SMALL AND SMALL-MID ("SMID") CAP EQUITIES AND THE CASE FOR CORE

Mitigating the perils of concentration risk and overdiversification

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As institutional investors continue to search for solutions to help meet their risk and return objectives, small and smid cap equity strategies remain compelling. However, once an investment program decides to invest in one of these asset classes, allocation decisions can significantly impact a portfolio's risk profile and returns. The small and smid cap universes are very broad and are used for both active and passive strategies that range from deep value to aggressive growth (and everything in between). Traditionally, the small and smid cap universes are each segmented into three style categories – growth, core, and value – in addition to the active/passive dichotomy. If the allocation decision among these styles is not made properly, an investment program may be exposed to unintended risks.

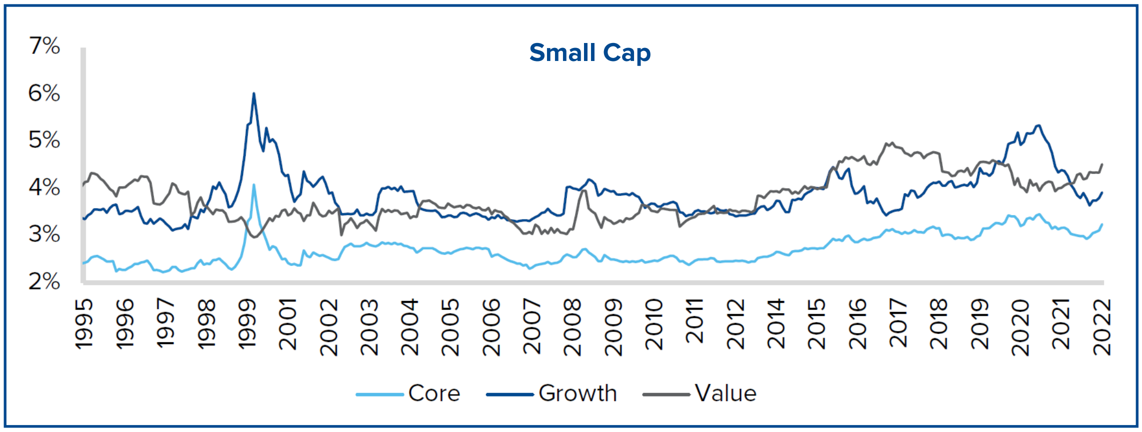
The composition of the growth and value benchmarks within the small and smid cap equity asset classes has evolved and created an often-overlooked pitfall: the potential for unwanted industry concentration and inadvertent portfolio exposures. We believe that active investing that incorporates stocks with both value and growth characteristics is a better solution for these asset classes. By combining the benefits of growth and value investing, along with the diversification and alpha potential of actively investing in smaller companies, we believe an active core approach captures the best of the small and smid cap universes. Additionally, active core offers a compelling solution for institutional investors seeking to streamline the number of strategies in their portfolios, limit difficult allocation decisions within the small cap and/or smid cap universes, maintain an effective level of diversification, and meet their risk-return objectives.

HOW TO AVOID AMPLIFYING CONCENTRATION RISK

According to our analysis, institutional investors may be subjecting their portfolios to both industry concentration and volatile changes in exposures by committing to a growth or value style within small or smid cap equity. This is clearly seen when taking a three decade-long historical view of trends in the Russell 2000® Index (which represents small cap core) and Russell 2500™ Index (which represents smid cap core), together with each benchmark's growth and value counterparts. Figure 1A represents the standard deviation of industry group weightings in small cap core, growth, and value on a historical basis, while Figure 1B represents these characteristics for smid cap core, growth, and value. In Figures 1A and 1B, a higher standard deviation indicates a wider level of dispersion amongst industry group weightings, implying a greater concentration in certain industry groups. These figures demonstrate that the industry group weightings in the core styles have less dispersion, less concentration, and more stability over time when compared to the growth and value styles of the applicable strategy. Small and smid cap growth or value investors may be unaware of the potential hazards posed by their choice of style and, as a result, may potentially be at risk from unintended and fluctuating industry concentrations.

