

## Growth vs. Value: Interest Rates as a Driver of Style-Relative Performance

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In this paper, we offer our perspectives on interest-rate shifts as a driver of both performance and valuation differentials between Growth and Value equity styles, particularly over the last 15 years. We focus on fundamental drivers that specifically interact with interest rates and have significant implications for valuation.

In explaining the link between Growth vs. Value performance and interest rates, market commentary has tended to focus primarily on differences in the distribution of cash flow over time. Growth stocks have projected cash flows weighted further in the future, and thus are more sensitive to changes in discount rates compared to value stocks. We view this dynamic as accurate and important, but likely incomplete on its own.

We believe a company's competitive dynamics and barriers to entry are other factors influencing a stock's valuation and sensitivity to changes in interest rates over time. We further posit that Growth indexes are more likely to include companies with higher barriers to entry vs. Value indexes—at least when considering the last 15 years. Taken together, this suggests additional mechanisms may drive Growth's higher valuation sensitivity to changes in interest rates as compared to Value.

AUTHORS

PORTFOLIO SOLUTIONS GROUP

*Specialists in designing and managing custom multi-asset, multi-manager investment solutions that span from broadly diversified to focused portfolios. The team's expertise lies in partnering with institutional and high net worth investors to understand their unique needs and crafting solutions to help them achieve their overall investment objectives.*

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We see three reasons why exploring these Growth vs. Value valuation dynamics may be beneficial for investors:

- Offers a more complete explanation of the past 15-year performance gap:** The performance and valuation gap between Growth and Value over the last 15 years in the context of falling interest rates has been extreme (*Displays 1 and 2*). These gaps have only partially reset as interest rates have moved higher. This period of Growth outperformance can be more easily understood when integrating mechanisms related to differing competitive dynamics.
- Exposes factors that may impact future performance differentials:** Apart from understanding past dynamics affecting Growth vs. Value performance, we believe our framework may be useful in understanding potential future trajectories/complexities. Rather than a purely mechanical relationship between shifting interest rates and stock valuations—we believe the experience of the past 15 years partly reflects an interaction between interest rates and competitive dynamics. Competitive dynamics are of course not static, but ever evolving. **Functionally, as asset allocators, this means we cannot depend purely on a forecast of the path of interest rates and management of style exposures based on historical correlations.** We also need to consider the insights from active equity managers around the interaction between evolving competitive dynamics and the shifting cost of capital.

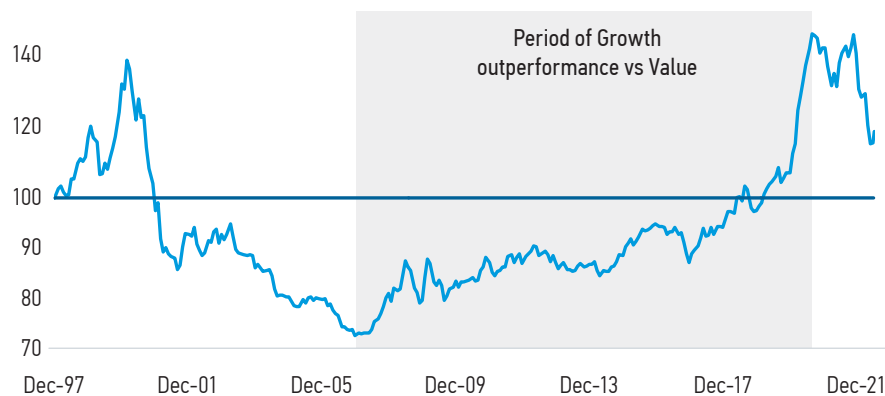
- Points out links to other key thematic trends:** A notable trend in recent years has been the rising concentration of top large-cap names within equity indexes driving returns; this is especially true for Growth indexes rather than Value indexes. Alongside concentration at the top, there has also been concern around weak productivity and market

congestion at the bottom—an issue now most often encapsulated under the term “zombie companies”. We believe both themes can be viewed as additional symptoms of the competitive dynamic differentials we believe play a role in mitigating valuation sensitivity to interest rates.

#### DISPLAY 1

### A long period of Growth outperformance relative to Value

MSCI World Growth vs. Value; indexed to 100 as of 12/31/1997, log scale



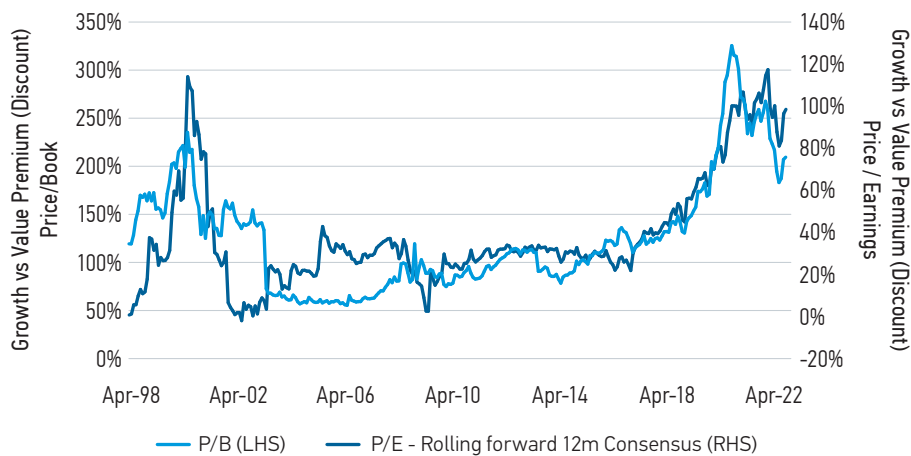
As of July 11, 2022

Source: Bloomberg, Morgan Stanley.

