RESEARCH INSIGHTS

WHY SMALL CAPS ARE ATTRACTIVE

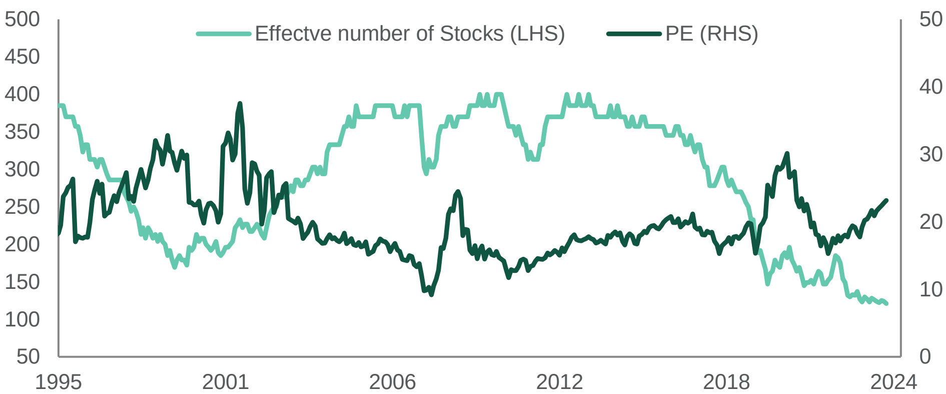
GUIDO BALTUSSEN, PROF, PHD.
Head of Quantitative Strategies - International

ABHISHEK GUPTA
Sr. Client Portfolio Manager

DANIEL FANG, CFA, CAIA
Sr. Quantitative Researcher

The global stock market reached an all-time high in September 2024. The key driver has been the mega cap stocks, causing market concentration to increase to unseen levels. As illustrated in Exhibit 1, the effective number of stocks in the MSCI World Index has reduced to 121 stocks relative to the historical median of 300+ stocks, as of September 30th. At the same time, large cap stock valuations appear elevated with the price to earnings (PE) ratio at 22.6, ranked at the 78th percentile since 1995.

EXHIBIT 1: EFFECTIVE NUMBER OF STOCKS & PE RATIO OF MSCI WORLD INDEX



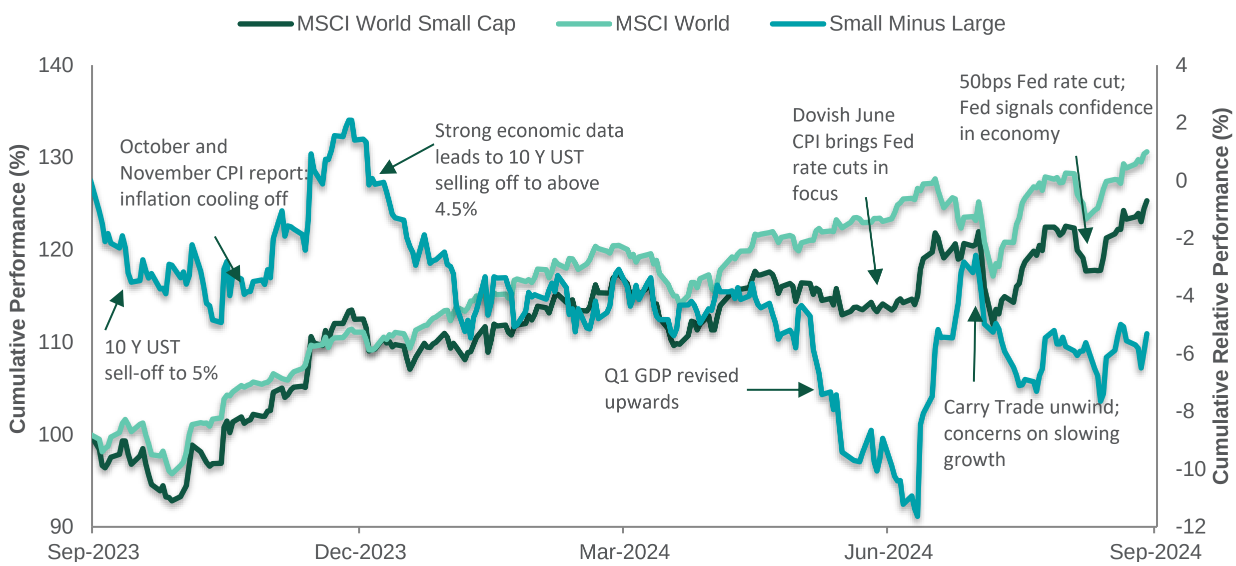
Source: FactSet, Bloomberg, NTAM Global Asset Allocation Quantitative Research. Data is from 12/31/1994 to 09/30/2024. Effective number of stocks represents the inverse of the Herfindahl-Hirschman Index (HHI) of MSCI World Index.

