



**VERDAD**

# Persistence and Predictability of Growth

*Ben Graham Centre for Value Investing | Ivey Business School*

*February 2026*

# The Academic Evidence

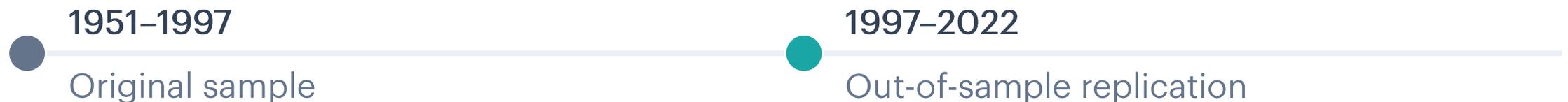
Chan, Louis K. C., Jason Karceski, and Josef Lakonishok (2003)  
“The Level and Persistence of Growth Rates.” *Journal of Finance*

**Key Finding:** While some firms achieve spectacular growth, they are rare. Long-term earnings growth does not persist beyond what we’d expect to see by random chance.

**Question for this presentation:**

“Did anything change over the next 25 years?”

Out-of-sample test: all U.S. stocks (1997–2022).



# Probability of Above-Median Growth Over Successive Years

## Persistence of Growth Rates (1997–2022)

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	50.0%	25.5%	14.8%	9.1%	5.9%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>0.5%</i>	<i>2.3%</i>	<i>2.9%</i>	<i>2.8%</i>
EBITDA	50.0%	24.2%	13.0%	7.4%	4.5%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-0.8%</i>	<i>0.5%</i>	<i>1.2%</i>	<i>1.4%</i>
EBIT	50.0%	24.5%	13.3%	7.8%	4.8%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-0.5%</i>	<i>0.8%</i>	<i>1.6%</i>	<i>1.7%</i>
EBT	50.0%	24.3%	13.3%	7.7%	4.7%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-0.7%</i>	<i>0.8%</i>	<i>1.5%</i>	<i>1.6%</i>
<b>Base Case (chance)</b>	<b>50.00%</b>	<b>25.00%</b>	<b>12.50%</b>	<b>6.25%</b>	<b>3.13%</b>

# No Persistence, Even Among Firms That Start in the Top Quartile

## Persistence Among Firms Starting in the Top Quartile (1997–2022)

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	58.1%	31.0%	18.8%	12.0%	8.0%
<i>% Difference from chance</i>	8.1%	6.0%	6.3%	5.8%	4.9%
EBITDA	48.8%	23.0%	12.3%	6.8%	4.0%
<i>% Difference from chance</i>	-1.2%	-2.0%	-0.2%	0.6%	0.9%
EBIT	47.2%	22.2%	11.7%	6.5%	3.8%
<i>% Difference from chance</i>	-2.8%	-2.8%	-0.8%	0.3%	0.7%
EBT	45.1%	21.3%	11.3%	6.2%	3.6%
<i>% Difference from chance</i>	-4.9%	-3.7%	-1.2%	-0.1%	0.5%
<b>Base Case (chance)</b>	<b>50.00%</b>	<b>25.00%</b>	<b>12.50%</b>	<b>6.25%</b>	<b>3.13%</b>

