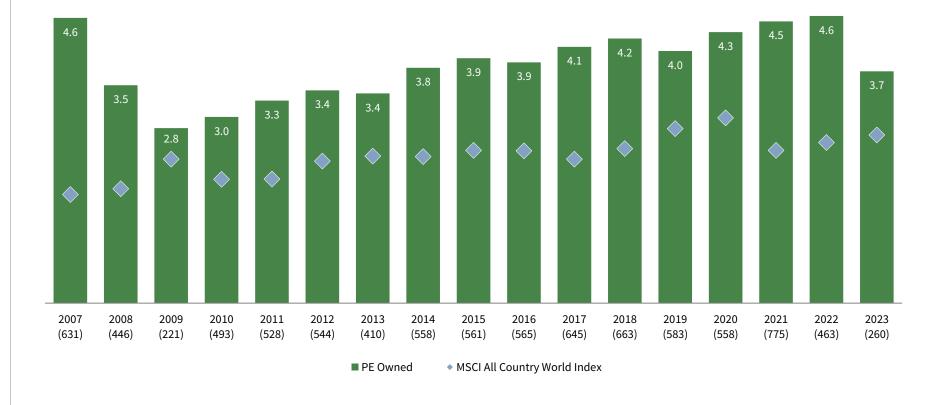
### **GLOBAL PRIVATE EQUITY ANALYSIS**

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

## Amid rising rates, average PE leverage multiples declined by nearly a full turn of EBITDA in 2023

Over the period analyzed, public company leverage multiples have been less volatile than those for PE

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES As of December 31, 2023 • Net Debt/EBITDA



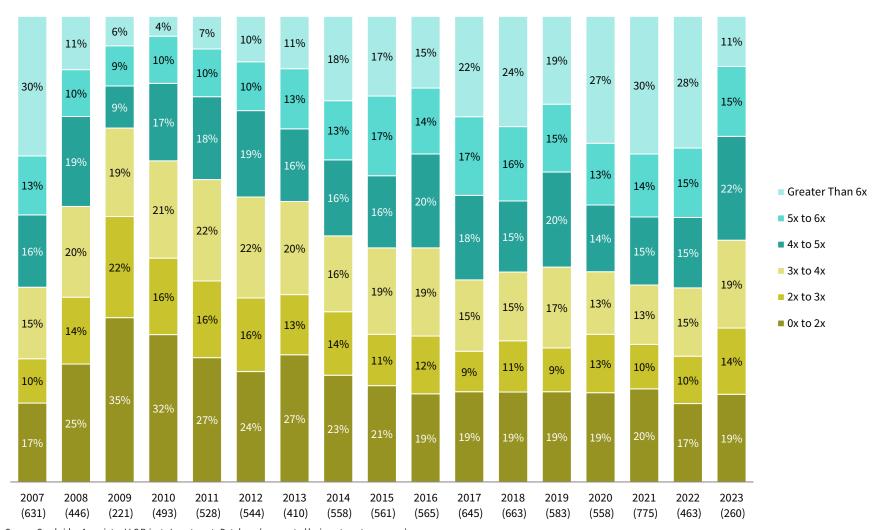


# About 25% of 2023 deals were levered at 5x or more—in the prior nine years, that percentage was ~30%

In 2020–22, the percentage of transactions levered at greater than 6x EBITDA approximated that of 2007

#### AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES

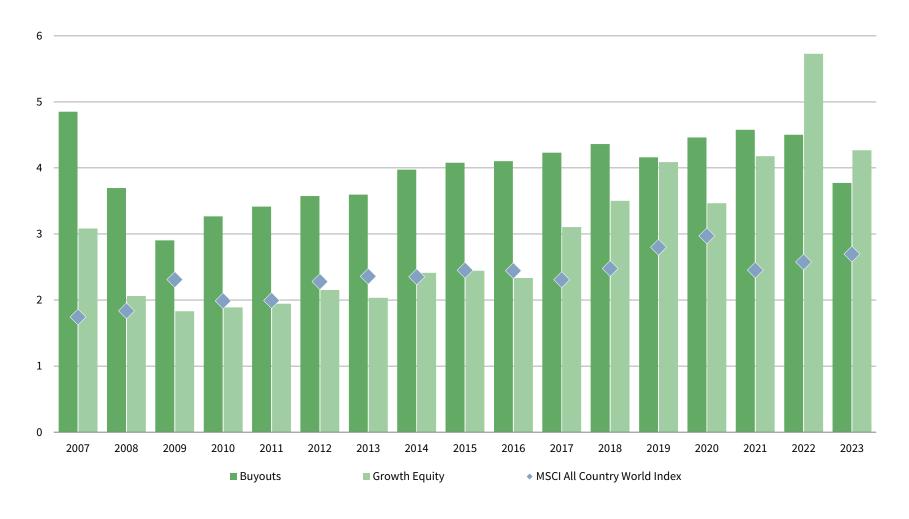
As of December 31, 2023 • Net Debt/EBITDA



## In 2023, buyout leverage multiples were the lowest they have been since 2013

Like PPMs, growth equity leverage multiples have been tied to revenue, not EBITDA

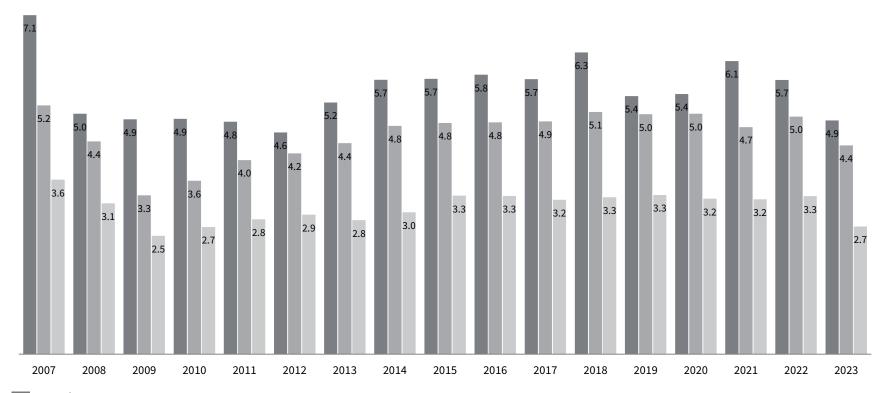
AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES As of December 31, 2023 • Net Debt/EBITDA



## Small buyout leverage multiples dipped below 3x for the first time in ten years

Mid- and large-cap multiples also dropped in 2023, falling to levels not seen since 2012

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF GLOBAL PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT As of December 31, 2023 • Net Debt/EBITDA



EV > \$1B EV \$250M - \$1B

EV < \$250M

### PE-backed healthcare acquisitions averaged the lowest leverage multiples among the sectors in 2023

Over the period analyzed, variances in leverage multiples between private and public companies have been most pronounced in IT and healthcare

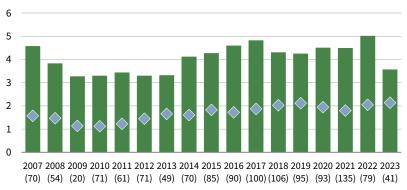
#### AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISTION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES **VS PUBLIC COMPANIES BY SECTOR**

As of December 31, 2023 • Net Debt/EBITDA

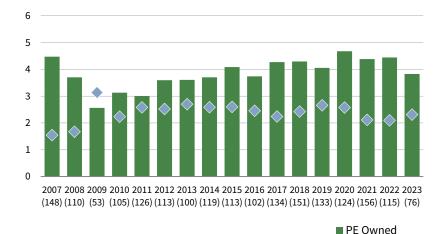
#### **Consumer Discretionary**



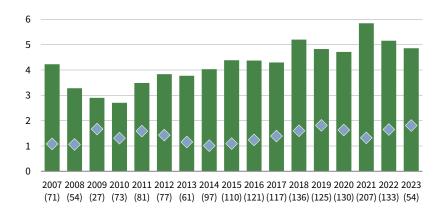
Healthcare



#### Industrials



#### Information Technology



MSCI All Country World Index



### **GLOBAL PRIVATE EQUITY ANALYSIS**

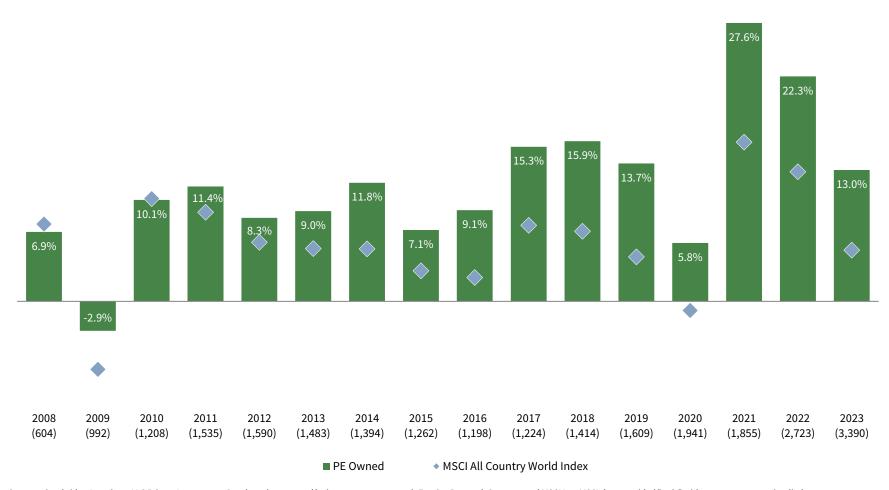
- EBITDA Purchase Price Multiple
- Revenue Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



### Revenue growth in 2023 was in line with longterm averages

Since 2008, PE average annual revenue growth outpaced that of public companies by 6.5% (12.4% versus 5.9%)

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

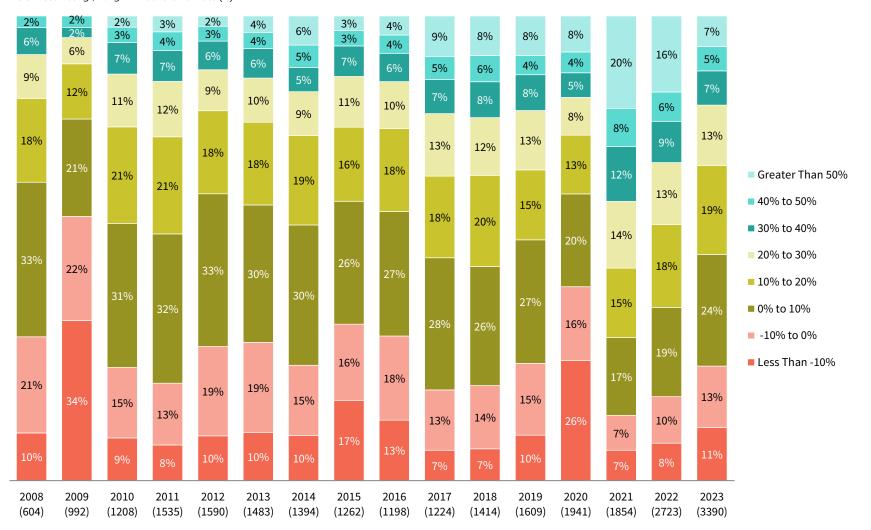




# Following two years of unprecedented growth, the distribution of revenue growth rates in 2023 mirrored the long-term trend

Over the full period, about 20% of companies grew annual revenue by at least 30%, and 27% failed to grow revenue at all

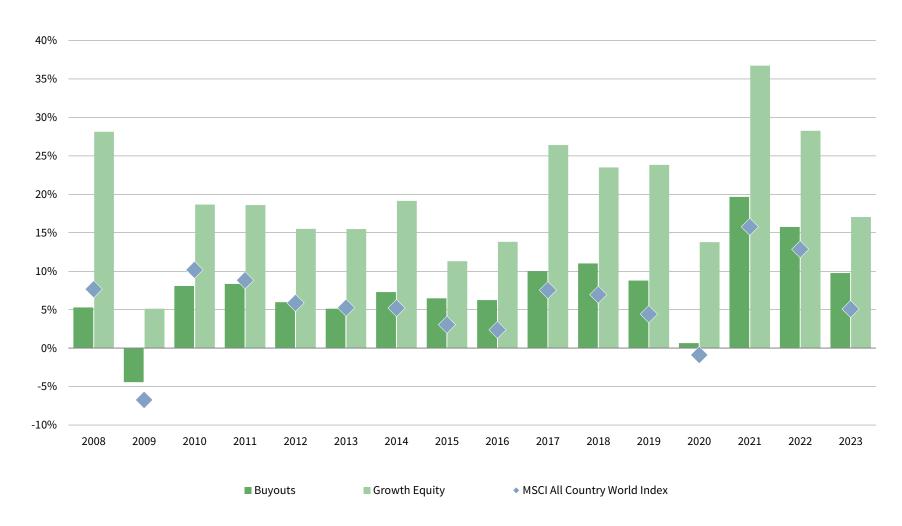
#### AVERAGE ANNUAL REVENUE GROWTH BREAKDOWN OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES



## 2023 revenue growth for PE strategies approximated or exceeded pre-2021 averages

In all but four years, growth equity averaged >15% growth; in all but three years, buyouts averaged higher revenue growth than public peers

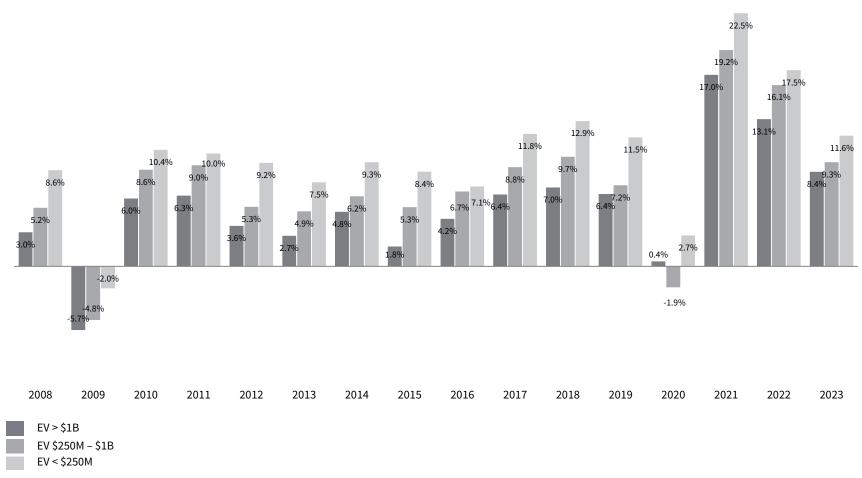
#### AVERAGE ANNUAL REVENUE GROWTH OF GLOBAL BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES



## Over the full period, small buyouts averaged annual revenue growth of 10%

Mid and large buyouts averaged 8% and 6%, respectively

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



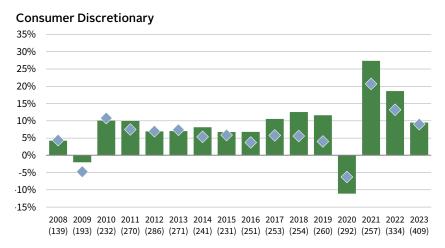


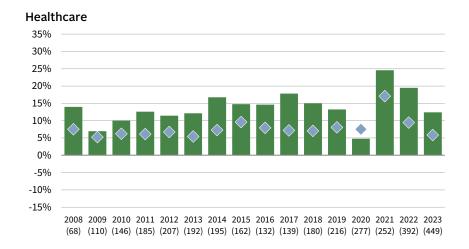
# Excepting consumer discretionary, PE companies across the sectors averaged at least double-digit growth in 2023

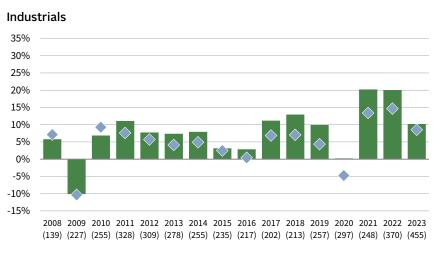
Aside from 2020, healthcare revenue growth in 2023 was the lowest it has been since 2013

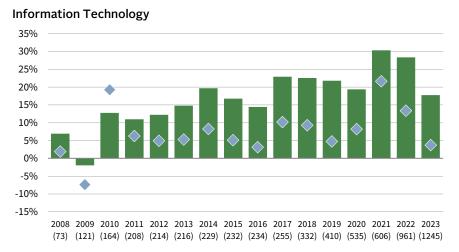
#### AVERAGE ANNUAL REVENUE GROWTH OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES BY SECTOR

As of December 31, 2023 • Annual Growth Rate (%)









■ PE Owned 

MSCI All Country World Index

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.



### **GLOBAL PRIVATE EQUITY ANALYSIS**

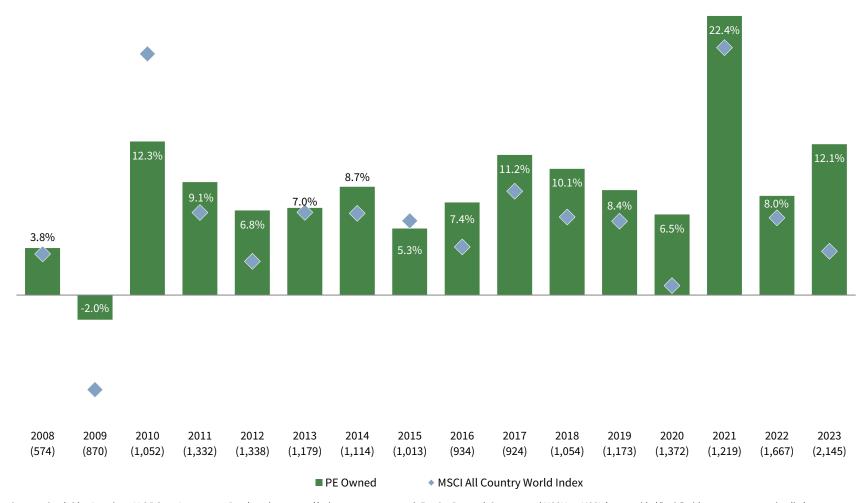
- EBITDA Purchase Price Multiple
- Revenue Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



# PE companies grew EBITDA at an above average rate in 2023 (long-term average was 8.9%)

PE and public company EBITDA growth moved in different directions in 2023. It was the third best year for PE and the among the worst five years for publics

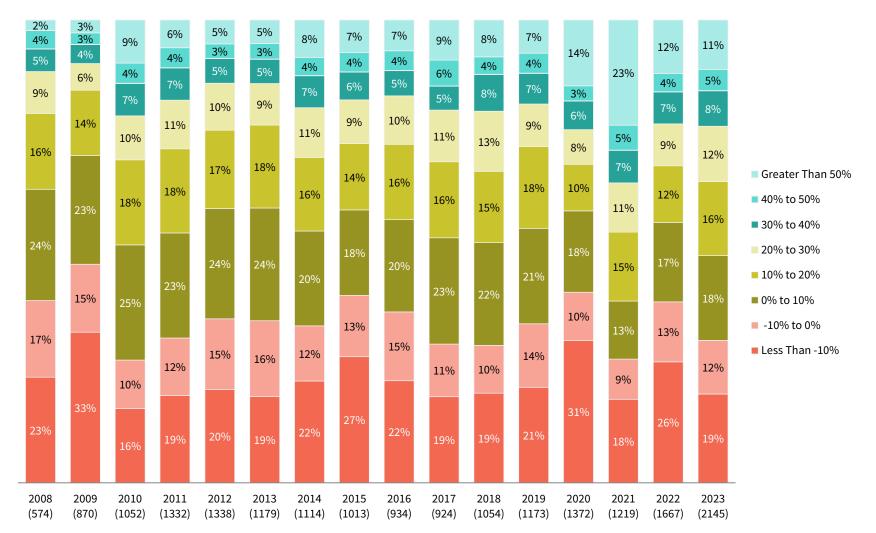
#### AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES



## With few exceptions, in each year, at least 15% of PE companies grew EBITDA by >30%

At the same time, at least 27% of the PE universe has failed to grow EBITDA each year

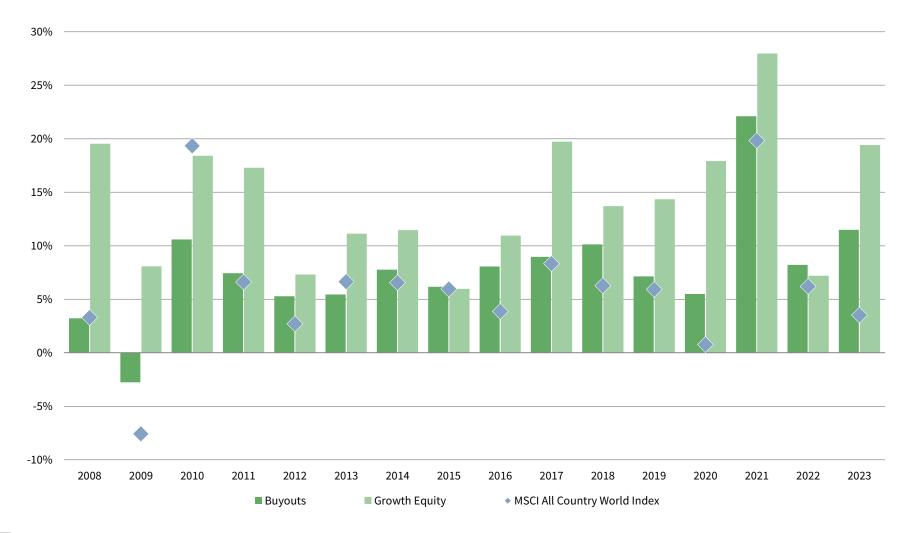
#### AVERAGE ANNUAL EBITDA GROWTH BREAKDOWN OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES



### 2023 average EBITDA growth ranked among the best of all years analyzed for buyouts and growth equity

Over the 16-year period, growth equity averaged 13.7% annual EBITDA growth, buyouts averaged 7.6%, and public companies averaged 6.1%

#### AVERAGE ANNUAL EBITDA GROWTH OF GLOBAL BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

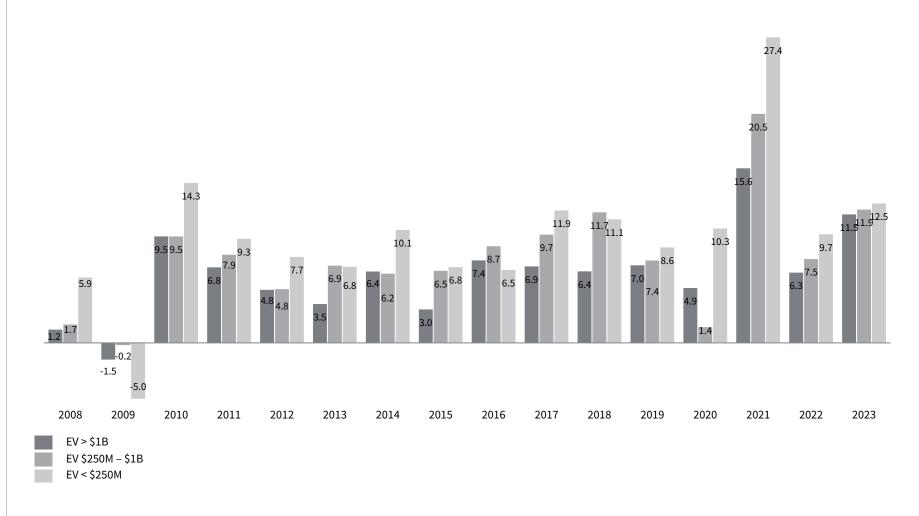




## In 2023, buyouts of all size segments averaged double-digit EBITDA growth

Over the longer time horizon, small caps have outgrown other cohorts by a wide margin

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



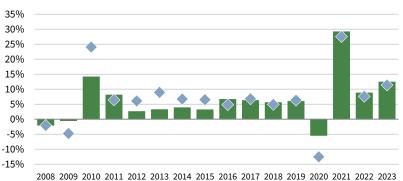
## In 2023, healthcare and IT EBITDA growth bounced back from a tough 2022

In all sectors other than consumer discretionary, PE has averaged better annual EBITDA growth than public peers

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

As of December 31, 2023 • Annual Growth Rate (%)

#### **Consumer Discretionary**



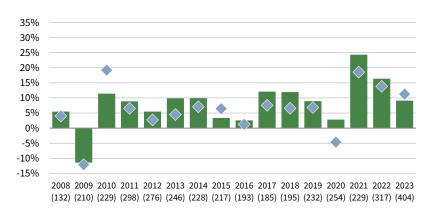
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 (136) (163) (206) (245) (245) (233) (207) (186) (216) (198) (202) (200) (202) (152) (212) (277)

#### Healthcare

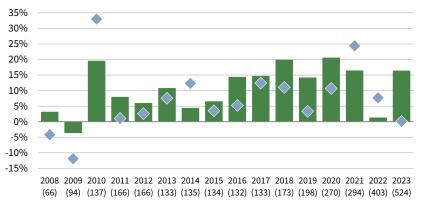


2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 (60) (108) (127) (153) (165) (139) (152) (132) (105) (117) (149) (178) (231) (200) (289) (345)

