

# Morningstar Quarterly Style Monitor: Q4 2023

## Receding Inflation and Expected Rate Cuts Allows For Stronger Growth Across the Board in the Fourth Quarter of 2023

### Morningstar Inc.

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### Executive Summary

This is the latest installment of the Morningstar Quarterly Style Monitor, which is designed to help investors stay on top of style trends. This publication tracks several members of the Morningstar Broad Style Index family, as well as the recently launched Global Style family, providing insights into their performance drivers and portfolio composition.

### Key Takeaways

- ▶ Receding inflation along with a continued enthusiasm for Artificial Intelligence during the quarter made for a more favorable market environment, with all style indexes closing in positive territory.
- ▶ The margin of outperformance for U.S. small caps was higher than that of the other size segments, with mid-caps following closely behind.
- ▶ Reduction in crude oil prices and an expectation of interest rate cuts caused technology stocks to outperform whilst energy stocks underperformed, propelling growth to do better in all regions but the emerging markets.
- ▶ Changes to index compositions were mostly attributable to price fluctuations and a number of corporate actions, notably the Morningstar US Large Cap Index only had a single addition.
- ▶ Changes in sector weights were not so significant outside of the technology and energy sectors, though the stories here are converse. Energy holdings increased only in Broad and Growth Emerging markets, consequently, despite positive performance these were the worst performing indexes.
- ▶ Valuation spreads between growth and value stocks, measured by P/E (trailing 12 months) have increased over the past quarter with a slight decrease in developed markets ex-US. They remain historically high as of January 2024 for most segments, except for U.S. mid-caps.
- ▶ In Emerging Markets strong performance from Brazil, India and Mexico was curtailed by continued poor performance in China and Turkey, who both struggle with macroeconomic headwinds.
- ▶ Differences in volatility between growth and value has been more pronounced over the last year when compared to results from the previous quarter though the gap has narrowed in emerging markets.
- ▶ All markets have demonstrated an increase in market sensitivity over the last year when compared to the previous quarter, though the change in emerging markets, while minute, is conversely true.
- ▶ While comparatively higher valuation spreads have historically presaged subpar returns for the more expensive style, the converse seems to be true for large-mid stocks in ex-U.S. developed markets.

## **Performance Highlights**

### **Returns**

The fourth quarter of 2023 painted a contrasting picture when compared to the third in the U.S., with expectations of rate cuts nearing and a slowdown in inflation likely being the catalysts for the uptick in performance. All indexes finished on a positive note, with small caps performing particularly well in the US whilst value lagged behind their growth counterparts across the board. For example, the Morningstar US Large Broad Value underperformed the Morningstar US Large Broad growth index by a little over 5% and when compared to its small cap peer it underperformed by 5.95%. When looking at sector specific performance, those most sensitive to interest rates, such as Technology and Consumer Cyclical, performed best, likely explaining the outperformance of growth.

The story is similar globally, where our style family is built by applying Morningstar Indexes' Broad Style methodology to our suite of Target Market Exposure indexes (targeting large- and mid-cap stocks representing 85% of the investable market), the dynamics closely mirrored those in the U.S. Overall with value stocks once again underperforming when compared to the growth equivalent in all but the emerging markets. For instance, the Growth iterations of our Global and Developed Markets ex-US indexes outperformed their value variations by 3.29% and 3.09% respectively. The similar macro-economic backdrops in the Eurozone and UK likely explain this growth outperformance, with inflation lowering more than expected in both regions

**Exhibit 1** Returns (%)

<b>US</b>	<b>1 Qr</b>	<b>1 Yr</b>	<b>5 Yr</b>	<b>10 Yr</b>	<b>Since Inception*</b>
Morningstar US Market Extended	12.15	26.22	15.15	11.51	8.65
Morningstar US Market Broad Growth Extended	13.88	38.69	16.91	12.94	8.33
Morningstar US Market Broad Value Extended	10.20	14.54	12.69	9.71	8.51
Morningstar US Large Cap	11.69	29.81	16.08	12.37	8.33
Morningstar US Large Broad Growth	14.04	45.81	18.41	14.23	8.26
Morningstar US Large Broad Value	8.97	14.97	12.89	10.07	7.88
Morningstar US Mid Cap	12.84	16.24	13.38	10.01	9.45
Morningstar US Mid Cap Broad Growth	13.15	20.84	14.09	10.51	8.57
Morningstar US Mid Cap Broad Value	12.46	11.83	11.90	9.16	9.86
Morningstar US Small Cap Extended	14.37	19.42	10.56	7.35	8.57
Morningstar US Small Broad Growth Extended	13.76	22.61	9.76	7.43	7.14
Morningstar US Small Broad Value Extended	14.91	16.27	11.64	7.36	9.83
<b>Global</b>					
Morningstar Global Target Market Exposure	11.08	22.74	12.25	8.50	7.48
Morningstar Global Growth	12.71	29.98	13.16	9.46	8.14
Morningstar Global Value	9.42	16.06	10.74	7.26	6.74
Morningstar Developed Markets ex-US	10.49	18.55	9.16	4.94	4.23
Morningstar Developed Markets ex-US Growth	12.19	17.74	9.31	5.38	4.33
Morningstar Developed Markets ex-US Value	9.10	19.49	8.61	4.31	4.11
Morningstar Emerging Markets	7.79	10.60	4.74	3.71	3.10
Morningstar Emerging Markets Growth	7.03	6.18	3.46	3.36	2.99
Morningstar Emerging Markets Value	8.58	15.01	5.73	3.97	3.58

Source: Morningstar Direct. Data as of December 30, 2023.

\*This includes performance backtested to the end of June 1997 for U.S. indexes and June 2008 for global indexes.

\*\*Returns longer than one year annualized.

\*\*\*All index performance data displayed are for Total Return USD variants.

Relative to its value counterpart, the Morningstar US Large Cap Broad Growth Index's outperformance in the fourth quarter of 2023 was predicated primarily on intrasector selection effects, particularly within the consumer cyclical and technology sectors, providing a significant boost. What further exacerbated this overperformance was the underweighting in the energy sector, a sector which performed poorly due to a significant drop in the price of WTI crude oil. Technology stocks such as Microsoft, Alphabet and of course Nvidia all experienced solid growth due to its AI-gearred processors, whilst in the consumer cyclical camp, Amazon's performance contributed well. These stocks all benefited from a decrease in inflationary pressures, potentially peaking policy rates, decreases in energy costs, and a pronounced wave of AI-related positive sentiment.

Globally, the U.S. has outperformed its Developed Markets ex-US and Emerging Markets counterparts, with the latter's growth segment being the laggard, performing worst of all global style indexes. A third consecutive rate cut from the central bank in Brazil allowed for outperformance, whilst Egypt and India also posted strong double digit returns. The outperformance in these regions was however curtailed by continued poor performance in China, due to struggles with macroeconomic headwinds. Turkey's performance was also particularly weak with the Morningstar Turkey TME index returning -13.23% in Q4. It is worth noting that the Global Style indexes are constructed from various regional indexes that ascribe style scores relative to other companies within the respective region. Consequently, there is a

structural limit on the regional differences that can exist between global value and growth indexes. As such, it is unlikely that country tilts would ever be the primary driver of return differences between regional value and growth indexes. Sector tilts played a negligible role in relative performance across ex-U.S. developed markets, though they were more meaningful across emerging economies, particularly in technology and financial services.

Over the past decade in the U.S., growth beat value and large caps beat small caps. That is the opposite of what many factor investors have come to expect, as data going back to the 1920s suggests that smaller and more value-oriented stocks have tended to do better over the long term.<sup>1</sup> This more recent countervailing trend continued during the last year and was punctuated during the fourth quarter of 2023, with growth prevailing over value by a wide margin.

Extending the look-back period to the end of June 1997, which is the earliest available for the U.S. broad style indexes, small- and mid-cap stocks did in fact beat large caps, though the all-cap Morningstar US Market Broad Growth Extended Index lagged its value counterpart. Globally, since the end of June 2008 (the longest available performance horizon), growth stocks also outperformed value. Still, in the U.S., there was a notable trend across the lower ends of the market-cap spectrum: Smaller value stocks tended to do better than their growth counterparts. This is consistent with academic studies, which have shown the value effect has historically been the most pronounced among the smallest stocks.<sup>2</sup>

### **Risk**

Not surprisingly, over long time horizons, smaller-cap stocks in the U.S. have tended to exhibit greater volatility and sensitivity to market fluctuations than their larger counterparts, as Exhibits 2 and 3 show. Such companies tend to have more-volatile earnings as they are more leveraged to the vagaries of niche markets and have a lower likelihood of enjoying durable competitive advantages relative to larger stocks.