Sources: S&P Capital IQ and Verdad research

# International Evidence

## Persistence of Growth Rates in Europe and Japan (1997–2022)

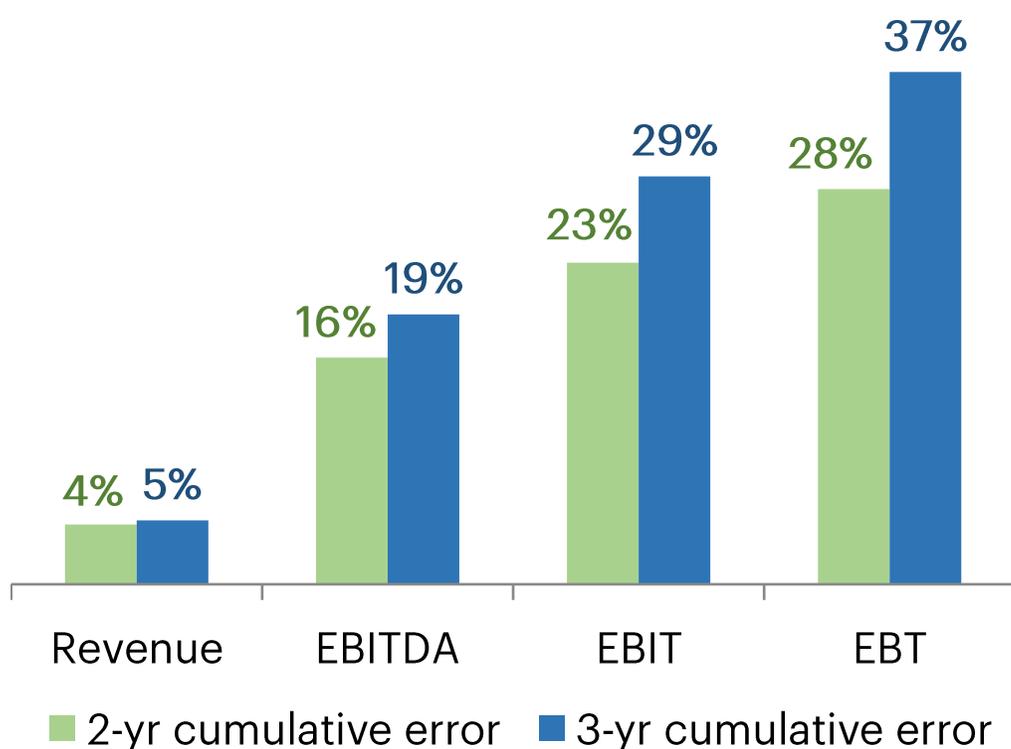
Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	50.0%	24.8%	13.2%	7.6%	4.5%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-0.2%</i>	<i>0.7%</i>	<i>1.4%</i>	<i>1.4%</i>
EBITDA	50.0%	22.7%	10.6%	5.4%	2.9%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-2.3%</i>	<i>-1.9%</i>	<i>-0.9%</i>	<i>-0.2%</i>
EBIT	50.0%	23.5%	11.7%	6.1%	3.4%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-1.5%</i>	<i>-0.8%</i>	<i>-0.2%</i>	<i>0.3%</i>
EBT	50.0%	23.6%	12.0%	6.5%	3.8%
<i>% Difference from chance</i>	<i>0.0%</i>	<i>-1.4%</i>	<i>-0.5%</i>	<i>0.3%</i>	<i>0.7%</i>
<b>Base Case (chance)</b>	<b>50.00%</b>	<b>25.00%</b>	<b>12.50%</b>	<b>6.25%</b>	<b>3.13%</b>

Sources: S&P Capital IQ and Verdad research

# Growth is Hard to Predict (Even for Analysts)

Forecasts errors worsen over longer horizons and further down the income statement

## Analysts Tend to Overshoot on Average



## Analyst Forecast vs. Actual Growth (1997–2022)

### 2-Year Median Forecasts

	Revenue	EBITDA	EBIT	EBT
Annualized Growth				
Median 2-Year Estimate	8.2%	13.7%	16.3%	18.2%
Actual 2-Year Growth	6.2%	6.3%	5.9%	5.6%
<b>Cumulative Error</b>	<b>4.3%</b>	<b>16.3%</b>	<b>23.1%</b>	<b>28.4%</b>

### 3-Year Median Forecasts

	Revenue	EBITDA	EBIT	EBT
Annualized Growth				
Median 3-Year Estimate	7.1%	11.2%	13.5%	15.1%
Actual 3-Year Growth	5.7%	5.7%	5.4%	5.0%
<b>Cumulative Error</b>	<b>4.6%</b>	<b>19.4%</b>	<b>29.3%</b>	<b>36.8%</b>

At the median, analysts would do better to simply forecast nominal GDP growth (~5%)

# Analysts Can Separate Winners from Losers...

## Analysts' Accuracy When Sorting Into 3-Year Growth Quintiles (1997–2022)

**REVENUE**

		Outcome				
		5	4	3	2	1
		Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Forecast	5	48%	24%	11%	7%	9%
	4	15%	31%	25%	15%	13%
	3	9%	21%	30%	24%	16%
	2	6%	12%	29%	34%	20%
	1	6%	9%	16%	32%	38%

**EBITDA**

		Outcome				
		5	4	3	2	1
		Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Forecast	5	48%	19%	9%	9%	14%
	4	20%	28%	20%	17%	15%
	3	10%	26%	29%	20%	15%
	2	6%	17%	34%	29%	14%
	1	7%	12%	21%	31%	30%

Source: S&P Capital IQ  
Verdad research

# ...But Errors Are Bigger Among High-Growth Firms...

Yet high-flying firms are often “priced to perfection”

Quintiles of Analyst Growth Forecasts (1997–2022)					
Revenue	Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Annualized Growth					
3-Year Estimate	19.4%	10.7%	7.1%	4.6%	0.9%
Actual 3-Year Growth	15.4%	7.8%	4.9%	2.7%	-0.5%
<b>Cumulative Error</b>	<b>16.4%</b>	<b>10.3%</b>	<b>7.4%</b>	<b>5.9%</b>	<b>4.2%</b>
EBITDA	Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Annualized Growth					
3-Year Estimate	33.1%	17.2%	11.2%	7.3%	1.3%
Actual 3-Year Growth	18.8%	8.7%	5.9%	3.6%	-1.2%
<b>Cumulative Error</b>	<b>68.2%</b>	<b>32.4%</b>	<b>18.8%</b>	<b>12.2%</b>	<b>7.7%</b>