#### Industrials



#### **Information Technology**



MSCI All Country World Index



■ PE Owned

### **GLOBAL PRIVATE EQUITY ANALYSIS**

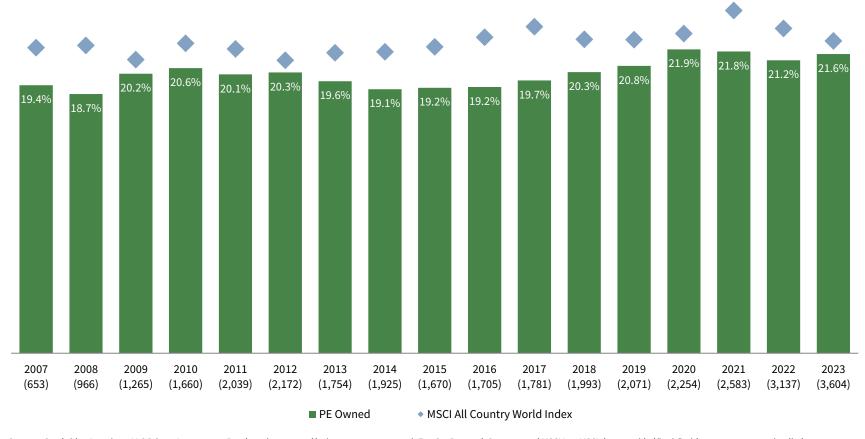
- EBITDA Purchase Price Multiple
- Revenue Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics

## PE margins have historically lagged those of public companies in the global public index

PE companies have operated at 20% of higher margins in every year since 2018

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

As of December 31, 2023 • EBITDA/Revenue (%)



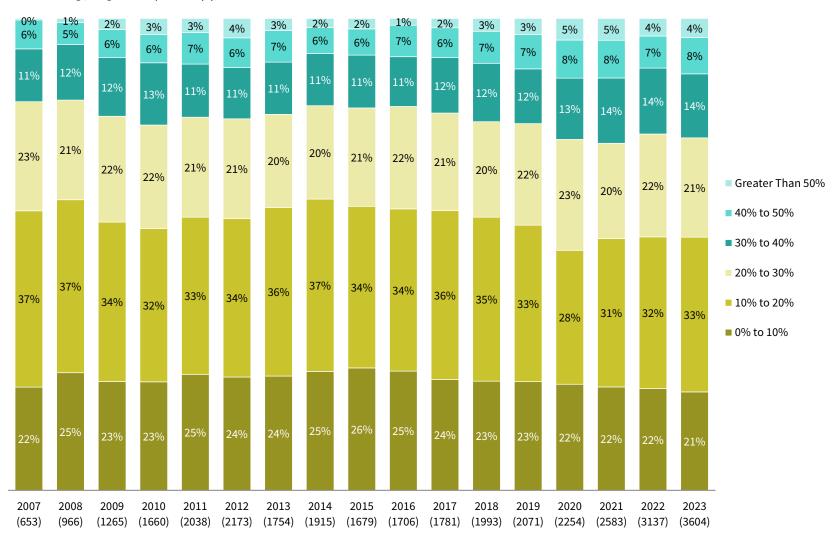


### The dispersion of EBITDA margins has been consistent over time

Since 2020, at least 25% of companies operated at annual margins >30%. At the same time, the total universe became more heavily weighted in IT companies

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

As of December 31, 2023 • EBITDA/Revenue (%)



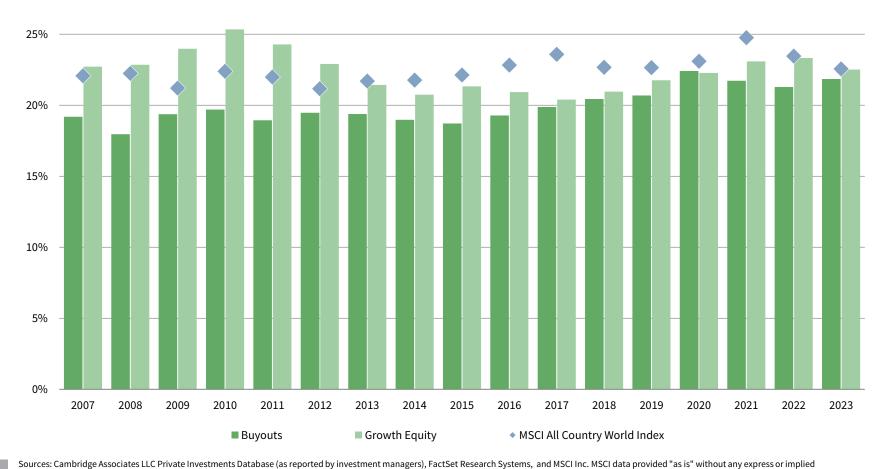
# Growth equity companies have operated at higher margins than buyouts, but since 2017, the delta is only ~1% annually

Over the full period, average margins for growth equity and public companies have been the same (22.6% annually)

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

As of December 31, 2023 • EBITDA/Revenue (%)

30%

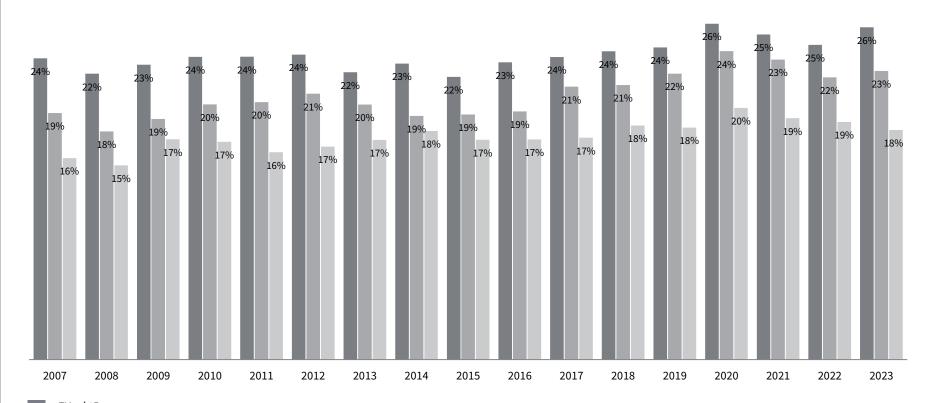


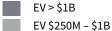
### Since 2020, large buyouts have averaged 25% plus margins

Mid- and large-cap buyouts historically operated at superior margins to the small-cap cohort

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

As of December 31, 2023 • EBITDA/Revenue (%)





### In three of the four sectors, PE and public company margins approximate one another

Public companies only regularly operate at higher margins than PE peers in healthcare, driven in part by the differences in underlying industries (e.g., more biotech and pharma in the public index)

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

As of December 31, 2023 • EBITDA/Revenue (%)

# 25% 20% 15% 5%

### 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 (140) (190) (243) (300) (374) (385) (331) (341) (324) (358) (353) (350) (327) (285) (342) (423) (449)

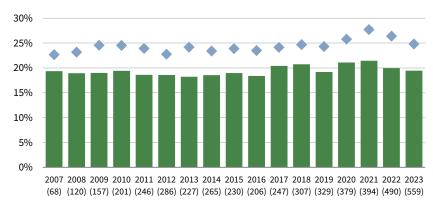


30%



#### ■ PE Owned

### Healthcare



### Information Technology



MSCI All Country World Index



### **GLOBAL PRIVATE EQUITY ANALYSIS**

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

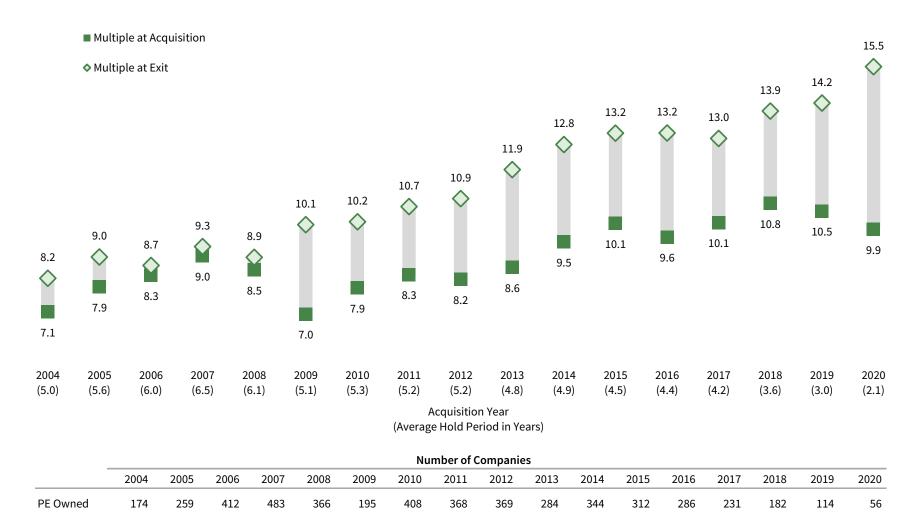


# Exited investments acquired in 2009–20 have achieved meaningful multiple expansion

For exited companies acquired in 2020, PPMs at exit were the highest observed

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

As of December 31, 2023 • Enterprise Value/EBITDA

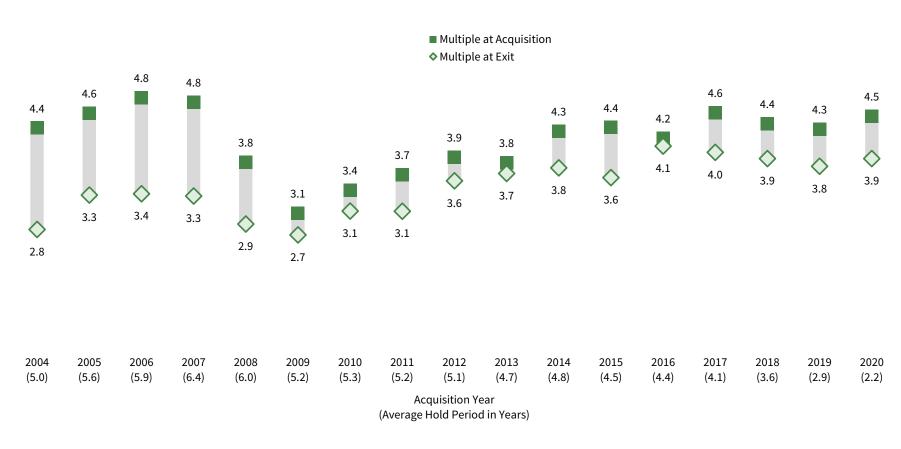


# For all acquisition years, there has been some leverage multiple compression at exit

The most significant leverage multiple compression has been observed for acquisitions made in the pre-Global Financial Crisis (GFC) era

### EBITDA LEVERAGE MULTIPLE COMPRESSION OF GLOBAL PRIVATE EQUITY-OWNED COMPANIES BY ACQUISITION YEAR

As of December 31, 2023 • Net Debt/EBITDA



Number of Companies

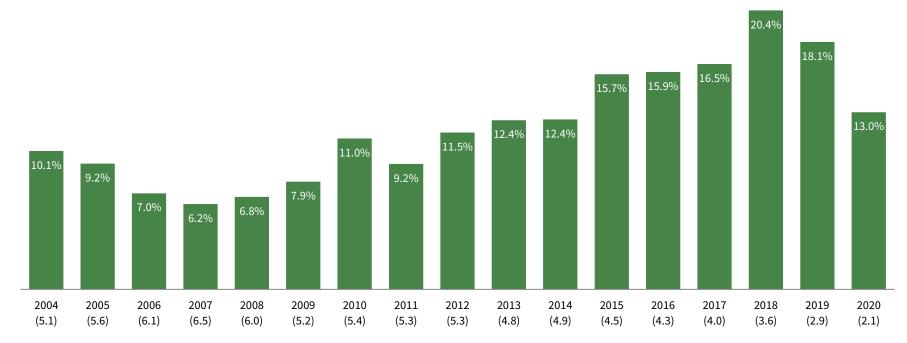
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	164	227	353	412	290	137	323	288	309	216	268	254	238	192	155	99	53

### For exited companies acquired since 2015, the median revenue CAGR was 16.5%

Across the full period, median CAGRs for all but four acquisition years have been at least 9% during PE ownership

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

As of December 31, 2023 • Compound Annual Growth Rate (%)



Acquisition Year (Average Hold Period in Years)

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ı	vum	ıber	OI	uom	nanies	

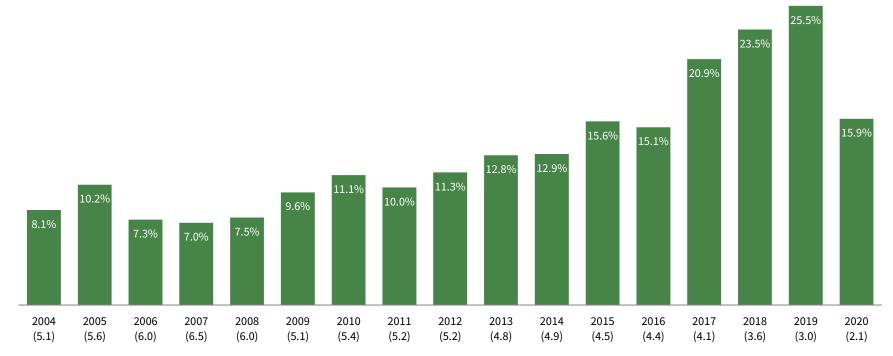
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	219	312	487	577	432	245	490	450	446	339	435	424	356	312	245	147	91