Concerned about elevated valuations and market concentration in large cap stocks, investors are showing increasing interest in small cap stocks.

Over the last 12 months, and specifically in the last quarter, we have seen significant price movements in small cap stocks – both positive and negative. In Exhibit 2, we look at the relative performance of small caps and large caps over the last 12 months. Economic growth prospects, the trajectory of long term rates and expectations around Fed policy have all been contributing to recent relative performance of small caps.

In early July, the release of dovish June US Consumer Price Index (CPI) data led to the market pricing in an increased pace of Fed rate cuts. Investors welcomed the prospect of easing monetary policy in the U.S. and elsewhere, along with economic resilience, leading to small caps outperforming larger caps. Further, while there have been bouts of volatility since, a 50 basis point (bps) rate cut from the U.S. Federal Reserve on September 18th and careful messaging focused on preserving growth and unemployment came out as positive for small caps.

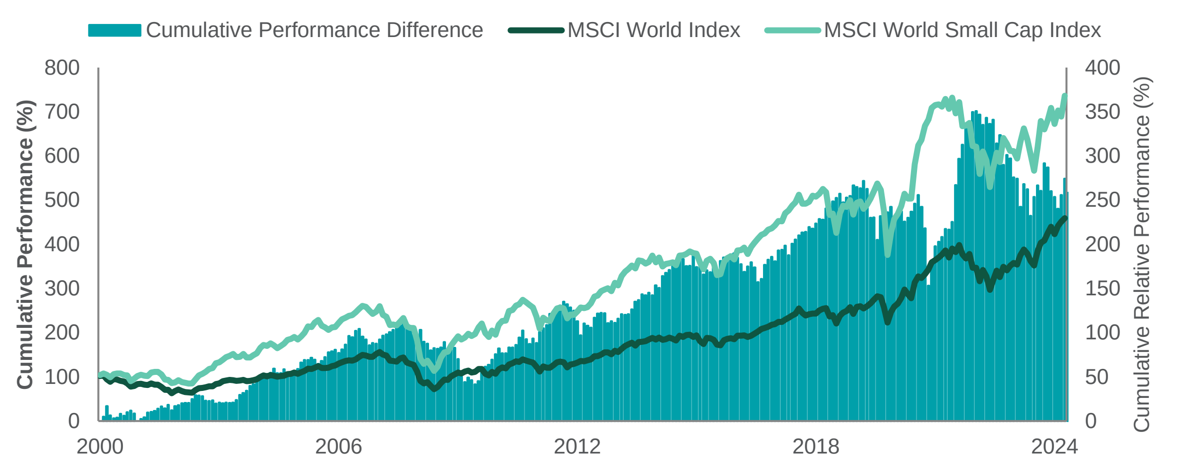
EXHIBIT 2: TRAILING 12M SMALL CAP PERFORMANCE RELATIVE TO LARGE CAPS



Source: Bloomberg, NTAM Global Asset Allocation Quantitative Research. Data shown from 01/01/2001 through 09/30/2024. MSCI World Small Cap Index was launched on 01/01/2001.