The same pattern is observed across the one-year horizon, opposing the 2022 market environment, which had large caps being more volatile than small caps over short term horizons. Such deviations from academic expectations can occur during turbulent markets such as in 2022, but they rarely hold over the long term. In addition to structural characteristics of the larger-cap indexes (including higher concentration and larger stocks being more prone to frequent news flow that can drive short-term trading activity), fluctuations in sector weightings also play a role in driving short-term volatility.

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<sup>1</sup> Source: French Data Library.

<sup>2</sup> Fama, E.F. & French, K. 2014. "A Five-Factor Asset Pricing Model." September 2014. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2287202](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2287202)

**Exhibit 2** Standard Deviation (%)

<b>US</b>	<b>1 Yr</b>	<b>5 Yr</b>	<b>10 Yr</b>	<b>Since Inception*</b>
Morningstar US Market Extended	15.56	19.18	15.67	16.04
Morningstar US Market Broad Growth Extended	17.24	21.22	17.26	18.46
Morningstar US Market Broad Value Extended	15.27	18.82	15.29	15.26
Morningstar US Large Cap	14.16	18.54	15.20	15.64
Morningstar US Large Broad Growth	16.87	21.59	17.48	18.33
Morningstar US Large Broad Value	13.14	17.51	14.38	14.67
Morningstar US Mid Cap	19.97	21.14	17.08	17.68
Morningstar US Mid Cap Broad Growth	20.58	21.69	17.66	19.95
Morningstar US Mid Cap Broad Value	20.26	22.05	17.56	17.44
Morningstar US Small Cap Extended	24.47	24.63	20.34	20.42
Morningstar US Small Broad Growth Extended	23.44	23.66	19.92	22.57
Morningstar US Small Broad Value Extended	25.94	26.75	21.62	20.00
<b>Global</b>				
Morningstar Global Target Market Exposure	15.47	17.87	14.76	16.86
Morningstar Global Growth	16.89	18.89	15.50	17.05
Morningstar Global Value	15.09	18.37	15.07	17.19
Morningstar Developed Markets ex-US	17.05	18.14	15.23	17.94
Morningstar Developed Markets ex-US Growth	18.71	18.10	15.08	17.20
Morningstar Developed Markets ex-US Value	16.53	19.60	16.37	19.21
Morningstar Emerging Markets	17.44	18.79	16.90	20.94
Morningstar Emerging Markets Growth	17.72	19.16	16.74	20.64
Morningstar Emerging Markets Value	17.42	19.73	18.15	21.43

Source: Morningstar Direct. Data as of December 31, 2023.

\*This includes performance backtested to the end of June 1997 for U.S. indexes and June 2008 for Global indexes. Returns longer than one year annualized. All index performance data displayed are for Total Return USD variants.

**Exhibit 3 Market Beta**

<b>US</b>	<b>1 Yr</b>	<b>5 Yr</b>	<b>10 Yr</b>	<b>Since Inception*</b>
Morningstar US Market Extended	1.00	1.00	1.00	1.00
Morningstar US Market Broad Growth Extended	1.07	1.06	1.06	1.11
Morningstar US Market Broad Value Extended	0.93	0.94	0.94	0.90
Morningstar US Large Cap	0.89	0.96	0.96	0.97
Morningstar US Large Broad Growth	0.97	1.05	1.05	1.08
Morningstar US Large Broad Value	0.80	0.87	0.88	0.86
Morningstar US Mid Cap	1.23	1.07	1.06	1.06
Morningstar US Mid Cap Broad Growth	1.28	1.09	1.08	1.16
Morningstar US Mid Cap Broad Value	1.18	1.06	1.04	0.96
Morningstar US Small Cap Extended	1.41	1.19	1.19	1.15
Morningstar US Small Broad Growth Extended	1.39	1.14	1.16	1.23
Morningstar US Small Broad Value Extended	1.42	1.24	1.22	1.07
<b>Global</b>				
Morningstar Global Target Market Exposure	1.00	1.00	1.00	1.00
Morningstar Global Growth	1.06	1.02	1.02	0.99
Morningstar Global Value	0.94	0.99	0.99	1.00
Morningstar Developed Markets ex-US	1.00	1.00	1.00	1.00
Morningstar Developed Markets ex-US Growth	1.07	0.96	0.96	0.94
Morningstar Developed Markets ex-US Value	0.94	1.05	1.05	1.05
Morningstar Emerging Markets	1.00	1.00	1.00	1.00
Morningstar Emerging Markets Growth	1.01	0.99	0.96	0.97
Morningstar Emerging Markets Value	0.99	1.02	1.04	1.01

Source: Morningstar Direct. Data as of December 31, 2023.

\*This includes performance backtested to the end of June 1997 for U.S. indexes and June 2008 for Global indexes. Returns longer than one year annualized. All index performance data displayed are for Total Return USD variants.

Irrespective of size, value and growth stocks in the U.S. have tended to exhibit similar risk characteristics with each other over the past decade, though several periods have contravened this pattern. For example, growth stocks were a bit more volatile over the longest look-back period from July 1997 through December 2023. This is partly attributable to the dot-com bubble, and subsequent correction, during the early 2000s.

Globally, value stocks have tended to be more volatile over longer time horizons. This tendency, however, hasn't been as demonstrable over the past year. This is more so in line with the U.S. and global broad universe, where growth stocks have shown greater volatility over the past year.

While their risk, when viewed through the conventional lens of return volatility, will go through periods of divergence and convergence, it's worth remembering that value and growth styles carry different fundamental risk profiles. Value stocks tend to have weaker profitability, encounter stiffer competition, and face more daunting secular headwinds than growth stocks. Growth stocks tend to have healthier businesses and more auspicious industry positioning, but they often come with rich valuations that

could compress if they fall short of (often lofty) investor expectations. That said, some of these value and growth risks are firm-specific, which the broad style indexes largely diversify away.

## Portfolio Highlights

### December Reconstitution

Morningstar's broad style index family was reconstituted in December (the next reconstitution will be in June) according to its reconstitution schedule. As a result, the composition of the indexes changed more noticeably between the third and fourth quarters than they did between the previous two quarters. Changes can be driven by corporate actions, style and size migration, or price fluctuations of existing constituents. Exhibit 4 shows how much the U.S. indexes and select global variants changed over the past quarter, one year, and five years, using active share to measure the difference in the index portfolio before and after reconstitution. Exhibit 5 shows the top five new constituents added to each index during the June reconstitution.

**Exhibit 4** Active Share (%) of Each Index Against Itself Over Time

<b>US</b>	<b>1 Qr</b>	<b>1 Yr</b>	<b>5 Yr</b>
Morningstar US Market Extended	4.68	13.45	27.17
Morningstar US Market Broad Growth Extended	10.25	24.36	45.74
Morningstar US Market Broad Value Extended	11.00	17.92	35.86
Morningstar US Large Cap	5.79	16.14	29.06
Morningstar US Large Broad Growth	10.73	26.25	47.10
Morningstar US Large Broad Value	12.41	20.00	39.10
Morningstar US Mid Cap	13.63	25.73	49.41
Morningstar US Mid Cap Broad Growth	17.01	31.35	56.21
Morningstar US Mid Cap Broad Value	19.00	34.63	60.41
Morningstar US Small Cap Extended	14.18	25.44	53.29
Morningstar US Small Broad Growth Extended	21.53	36.14	64.41
Morningstar US Small Broad Value Extended	20.05	32.86	60.34
<b>Global</b>			
Morningstar Global Target Market Exposure	5.13	12.59	28.06
Morningstar Global Growth	10.59	22.39	45.11
Morningstar Global Value	11.23	16.64	36.28

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 5** Top Five New Constituents Added to Each Index in June 2023