# Median EBITDA growth for exited companies acquired since 2009 was nearly 14%

More recent vintages have even higher CAGRs than longer-term norms

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

As of December 31, 2023 • Compound Annual Growth Rate (%)



Acquisition Year (Average Hold Period in Years)

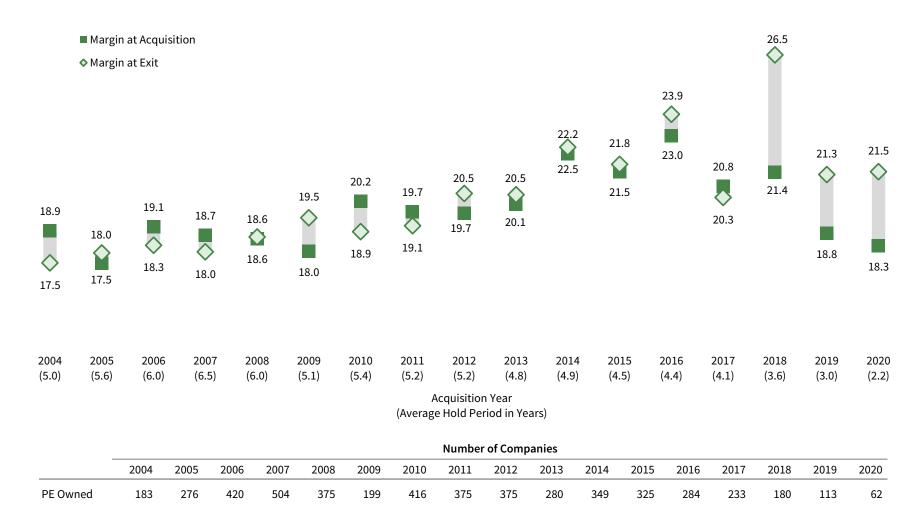
	Number of Companies																
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	191	285	434	521	392	203	424	383	382	289	357	330	299	243	188	118	64

# EBITDA margins have historically remained consistent from acquisition to exit

The significant movement in margins for exited companies acquired in 2018–20 could indicate that those companies benefited from the high growth environment in 2021, which ultimately could improve margins

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

As of December 31, 2023 • EBITDA/Revenue (%)



REGIONAL COMPARISONS: ASIA, EUROPE, AND THE UNITED STATES

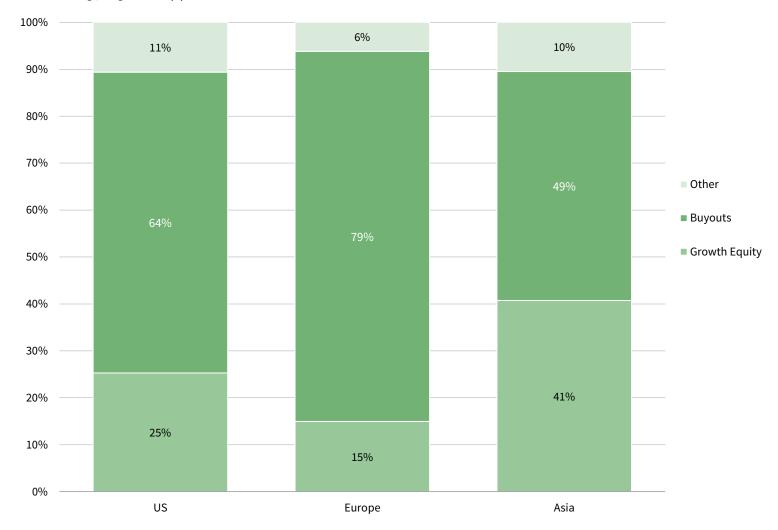


# The European and US samples have remained more heavily weighted toward buyouts

The Asian sample has become more balanced over time

### BREAKDOWN OF INVESTMENT STRATEGIES BY REGION

As of December 31, 2023 • Percent (%)

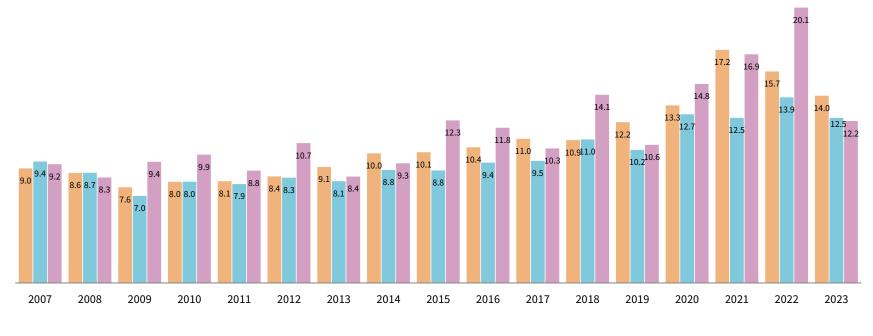


# While PPMs declined across all regions in 2023, they fell most in Asia

Over the long term, the United States has averaged a PPM of 10.6x, Europe has averaged 9.6x, and Asia has averaged 11.0x

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

As of December 31, 2023 • Enterprise Value/EBITDA



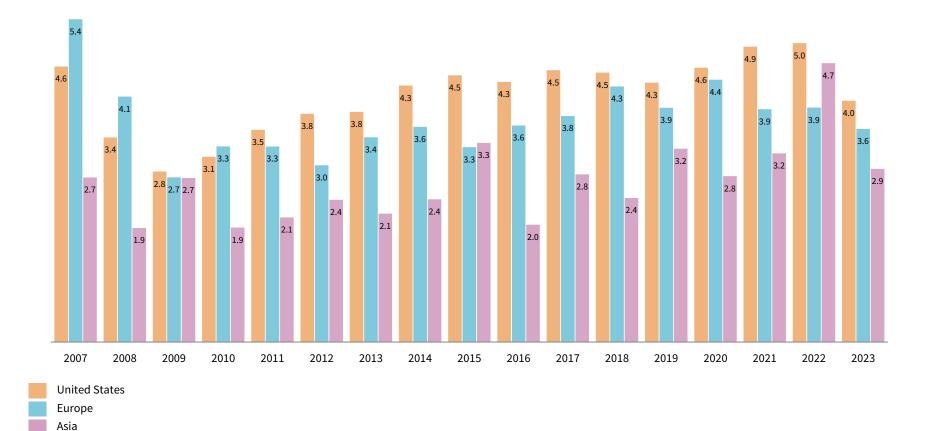


# In 2023, leverage multiples in the United States fell to their lowest level since 2013 and Europe's were their lowest since 2016

Leverage multiples in Asia returned to their historical average

### AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF PRIVATE COMPANIES BY REGION

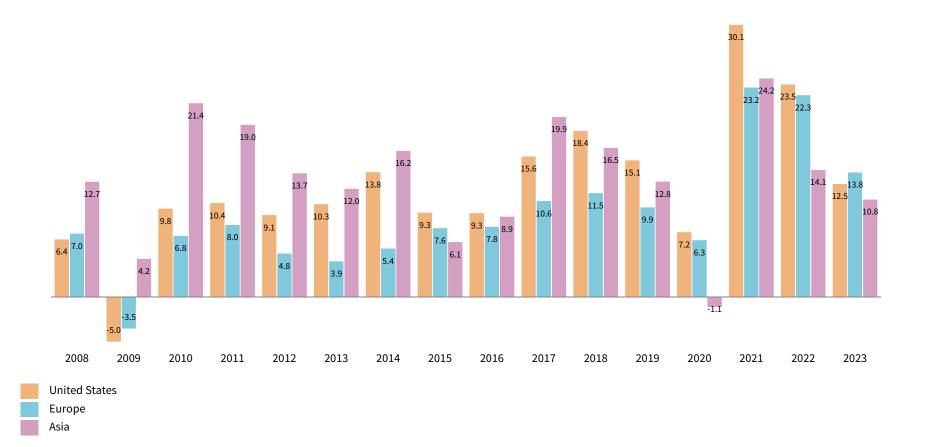
As of December 31, 2023 • Net Debt/EBITDA



# Across the regions, PE companies in Europe averaged the fastest revenue growth in 2023

From 2008–23, PE companies averaged 13.3% annual revenue growth in the United States, 12.9% in Asia, and 9.3% in Europe

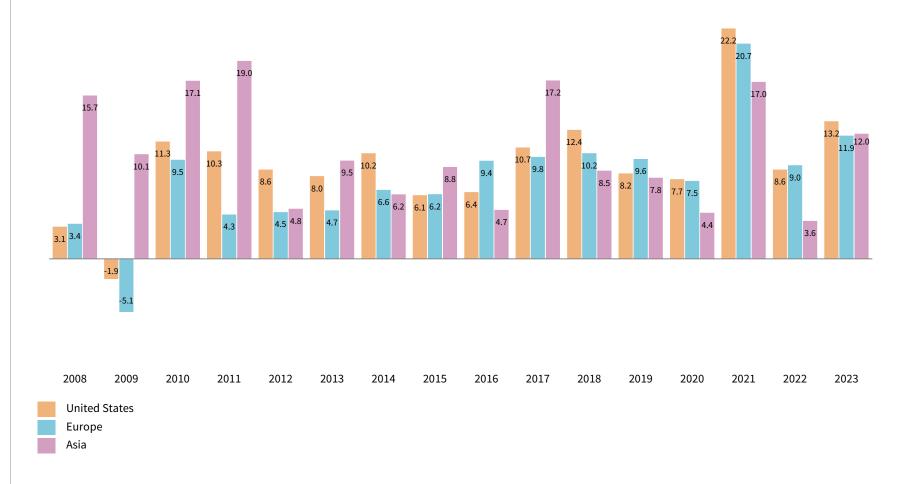
### AVERAGE ANNUAL REVENUE GROWTH OF PRIVATE EQUITY-OWNED COMPANIES BY REGION



# Over the full period, PE companies in Asia averaged the highest annual EBITDA growth (10.3%)

At the same time, PE-backed companies in the United States averaged 9.5% annual EBITDA growth and those in Europe averaged 7.3%

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

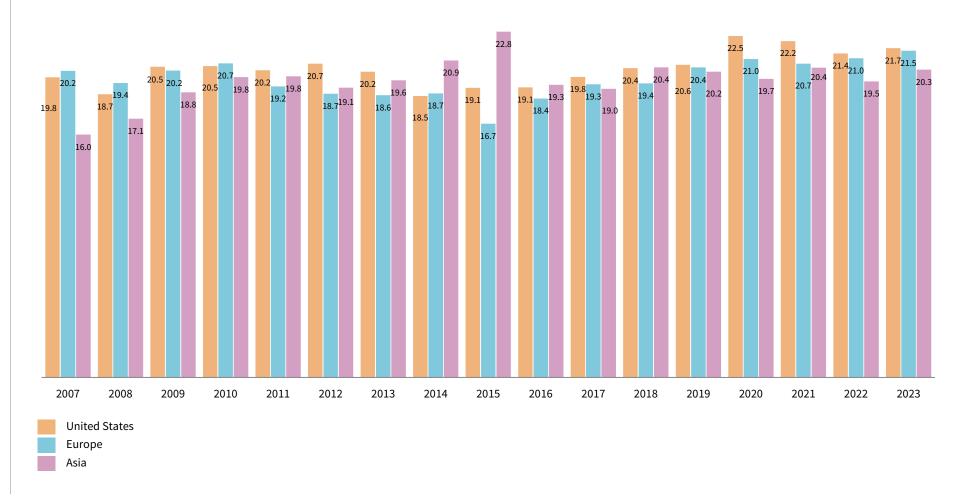


# Average margins across regions were approximately 20% per year

US companies have operated at the highest margins in every year since 2017

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

As of December 31, 2023 • EBITDA/Revenue (%)

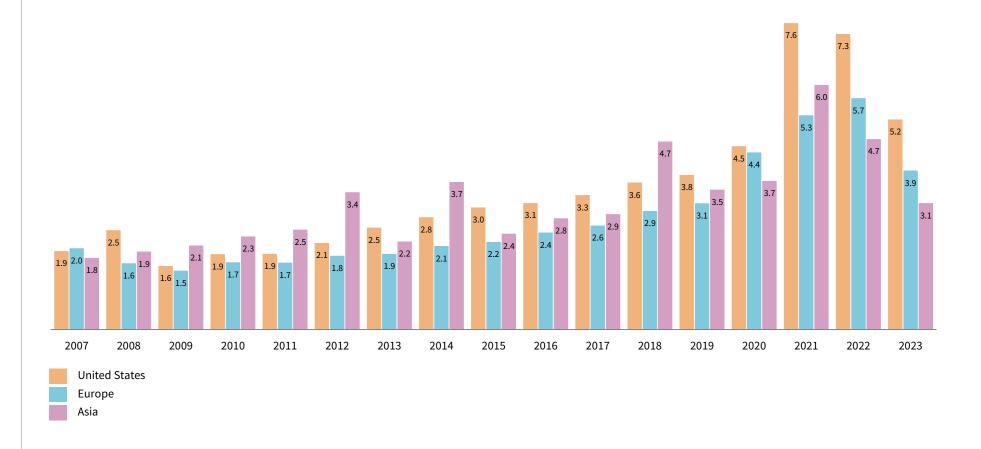


# After spiking in 2021 and 2022, revenue PPMs across the regions have fallen closer to long-term averages

Over the full period, the United States averaged the highest revenue PPMs (3.4x) versus 3.1x for Asia and 2.6x in Europe.