#### DISPLAY 2

### A widening valuation gap between Growth and Value

MSCI World Growth vs Value; valuation premium (discount) over time



As of July 11, 2022

Source: Bloomberg, Morgan Stanley.

## Preface

To avoid potential confusion, we offer some quick notes on the intended scope of this paper. When approaching the terms Growth and Value, our focus is on commonly used Growth and Value style indexes.

Additionally, it is not our intention to analyze or discuss all the various drivers of Growth vs. Value relative performance. **Our focus is on interest rates as a driver of both performance and valuation differentials, and the fundamental drivers that specifically interact with interest rates with implications for valuation.**

## Deconstructing the Mechanics Linking Rates to Growth vs. Value Performance

In framing the Growth vs. Value trade in terms of interest-rate duration, the most common explanation focuses on how cash flows are distributed over time: Cash flows for growth stocks sit farther in the future, making the discounted value of Growth more sensitive than Value to changes in the discount rate. This explanation focuses specifically on how changes in the discount rate impact valuation for stocks with different growth trajectories. From a fundamentals perspective, however, we think there is another important factor to consider. **We believe a company's competitive dynamics play a critical role in affecting the sensitivity of the stock's valuation to interest rates.** In our view, layering this on top of the timing of cash-flow distributions provides a more complete explanation for the magnitude of performance and valuation disparities between Growth vs. Value over the last 15 years as interest rates declined.

### ESTABLISHING THE LINK BETWEEN COMPETITIVE DYNAMICS AND INTEREST-RATE SENSITIVITY

A company's growth rate can be viewed as a function of the returns it can generate from allocating capital. While many

factors play into those returns, over time competitive dynamics should constrain a company's returns relative to its cost of capital. **Where excess returns are high and barriers to entry are low, new competitors will be drawn into the market.** Over time, that additional competition will erode excess returns until the incentive for new entrants is eliminated. Since interest rates are a core driver of cost of capital, this means that falling interest rates might over time lead to lower returns on company investment, with the degree of sensitivity dictated by competitive dynamics. **Company returns should be strongly linked to changes in cost of capital where barriers to entry are low (over a long enough time frame), or weakly linked where barriers to entry are high.**

The relevance to **Growth vs. Value comes from an assertion that Growth in aggregate tends toward higher barriers to entry than Value**, or at least has over the last 15 years—we look to support this assertion more directly later in the paper. If this assertion holds, then companies in Growth indexes may be better able to sustain returns on capital with relative insensitivity to shifts in the cost of capital. Conversely for companies in Value indexes, a falling cost of capital over time might translate to lower returns on invested capital, as competitive dynamics keep returns in check.

If viewing valuation through the lens of **discounted cash-flow valuation**, the following implications might apply. If interest rates fall and drive relevant cost of capital lower, both Growth and Value would benefit from a lower discount rate. Growth would see significant benefit, both because base-level growth is higher (cash flows weighted further in the future) and growth rates may persist regardless of a lower cost of capital. Value would already see less valuation upside relative to Growth given a lower growth rate (cash flows more weighted toward the present). Moreover, valuation upside might be further reduced

by a decline in cash flow growth (or, alternatively, require greater investment for the same level of growth) as competitive dynamics push company returns on capital toward the new, lower cost of capital.

### A PRICE-TO-BOOK FRAMEWORK IS USEFUL IN ILLUSTRATING VALUATION IMPLICATIONS

A price-to-book ratio (P/B) can be linked to a valuation model based on discounted cash flows. Breaking down P/B in discounted cash flow form helps to identify drivers that hold relevance to our conceptual model. Valuation textbooks build out the P/B link to discounted cash flow valuation as follows (Damodaran, n.d.), starting with Gordon Growth Model.

$$P = \frac{D}{(r - g)}$$

Replacing dividend with an equivalent net income\* payout ratio, and dividing by book value, transforms the dividend discount model to a form that explains price-to-book.

$$\frac{P}{B} = \frac{ROE * \text{Payout Ratio}}{(r - g)}$$

Using the sustainable growth rate formula, we can further replace growth.

$$\frac{P}{B} = \frac{ROE * \text{Payout Ratio}}{r - ((1 - \text{Payout Ratio}) * ROE)}$$

The functional implication of this formula is that P/B can be thought of as a function of return on equity (ROE), the payout ratio and the cost of equity. Specifically, the following implications apply:

- P/B should be negatively correlated with the discount rate, all else equal.
- P/B should be positively correlated with ROE.
- P/B ends up being a function of the differential between ROE and the cost of equity. If ROE and the cost of equity are equal, P/B always equals 1.

### DISPLAY 3

#### Understanding the conceptual valuation implications

In this example, the positive valuation implications of a decline in the cost of capital are relatively muted if ROE moves down alongside the cost of capital.

	IF INTEREST RATE FALLS BY 300BPS			NOTES
	BASE	HIGH BARRIER EXAMPLE	LOW BARRIER EXAMPLE	
Discount rate	9.0%	6.0%	6.0%	The discount rate change is the same
Interest rate	4.0%	1.0%	1.0%	
ERP	5.0%	5.0%	5.0%	
Payout ratio	85.0%	85.0%	85.0%	
ROE	15.0%	15.0%	12.0%	ROE is unchanged for "high barrier", but falls in "low barrier" example
Excess Returns	6.0%	9.0%	6.0%	Excess returns increase for the "higher barrier" example
<b>Implied P/B</b>	<b>1.9x</b>	<b>3.4x</b>	<b>2.4x</b>	A greater multiple impact for the "high barrier" example
Change vs base		80%	29%	

Source: Morgan Stanley.