<b>Index</b>	<b>New Constituents</b>
Morningstar US Market Extended	Liberty Live, Kenvue Inc, Veralto Corp, CNH Industrial NV, CSW Industrials Inc
Morningstar US Market Broad Growth Extended	Eaton Corp PLC, KLA Corp, Coinbase Global, Constellation Brands, Apollo Global Mgmt Inc
Morningstar US Market Broad Value Extended	Danaher Corp, Costco Wholesale Corp, Automatic Data Processing Inc, Booking Holdings Inc, Starbucks Corp
Morningstar US Large Cap	Parker Hannifin Corp
Morningstar US Large Broad Growth	Eaton Corp PLC, KLA Corp, Parker Hannifin Corp
Morningstar US Large Broad Value	Danaher Corp, Costco Wholesale Corp, Automatic Data Processing Inc, Booking Holdings Inc, Starbucks Corp
Morningstar US Mid Cap	Autodesk Inc, Crown Castle Inc, Truist Financial Corp, General Motors Co, Public Storage
Morningstar US Mid Cap Broad Growth	Autodesk Inc, Public Storage, DexCom Inc, Edwards Lifesciences Corp, The Estee Lauder Companies Inc
Morningstar US Mid Cap Broad Value	Truist Financial Corp, General Motors Co, Ford Motor Co, American Electric Power Co Inc, Dominion Energy Inc
Morningstar US Small Cap Extended	Karuna Therapeutics Inc, East West Bancorp Inc, Fortune Brands Innovations Inc, Bath & Body Works Inc, Ally Financial Inc
Morningstar US Small Broad Growth Extended	Penumbra Inc, Tetra Tech Inc, Repligen Corp, Sarepta Therapeutics Inc, Catalent Inc
Morningstar US Small Broad Value Extended	East West Bancorp Inc, Fortune Brands Innovations Inc, Bath & Body Works Inc, Ally Financial Inc, Dick's Sporting Goods Inc
Morningstar Global Target Market Exposure	Kenvue Inc, Ares Management Corp, Veralto Corp, First Citizens BancShares Inc, Sandoz Group AG
Morningstar Global Growth	Toyota Motor Corp, UBS Group AG, Oracle Corp, Mitsubishi UFJ Financial Group Inc, Lam Research Corp
Morningstar Global Value	Danaher Corp, The Walt Disney Co, Siemens AG, American Tower Corp, HDFC Bank Ltd

Source: Morningstar Direct. Data as of December 31, 2023.

The Morningstar US Market Extended Index, which spans all styles, didn't change materially during the December reconstitution. Price fluctuations can explain most of the changes to that index's allocation over the past quarter. That said, there were some notable additions to the index in December, including Liberty Live, after a split off from Liberty Media, and Kenvue Inc who separated from Johnson & Johnson to become an independent company.

The Global TME index's story was not much different, with price fluctuations accounting for most changes during the quarter. Additions to this index include Veralto Corp (after a spinoff from Danaher Corporation), Sandoz Group AG (another spinoff from Novartis) and Ares Management Corp. Further notable names added to the growth variation include Toyota and UBS Group whilst value additions included Danaher and Siemens.

The Morningstar US Large Cap Index also had low turnover, with only one new stock being added to the index, Parker Hannifin Corp, after a year of extremely strong performance pushed it up a size segment.

On the other end of the size spectrum, small caps had the highest turnover, this is expected as small cap stocks are more volatile and have a greater degree of sensitivity with market movements as opposed to larger size segments, as demonstrated in exhibit 2 and 3 respectively. Interestingly, many of the largest additions to the US Small Cap Broad Growth index include healthcare stocks such as Repligen Corp, Sarepta Therapeutics and Catalent. On the other hand, the US Small Cap Broad Growth index's largest additions include two financials, East West Bancorp and Ally Financial.

The reconstitution did not have considerable impact on most of the sector weightings apart from the sizable increase in allocation of the technology sector across all regions, and style segments, though in



the small cap space it was juxtaposed. Contrary to this, the energy sector weightings have dropped in all but two of the indexes, Emerging markets and Emerging markets growth.

### Sectors

The sector weightings for the broad style indexes are shown in Exhibit 6.

**Exhibit 6** Sector Composition (%)

	Basic Materials	Communication Services	Consumer Cyclical	Consumer Defensive	Energy	Financial Services	Healthcare	Industrials	Real Estate	Tech	Utilities
<b>US</b>											
Morningstar US Market Extended	2.44	7.93	11.27	5.75	3.96	12.77	12.48	9.37	3.08	28.68	2.26
Morningstar US Market Broad											
Growth Extended	1.36	8.38	14.79	2.49	1.16	6.78	9.65	7.78	2.85	44.24	0.53
Morningstar US Market Broad Value											
Extended	3.55	7.48	7.69	8.95	6.86	18.98	15.37	11.04	3.31	12.74	4.04
Morningstar US Large Cap	1.39	10.07	11.30	5.72	3.82	12.77	12.98	6.42	0.92	33.61	0.99
Morningstar US Large Broad Growth	0.74	10.40	17.01	1.48	0.39	6.44	7.91	2.01	1.06	52.55	0.00
Morningstar US Large Broad Value	2.07	9.73	5.39	10.11	7.36	19.32	18.23	10.98	0.79	14.00	2.01
Morningstar US Mid Cap	5.05	2.86	9.63	6.86	4.29	11.59	10.28	16.39	8.32	18.08	6.65
Morningstar US Mid Cap Broad											
Growth	2.49	3.84	9.13	5.20	3.02	7.77	11.28	21.80	7.94	25.45	2.07
Morningstar US Mid Cap Broad Val	7.69	1.88	10.52	7.80	5.62	15.56	9.30	10.91	8.74	10.62	11.37
Morningstar US Small Cap Extended	4.12	2.92	13.66	3.73	5.33	15.04	12.09	17.43	7.38	16.13	2.09
Morningstar US Small Broad Growth											
Extended	3.63	2.90	10.26	4.14	2.88	7.17	19.63	20.98	5.30	21.93	1.18
Morningstar US Small Broad Value											
Extended	5.51	2.97	18.72	2.73	5.79	24.01	7.27	11.75	10.32	7.95	2.98
<b>Global</b>											
Morningstar Global Target Market											
Exposure	4.30	7.28	10.88	6.74	4.63	15.85	11.31	10.45	2.37	23.54	2.61
Morningstar Global Growth	2.73	7.46	14.64	5.79	1.66	9.05	10.75	9.82	1.97	34.87	1.23
Morningstar Global Value	5.86	7.16	6.79	7.69	7.67	23.09	11.99	11.12	2.83	11.64	4.07
Morningstar Developed Mkts ex-US	7.56	3.94	10.32	8.92	5.84	20.60	11.78	16.59	2.28	8.87	3.13
Morningstar Developed Markets ex-											
US Growth	4.92	4.04	12.45	10.79	1.69	11.47	17.08	19.70	1.74	14.10	2.02
Morningstar Developed Markets ex-											
US Value	10.04	3.94	7.85	7.12	9.74	30.40	6.38	13.38	2.92	3.57	4.30
Morningstar Emerging Markets	8.23	8.14	12.05	5.70	5.85	22.34	3.64	7.94	1.53	21.44	3.14
Morningstar Emerging Markets											
Growth	6.71	9.40	14.53	8.87	5.57	15.75	6.17	10.53	1.34	18.89	2.23
Morningstar Emerging Mkts Value	9.61	7.13	9.73	2.88	6.04	28.09	1.37	5.54	1.73	24.06	3.82

Source: Morningstar Direct. Data as of December 31, 2023.

There are persistent differences in growth rates and valuations across sectors, leading to diverging sector weightings across the value and growth indexes, which can affect performance. For example, the Morningstar US Market Broad Growth Extended Index has greater exposure to the consumer cyclical and technology sectors than its value counterpart and less exposure to the consumer defensive, financial-services, industrials, utilities, and energy sectors. Most of these sector tilts were also present five years ago.

Interestingly, these sector tilts become less nuanced globally. For example, in developed markets outside the U.S., technology is less overrepresented in growth as compared with that of value relative to the U.S. region. Financial services and energy are underrepresented in growth as compared with value. It is noteworthy to mention that the Morningstar Emerging Markets Value TME Index is more skewed to the technology sector, being almost third greater to its growth counterpart, which is the contrary to what we observe in the U.S. and developed markets ex-U.S. While the ex-U.S. indexes only cover the large-mid size bands (as opposed to the all-cap coverage of the Morningstar US Market Extended Index), given cap weighting, we'd expect these style differences across regions to hold even when small caps are included.

In the U.S., there are also notable sector differences along the market-cap spectrum. The Morningstar US Large Cap Index has greater exposure to communication services, consumer defensive, and technology stocks than the Morningstar US Small Cap Extended Index and less exposure to the real estate and industrials sectors. These tilts were also present five years ago, but at that time, healthcare stocks represented a greater portion of the large-cap index than they did of the small-cap index. That relationship had more recently flipped, though we are now once again seeing larger healthcare weightings in the U.S. large cap segment when compared to the U.S. small cap segment, albeit the difference is very minor.