### AVERAGE REVENUE PURCHASE PRICE MULTIPLES AT ACQUISITION OF PRIVATE COMPANIES BY REGION

As of December 31, 2023 • Enterprise Value/Revenue



### **EUROPEAN PRIVATE EQUITY ANALYSIS**

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

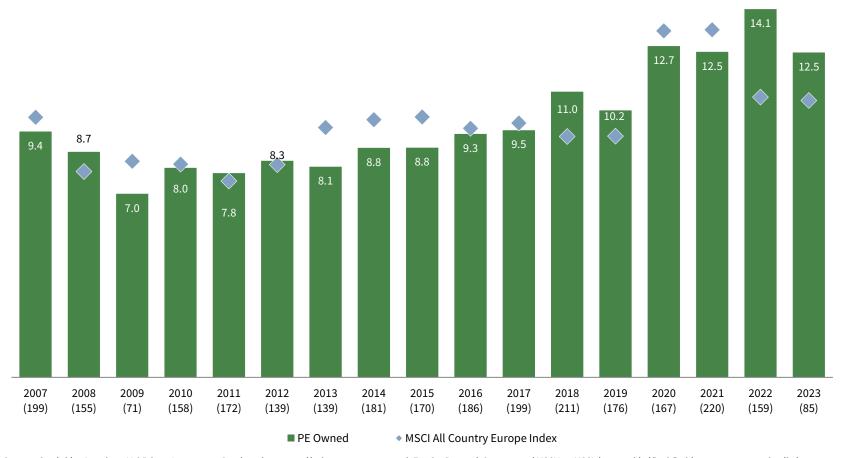


### PE acquisition multiples fell in 2023 but have been in double digits since 2018

The PE premium to public counterparts in 2022 and 2023 was the largest recorded since 2007

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

As of December 31, 2023 • Enterprise Value/EBITDA



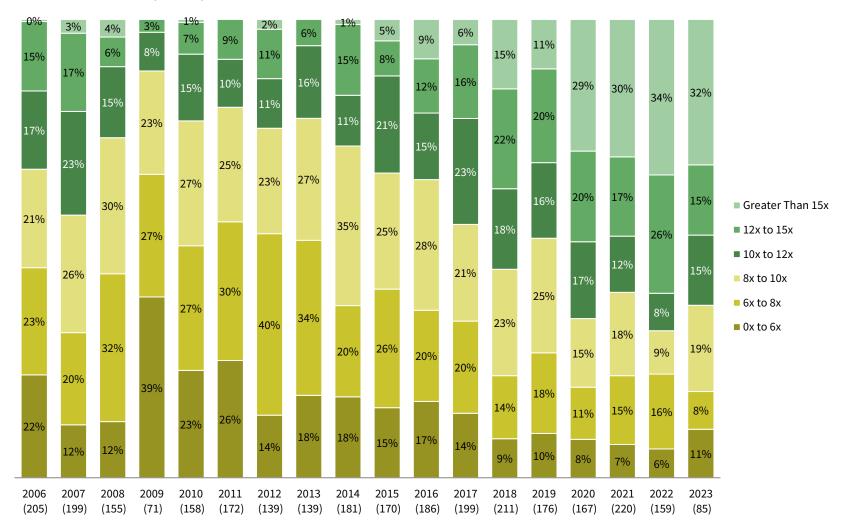


### Since 2017, 60% of deals transacted above 10x

Over that same period, there was a concomitant increase in large transactions

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

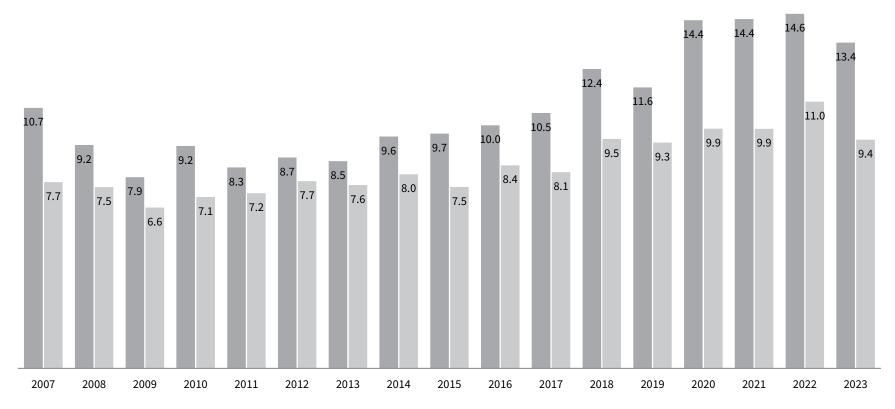
As of December 31, 2023 • Enterprise Value/EBITDA

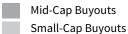


# In 2023, PPMs decreased for both small- and mid-cap buyouts

Like the total universe, both sizes remained high relative to their long-term averages

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT As of December 31, 2023 • Enterprise Value/EBITDA





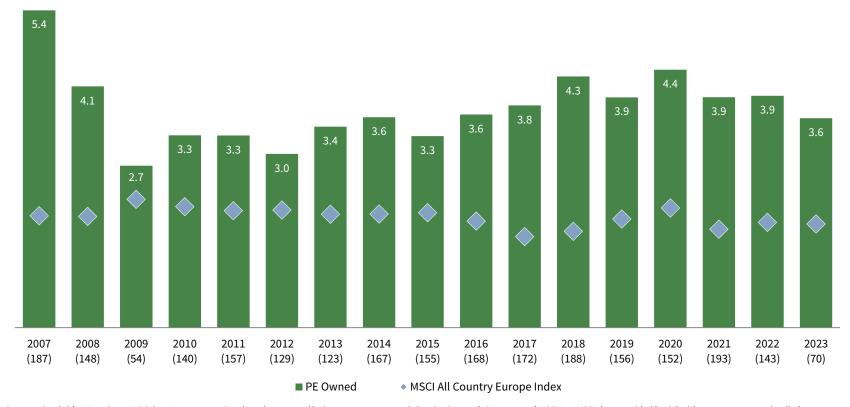
### **EUROPEAN PRIVATE EQUITY ANALYSIS**

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

# Leverage multiples in Europe have been trending downward, and in 2023 were at their lowest since 2016

Public company leverage multiples have consistently been around 2x

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF EUROPEAN PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES
As of December 31, 2023 • Net Debt/EBITDA



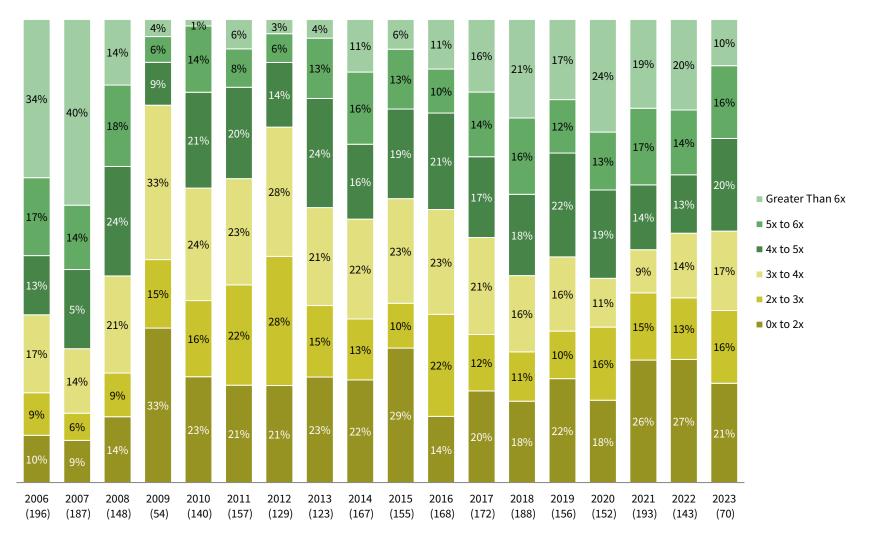


# In 2023, the percentage of deals transacted at leverage multiples of 6x or greater was the lowest since 2015

Interest rate hikes likely impacted the use of leverage

### AVERAGE LEVERAGE MULTIPLE BREAKDOWN OF EUROPEAN PRIVATE EQUITY-OWNED COMPANIES

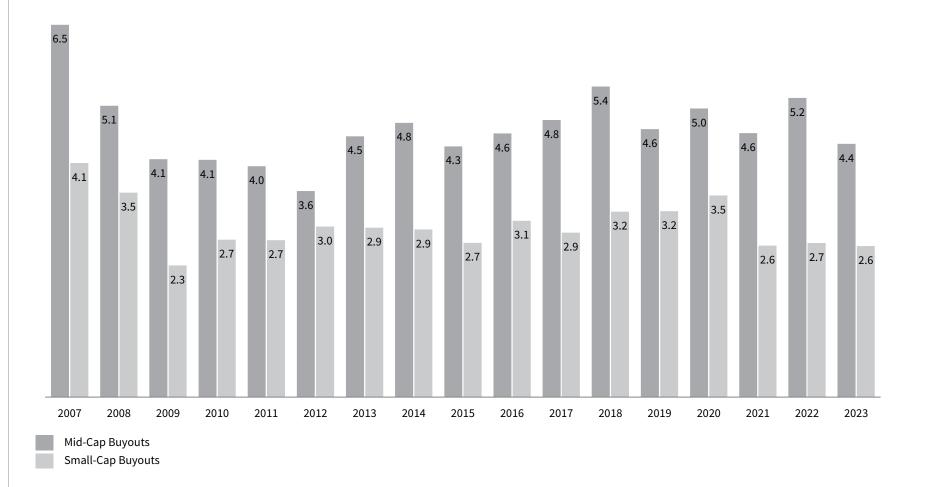
As of December 31, 2023 • Net Debt/EBITDA



# Small buyout leverage multiples have returned to levels last seen immediately following the GFC

Over the full period, small-, mid-, and large-cap (while not shown) buyouts, averaged 3.0x, 4.7x, and 5.0x, respectively

AVERAGE EBITDA LEVERAGE MULTIPLES AT ACQUISITION OF EUROPEAN PRIVATE EQUITY BUYOUT COMPANIES BY ENTERPRISE VALUE SEGMENT
As of December 31, 2023 • Net Debt/EBITDA



### **EUROPEAN PRIVATE EQUITY ANALYSIS**

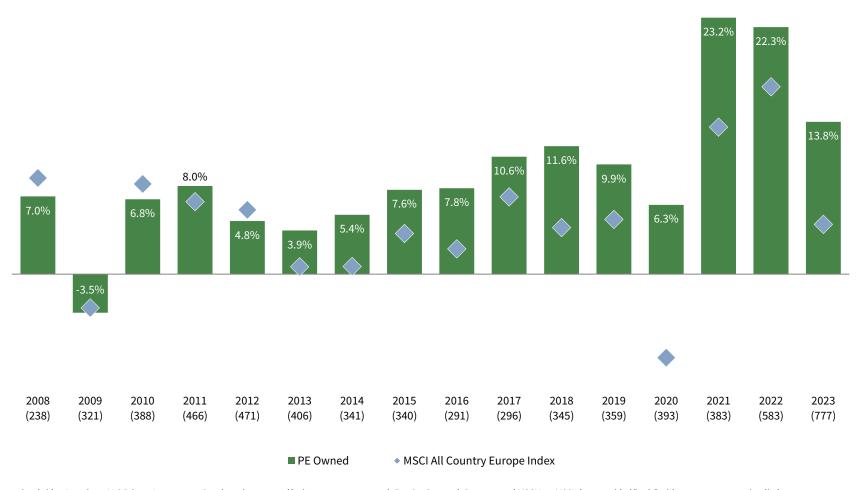
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



# Average PE revenue growth in 2023 was the third highest of years analyzed despite a considerable drop from the prior year

On average, PE companies have grown revenue about 4% faster than the MSCI All Country Europe Index