With this perspective, **shifts in P/B ratios require an understanding of what drives cost of equity, return on equity and the differential between the two (i.e., excess returns)**. The following is relevant in our view:

- **Cost of equity** can be defined simply as the risk-free rate plus an equity risk premium. While debates can be had regarding the current equity risk premium, it is reasonable to assume that cost of equity falls alongside declining risk-free rates.
- Conceptually speaking, **ROE** can be viewed as representing the return a company can generate by putting capital to work. The return on investment is then a fundamental driver of the company's growth outlook.
- In theory, a company's ability to generate and maintain excess returns (ROE less cost of equity) relates to competitive dynamics, with higher competition and lower barriers to entry tending to drive return on equity toward the cost of capital.

#### P/B LINKED TO GROWTH VS. VALUE: FACTORS/DYNAMICS DRIVING VALUATION IMPLICATIONS.

The basic premise of the above is that P/B multiples are driven principally by ROE and the cost of capital. Moreover, it suggests that ROE and cost of capital can themselves be linked, depending on competitive dynamics. To illustrate, we look at the valuation implications of falling cost of capital for companies operating with either high barriers to entry or low barriers to entry.

- **High barriers to entry:** A company with high barriers to entry may be able to maintain a high ROE regardless of changes in the cost of equity. In this case, a falling cost of equity implies higher excess returns (ROE less cost of equity), driving P/B higher.
- **Low barriers to entry:** A company facing greater competition may see ROE trend toward the cost of equity. In this case, a falling cost of equity may eventually imply declines in ROE, partially negating valuation benefits from the lower cost of equity.

In the table above, we run some illustrative numbers through the P/B formula to see how these dynamics could drive different levels of valuation sensitivity to changes in the cost of capital. We see more valuation upside with falling cost of capital if ROE is unchanged (higher excess returns) than when excess returns are fixed and ROE falls alongside a lower cost of capital.

This holds relevance to Growth vs. Value performance gaps because we believe that Growth has tended toward higher barriers to entry and Value toward lower barriers to entry. That effect is then amplified through the baseline characteristics of the Growth and Value styles. Growth indexes typically have higher ROE's and lower payout ratios, which translates to higher growth. Value indexes typically have lower ROE's and higher payout ratios, which translates to lower growth. We see an even more dramatic differential in valuation sensitivity to lower cost of capital. The same change in cost of capital carries far higher multiple expansion implications for Growth than it does for Value.



**DISPLAY 4****Understanding the conceptual valuation implications**

In this example, the positive valuation implications of a decline in the cost of capital are relatively muted if ROE moves down alongside the cost of capital.

	<b>GROWTH (HIGH BARRIER) BEFORE</b>	<b>GROWTH (HIGH BARRIER) AFTER</b>	<b>VALUE (LOW BARRIER) BEFORE</b>	<b>VALUE (LOW BARRIER) AFTER</b>	<b>NOTES</b>
Discount rate	9.0%	6.0%	9.0%	6.0%	The discount rate change is the same (-300 bps)
Interest rate	4.0%	1.0%	4.0%	1.0%	
ERP	5.0%	5.0%	5.0%	5.0%	
Payout ratio	75.0%	75.0%	95.0%	95.0%	
ROE	18.0%	18.0%	12.0%	9.0%	Growth ROE assumed higher and unaffected by change in cost of capital
Excess Returns	9.0%	12.0%	3.0%	3.0%	Value excess returns lower, and remain unchanged after rate decline
<b>Implied P/B</b>	<b>3.0x</b>	<b>9.0x</b>	<b>1.4x</b>	<b>1.5x</b>	A greater implied multiple impact for Growth vs Value
Change vs base		200%		14%	

Source: Morgan Stanley.

**P/B IS A USEFUL CONCEPTUAL LENS, BUT THERE ARE LIMITATIONS IN PRACTICAL APPLICATION.**

First, we think the formula used in tying ROE and cost of capital to P/B is conceptually sound, but lacks nuance as a tool to directly evaluate market valuation. Second, we recognize that both P/B and ROE are imperfect valuation metrics, subject to various accounting distortions. For these reasons, we focus on the illustrative examples above, rather than attempting to accurately capture specific market metrics or use that exercise to determine if the market is appropriately pricing Growth relative to Value.

**BARRIERS TO ENTRY AND DIFFERENTIALS BETWEEN GROWTH VS. VALUE**

A key assumption in the conceptual framework described above is that **companies and sectors in Growth indexes tend toward higher barriers to entry, while companies and sectors in Value indexes tend to be more exposed to competitive pressures.** While we do not believe that all companies in either Growth or Value indexes can be painted with the same brush—many exceptions

will apply—we do believe that these assertions hold in aggregate. We see the most intuitive support for this in Growth vs. Value sector skews, and in considering the competitive dynamics for those sectors. **The sectors overrepresented in Value are ones where one might expect some efficiency to drive ROE alongside cost of capital, while the sectors overrepresented in Growth indexes are ones where barriers to entry might be expected to be relatively high.**

Growth and Value sector skews are detailed in *Display 5* below. Value indexes tend to have consistently greater exposure to utilities, energy and financials relative to Growth indexes. Looking at each of these three sectors, we see reasons why ROE may be more likely to move with cost of capital.

- **Energy:** As a commodity-based sector, energy is clearly tied to cost of capital, with decisions to invest in new projects linked to hurdle rates dictated in large part by capital expenditure. An E&P company will only drill if the expected returns on that additional well are

expected to exceed the cost of the machinery, people and time needed to drill that well. Returns may oscillate with supply and demand, but the hurdle rates driving decision-making are linked to cost of capital.