FIGURE 1A: SMALL CAP CORE ENJOYS MORE STABLE INDUSTRY WEIGHTINGS

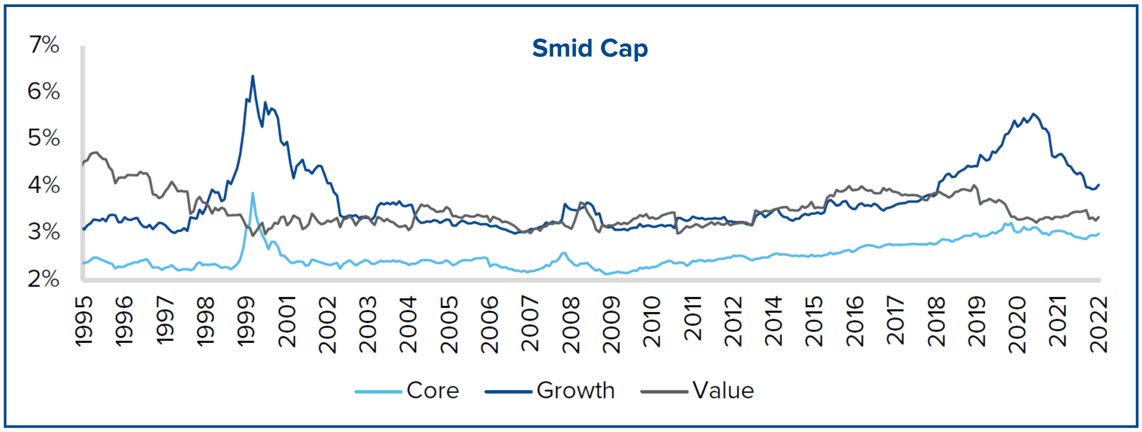
STANDARD DEVIATION OF INDUSTRY GROUP WEIGHTINGS IN SMALL CAP CORE, GROWTH, AND VALUE



Source: Furey Research Partners and FactSet, as of September 30, 2022.
Small cap core equities represented by the Russell 2000® Index. Small cap growth equities represented by the Russell 2000® Growth Index. Small cap value equities represented by the Russell 2000® Value Index.

FIGURE 1B: SMID CAP CORE ENJOYS MORE STABLE INDUSTRY WEIGHTINGS

STANDARD DEVIATION OF INDUSTRY GROUP WEIGHTINGS IN SMID CAP CORE, GROWTH, AND VALUE



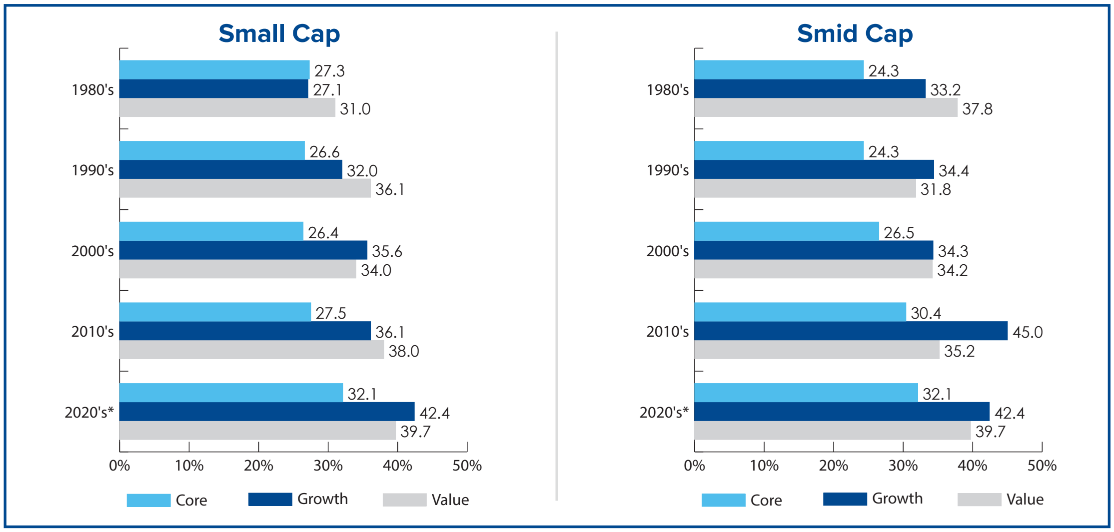
Source: Furey Research Partners and FactSet, as of September 30, 2022.
Smid cap core equities represented by the Russell 2500™ Index. Smid cap growth equities represented by the Russell 2500™ Growth Index. Smid cap value equities represented by the Russell 2500™ Value Index.