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

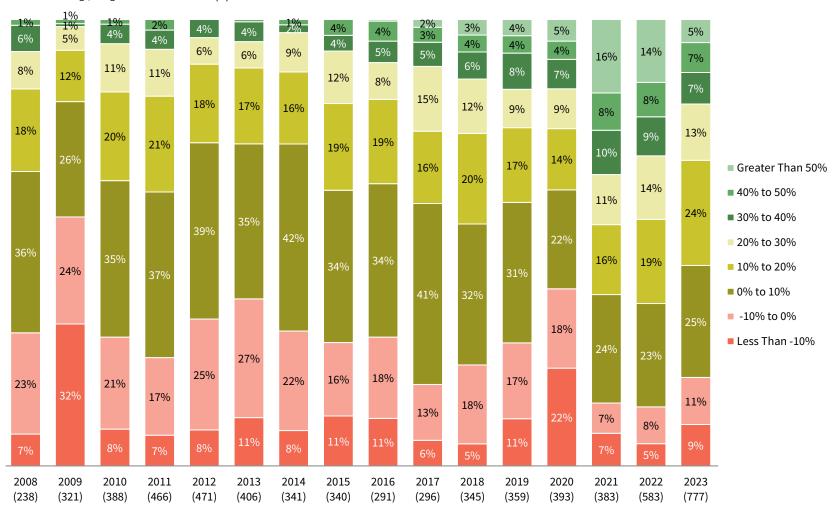




# Consistent with the general downturn in growth, less than one-fifth of companies grew revenue by more than 30% in 2023

The dispersion overall looked similar to that of the years leading up to the COVID-19 pandemic

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





# Growth equity companies have grown revenue much faster than buyouts and publics

Buyouts and public companies have averaged similar growth over the full period, about 7% and 5%, respectively

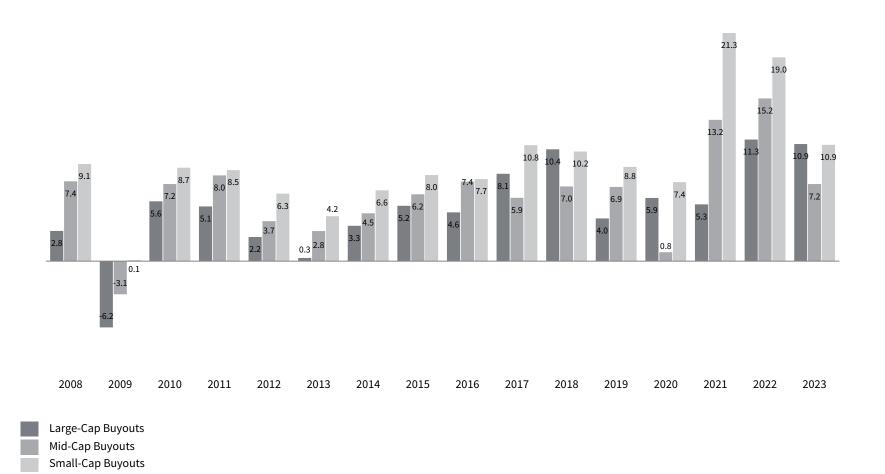
#### AVERAGE ANNUAL REVENUE GROWTH OF EUROPEAN BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES



# In 2023, revenue growth fell for all size segments but less so for large caps

Despite declines from the prior year, 2023 revenue growth across the sizes was above the historical averages

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





### **EUROPEAN PRIVATE EQUITY ANALYSIS**

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



# EBITDA growth ticked up in 2023 despite a sharp decline in revenue

PE companies have generally had more consistent growth rates than their public peers

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

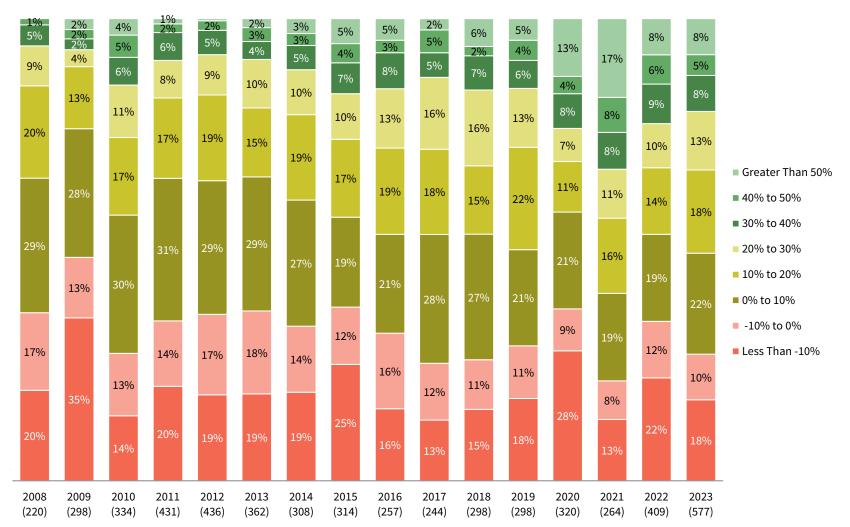




# Over time, there has been a trend toward higher EBITDA growth

Overall, the dispersion of EBITDA growth rates in 2023 mirrored that of the prior year

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





# Growth equity companies have grown EBITDA by more than 20% in five of the last seven years

Buyouts and public company growth has tended to be somewhat correlated, although the former outpaced the latter by more than 7% in 2023

### AVERAGE ANNUAL EBITDA GROWTH OF EUROPEAN BUYOUT AND GROWTH EQUITY COMPANIES VS PUBLIC COMPANIES

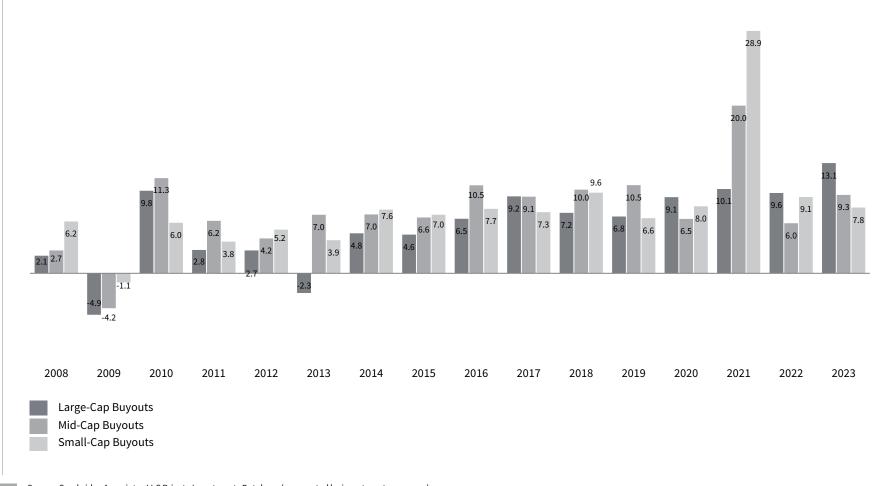




# Across the analyzed period, large-cap buyouts grew EBITDA at their fastest rate in 2023

Small- and mid-cap buyouts moved closer to their long-term averages of roughly 8%

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



## **EUROPEAN PRIVATE EQUITY ANALYSIS**

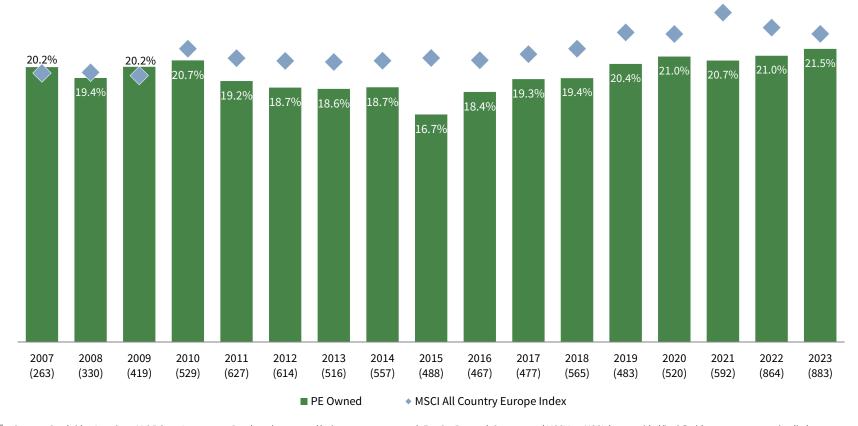
- Purchase Price Multiple
- Leverage Multiple
- Revenue Growth
- EBITDA Growth
- EBITDA Margin
- Exit Metrics



# The average EBITDA margin for PE-backed European companies in 2023 was the highest of any year analyzed

Public companies have averaged better margins than PE in every year since 2010

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

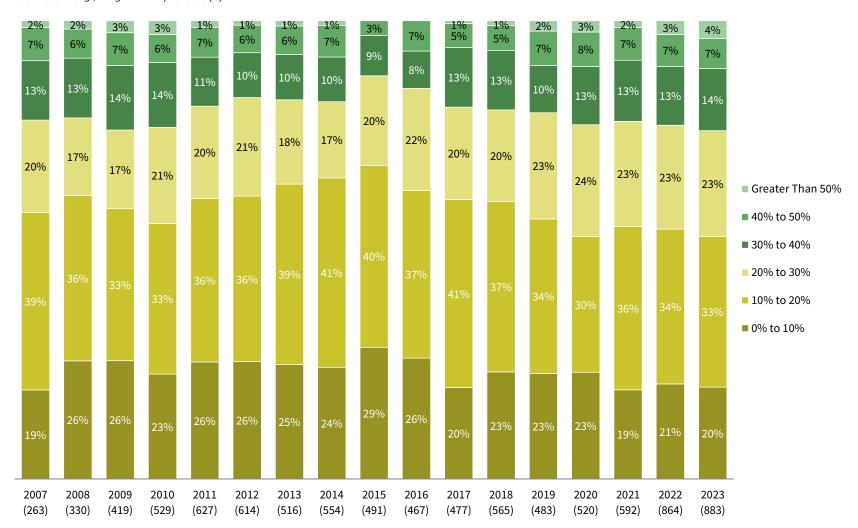




## The percentage of companies operating at margins above 30% has expanded since 2015

Most operated at margins between 10% and 30%

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

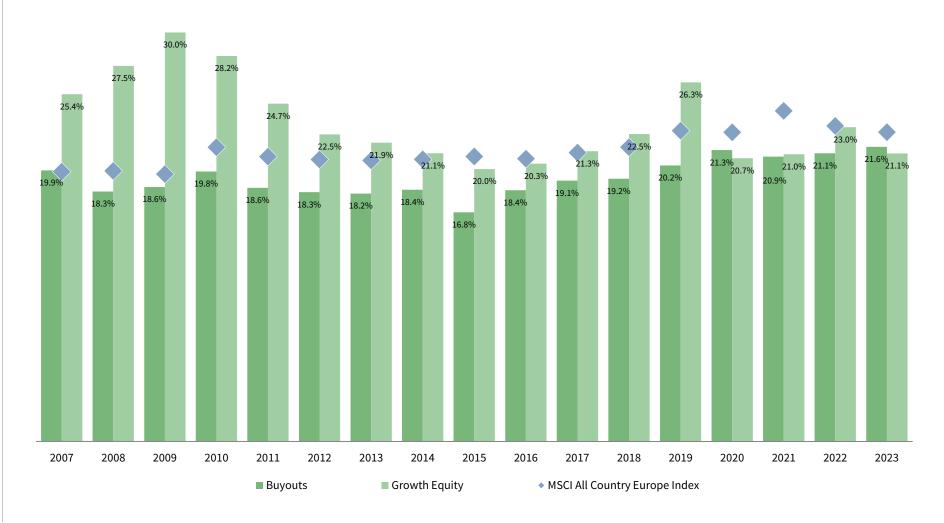




## Buyout companies hit record margins for the period in 2023

Buyout and public company margins have consistently ranged in the high-teens and low-twenties, but those for growth equity have been more varied

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

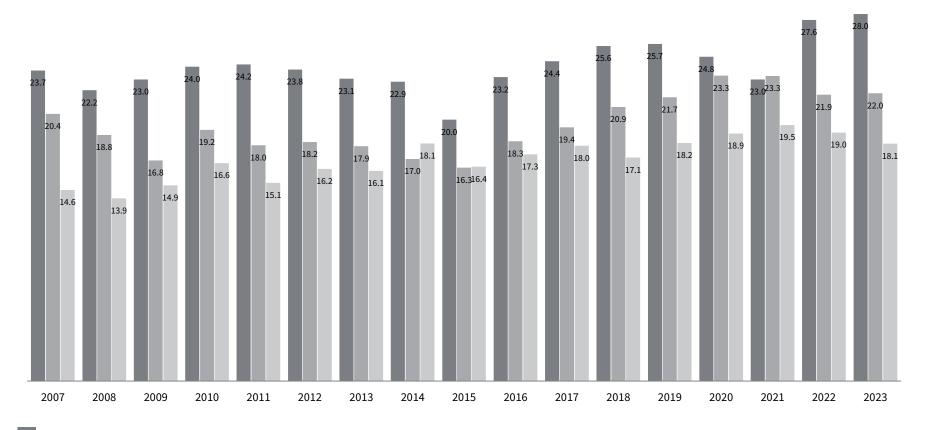


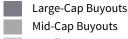


# The high average EBITDA margin for European buyouts in 2023 was driven by large-cap companies

The long-term averages for the three sizes are about 17% (small), 20% (mid), and 24% (large)