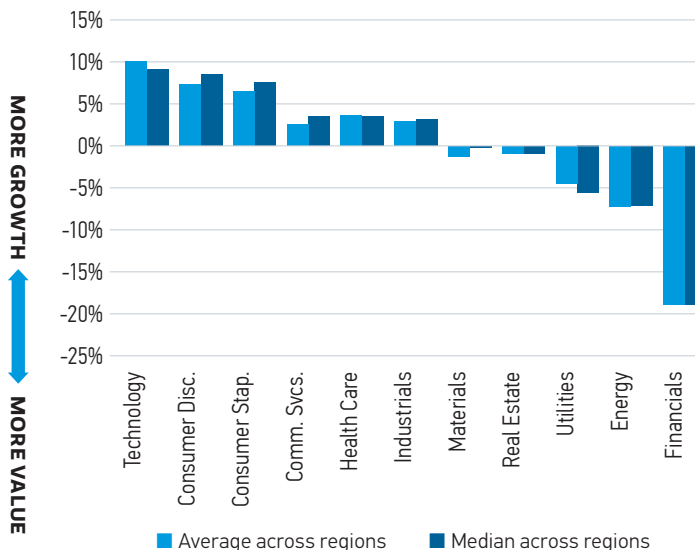
- **Financials:** Within financials and focusing on banks, ROE holds somewhat disproportionate relevance as a performance metric as it captures a company's ability to benefit from the spread between lending rates and the cost of deposits. At a sector level, competitive dynamics on both sides of the balance sheet would seem likely to drive some efficiency in aligning ROE to the cost of equity.
- **Utilities:** The regulated utilities sector often has ROE levels dictated by formulas intended to ensure a specified level of excess return relative to cost of capital. Competition might not be the driver, but the effect is the same—if cost of capital falls, ROE should fall, keeping excess returns in check.

## DISPLAY 5

### Growth vs. Value Sector Skews

The charts below show Growth index sector weights minus Value index sector weights for each region, based on average quarterly weights over the last ten years. A positive percentage indicates the higher sector weight in Growth relative to Value, a negative percentage indicates a lower sector weight in Growth relative to Value.

	MSCI WORLD	MSCI USA	MSCI EUROPE	MSCI JAPAN	MSCI EMERG. MARKETS
Technology	12.5%	16.2%	7.6%	5.2%	9.1%
Consumer Disc.	8.5%	10.6%	6.9%	0.8%	9.5%
Consumer Stap.	2.8%	-4.3%	18.3%	7.8%	7.6%
Comm. Svcs.	3.5%	7.3%	-4.5%	1.5%	5.3%
Health Care	2.4%	-0.2%	7.3%	4.8%	3.5%
Industrials	3.2%	0.7%	8.0%	3.5%	-1.0%
Materials	0.1%	-0.9%	0.2%	-0.2%	-5.7%
Real Estate	-1.5%	-0.9%	-1.5%	0.5%	-0.9%
Utilities	-5.6%	-6.1%	-7.1%	-2.3%	-1.7%
Energy	-7.0%	-7.1%	-11.4%	-1.8%	-8.5%
Financials	-18.9%	-15.4%	-23.7%	-19.6%	-17.1%



10-year average of quarterly data through second quarter 2021.

Source: Bloomberg, Morgan Stanley.

For Growth indexes, the sectors most overrepresented relative to Value are technology and consumer discretionary. Given the nature of the companies driving Growth consumer discretionary weights (e.g., Amazon), we would argue both could be captured under the technology umbrella. While competitive dynamics vary across the technology sector, it is not a stretch to argue that technological expertise, such as network effects, switching costs and feedback loops and patents create barriers to entry. Moreover, the rise of “Big Tech” has resulted in concentrated market share and focused government attention globally on sector antitrust issues, underscoring the barriers to entry issue.

### ROE Divergence and Rising Market Concentration Support This Construct

#### HOW GROWTH AND VALUE ROE TRENDS HAVE DIVERGED

If the conceptual valuation framework outlined in the previous section holds, then we would expect to see some widening in differentials for Growth ROE relative to Value ROE metrics. Looking at data from the last ten to 15 years, this does in appear to be the case. The spread between Growth index ROE and Value index ROE has widened with some consistency across regions over the last 15 years.

Since interest rates were declining long before 2006/2007, one could ask why valuation multiples did not diverge earlier,

or travel on a path more aligned with the interest-rate trend. A potential explanation is that ROE is a function of several factors. For instance, the DuPont identity decomposes ROE into the productivity of assets, operating margin, financial leverage, interest expense burden and the tax rate. It may be that companies historically responded to ROE pressures through increased financial leverage or improving margins by means of acquisition. ROE trends over the short term will also respond to the macro environment. Any stronger periods of economic performance potentially lift short-term ROEs, thereby offsetting competitive pressures.

Competitive dynamics are also inherently linked to sector-specific fundamentals.

While the valuation concepts above are useful in providing some unifying themes to potentially explain diverging valuation multiples, we believe these concepts are intrinsically linked to sector-specific drivers and how those diverge between Growth and Value indexes.