Concentration risk in small and smid cap growth and value is even more apparent when analyzing the aggregate weight of the top three industry groups in the core, growth, and value indices for each asset class. Figure 2 evidences heavier industry concentrations in growth and value relative to core for both small and smid caps, which could place portfolios at greater risk from overexposure to just a few dominant industry groups. Moreover, while the level of industry concentration in small cap core has remained fairly level over the past four decades, concentration levels of the top three industry groups in small cap growth and small cap value have continued to climb, with no indication that this trend will cease in the near term. Again, growth or value investors may be unaware of this scenario and, as a result, may be taking on risk from unintended industry bets.

Past performance is not a guarantee of future results.

FIGURE 2: CORE LESS VULNERABLE TO INDUSTRY CONCENTRATION RISK

AVERAGE AGGREGATE WEIGHT OF TOP THREE INDUSTRY GROUPS IN SMALL AND SMID CAP CORE, GROWTH, AND VALUE



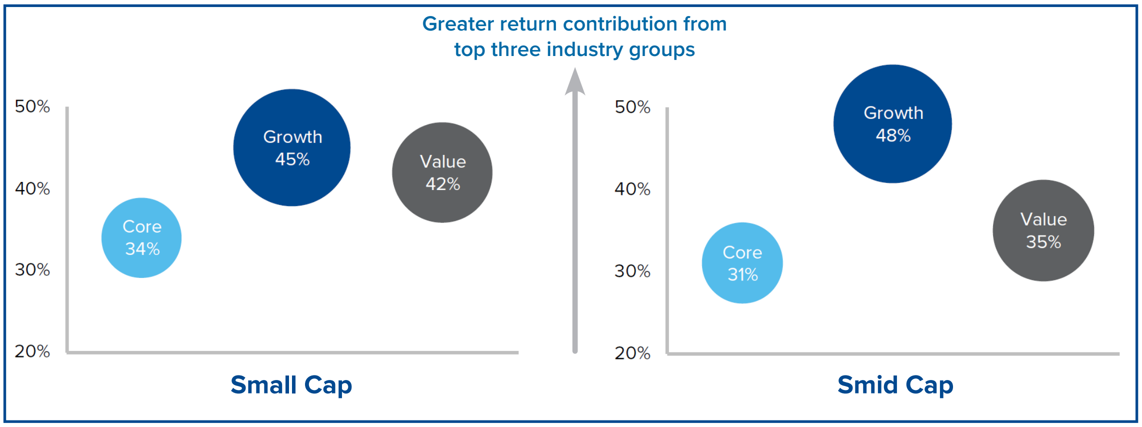
Source: Furey Research Partners and FactSet, as of September 30, 2022.
Small cap core equities represented by the Russell 2000® Index. Small cap growth equities represented by the Russell 2000® Growth Index. Small cap value equities represented by the Russell 2000® Value Index.
Smid cap core equities represented by the Russell 2500™ Index. Smid cap growth equities represented by the Russell 2500™ Growth Index. Smid cap value equities represented by the Russell 2500™ Value Index.

Our analysis of industry concentrations also underscores some of the inherent biases within certain styles. Not surprisingly, the Information Technology and Health Care sectors are dominant within the growth style, whereas the Financials and Real Estate sectors are disproportionately represented in the value index.[1]

Industry concentration has concrete effects on performance. Figure 3, an analysis of returns over the past decade, reveals the top three contributing industry groups in the small and smid cap growth and value indices account for a significantly greater proportion of each index's respective returns. Again, this suggests that an investor's exposure to growth and value styles alone can increase concentration risk and industry-specific sensitivities in an institutional portfolio. An investor seeking to exploit fluctuating concentrations and time allocation decisions between value and growth based on particular inflection points faces a myriad of potential challenges, including transaction costs and determining the optimal timing for such a move.

FIGURE 3: GROWTH AND VALUE RETURNS MORE RELIANT ON TOP INDUSTRY WEIGHTS

PROPORTION OF RETURNS FROM TOP THREE INDUSTRY GROUPS – 10-YEAR PERIOD FOR SMALL AND SMID CAP CORE, GROWTH, AND VALUE



Source: Furey Research Partners and FactSet, as of September 30, 2022.
Small cap core equities represented by the Russell 2000® Index. Small cap growth equities represented by the Russell 2000® Growth Index. Small cap value equities represented by the Russell 2000® Value Index.
Smid cap core equities represented by the Russell 2500™ Index. Smid cap growth equities represented by the Russell 2500™ Growth Index. Smid cap value equities represented by the Russell 2500™ Value Index.