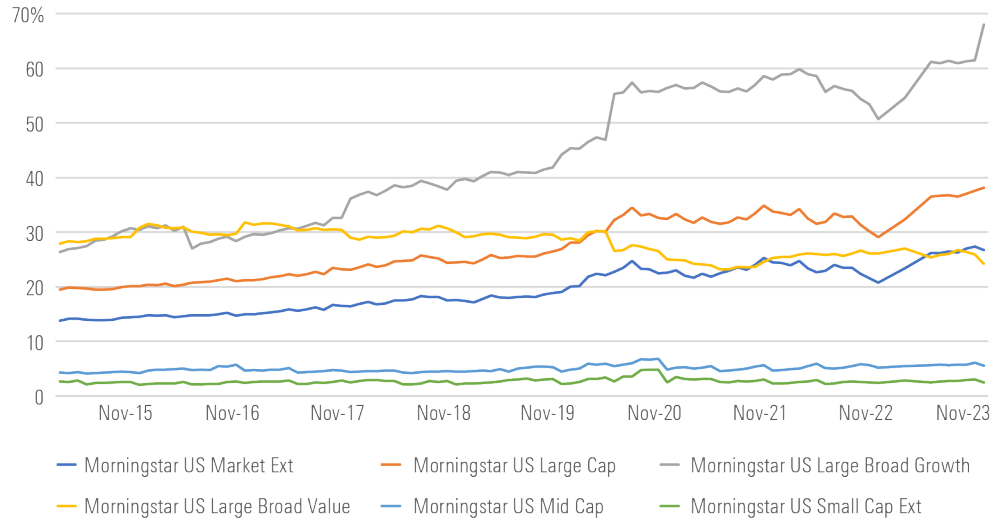
### **Concentration**

The broad style indexes all skew toward the larger names within their respective segments, owing to market-cap weighting. This weighting approach reflects the composition of the opportunity set and allows companies to become a bigger part of the portfolios as they grow within each market-cap segment.

Concentration is most pronounced in the large-cap indexes (as shown in Exhibit 7), particularly in the Morningstar US Large Broad Growth Index, where the percentage of assets in the top 10 constituents has grown from 44% at the end of December 2019 to roughly 68% five years later. The market has become more concentrated as the largest growth stocks have outperformed. This not only increased their market-cap weightings but also reduced the number of large-growth stocks required to reach 50% coverage of the large-cap market, reducing the number of stocks in the portfolio. Today, the Morningstar US Large Broad Growth Index holds 88 stocks, down from 161 seven years ago. Moreover, the largest constituent in the index today (Apple) comprises over 17% of the portfolio, with Microsoft following closely at a little under 17%, whereas seven years ago, the equivalent weight for the largest holding (Alphabet) was less than half of today's number, just over 6%.

The small- and mid-cap indexes have far less concentration in their top 10 constituents, as there is a natural cap on how large constituents can grow before they advance to the next market-cap segment.

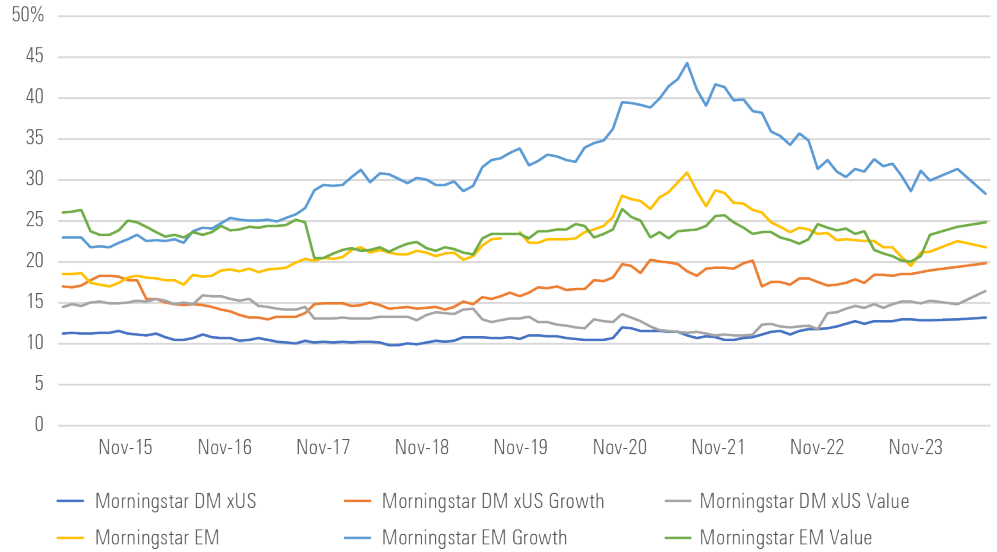
**Exhibit 7** Percentage of Portfolio in Top 10 Holdings—U.S.



Source: Morningstar Direct. Data as of December 31, 2023.

Exhibit 8 shows concentration trends for the style indexes across emerging markets and ex-U.S. developed markets, along with the corresponding parent indexes. Concentration has been perennially higher in emerging markets, which implies that there are factors endemic to these markets that facilitate greater concentration of capital. Additionally, while the portfolios largely seem to be getting more concentrated over time, the recent trend in the Morningstar Emerging Markets Growth TME Index is interesting, with concentration falling precipitously since October 2020. This is partially due to the underperformance of Chinese mega-caps like Alibaba and Tencent, including the first half of 2022, which have been beleaguered by regulatory crackdowns on gaming, digital commerce, and the like.

**Exhibit 8** Percentage of Portfolio in Top 10 Holdings—Global



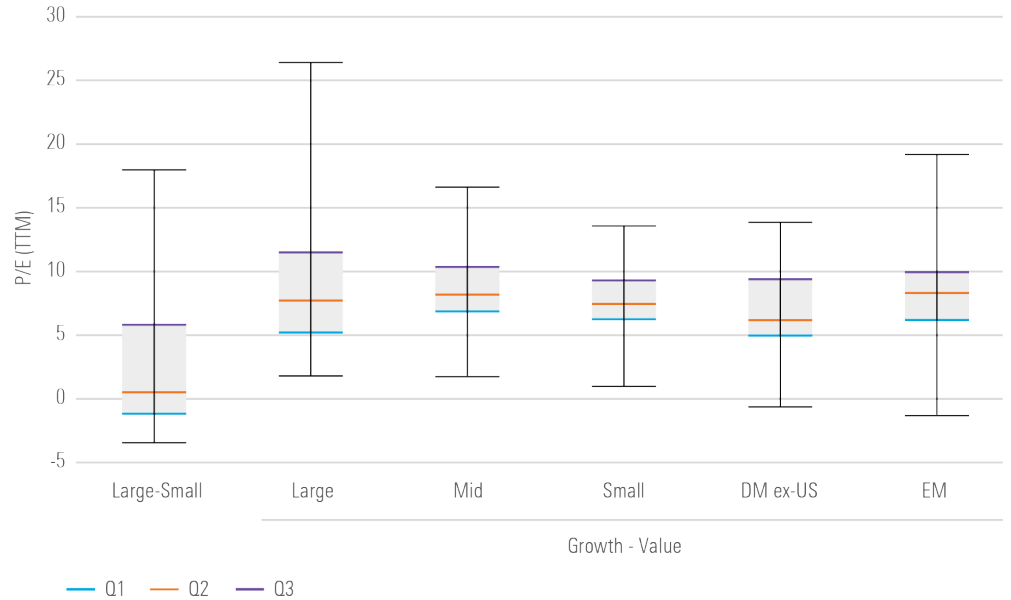
Source: Morningstar Direct. Data as of December 31, 2023.

**Valuations**

By definition, growth stocks trade at higher valuations than value stocks. After years of stronger performance, growth stocks have become more expensive relative to value stocks. This trend holds true both in the U.S. and globally, as illustrated in Exhibits 9 through 15. These figures show the spread between the trailing 12-month P/E ratios of the growth and value indexes in the Morningstar Broad Style family for each of the three market-cap segments, as well as for the ex-U.S. developed-markets and emerging-markets regions of the Global Style family. It also includes this spread data for the Morningstar US Large Cap and Morningstar US Small Cap Extended indexes, along with historical distributions for all the spreads.

After a volatile first quarter of the year, followed by a recovery during the second quarter, relative valuations for growth stocks increased noticeably compared with the end of 2022 across all size segments and regions. As of December, the growth-value P/E spread was in the top quintile of historical distributions for all size bands and regions, with some of them above the 90th percentile, approaching unprecedented levels. However, for US Mid, the spreads have been comparatively less pronounced than former indexes mentioned in this quarter.