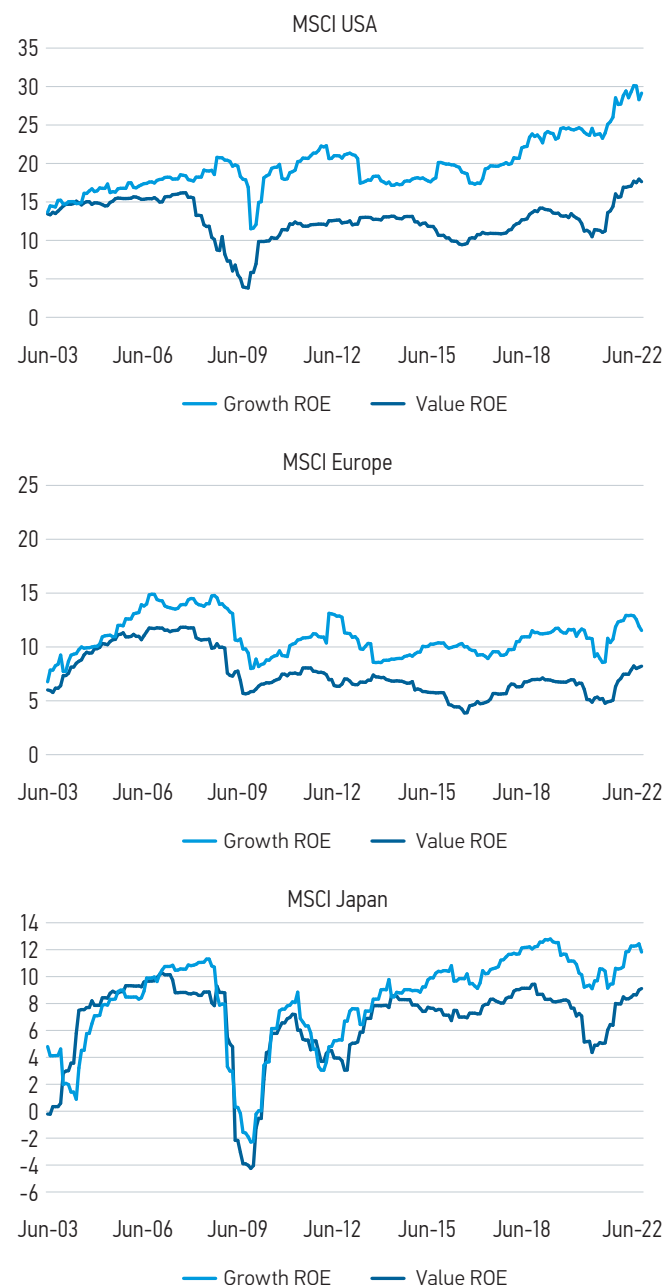
With this in mind, we lay out ROE trends for MSCI World sectors in the table below, covering 2007 to 2021, which corresponds to the recent long-term run of Growth outperformance. It is notable that sectors with a higher weight in the Growth index have tended to rise (e.g., technology), while

sectors with a higher weight in the Value index have tended to decline (e.g., energy, financials, utilities). To be sure, not all of these trends are explained specifically within the framework we have laid out, but we do believe they are directionally supportive.

**DISPLAY 6**

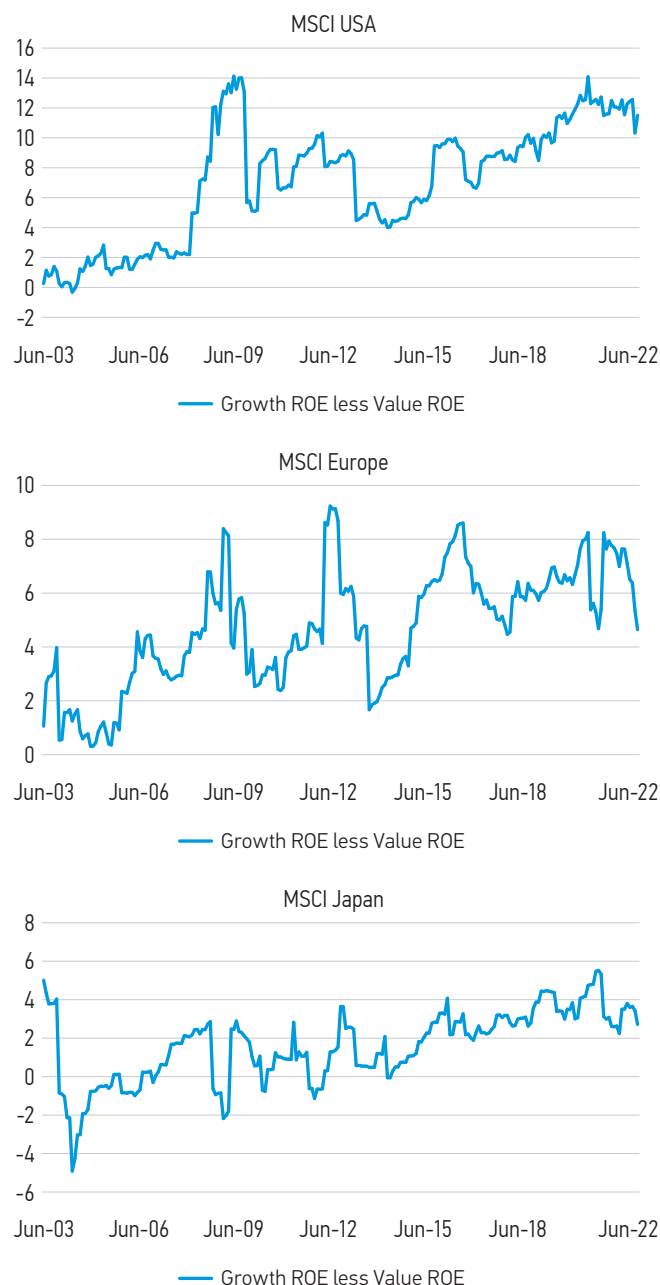
**Value and Growth ROE Trends Across Regions**

The ROE metric is provided by MSCI through Bloomberg (“MSCI ROE”)



**Value and Growth ROE Differentials Widen**

The ROE metric is provided by MSCI through Bloomberg (“MSCI ROE”)



Source: Bloomberg, Morgan Stanley.

## DISPLAY 7

### MSCI World Sector ROE Changes Since 2007: Trend Is Higher for Growth Sectors, Lower for Value

The table below shows the change in ROE for MSCI World Index sectors relative to a 2007 base. Current sector index weights for both Growth and Value are shown below. There appears to be a clear trend where sectors that hold higher weights in the Growth (Value) index have been more likely to see a rising (declining) ROE trend.