Where does this leave the relative attractiveness of small cap stocks? And how should investors look at small cap stocks in general? Are they poised to deliver similar outperformance as they did in the 2000s (Exhibit 3)? And what have we seen since we earlier wrote on this in May? In this paper, we provide insights into the attractiveness of small caps and why this might be the time for investors to allocate to small cap stocks.

EXHIBIT 3: GLOBAL SMALL CAPS HAVE OUTPERFORMED LARGE CAPS

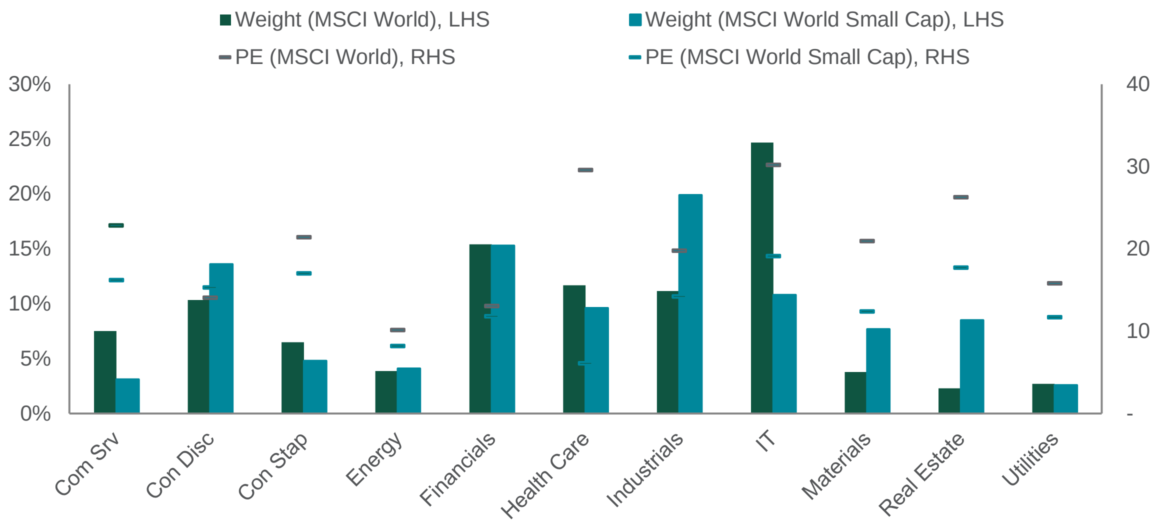


Source: Bloomberg, NTAM Global Asset Allocation Quantitative Research. Data shown from 01/01/2001 through 09/30/2024. MSCI World Small Cap Index was launched on 01/01/2001.

REASON 1: SMALL CAPS TRADE AT ATTRACTIVE VALUATIONS

After more than a decade of market leadership, technology oriented sectors, including Information Technology and Communication Services, now represent around a third of the MSCI World Index. Valuation of mega cap firms within these sectors have been buoyant, driven by growth expectations. In contrast, the distribution of sector weights and valuations within the MSCI World Small Cap Index are moderate and normalized (Exhibit 4).

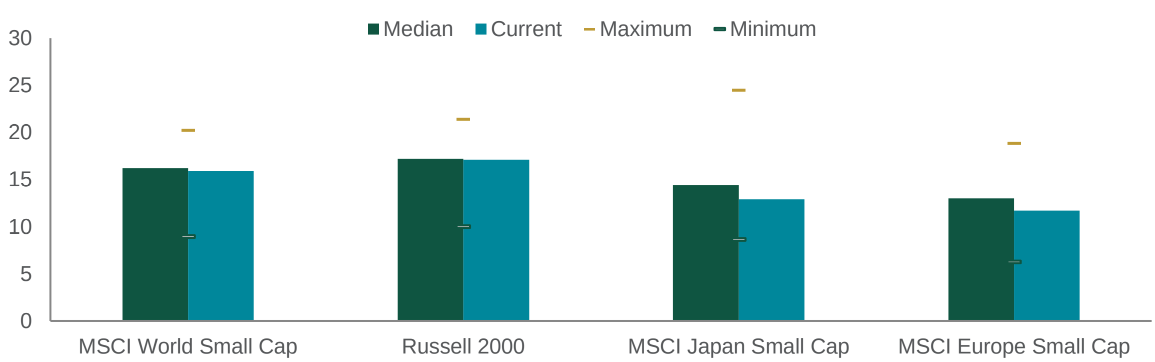
EXHIBIT 4: SECTOR WEIGHT AND PE RATIO COMPARISON (MSCI WORLD VS. MSCI WORLD SMALL CAP)