Past performance is not a guarantee of future results.

THE PERILS OF OVERDIVERSIFICATION

Based on the empirical evidence presented above, one might conclude that since reliance on growth or value strategies within small or smid cap increases sector concentration risk, the antidote should be to enhance diversification by increasing the number of strategies represented in the investor's overall portfolio. However, such a move could expose the investor to another source of risk: overdiversification.

While diversification is a vital element of institutional investment programs, the asset management industry is increasingly aware of going too far in pursuit of that principle. Recent studies show that many institutional portfolios are in fact overdiversified, with some programs now looking to streamline their holdings. There are numerous hazards associated with overdiversification, such as:

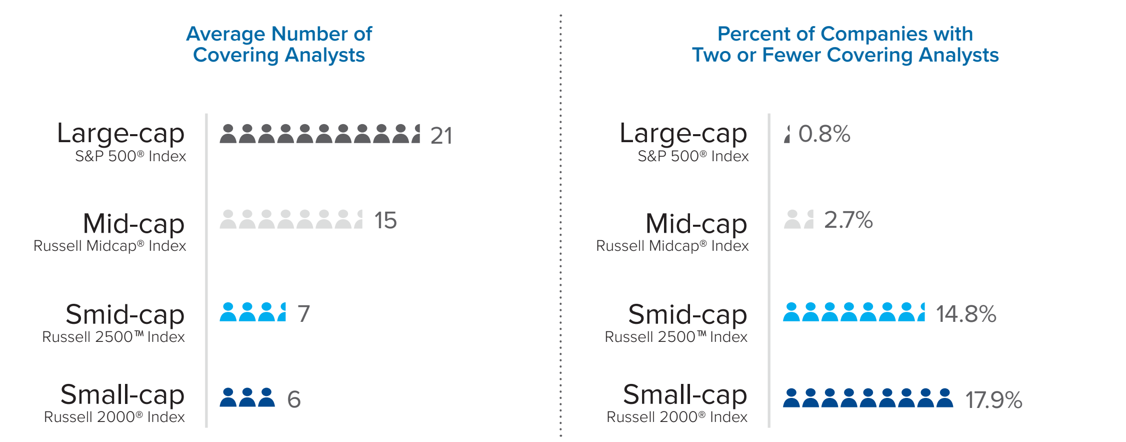
- **Weaker performance:** Some studies show that using diversification to reduce active risk may only be effective up to a certain point. The portfolio's ability to outperform its benchmark then becomes impaired.[2]
- **Correlation of returns:** Overdiversification can lead to undesired correlations, as human and factor biases of the allocators can come into play to create a portfolio of too-similar investment strategies.[3]
- **Costs:** While many studies show that the active risk and active share of a portfolio decline as additional strategies are added, lower fees are not a by-product of this decline in risk. Therefore, investors can potentially expect less productive fee ratios as a result of overdiversification.[2]

THE SIGNIFICANCE OF AN ACTIVE OVERLAY

It is important to remember the critical role that active management can play in small and smid cap equity strategies. As smaller issuers generally occupy an area of the equity market in which there is greater inefficiency, we believe security selection based on bottom-up fundamentals and specialized expertise is critical to alpha generation. As demonstrated in Figure 4, there is a relative under-coverage of small cap equities by analysts, creating significant opportunities for small and smid cap specialists to identify potential sources of alpha.

FIGURE 4: SMALL CAPS AND SMID CAPS REMAIN STRUCTURALLY INEFFICIENT, IDEAL FOR ACTIVE MANAGERS

LACK OF ANALYST COVERAGE MEANS UNDISCOVERED OPPORTUNITIES



As of October 31, 2022. Source: Bloomberg, LP.