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







## **EUROPEAN PRIVATE EQUITY ANALYSIS**

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



# Realized companies acquired in 2019 were exited at the highest median EBITDA PPM of all years analyzed

Multiple expansion has averaged three turns for companies acquired since 2009

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

As of December 31, 2023 • Enterprise Value/EBITDA

- Multiple at Acquisition
- Multiple at Exit



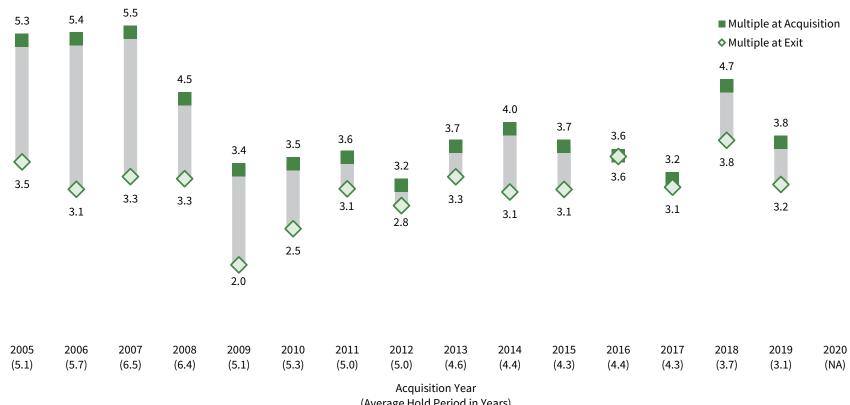
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	103	151	142	108	54	121	108	88	89	105	94	90	66	57	39	13

## In acquisition years 2011–19, managers only deleveraged companies by an average of 0.5x

The use of leverage decreased in general after the GFC as company growth became a bigger driver of value creation

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

As of December 31, 2023 • Net Debt/EBITDA



(Average Hold Period in Years)

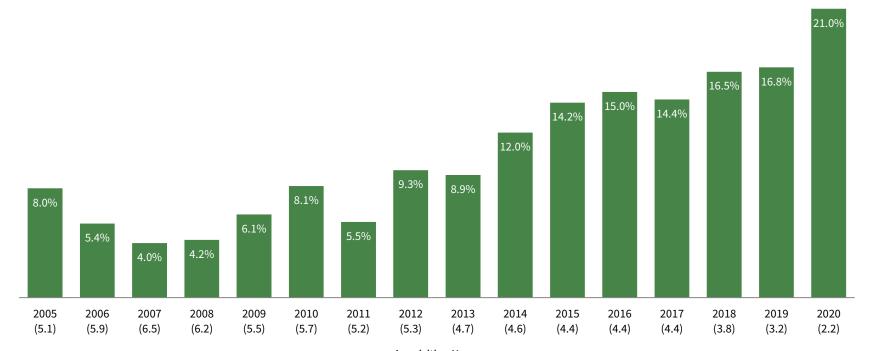
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	97	142	124	98	35	94	84	76	75	83	76	77	58	43	32	13

# Companies acquired in 2018–20 were sold into the market peak with historically high revenue CAGRs

Because of the current slower growth environment, revenue CAGRs could return to longer-term norms

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

As of December 31, 2023 • Compound Annual Growth Rate (%)



Acquisition Year (Average Hold Period in Years)

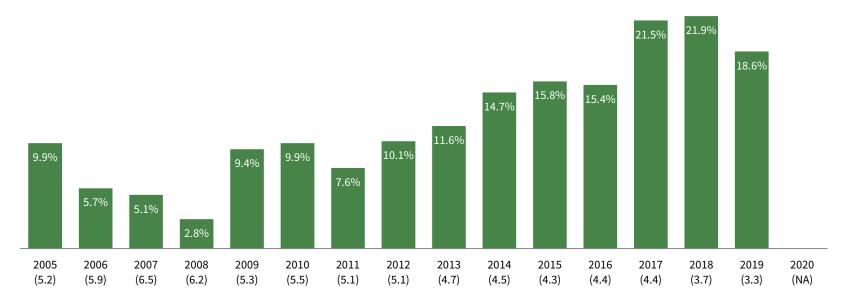
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	117	159	163	116	57	132	118	100	96	114	105	94	69	58	44	18

# EBITDA CAGRs for exited companies acquired in 2017–19 were appreciably higher than previous years

EBITDA CAGRs have remained the lowest for realized companies acquired just before the GFC

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

As of December 31, 2023 • Compound Annual Growth Rate (%)



Acquisition Year (Average Hold Period in Years)

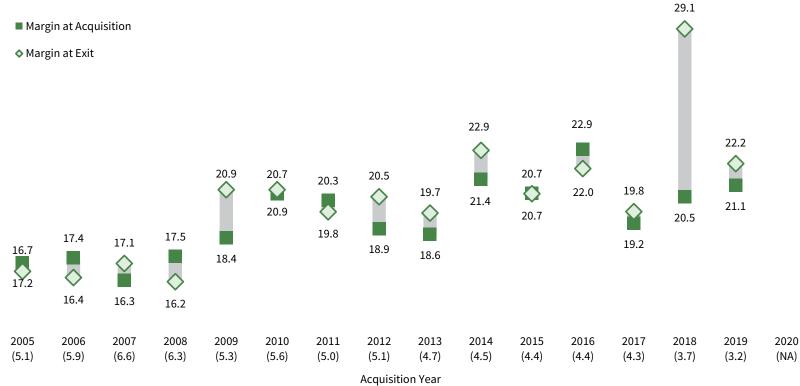
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	112	155	155	117	55	123	110	91	92	106	96	92	68	57	39	14

## Aside from the 2018 acquisitions, the median EBITDA margin expansion has been just 0.4%

For nine of the acquisition years, there has been some margin improvement during PE ownership

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

As of December 31, 2023 • EBITDA/Revenue (%)



Acquisition Year (Average Holding Period in Years)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PE Owned	108	149	150	105	52	121	104	89	88	101	95	86	63	55	37	12

## **ASIAN PRIVATE EQUITY ANALYSIS**



## PE PPMs experienced the sharpest year-overyear decline in 2023 since at least 2007

Public valuations remained elevated but below 2021 highs

AVERAGE EBITDA PURCHASE PRICE MULTIPLES AT ACQUISITION OF ASIAN PRIVATE EQUITY-OWNED COMPANIES VS PUBLIC COMPANIES As of December 31, 2023 • Enterprise Value/EBITDA





PE Owned

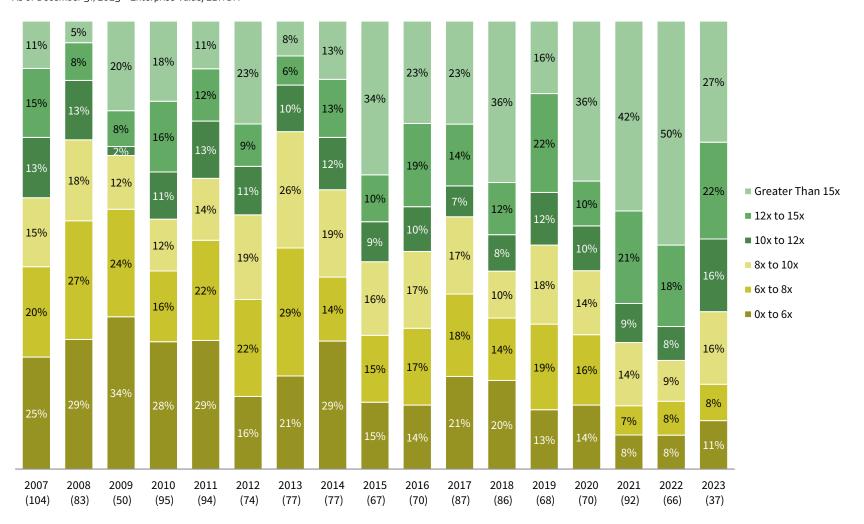
MSCI AC Asia Pacific Index

# The year-over-year decline in PPMs was driven largely by a drop in the percentage of deals that transacted at greater than 15x

Amid a slower year, about a third transacted at PPMs of less than 10x

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

As of December 31, 2023 • Enterprise Value/EBITDA

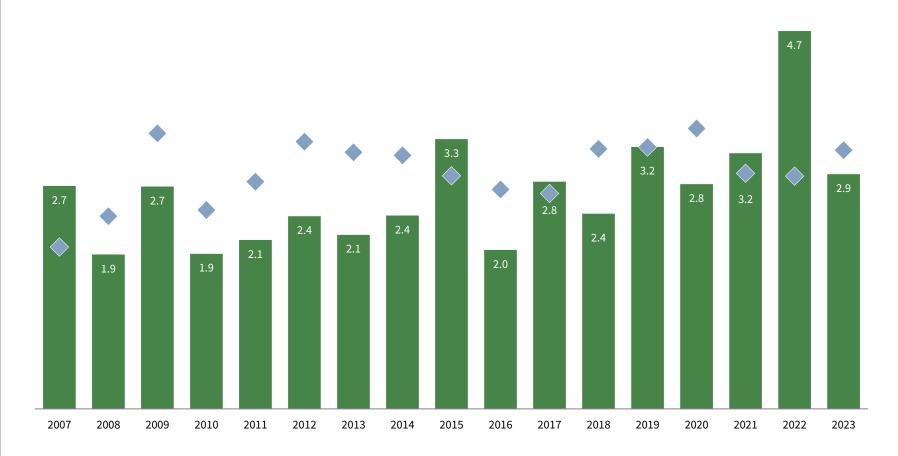


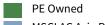
## PE leverage multiples receded and moved closer to their long-term average (2.7x) in 2023

The growth equity tilt in the Asia PE sample often results in less leverage relative to the United States and Europe, as well as public markets

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

As of December 31, 2023 • Net Debt/EBITDA





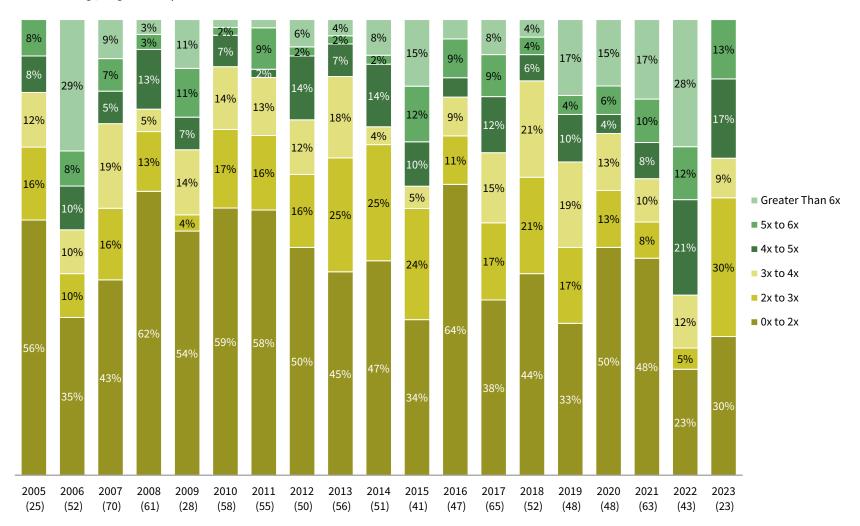
MSCI AC Asia Pacific Index

## All companies were acquired with leverage multiples lower than 6x in 2023

Over the long term, 10% of companies have been purchased with more than 6x leverage

#### LEVERAGE MULTIPLE BREAKDOWN OF ASIAN PRIVATE EQUITY-OWNED COMPANIES

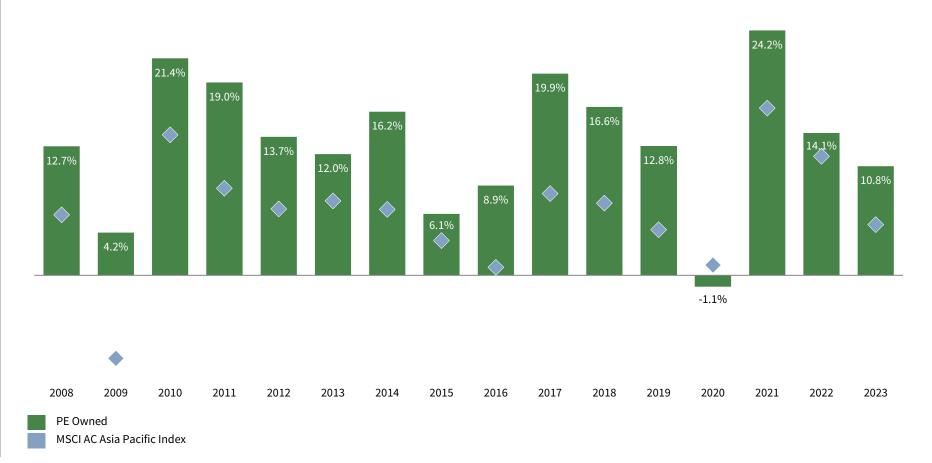
As of December 31, 2023 • Net Debt/EBITDA