Source: FactSet, Bloomberg, NTAM Global Asset Allocation Quantitative Research. As of 09/30/2024.

Relative to their own history, small cap stocks are trading at a discount. Exhibit 5 shows the valuation of global and regional small cap stocks, relative to historical norms. Across regions, small caps are trading below their historical median valuations.

EXHIBIT 5: SMALL CAPS OFFER ATTRACTIVE VALUATIONS

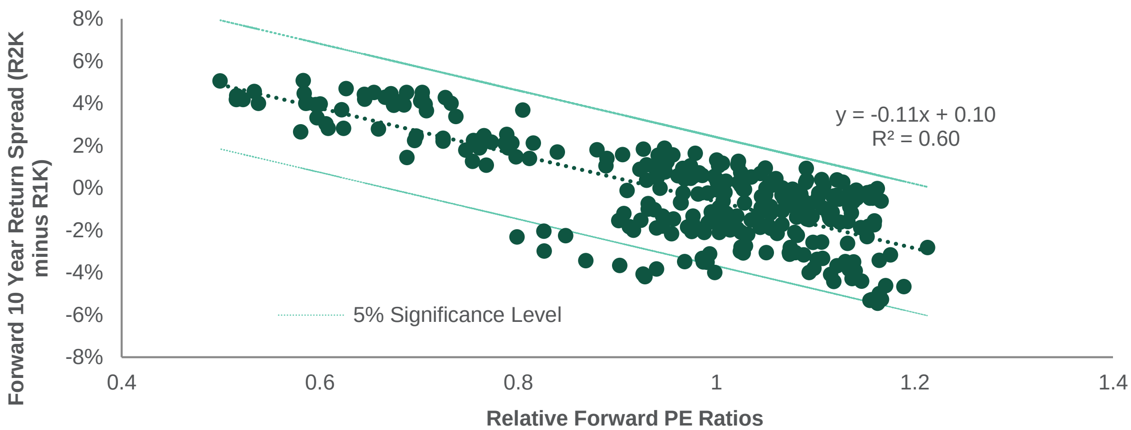


Source: FactSet, NTAM Global Asset Allocation Quantitative Research. Data is from 01/01/2001 to 09/30/2024. Price to Earnings Ratio for the market cap weighted indices. Exclude stocks with negative earnings.

Small cap valuations are at a significant discount to that of the large caps. As of September 30th, global small cap stocks are trading at a 30% valuation discount relative to large cap stocks. Similar valuation discounts are observed for small caps across key regions: the U.S., Japan, and Europe.

The relative valuation of small caps has historically had predictive power on future relative performance. Exhibit 6 shows a scatterplot between forward PE ratios and the forward 10-year return spread of small caps relative to large caps in the U.S. The trend line slope is -0.11. The negative slope, or beta coefficient, indicates cheaper relative valuations have historically contributed to better small cap performance. Relative valuation explains 60% of the total variance of the 10 year forward return spread. Given current historically low valuations, small caps may potentially outperform over the next 10 years. Looking at current relative small cap valuations, this model would predict the relative discount to contribute 2.8% annualized outperformance from small caps over large caps, over the next 10 years.