**Exhibit 9** P/E (TTM) Valuation Spread



	Growth - Value					
	US Large-Small	US Large	US Mid	US Small	DM ex-US	EM
Current P/E Valuation						
Spread	8.93	19.09	10.56	11.50	10.41	11.38
Percent Rank (%)	85.8	96.1	78.5	95.7	80.6	89.7

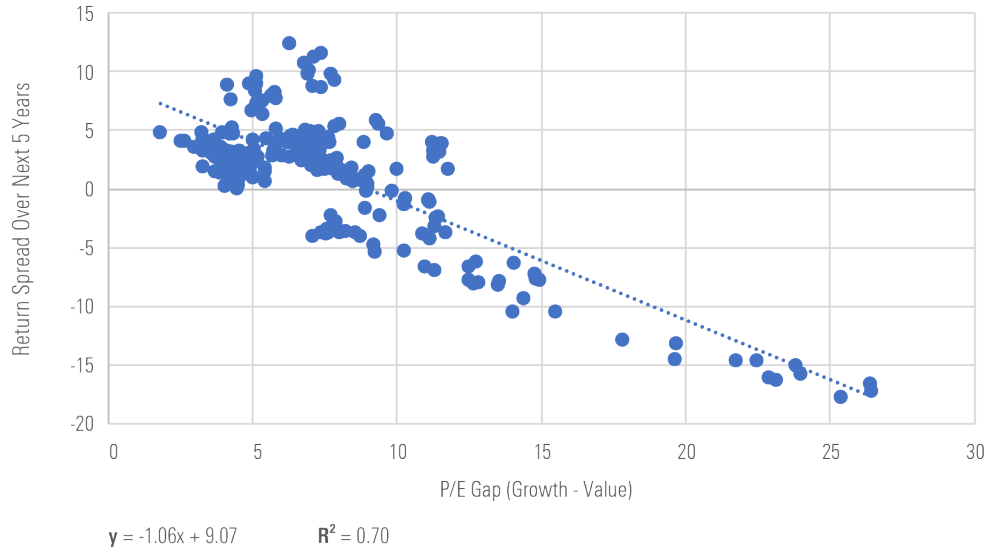
Source: Morningstar Direct. Data as of December 31, 2023.

Unusually wide valuation spreads may portend lower expected returns for the pricier index. Historically, in the U.S., wider valuation spreads have been associated with lower returns over the next five years for the large- and mid-cap growth indexes relative to their value counterparts, as Exhibits 10 and 11 show. The same is true of the large-cap index relative to the small-cap extended index.

There wasn't a strong relationship between valuation spreads and future returns for the U.S. small-cap growth and value indexes. The same is true of the large-mid universe in emerging markets, displayed in Exhibit 15.

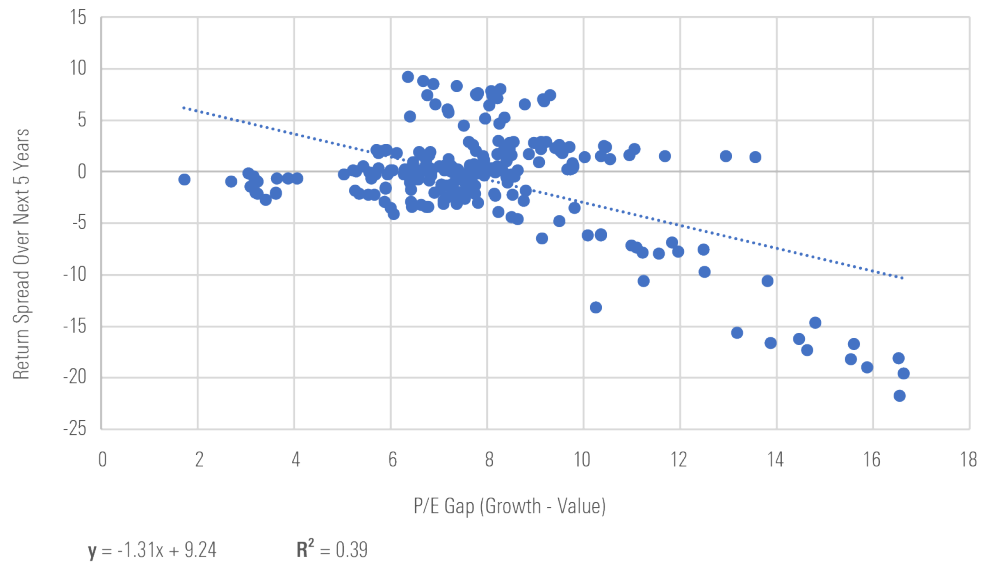
A startling and counterintuitive phenomenon can be observed in developed markets outside the U.S. (Exhibit 14), where there seems to have been a significantly positive relationship between valuation spreads and subsequent five-year returns. We view this as an anomaly, likely attributable to exogenous economic factors that have disproportionately benefited growth stocks over this period. It's also worth noting that the historical distribution of valuation spreads has been tightest in these ex-U.S. developed markets.

**Exhibit 10** Relationship Between Valuations and Future Returns: November 1999 - June 2023 (Morningstar US Large Broad Growth Index - Morningstar US Large Broad Value Index)



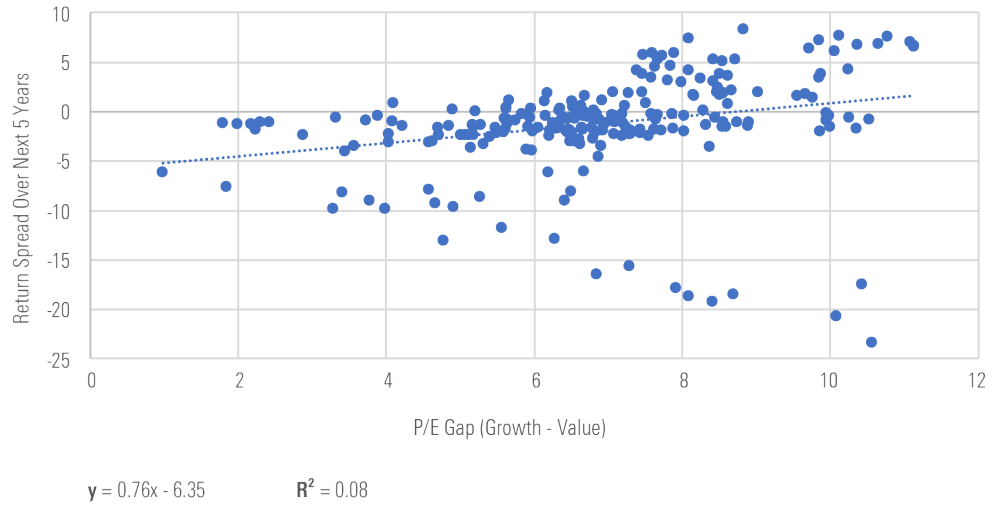
Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 11** Relationship Between Valuations and Future Returns: November 1999 - June 2023 (Morningstar US Mid Broad Growth Index - Morningstar US Mid Broad Value Index)



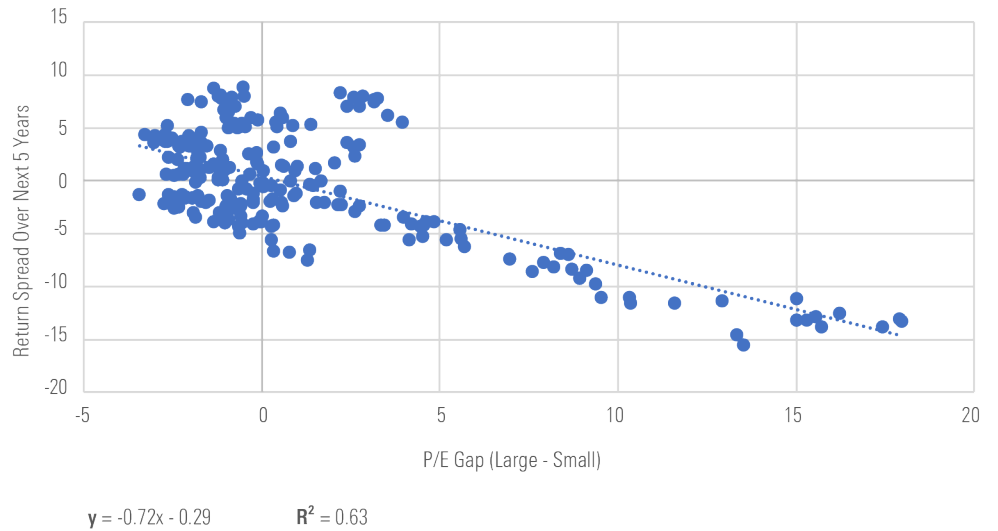
Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 12** Relationship Between Valuations and Future Returns: November 1999 - June 2023 (Morningstar US Small Cap Broad Growth Extended Index - Morningstar US Small Cap Broad Value Extended Index)