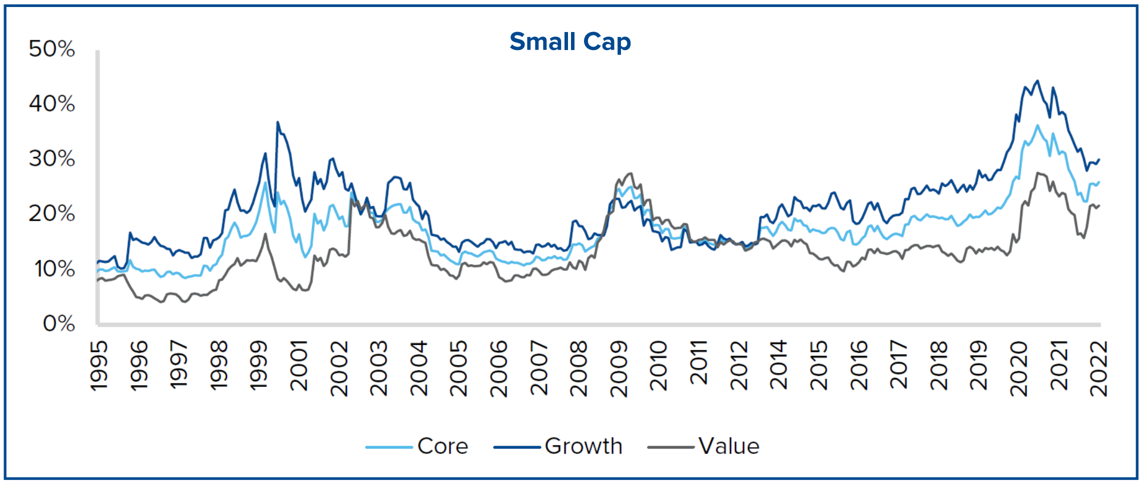
Past performance is not a guarantee of future results.

Over the past decade, low interest rates and quantitative easing lifted stocks of all market caps. Recently, however, the broader economic landscape has changed due to high inflation leading to aggressive interest rate increases along with the shrinking of the Federal Reserve's balance sheet. With less available capital, we believe investors will gravitate to sectors and stocks with strong fundamentals, resulting in a process of active management potentially outperforming in this environment.

Furthermore, the analysis of all three investment styles within both small and smid cap reveals that exposure to stocks of non-earning (or loss-making) companies in the applicable index is currently elevated as compared to historical levels (Figures 5A and 5B). Loss-making stocks have demonstrably higher downside capture ratios than those of stocks of profitable companies (Figure 6). Consequently, we believe investing in a passive index is not the optimal solution for small or smid cap equity investors, particularly in an environment of high volatility. A skilled and experienced active manager with a fundamental research-based and bottom-up approach can identify overlooked opportunities regardless of market conditions, while maintaining a strategic focus on risk management.

FIGURE 5A: SMALL CAP NON-EARNERS WELL REPRESENTED IN PASSIVE INDICES

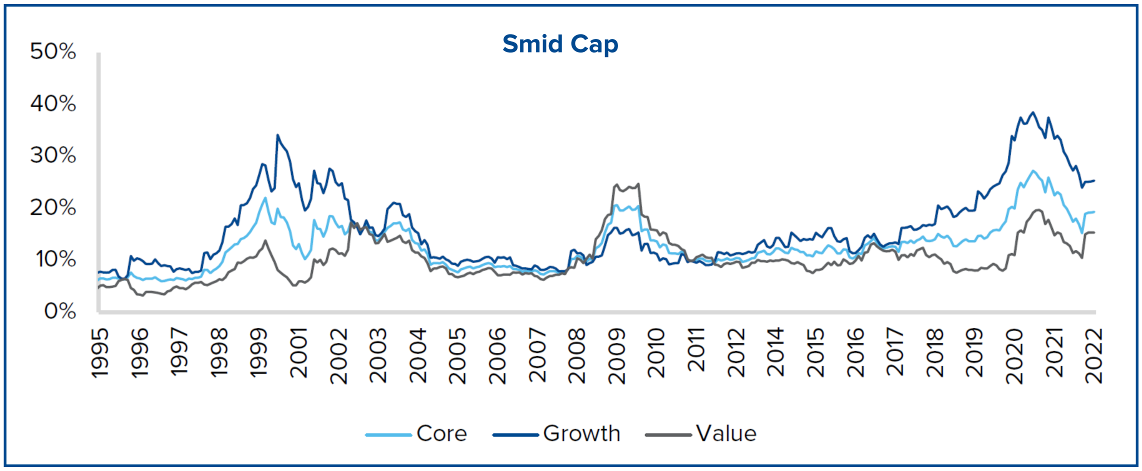
AGGREGATE WEIGHTING OF SMALL CAP NON-EARNING STOCKS IN CORE, GROWTH, AND VALUE



Source: Furey Research Partners and FactSet, as of September 30, 2022.
Small cap core equities represented by the Russell 2000® Index. Small cap growth equities represented by the Russell 2000® Growth Index. Small cap value equities represented by the Russell 2000® Value Index.