# PE and public revenue growth declined for the second straight year in 2023

Since 2008, PE companies grew revenue faster than their public counterparts in all but one year

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

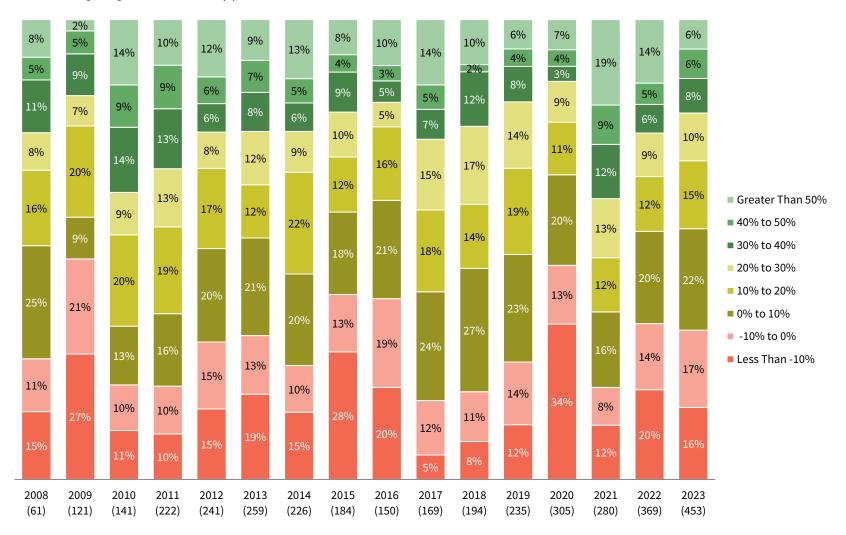




## Similar to 2022, one-third of companies experienced revenue declines in 2023

A slow growth environment is evidenced by a downward trend in the percentage of the fastest growers

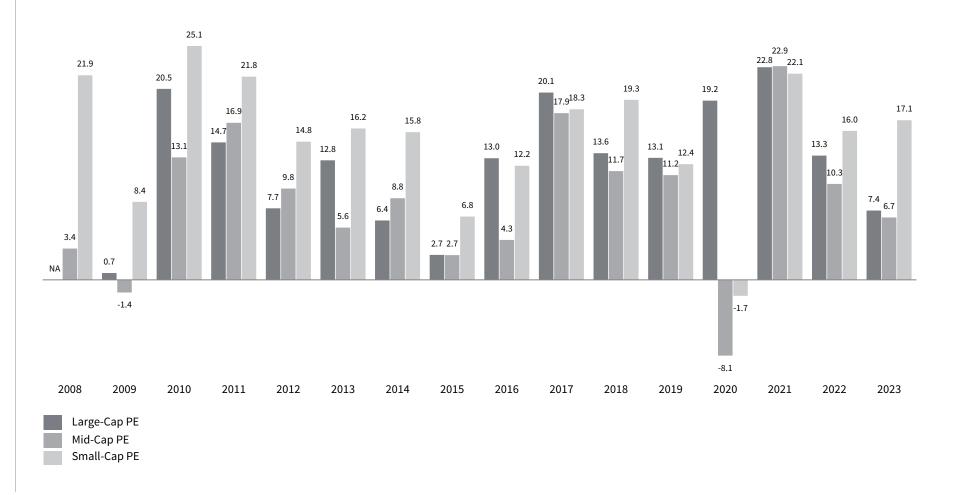
#### ANNUAL REVENUE GROWTH BREAKDOWN OF ASIAN PRIVATE EQUITY-OWNED COMPANIES



# The overall revenue growth decline in 2023 appears to be driven primarily by the larger end of the market

Except for a couple years, small companies consistently grew revenue by at least 15%

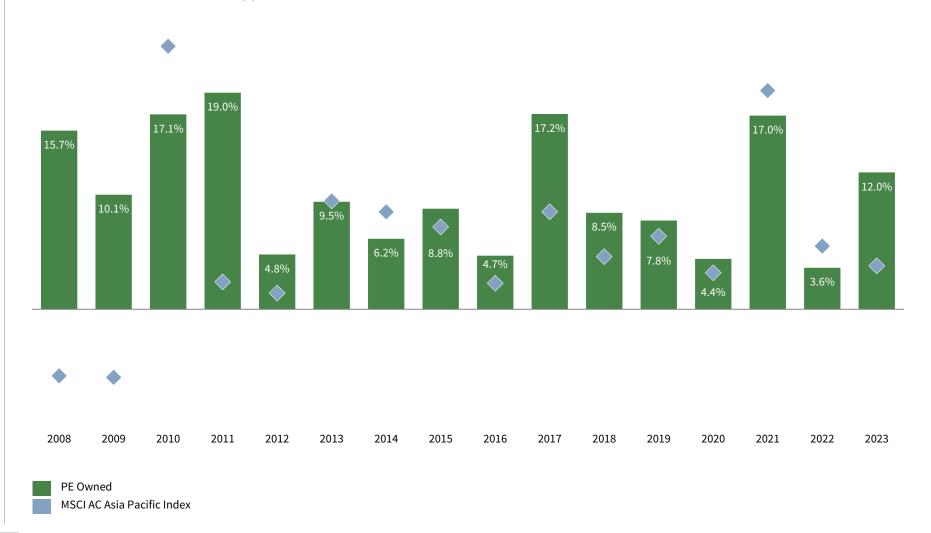
## AVERAGE ANNUAL REVENUE GROWTH OF ASIAN PRIVATE EQUITY-OWNED COMPANIES BY ENTERPRISE VALUE SEGMENT



# EBITDA growth for PE companies recovered well in 2023 as mangers focused on profitability

Public company growth fell for a second straight year

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

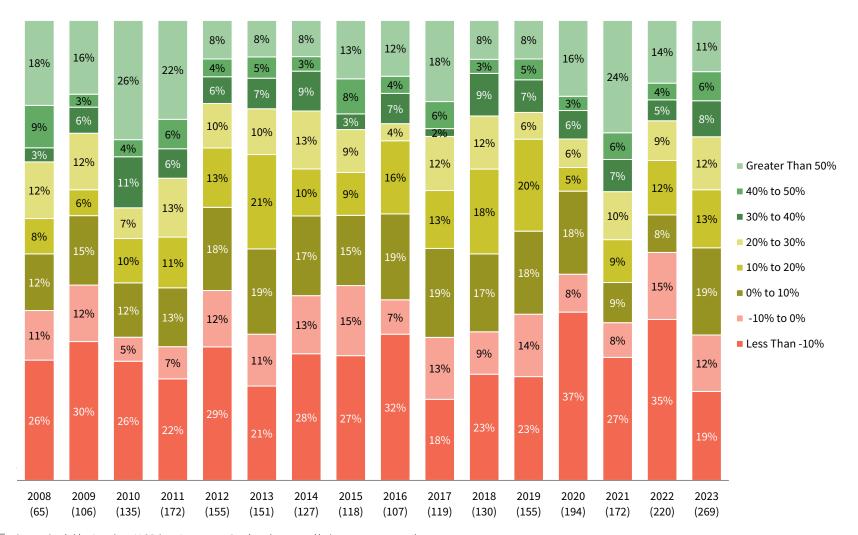




## The percentage of companies that failed to grow EBITDA returned to normal in 2023

The proportion of companies that grew EBITDA at a rate greater than 30% was relatively flat from the prior year, and down significantly from 2021

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

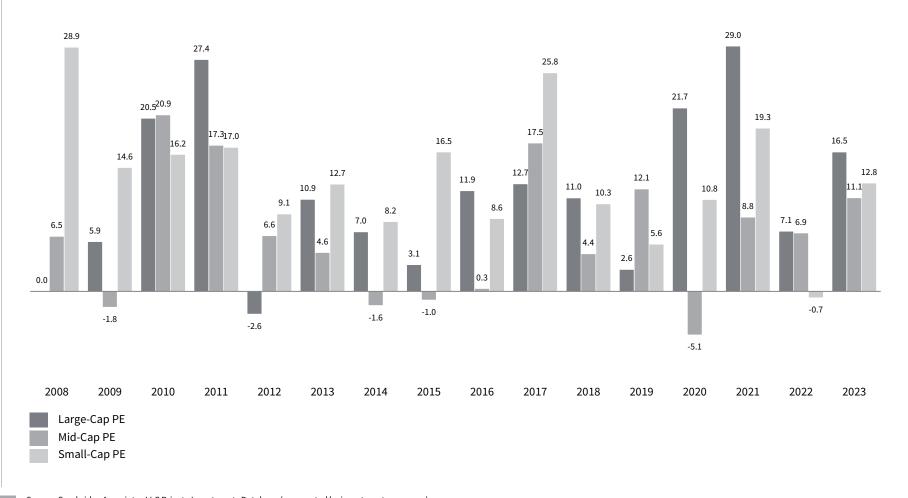




## In 2023, EBITDA growth among all three size groups was historically aligned

Small companies, however, averaged the highest annual EBITDA growth than any of the size segments over the full time period

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



# EBITDA margins for PE and public companies have been remarkably consistent over the full period

Both tend to hover around 20%

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

As of December 31, 2023 • EBITDA/Revenue (%)



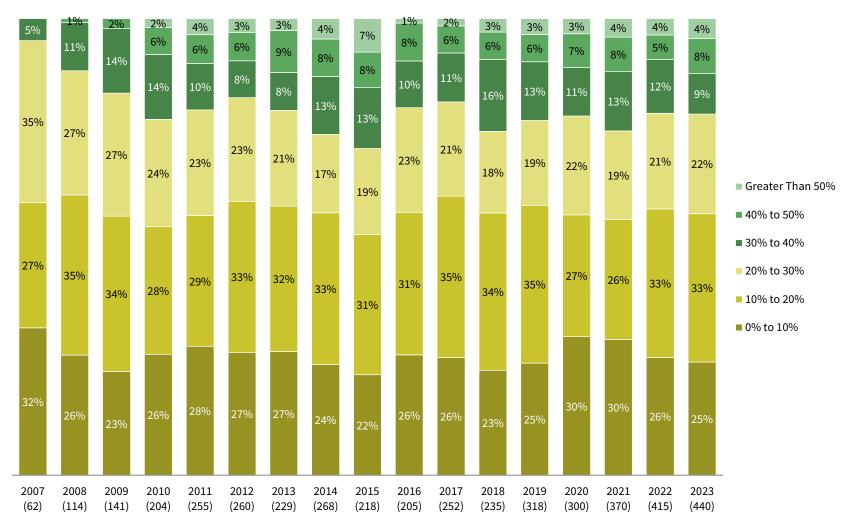


MSCI All Country Europe Index

## The dispersion of PE company margins has been stable over time

More than half have operated at margins between 10% and 30%

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

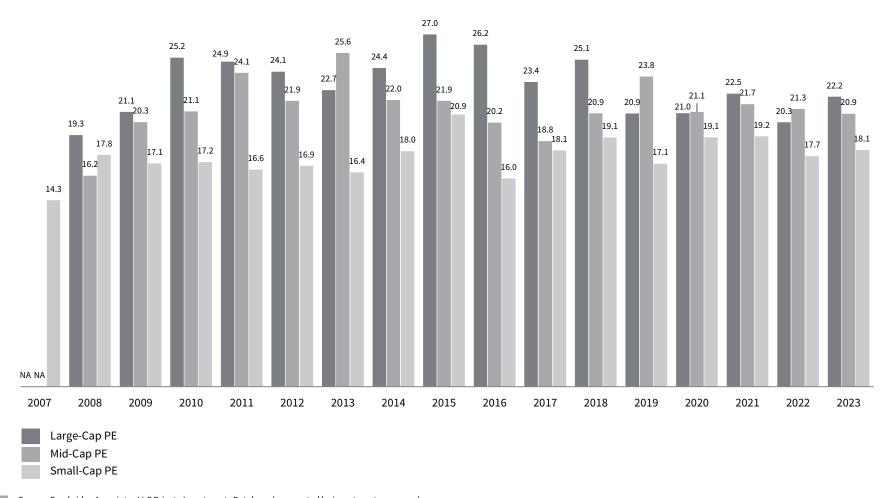




# EBITDA margins have historically been correlated with company size. Large companies have averaged the highest, and small the lowest

But the difference among the size segments has been less pronounced since 2020

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





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