# ...And Errors Are Also Magnified Further Down the Income Statement

Valuation multiples are more likely to contract among high-expectation firms

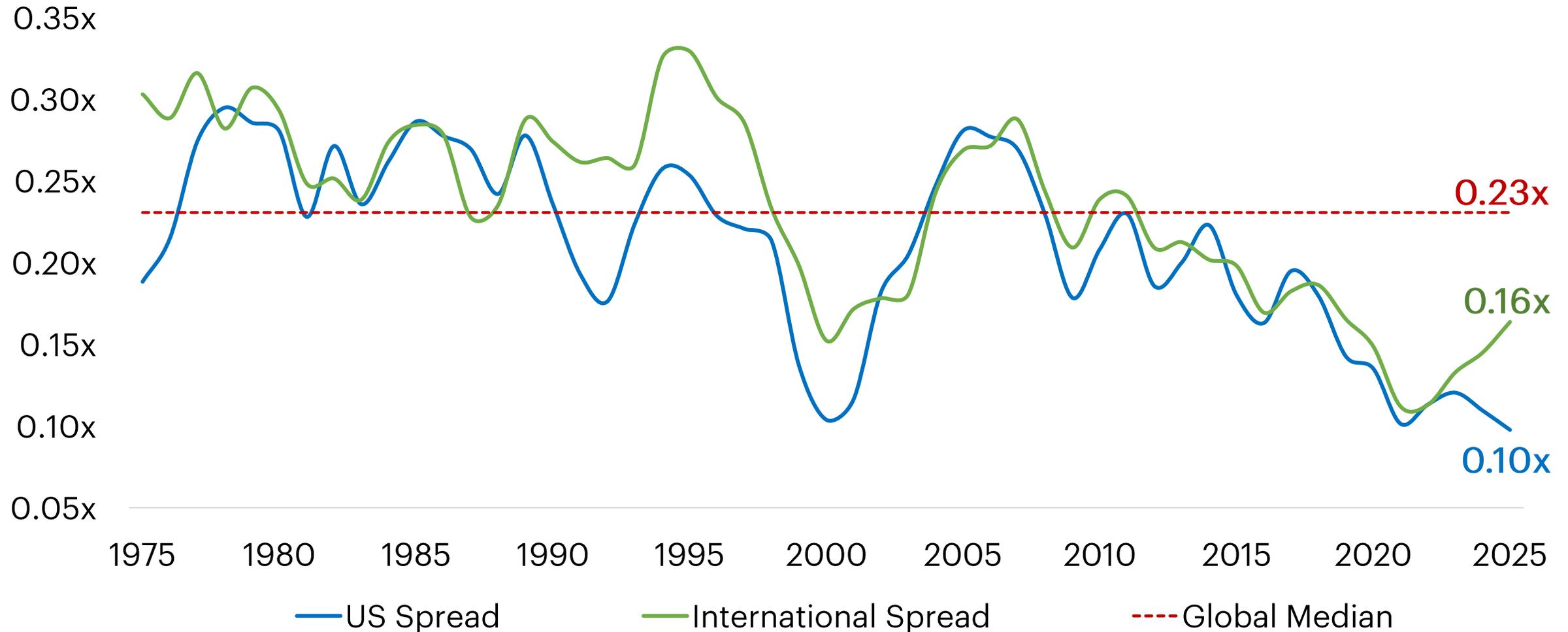
## Quintiles of Analyst Growth Forecasts (1997–2022)

EBIT	Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Annualized Growth					
3-Year Estimate	42.3%	21.0%	13.5%	8.6%	1.5%
Actual 3-Year Growth	20.1%	9.7%	5.8%	3.1%	-2.9%
<b>Cumulative Error</b>	<b>115.0%</b>	<b>44.9%</b>	<b>28.0%</b>	<b>18.7%</b>	<b>13.2%</b>

EBT	Q5 (High)	Q4	Q3	Q2	Q1 (Low)
Annualized Growth					
3-Year Estimate	50.7%	24.2%	15.1%	9.5%	2.5%
Actual 3-Year Growth	21.6%	8.2%	5.3%	2.9%	-3.7%
<b>Cumulative Error</b>	<b>162.7%</b>	<b>65.0%</b>	<b>35.8%</b>	<b>22.4%</b>	<b>18.3%</b>

# Valuation Spreads Are Near Historical Extremes

Disruption of the “recurring revenue” growth story would provide support for value



Source: Ken French data library. Spread is measured as value P/B divided by growth P/B.