	TECH- NOLOGY	CONSUMER DISC.	COMMUN. SERVICES	INDUSTRIALS	MATERIALS	CONSUMER STAP.	HEALTH CARE	UTILITIES	ENERGY	FINANCIALS
2007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	-0.1	-1.7	1.0	0.8	-1.1	0.4	0.4	-1.5	-0.2	-6.7
2009	-6.5	-8.4	1.4	-5.9	-11.9	-0.5	-0.5	-3.0	-9.8	-15.5
2010	-0.5	-3.1	2.0	-6.3	-9.6	-0.7	-0.7	-2.7	-11.0	-9.7
2011	2.1	0.1	2.5	-3.5	-4.7	-0.1	-0.1	-5.7	-8.5	-8.1
2012	0.9	0.8	-0.4	-2.9	-8.5	-1.3	-1.3	-7.9	-8.6	-8.9
2013	-0.2	3.2	0.1	-3.1	-12.2	-0.2	-0.2	-7.1	-10.7	-8.3
2014	0.5	3.7	7.6	-3.0	-11.1	-0.8	-0.8	-6.4	-12.6	-7.6
2015	2.2	4.1	1.5	-3.1	-12.9	-1.1	-1.1	-5.6	-18.5	-7.0
2016	1.3	3.8	0.7	-3.5	-16.5	-1.3	-1.3	-6.7	-24.9	-7.8
2017	2.2	3.5	0.8	-2.3	-9.9	-0.4	-0.4	-5.4	-20.5	-7.4
2018	5.5	5.0	2.7	-0.5	-8.4	1.0	1.0	-4.6	-15.8	-6.7
2019	10.8	4.2	2.4	-1.3	-9.6	-0.2	-0.2	-4.4	-14.8	-6.2
2020	9.6	-2.0	0.8	-5.9	-12.8	-0.1	-0.1	-4.3	-24.5	-8.7
2021	13.5	1.8	3.3	-4.8	-5.8	0.8	0.8	-4.8	-20.7	-6.1

#### Current Index Weight

MSCI World Growth	35.3	15.8	10.8	9.5	2.9	5.8	11.9	0.3	1.1	5.4
MSCI World Value	8.5	6.1	4.6	10.1	5.2	9.7	16.5	5.9	8.2	20.9
<b>Growth less Value</b>	<b>26.8</b>	<b>9.7</b>	<b>6.2</b>	<b>-0.6</b>	<b>-2.3</b>	<b>-3.9</b>	<b>-4.7</b>	<b>-5.5</b>	<b>-7.1</b>	<b>-15.5</b>

Data through December 2021.

Source: Bloomberg, Morgan Stanley.

#### CONCENTRATION AMONG TOP NAMES IN GROWTH INDEXES A FACTOR

In recent years, several top names have grown to dominate index weights—and returns—within Growth indexes, while concentration has tended to fall within Value indexes. Concentration of index weight is not a pure measure of market concentration (that would be a sector level measure), but one would expect a meaningful relationship between the two. We take this as further support of our view that Growth has benefited from relatively high barriers to entry relative to Value.

Looking at data for the MSCI World Growth and Value indexes below, we can see a clear shift higher in total combined index weight of the top 25 names for the Growth index, coupled with declining concentration in the Value index. **Prior to 2017, the Value index had been more concentrated than the Growth index.** At some level, this prior dynamic makes intuitive sense, with the Value index including a greater number of large, mature (and thus slower growing) companies, and the Growth index including a greater number of small, higher-growth names.

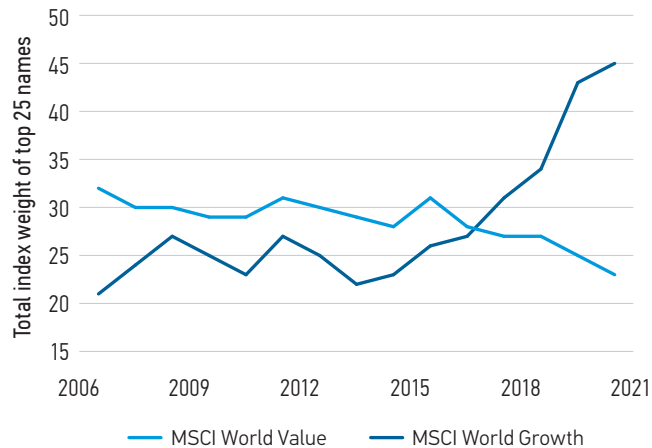
The shift since 2016 is notable and comes alongside the rise of “Big Tech.”

The largest shift has occurred in the U.S., but the trend still holds across major global regions. Growth index concentration has been rising and Value index concentration has been falling in Europe, Japan and Emerging Markets. As of 2020, the highest concentration in the top 25 names was seen in the MSCI Emerging Markets Growth Index, although this lessened in 2021 based on the impact of regulatory dynamics in China.

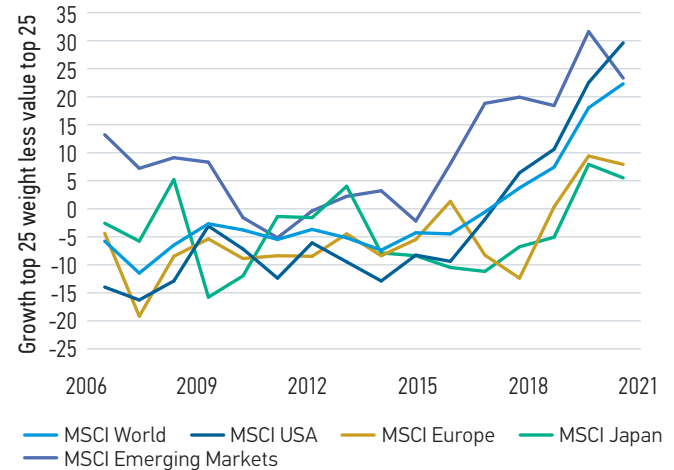


**DISPLAY 8****Rising Concentration in Growth vs. Value: 2006-2021**

The chart shows the combined weight of the top 25 index weights for both the MSCI World Growth and MSCI World Value.