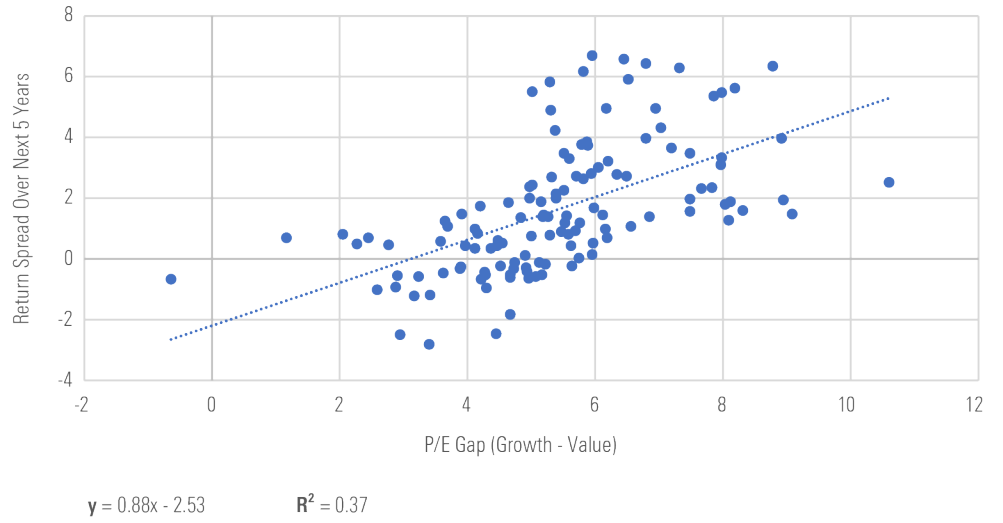
Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 13** Relationship Between Valuations and Future Returns: November 1999 - June 2023 (Morningstar US Large Index - Morningstar US Small Cap Extended Index)



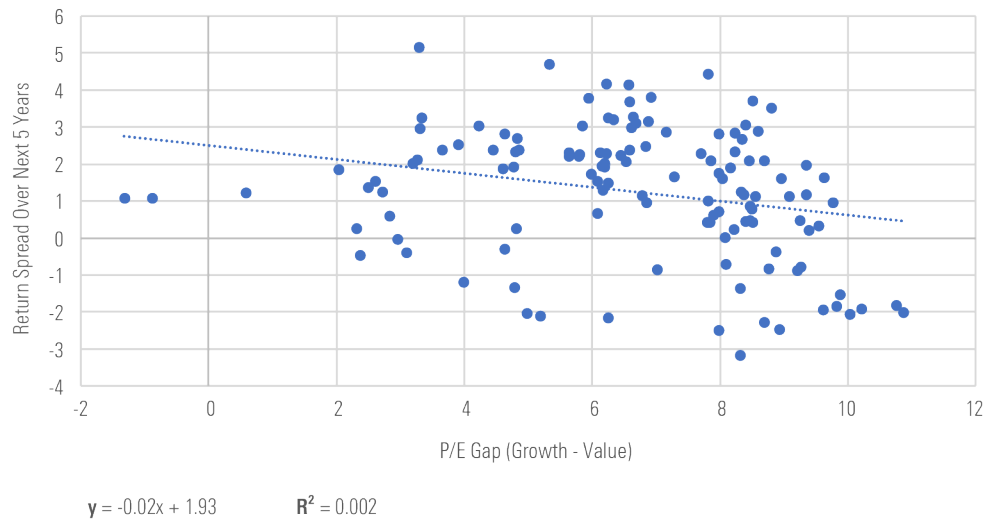
Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 14** Relationship Between Valuations and Future Returns: June 2008 - June 2023 (Morningstar DM ex-US Growth TME Index - Morningstar DM ex-US Value TME Index)



Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 15** Relationship Between Valuations and Future Returns: June 2008 - June 2023 (Morningstar EM Growth TME Index - Morningstar EM Value TME Index)



Source: Morningstar Direct. Data as of December 31, 2023.



**Forever in Style**

Regardless of market conditions, the Morningstar Broad Style and Global Style index families provide a robust toolkit for style investors. The indexes accurately represent the opportunity set available to style investors across different regions and can facilitate precise performance benchmarking and efficient asset allocation aligned with the Morningstar Style Box. For more information, visit <https://www.morningstar.com/products/indexes-style>. ■■

## Appendix

### Appendix 1: Style Investing

Style investing focuses on two of the most important drivers of stock returns: size and valuations. In their 1992 seminal paper “The Cross-Section of Expected Stock Returns,” Nobel laureate Eugene Fama and Kenneth French demonstrated that differences in these two variables can explain much of the variation of stock returns. That was the same year the Morningstar Style Box launched. This tool divides the equity market into nine sections along two dimensions: size and value/growth orientation, which has become a widely adopted frame of reference for classifying managed portfolios and assessing performance.

This style framework is also useful for framing asset-allocation decisions. The large-value segment of the market is a fertile hunting ground for mature dividend-payers, while the large-growth segment is home to many highly profitable companies with strong prospects. Small-growth stocks tend to have the greatest potential for capital appreciation, but they also carry considerable risk. Finally, the small-value segment may be where the best bargains are. Historically, this market segment has had the highest returns, though it has experienced long stretches of underperformance.

The Morningstar Broad Style and Global Style indexes provide an effective toolkit to gauge style trends, both in the U.S. and globally. These indexes cast a wider net than the nine segments of the style box, carving the value-growth spectrum into halves rather than thirds. This better reflects the opportunity set available to style investors, as managers often color outside their designated section in the style box. Stocks in the blend segment of the market are partially allocated to both the value and growth indexes, as they often appear in both value and growth managers’ portfolios.

### Appendix 2: Company Characteristics by Style

Morningstar’s broad style and global style indexes each focus on a different type of stock, reflecting how many active managers define their opportunity set.

Large-growth stocks are often among the market’s most enviable businesses. These firms not only tend to enjoy robust growth prospects but also typically benefit from dominant market positions and deploy extremely profitable business models. Within the Morningstar Broad Style Index family, the Morningstar US Large Broad Growth Index has the greatest exposure to stocks with Morningstar Economic Moat Ratings of wide, reflecting durable competitive advantages that Morningstar equity analysts expect to last for at least 20 years, as Exhibit 16 illustrates. However, the constituents of this index tend to generate a smaller share of their revenue outside the U.S. compared with any of the other broad style indexes that cover the U.S., as shown in Exhibit 17.

Similar to the U.S., global growth indexes have the greatest bent toward wide moat ratings, reflecting the structurally more favorable business models of these constituents. These durable competitive advantages are also more prevalent in developed markets relative to emerging. Companies listed in emerging markets are more likely to have to navigate headwinds like tenuous regulatory landscapes

(which invite competition) and more acute economic cyclicality (which detracts from our equity analysts' confidence in the durability of their profits).

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**Exhibit 16 Economic Moat Exposure (%)**

<b>US</b>	<b>Wide Moat</b>	<b>Narrow Moat</b>	<b>None</b>
Morningstar US Market Extended	54.27	27.30	7.14
Morningstar US Market Broad Growth Extended	63.66	20.72	4.26
Morningstar US Market Broad Value Extended	44.57	34.13	10.11
Morningstar US Large Cap	71.98	25.26	2.27
Morningstar US Large Broad Growth	83.22	15.96	0.65
Morningstar US Large Broad Value	61.01	34.22	3.93
Morningstar US Mid Cap	15.85	44.44	22.91
Morningstar US Mid Cap Broad Growth	23.99	41.94	14.78
Morningstar US Mid Cap Broad Value	8.48	43.62	30.74
Morningstar US Small Cap Extended	0.66	10.70	9.56
Morningstar US Small Broad Growth Extended	0.57	9.30	8.47
Morningstar US Small Broad Value Extended	0.74	12.17	10.72
<b>Global</b>			
Morningstar Global Target Market Exposure	46.68	26.38	12.75
Morningstar Global Growth	57.62	22.34	6.79
Morningstar Global Value	35.11	30.94	18.98
Morningstar Developed Markets ex-US	28.33	23.82	26.08
Morningstar Developed Markets ex-US Growth	39.37	26.52	12.39
Morningstar Developed Markets ex-US Value	16.58	21.42	40.24
Morningstar Emerging Markets	14.65	16.61	13.92
Morningstar Emerging Markets Growth	16.21	15.17	13.02
Morningstar Emerging Markets Value	13.47	18.22	14.99

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Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 17** Revenue Generated in the U.S.