FIGURE 5B: SMID CAP NON-EARNERS WELL REPRESENTED IN PASSIVE INDICES

AGGREGATE WEIGHTING OF SMID CAP NON-EARNING STOCKS IN CORE, GROWTH, AND VALUE

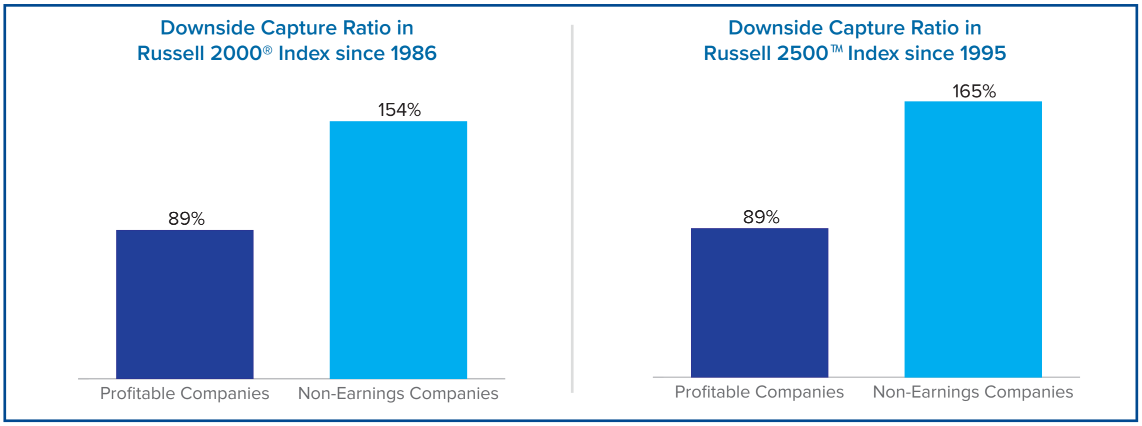


Source: Furey Research Partners and FactSet, as of September 30, 2022.
Smid cap core equities represented by the Russell 2500™ Index. Smid cap growth equities represented by the Russell 2500™ Growth Index. Smid cap value equities represented by the Russell 2500™ Value Index.

Past performance is not a guarantee of future results.

FIGURE 6: STOCKS OF NON-EARNERS CAPTURE MORE DOWNSIDE

DOWNSIDE CAPTURE RATIO OF STOCKS IN NON-EARNING COMPANIES VS. PROFITABLE COMPANIES



Source: Furey Research Partners and FactSet, as of September 30, 2022.

BENEFITS OF CORE

Palisade believes investors attempting to reduce portfolio risk, generate alpha, and streamline their investment programs to prevent overdiversification should focus their small and smid cap allocations in active core equity strategies, which provide attractive risk-return profiles and inherently mitigate some of the hazards inherent in value and growth. As previously underscored in this paper, the small cap core and smid cap core equity indices generally exhibit less dispersion within industry group weightings and more stability in composition than their growth and value counterparts. By combining the benefits of growth and value investing, along with the diversification and alpha potential of actively investing in smaller companies, active core equity strategies represent the potential best of both the small and smid cap universes. We believe these core strategies offer a compelling solution for institutional investors seeking to streamline the number of strategies in their portfolios, maintain an effective level of diversification, and meet their risk- return objectives.

REVISIT YOUR SMALL AND SMID CAP CORE EQUITY ALLOCATION

As our analysis illustrates, allocations within the small and smid cap universes could expose institutional investors to unintended risks, including industry concentrations, overdiversification, and downside risks associated with passive investments. Institutional investors should evaluate their investment programs, in particular their allocations within small and smid cap equity, and consider consolidating these allocations into core portfolios to mitigate risk.

Endnotes:

[1] Bloomberg, 4/1/2009–9/30/2022. Small cap core equities represented by the Russell 2000® Index. Small cap growth equities represented by the Russell 2000® Growth Index. Small cap value equities represented by the Russell 2000® Value Index. Small-mid cap core equities represented by the Russell 2500™ Index. Small-mid cap growth equities represented by the Russell 2500™ Growth Index. Small-mid cap value equities represented by the Russell 2500™ Value Index.

[2] Shawn McKay, Robert Shapiro, Ric Thomas, "What Free Lunch? The Costs of Overdiversification," Financial Analysts Journal: A Publication of CFA Institute, 2018.