**Growth Index Concentration Rising Regionally: 2006-2021**

The chart depicts the combined total weight of the top 25 names in the Growth index less the combined total weight of the top 25 names in the Value index for each region.



Data through December 2021.

Source: Bloomberg, Morgan Stanley.

**Key Implications and Related Themes to Watch**

A core focus of this paper is to establish that interest rates drive Growth vs. Value dynamics not only because of how discount rates affect valuation, but also through a deeper interaction between fundamentals and cost of capital. What this means going forward is that the relevance that interest rates hold for the Growth vs. Value trade depends in part on fundamental context. In our view, competitive dynamics and barriers to entry have significant influence over the interaction between the cost of capital and fundamentals, with consequences to performance and valuation.

To be sure, the path of interest rates will remain important—already in 2022 a notable reset in Growth vs. Value came alongside rising interest rates. Going forward, a shift away from a long-term trend of falling interest rates toward either a sideways trend or a continued climb higher will continue to hold implications for Growth vs. Value performance. It is

reasonable to assume as a starting point that if falling interest rates favored Growth over Value, then a more neutral trend would offer a more balanced picture, and a rising trend might favor Value. At a minimum, this is consistent with the time distribution of cash flows component of the valuation equation. In keeping with our view that the interaction with fundamental context matters, we see other themes and questions that might either reinforce or offset these baseline assumptions. Two questions stand out to us as most relevant and important. For Growth, we question whether certain external factors might erode the long-term sustainability of higher excess returns. For Value, we question whether the rising cost of capital can be viewed as a definitive positive across the space.

**WILL MARKET OR GOVERNMENT FORCES ERODE HIGHER EXCESS RETURNS FOR GROWTH COMPANIES?**

We have argued that Growth benefited from higher barriers to entry as cost of capital fell. With the forces of competition less effective in keeping

return on capital in check relative to falling cost of capital, excess returns widened with substantial positive valuation implications. To the extent that high Growth valuations have been facilitated both by low rates and persistently high returns, factors driving either are relevant to future Growth performance.

A lynchpin in this view is the assertion that Growth has benefited from higher barriers to entry, an assertion that seems intuitive based on the technology and technology-enabled companies that have been a rising proportion of Growth indexes. While some of these “Big Tech” trends driving concentration might simply be coincidental with a period of falling rates, it has been proposed that low interest rates could induce strategic behavior likely to produce more concentrated markets. Specifically, Liu, Mian, and Sufi argue the following in a 2020 paper titled “Low Interest Rates, Market Power, and Productivity Growth” (Liu, Mian, & Sufi, 2020):

*“Market leaders aggressively invest to escape competition when interest rates are low, whereas market followers become discouraged by the fierce competition that would be necessary to gain market leadership. This strategic force delivers a unified explanation for the presence across advanced economies of low interest rates, high market concentration, high profits, large productivity gaps between market leaders and followers, and low productivity growth.”*

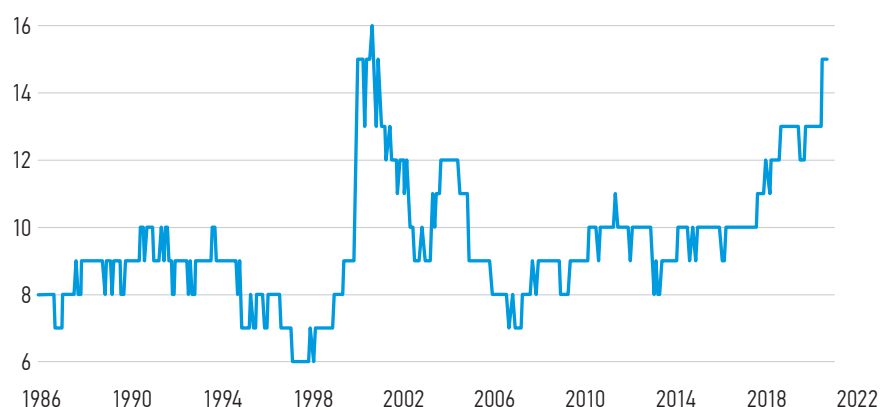
Further, there appears to be broad global concern that some technology companies may possess excessive market power, which has translated into various antitrust efforts on the part of global regulators and legislators. In the United States, issues related to antitrust and Big Tech are a point of focus across all three branches of the U.S. government (Freeman & Sykes, 2019). However, the ultimate form these efforts take remains highly uncertain, in part because current antitrust frameworks may need to be reworked. In China, antitrust regulatory action has progressed more rapidly, focused largely on key Chinese Big Tech companies that roiled markets in 2021. In Europe, the Digital Markets Act recently cleared a final vote in the European Parliament. This legislation is intended to address anticompetitive concerns related to large tech platform companies by establishing new rules for “platforms whose dominant online position make them hard for consumers to avoid” (EU Parliament Press Room, 2022).

Government intervention is one vector where we might see Growth returns forcibly realigned with cost of capital, risking potentially significant valuation resets. To the extent such regulation would focus on the largest names, the implications could be material at the index level, but arguably the breadth of impact might be limited to relatively

#### DISPLAY 9

### Some definitions of zombie companies see them rising relative to history

(Percentage of U.S. Zombie Companies in Russell 3000 Equivalent Index.)



Source: Leuthold Group and Joe Rennison, “Pandemic Debt Binge Creates New Generation of Zombie Companies,” Financial Times, September 13, 2020, via the Congressional Research Service.

few names—a potential source of divergence between passive and active Growth exposure.

#### RISING COST OF CAPITAL MAY NOT BE A CLEAR WIN FOR ALL VALUE COMPANIES

Alongside concern about rising market concentration at the top, where returns are strong, there has been concern around weak productivity and market congestion at the bottom. This theme has often been encapsulated under the term “zombie companies”. The exact definition of zombie companies varies, but essentially refers to companies with low returns and low prospects for growth.