# **Verdad Equity Strategy Example: Verdad Europe Fund**

# Verdad Specializes in Deep Value Micro-Caps

Europe offers an attractive combination of value and quality off the beaten path

- **We buy very small companies:** Our median holding has \$410M of market cap, and three quarters of our portfolio is within the smallest 5% of aggregate European market cap
- **Valuations are attractive:** We have built a portfolio in Europe that trades at 5.3x EBITDA and 0.7x Price/Book at the median
  - Europe is cheap vs. the US, small caps are cheap vs large caps, and our portfolio is cheaper still
  - We are in the sweet spot for PE: 94% of buyout transactions are below €150M of equity
- **In Europe, you're not sacrificing quality:** We are able to buy companies that have GP/A ratios of 40% on average
- **We focus on levered companies that generate high free cash flow (12.6% FCF yield) and are in the process of paying down debt**

# We Buy Very Small Companies...

Verdad Europe Fund		
Market Cap Percentiles (\$ Mil)		
90%	(Top 10%)	\$1,896
75%		\$988
50%	(Median)	\$410
25%		\$174
10%	(Bottom 10%)	\$102

Source: S&P Capital IQ (January 2026)

# ... At Deeply Discounted Valuations

## Verdad Europe Fund

### Valuation Percentiles (Price/Book)

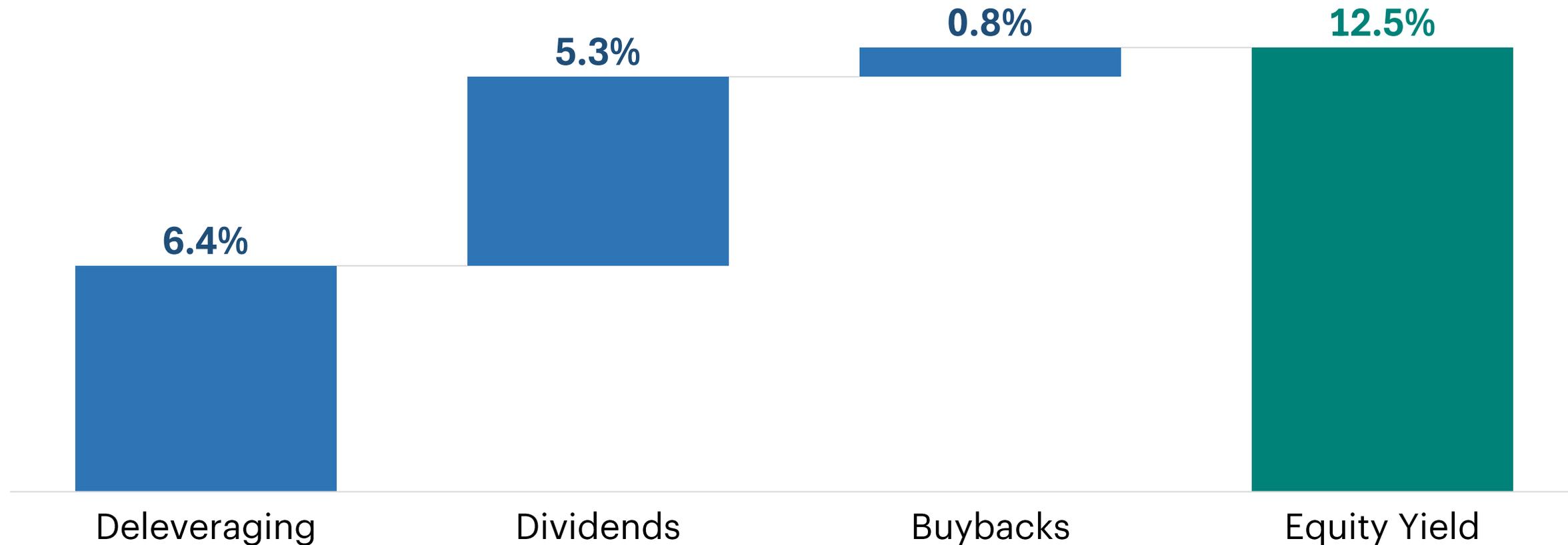
90%	(Top 10%)	1.7x
75%		1.1x
50%	(Median)	0.7x
25%		0.6x
10%	(Bottom 10%)	0.5x

### Valuation Percentiles (EV/EBITDA)

90%	(Top 10%)	7.1x
75%		6.1x
50%	(Median)	5.3x
25%		4.2x
10%	(Bottom 10%)	3.7x

# Our Firms Primarily Allocate Free Cash Flow to Deleveraging

## Verdad Europe's Capital Allocation in 2025



Adding nominal GDP growth to this equity yield results in a mid-to-high teens expected return

# Q&A

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