[3] Gerald Garvey, Ronald N. Kahn, Raffaele Savi, "The Dangers of Diversification: Managing Multiple Manager Portfolios," The Journal of Portfolio Management, Winter 2017.

PERFORMANCE AS OF SEPTEMBER 30, 2022

	September 2022	YTD 2022	1 Year	3 Year Annualized	5 Year Annualized	10 Year Annualized
Small Cap Core Equity Composite (Gross)	-9.3%	-23.6%	-18.6%	4.9%	6.0%	10.2%
Small Cap Core Equity Composite (Net)	-9.3%	-23.9%	-19.0%	4.3%	5.4%	9.6%
Russell 2000® Index	-9.6%	-25.1%	-23.5%	4.3%	3.6%	8.6%

	September 2022	YTD 2022	1 Year	3 Year Annualized	ITD (9/1/2018)
Smid Cap Core Equity Composite (Gross)	-9.7%	-23.6%	-19.0%	5.7%	3.0%
Smid Cap Core Equity Composite (Net)	-9.8%	-24.1%	-19.7%	4.8%	2.2%
Russell 2500™ Index	-9.5%	-24.0%	-21.1%	5.4%	2.5%

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The Small Capitalization Composite includes all fee-paying, discretionary, taxable mutual funds, taxable and tax-exempt institutional portfolios invested in equities with increasing earnings and free cash flow, core characteristics, and small capitalizations. Prior to January 1, 2012, taxable mutual funds and taxable accounts were excluded from the composite. Effective January 1, 2016, any account in the composite that has a cash flow withdrawal or deposit of 50% or greater of the assets of the account will be removed from the composite for that month and will be added back in the following month. The minimum account size for this composite is $1 million. Prior to April 1, 2008 the minimum account size was $10 million, and prior to January 1, 2009 the minimum account size for this composite was $3 million. The benchmark is the Russell 2000® Index. The investment management fee schedule for the composite is 0.85% on the first $50 million, 0.75% on the next $50 million, and 0.70% on the remainder. Actual investment advisory fees incurred by clients may vary. The Small Capitalization Composite creation date and inception date is March 1, 1995. For each period presented, the composite did not contain any wrap fee portfolios.

The SMID Capitalization Composite includes all portfolios invested in equities with increasing earnings and free cash flow, core characteristics, and small-to-mid capitalizations. Effective December 1, 2021, only fee-paying accounts are included in the composite. Prior to December 1, 2021, both fee-paying and non-fee-paying accounts were included in the composite. Any account in the composite that has a cash flow withdrawal or deposit of 50% or greater of the assets of the account will be removed from the composite for that month and will be added back in the following month. The minimum account size for this composite is $100 thousand. Prior to December 1, 2021, the minimum account size for this composite was $250 thousand. The benchmark is the Russell 2500™ Index. The investment management fee schedule for the composite is 0.80% on the first $25 million, 0.75% on the next $25 million, 0.70% on the next $50 million, 0.65% on the next $100 million, and 0.60% on the remainder. Actual investment advisory fees incurred by clients may vary. The SMID Capitalization Composite was created October 1, 2018 and the inception date is August 30, 2018.

The S&P 500® Index is an unmanaged index that is widely recognized as an indicator of general market performance, based on the market capitalizations of 500 large companies having common stocks listed on the NYSE or NASDAQ. The S&P 500® Index does not have a defined investment objective, nor does it charge fees and expenses.

The Russell 2000® Index measures the performance of the small-cap segment of the U.S. equity universe. It consists of approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2000® Growth Index measures the performance of the smallcap growth segment of the US equity universe. It includes those Russell 2000® companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 2000® Value Index measures the performance of the smallcap value segment of the US equity universe. It includes those Russell 2000® companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years).

The Russell 2500™ Index measures the performance of the small- to mid-cap segment of the U.S. equity universe. It consists of approximately 2,500 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2500™ Growth Index measures the performance of the small to mid-cap growth segment of the US equity universe. It includes those Russell 2500™ companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 2500™ Value Index measures the performance of the small to mid-cap value segment of the US equity universe. It includes those Russell 2500™ companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years).

The Russell Midcap® Index measures the performance of the 800 smallest companies in the Russell 1000® Index. The Russell 1000® Index is a compilation of the largest 1,000 publicly traded U.S. companies.

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