At the core of the zombie company debate is a view that falling cost of capital has allowed some firms to survive that otherwise might have exited through bankruptcy or sale. Concerns have tended to focus on market congestion and negative implications for overall productivity.

Given various competing definitions and data sets there is no firm consensus on the prevalence of zombie companies,

nor whether current levels are in fact high relative to history. It is beyond the intended scope of this paper to weigh in on this debate. We do see the conceptual basis for concern as sound and bring focus to the issue given potential relevance to how shifts in cost of capital might drive Growth vs. Value relative performance going forward.

The common definitions on zombie companies (low returns and low prospects for growth) would tend to suggest these companies are more likely to be found in Value indexes. If this assumption is correct and a persistently higher cost of capital does lead to some cleansing of zombie companies, there is potential for disproportionate impact on the Value space with implications for the relative performance of Growth vs. Value. **Just because falling rates favored Growth relative to Value, rising rates might not be a clear win for all segments in the Value space.** If rising interest rates ultimately create both winners and losers in the Value space, it opens a potentially more complicated outlook for Value in aggregate.

## Concluding Thoughts

A major equity market theme for much of the last 15 years has been the outperformance of Growth indexes relative to Value indexes and a widening valuation gap, which occurred in the context of falling interest rates. Throughout the pandemic period, the relative performance of Growth vs. Value relative has been highly correlated with interest rates—with Growth coming to represent high duration and Value low duration. In relating interest rates to Growth vs. Value performance, market commentary has tended to focus primarily on differences in the timing of cash flow distributions. Growth stocks have projected cash flows weighted further in the future, and thus are more sensitive to changes in discount rates compared to value stocks. While we believe this influence holds, we think competitive dynamics are also a mitigating factor that further impacts the sensitivity of equity valuations to changes in interest rates.

High barriers to entry have been a fundamental tailwind for Growth stocks, which alongside falling interest

rates, have translated to expanding excess returns and, in turn, higher valuation multiples. Rising equity market concentration in the largest names within Growth indexes might also be viewed as a symptom of this dynamic. In contrast, Value stocks seem more likely to face efficient competitive dynamics, at least in aggregate. This means stocks in the Value space might face competitive dynamics likely to constrain excess returns relative to a falling cost of capital, blunting the upside for valuation. **The overall effect would be to amplify valuation disparities in the context of a falling interest rate environment.** This conceptual model, in our view, offers a potentially more complete explanation for the magnitude of performance and valuation disparities that we have seen in Growth vs. Value over most of the last 15 years.

While this conceptual model is useful in explaining past trends, in our view **it raises as many questions as it answers in considering the future.** Some of the mechanisms driving Growth's outperformance relative to Value as interest rates fell would

seem likely to operate in reverse as rates rise—most clearly the aspect related to time distribution of cash flows. This mechanism is certainly one key contributor to recent Growth underperformance relative to Value as interest rates have moved higher in 2022. Other elements are less clear, to extent they depend on an evolving fundamental context and depend on forces that operate over longer time horizons.

What this ultimately suggests to us is that the assumed impact of rising interest rates on the relative performance of Growth vs. Value over a longer time horizon is subject to a lot of questions that may ultimately be answered at a bottom-up rather than top-down level. **Functionally, as asset allocators, this means we cannot depend purely on a forecast of the path of interest rates and management of style exposures based on historical correlations emerging from the last 15 years.** We must also consider insights from active equity managers around evolving competitive dynamics and the impacts of the shifting cost of capital.

Congressional Research Service. (2020). "Zombie" Companies: Background and Policy Issues.

Damodaran, A. (n.d.). *Determinants of Price to Book Ratios*. Retrieved February 2022, from [https://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/invfables/pbv-determinants.htm](https://pages.stern.nyu.edu/~adamodar/New_Home_Page/invfables/pbv-determinants.htm)

EU Parliament Press Room. (2022, July 5). Retrieved from European Parliament Webpage - Press room: <https://www.europarl.europa.eu/news/en/press-room/20220701PR34364/digital-services-landmark-rules-adopted-for-a-safer-open-online-environment>

Liu, E., Mian, A., & Sufi, A. (2020). *Low Interest Rates, Market Power, and Productivity Growth*. University of Chicago Booth School of Business and NBER.

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**MSCI Emerging Markets Index (MSCI EM)** is a free float-adjusted market capitalization weighted index that is designed to measure equity market performance of emerging markets.

**MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe. The term "free float" represents the portion of shares outstanding that are deemed to be available for purchase in the public equity markets by investors. The performance of the Index is listed in U.S. dollars and assumes reinvestment of net dividends.

**MSCI Japan Index** is a free-floated adjusted market capitalization weighted index that is designed to track the equity market performance of Japanese securities listed on the Tokyo Stock Exchange, Osaka Stock Exchange, JASDAQ and Nagoya Stock Exchange. The MSCI Japan Index is constructed based on the MSCI Global Investable Market Indices Methodology, targeting a free-float market capitalization coverage of 85%. MSCI USA

**MSCI World Index** is a free float adjusted market capitalization weighted index that is designed to measure the global equity market performance of developed markets. The term "free float" represents the portion of shares outstanding that are deemed to be available for purchase in the public equity markets by investors. The performance of the Index is listed in U.S. dollars and assumes reinvestment of net dividends.

**MSCI World Growth Index** is an index that measures the performance of growth stocks in developed countries throughout the world. The index includes reinvestment of dividends, net of foreign withholding taxes.

**MSCI World Value Index** captures large and mid cap securities exhibiting overall value style characteristics across 23 Developed Markets (DM) countries\*. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

**Russell 3000® Index** measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market. The Russell 3000 Index is constructed to provide a comprehensive, unbiased and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are reflected.

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