<b>US</b>	<b>% of Revenue from the U.S.</b>
Morningstar US Market Extended	61.59
Morningstar US Market Broad Growth Extended	56.11
Morningstar US Market Broad Value Extended	67.30
Morningstar US Large Cap	56.59
Morningstar US Large Broad Growth	50.10
Morningstar US Large Broad Value	63.31
Morningstar US Mid Cap	71.78
Morningstar US Mid Cap Broad Growth	68.61
Morningstar US Mid Cap Broad Value	75.35
Morningstar US Small Cap Extended	77.23
Morningstar US Small Broad Growth Extended	74.74
Morningstar US Small Broad Value Extended	79.57
<b>Global</b>	
Morningstar Global Target Market Exposure	44.36
Morningstar Global Growth	42.26
Morningstar Global Value	46.99
Morningstar Developed Markets ex-US	22.21
Morningstar Developed Markets ex-US Growth	26.06
Morningstar Developed Markets ex-US Value	18.52
Morningstar Emerging Markets	12.46
Morningstar Emerging Markets Growth	13.34
Morningstar Emerging Markets Value	11.84

Source: Morningstar Direct. Data as of December 31, 2023.

Large-value stocks tend to be more mature. These include slow-growth giants like Oracle and Procter & Gamble in the U.S. and Nestle outside of the U.S. Because they often have strong cash flows and limited need of it to fund growth, these stocks tend to make larger cash distributions to shareholders than their faster-growing and smaller counterparts.

Stocks in the middle of the value-growth spectrum, like Alphabet, are found in both the Morningstar US Large Broad Value and Growth indexes. That reflects that they are also found in both value and growth managers' portfolios, as they don't have a strong bias toward one style over the other.

Moving down the market-cap ladder tends to increase both risk and upside potential. Mid-cap growth stocks have a bit more growth runway than their larger counterparts. These companies are often at an earlier stage in their lifecycle yet have been successful, like Marvell Technology, or could be relatively mature firms transforming their businesses to align with secular growth trends across their markets, like consumer firm Yum Brand. Both companies were among the top holdings of the Morningstar US Mid Cap Broad Growth Index at the end of June 2023.

Small-growth stocks are riskier still. These firms tend to be less profitable and face greater uncertainty than better-established growth stocks, yet with this broader distribution of potential outcomes comes the juiciest growth potential. Pure Storage, a top holding in the Morningstar US Small Cap Broad Growth

Extended Index, exemplifies this promise and risk by leveraging its data storage products and applications in an economy that is constantly hungry for such services because of the horizontal transition to cloud services across industries. However, competition is fierce, and the industry tends to be quite cyclical, with demand troughs that can be just as deep and acute as the booms. Mid- and small-cap value stocks also carry greater risk and upside potential than their larger counterparts. This includes a mix of stocks that have simply matured before reaching the large-cap ranks, as well as names that have fallen out of favor, often for good reason. Biotechnology researcher Biogen is a good example of the former, while hospitality services provider Hilton Worldwide Holdings embodies the latter.

Smaller stocks tend to generate more of their revenue in the U.S., particularly on the value side. The constituents of the Morningstar US Small Cap Broad Value Extended Index generated a larger share of their revenue in the U.S. than any of the other broad style indexes, as shown in Exhibit 17.

Exhibits 18-32 show the top 10 constituents in the large-, mid-, and small-cap extended indexes, the value and growth indexes in those segments, as well as the value and growth indexes for ex-U.S. developed markets and emerging markets.

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**Exhibit 18** Top Holdings: Morningstar U.S. Large Cap Index

Constituent	Ticker	Sector	Weighting (%)
Apple Inc	AAPL	Technology	8.70
Microsoft Corp	MSFT	Technology	8.62
Amazon.com Inc	AMZN	Consumer Cyclical	4.38
NVIDIA Corp	NVDA	Technology	3.64
Alphabet Inc Class A	GOOGL	Communication Services	2.55
Meta Platforms Inc Class A	META	Communication Services	2.42
Alphabet Inc Class C	GOOG	Communication Services	2.16
Tesla Inc	TSLA	Consumer Cyclical	2.12
Berkshire Hathaway Inc Class B	BRK.B	Financial Services	2.00
Eli Lilly and Co	LLY	Healthcare	1.52

Source: Morningstar Direct. Data as of December 31, 2023.

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**Exhibit 19** Top Holdings: Morningstar U.S. Large Broad Growth Index

Constituent	Ticker	Sector	Weighting (%)
Apple Inc	AAPL	Technology	17.09
Microsoft Corp	MSFT	Technology	16.96
Amazon.com Inc	AMZN	Consumer Cyclical	8.60
NVIDIA Corp	NVDA	Technology	7.15
Tesla Inc	TSLA	Consumer Cyclical	4.17
Alphabet Inc Class A	GOOGL	Communication Services	3.09
Eli Lilly and Co	LLY	Healthcare	2.99
Meta Platforms Inc Class A	META	Communication Services	2.82
Alphabet Inc Class C	GOOG	Communication Services	2.62
Visa Inc Class A	V	Financial Services	2.50

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 20** Top Holdings: Morningstar U.S Broad Value Index

Constituent	Ticker	Sector	Weighting (%)
Berkshire Hathaway Inc Class B	BRK.B	Financial Services	4.06
JPMorgan Chase & Co	JPM	Financial Services	3.09
Exxon Mobil Corp	XOM	Energy	2.51
Johnson & Johnson	JNJ	Healthcare	2.37
Procter & Gamble Co	PG	Consumer Defensive	2.17
The Home Depot Inc	HD	Consumer Cyclical	2.16
Broadcom Inc	AVGO	Technology	2.02
Meta Platforms Inc Class A	META	Communication Services	2.02
Alphabet Inc Class A	GOOGL	Communication Services	1.99
UnitedHealth Group Inc	UNH	Healthcare	1.81

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 21** Top Holdings: Morningstar U.S. Mid Cap Index

Constituent	Ticker	Sector	Weighting (%)
Marvell Technology, Inc	MRVL	Technology	0.63%
NXP Semiconductor NV	NXPI	Technology	0.61%
Parker-Hannifin Corp	PH	Industrials	0.56%
Microchip Technology Inc	MCHP	Technology	0.56%
Workday Inc. A	WDAY	Technology	0.55%
TE Connectivity Ltd.	TEL	Technology	0.51%
Trane Technologies plc	TT	Industrials	0.51%
TransDigm Group	TDG	Industrials	0.51%
Capital One Financial	COF	Financial Services	0.50%
American Intl Group Inc	AIG	Financial Services	0.49%

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 22** Top Holdings: Morningstar U.S. Mid Cap Broad Growth Index

Constituent	Ticker	Sector	Weighting (%)
CrowdStrike Holdings Inc Class A	CRWD	Technology	1.20
Workday Inc Class A	WDAY	Technology	1.19
Trane Technologies PLC Class A	TT	Industrials	1.15
TransDigm Group Inc	TDG	Industrials	1.11
Autodesk Inc	ADSK	Technology	1.08
Marvell Technology Inc	MRVL	Technology	1.04
Public Storage	PSA	Real Estate	1.00
DexCom Inc	DXCM	Healthcare	0.98
Edwards Lifesciences Corp	EW	Healthcare	0.95
IDEXX Laboratories Inc	IDXX	Healthcare	0.95

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 23** Top Holdings: Morningstar U.S. Mid Cap Broad Value Index

Constituent	Ticker	Sector	Weighting (%)
PACCAR Inc	PCAR	Industrials	1.07
Truist Financial Corp	TFC	Financial Services	1.05
General Motors Co	GM	Consumer Cyclical	1.04
Capital One Financial Corp	COF	Financial Services	1.02
Ford Motor Co	F	Consumer Cyclical	1.02
D.R. Horton Inc	DHI	Consumer Cyclical	0.99
Simon Property Group Inc	SPG	Real Estate	0.99
Newmont Corp	NEM	Basic Materials	0.98
American International Group Inc	AIG	Financial Services	0.97
American Electric Power Co Inc	AEP	Utilities	0.91

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 24** Top Holdings: Morningstar U.S. Small Cap Extended Index

Constituent	Ticker	Sector	Weighting (%)
Vertiv Holdings Co Class A	VRT	Industrials	0.42
Roku Inc Class A	ROKU	Communication Services	0.36
Super Micro Computer Inc	SMCI	Technology	0.34
Tradeweb Markets Inc	TW	Financial Services	0.31
Saia Inc	SAIA	Industrials	0.29
Nutanix Inc Class A	NTNX	Technology	0.28
XPO Inc	XPO	Industrials	0.28
Pure Storage Inc Class A	PSTG	Technology	0.27
TopBuild Corp	BLD	Industrials	0.26
Toll Brothers Inc	TOL	Consumer Cyclical	0.26

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 25** Top Holdings: Morningstar U.S. Small Broad Growth Extended Index

Constituent	Ticker	Sector	Weighting (%)
Roku Inc Class A	ROKU	Communication Services	0.52
UiPath Inc Class A	PATH	Technology	0.51
Advanced Drainage Systems Inc	WMS	Industrials	0.47
Elastic NV	ESTC	Technology	0.44
Penumbra Inc	PEN	Healthcare	0.44
Universal Display Corp	OLED	Technology	0.43
Trex Co Inc	TREX	Industrials	0.43
SoFi Technologies Inc Ordinary Shares	SOFI	Financial Services	0.43
Tetra Tech Inc	TTEK	Industrials	0.43
Repligen Corp	RGEN	Healthcare	0.42

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 26** Top Holdings: Morningstar U.S. Small Value Extended Index

Constituent	Ticker	Sector	Weighting (%)
Toll Brothers Inc	TOL	Consumer Cyclical	0.53
United States Steel Corp	X	Basic Materials	0.52
East West Bancorp Inc	EWBC	Financial Services	0.48
Fortune Brands Innovations Inc	FBIN	Industrials	0.46
Bath & Body Works Inc	BBWI	Consumer Cyclical	0.45
Ally Financial Inc	ALLY	Financial Services	0.45
Lithia Motors Inc Class A	LAD	Consumer Cyclical	0.43
Norwegian Cruise Line Holdings Ltd	NCLH	Consumer Cyclical	0.41
Dick's Sporting Goods Inc	DKS	Consumer Cyclical	0.41
Tapestry Inc	TPR	Consumer Cyclical	0.40

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 27** Top Holdings: Morningstar Developed Markets ex-U.S. TME Index

Constituent	Ticker	Sector	Weighting (%)
Novo Nordisk A/S Class B	NOVO B	Healthcare	1.94
Nestle SA	NESN	Consumer Defensive	1.71
ASML Holding NV	ASML	Technology	1.65
Toyota Motor Corp	7203	Consumer Cyclical	1.21
Shell PLC	SHEL	Energy	1.20
AstraZeneca PLC	AZN	Healthcare	1.16
Lvmh Moet Hennessy Louis Vuitton SE	MC	Consumer Cyclical	1.16
Novartis AG Registered Shares	NOVN	Healthcare	1.15
Roche Holding AG	ROG	Healthcare	1.12
BHP Group Ltd	BHP	Basic Materials	0.97

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 28** Top Holdings: Morningstar Developed Markets ex-U.S. Growth TME Index

Constituent	Ticker	Sector	Weighting (%)
Novo Nordisk A/S Class B	NOVO B	Healthcare	3.83
ASML Holding NV	ASML	Technology	3.25
AstraZeneca PLC	AZN	Healthcare	2.29
Lvmh Moet Hennessy Louis Vuitton SE	MC	Consumer Cyclical	2.28
Nestle SA	NESN	Consumer Defensive	2.17
SAP SE	SAP	Technology	1.39
L'Oreal SA	OR	Consumer Defensive	1.32
Toyota Motor Corp	7203	Consumer Cyclical	1.19
Commonwealth Bank of Australia	CBA	Financial Services	1.14
Novartis AG Registered Shares	NOVN	Healthcare	1.13

Source: Morningstar Direct. Data as of December 31, 2023.



**Exhibit 29** Top Holdings: Morningstar Developed Markets ex-U.S. Value TME Index

Constituent	Ticker	Sector	Weighting (%)
Shell PLC	SHEL	Energy	2.50
BHP Group Ltd	BHP	Basic Materials	2.02
TotalEnergies SE	TTE	Energy	1.77
HSBC Holdings PLC	HSBA	Financial Services	1.76
Roche Holding AG	ROG	Healthcare	1.47
The Toronto-Dominion Bank	TD	Financial Services	1.37
Nestle SA	NESN	Consumer Defensive	1.28
Toyota Motor Corp	7203	Consumer Cyclical	1.27
Novartis AG Registered Shares	NOVN	Healthcare	1.20
BP PLC	BP.	Energy	1.13

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 30** Top Holdings: Morningstar Emerging Markets TME Index

Constituent	Ticker	Sector	Weighting (%)
Taiwan Semiconductor Manufacturing Co Ltd	2330	Technology	6.22
Samsung Electronics Co Ltd	005930	Technology	4.11
Tencent Holdings Ltd	00700	Communication Services	3.11
Alibaba Group Holding Ltd Ordinary Shares	09988	Consumer Cyclical	2.25
Reliance Industries Ltd	RELIANCE	Energy	1.69
HDFC Bank Ltd	HDFCBANK	Financial Services	1.53
PDD Holdings Inc ADR	PDD	Consumer Cyclical	1.24
International Holdings Co PJSC	IHC	Industrials	1.07
Infosys Ltd	INFY	Technology	1.01
ICICI Bank Ltd	ICICIBANK	Financial Services	0.83

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 31** Top Holdings: Morningstar Emerging Markets Growth TME Index

Constituent	Ticker	Sector	Weighting (%)
Taiwan Semiconductor Manufacturing Co Ltd	2330	Technology	7.87
Reliance Industries Ltd	RELIANCE	Energy	3.57
Tencent Holdings Ltd	00700	Communication Services	3.28
PDD Holdings Inc ADR	PDD	Consumer Cyclical	2.62
International Holdings Co PJSC	IHC	Industrials	2.25
HDFC Bank Ltd	HDFCBANK	Financial Services	1.87
ICICI Bank Ltd	ICICIBANK	Financial Services	1.74
SK Hynix Inc	000660	Technology	1.72
Alibaba Group Holding Ltd Ordinary Shares	09988	Consumer Cyclical	1.62
Meituan Class B	03690	Consumer Cyclical	1.59

Source: Morningstar Direct. Data as of December 31, 2023.

**Exhibit 32** Top Holdings: Morningstar Emerging Markets Value TME Index

Constituent	Ticker	Sector	Weighting (%)
Samsung Electronics Co Ltd	005930	Technology	7.94
Taiwan Semiconductor Manufacturing Co Ltd	2330	Technology	4.81
Tencent Holdings Ltd	00700	Communication Services	3.01
Alibaba Group Holding Ltd Ordinary Shares	09988	Consumer Cyclical	2.88
China Construction Bank Corp Class H	00939	Financial Services	1.50
Vale SA	VALE3	Basic Materials	1.48
HDFC Bank Ltd	HDFCBANK	Financial Services	1.25
Hon Hai Precision Industry Co Ltd	2317	Technology	1.06
Samsung Electronics Co Ltd Participating Preferred	005935	Technology	1.02
Infosys Ltd	INFY	Technology	0.92

Source: Morningstar Direct. Data as of December 31, 2023.

**Appendix 3: Funds That Track Morningstar Broad Style Indexes****Exhibit 33** Funds That Track Morningstar Broad Style Indexes

Name	SecId	Ticker	Domicile	Primary Prospectus Benchmark
BNY Mellon US Large Cap Core Equity ETF	F0000149CO	BKLC	United States	Morningstar US Large Cap TR USD
iShares Morningstar Growth ETF	FEUSA04ACO	ILCG	United States	Morningstar US Large Mid Brd Grt TR USD
iShares Morningstar Value ETF	FEUSA04ACP	ILCV	United States	Morningstar US Large Mid Brd Val TR USD
Lyxor Core Morningstar US (DR) ETF-Dist	F0000109UX	LCUD	Luxembourg	Morningstar US Large-Mid NR USD
iShares Morningstar U.S. Equity ETF	FEUSA04ACN	ILCB	United States	Morningstar US Large-Mid TR USD
NBI U.S. Equity Index O	F000013VX6		Canada	Morningstar US Large-Mid TR USD
NBI U.S. Equity Index INV-2	F000016TJI		Canada	Morningstar US Large-Mid TR USD
iShares Morningstar Mid-Cap Growth ETF	FEUSA04ACR	IMCG	United States	Morningstar US Mid Cap Brd Grt TR USD
iShares Morningstar Mid-Cap Value ETF	FEUSA04ACS	IMCV	United States	Morningstar US Mid Cap Brd Val TR USD
BNY Mellon US Mid Cap Core Equity ETF	F0000149CP	BKMC	United States	Morningstar US Mid Cap TR USD
iShares Morningstar Mid-Cap ETF	FEUSA04ACQ	IMCB	United States	Morningstar US Mid Cap TR USD
iShares Morningstar Small-Cap Growth ETF	FEUSA04ACU	ISCG	United States	Morningstar US Small Brd Grt Ext TR USD
iShares Morningstar Small-Cap Value ETF	FEUSA04ACV	ISCV	United States	Morningstar US Small Brd Val Ext TR USD
iShares Morningstar Small-Cap ETF	FEUSA04ACT	ISCB	United States	Morningstar US Small Cap Ext TR USD

Source: Morningstar Direct. Data as of December 31, 2023.

### **About Morningstar Indexes**

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

Please visit [indexes.morningstar.com](https://indexes.morningstar.com) for more information.

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