EXHIBIT 6: RELATIVE VALUATON VS. FORWARD RETURN SPREAD (R2K VS. R1K)

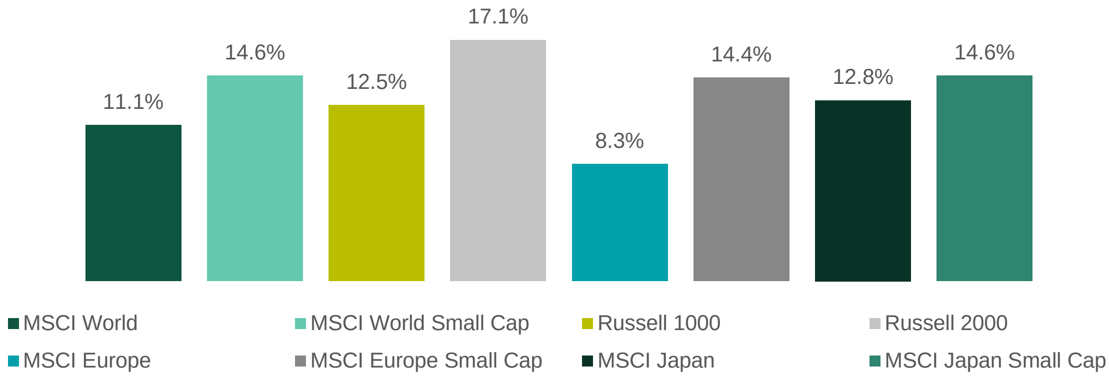


Source: FactSet, Bloomberg, NTAM Global Asset Allocation Quantitative Research. Data is from 03/31/1990 to 09/30/2024. Forward PE excludes stocks with negative earnings. R2K refers to the Russell 2000 Index and R1k refers to the Russell 1000 Index.

REASON 2: STRONG EXPECTED EARNINGS GROWTH FOR SMALL CAPS

Small caps not only trade at attractive valuations, but are also expected to experience significant earnings growth. Analyst expectations show that small cap corporate earnings are expected to outpace large cap earnings through 2026 (Exhibit 7). If these expectations are realized, small cap fundamentals have the potential be a tailwind to relative returns.

EXHIBIT 7: EXPECTED 3 YEAR EARNING GROWTH (%)



Source: FactSet, NTAM Global Asset Allocation Quantitative Research. Data As of 09/30/2024.

REASON 3: RATE CUTS ARE GENERALLY SUPPORTIVE TO SMALL CAP PERFORMANCE

Small companies tend to have less access to external debt financing and higher reliance on floating or short maturity debt to finance their business operations. As a result, rate hikes are expected to result in a higher cost of capital and hence lower profitability for small caps. This narrative has been one of the key drivers of the recent underperformance of small caps, as global central banks tightened monetary policy and increased interest rates.

In Exhibit 8a, we take an evidence-based perspective and perform an empirical analysis of the sensitivity of the return spread between small caps and large caps to changes in the Fed funds rate. In the scatter plot below, the Y-axis is showing the quarterly return spread between the Russell 2000 and Russell 1000, and the X-axis is showing the quarterly change of Fed Fund effective rates.

From the analysis, the contemporaneous relative performance for small caps has historically had - at best - a marginal relationship with the quarterly change of Fed Fund Rates with an insignificant slope quotient (t-stat: -0.5) . Hence, markets may have gone too far in discounting small cap prospects. However, depressed valuations coupled with an improvement in credit conditions post Fed-Fund rate cuts has more empirical support, and may provide ground for a small cap recovery.

In Exhibit 8b, we perform an analysis of the sensitivity of 1 year forward return spreads between small cap and large cap stocks to changes in the Fed Funds rate. The quarterly change in the Fed Funds rate now has a large and significant negative slope coefficient of -4.39 (t-stat: -3.1) to 1 year forward relative performance of small caps. The results imply that a quarterly decrease of 25 bps in the Fed Funds rate has historically contributed to a 1 year forward outperformance of 1.1% for small caps and vice-versa. In other words, rate cuts, when they happen, have historically been a tailwind to future small cap relative performance. Though still early, the recent small cap performance post the initial 50 bps rate cut at the September 18th meeting has been well aligned with the model.

EXHIBIT 8A: INTEREST RATE SENSITIVITIES OF SMALL CAP VERSUS LARGE CAP

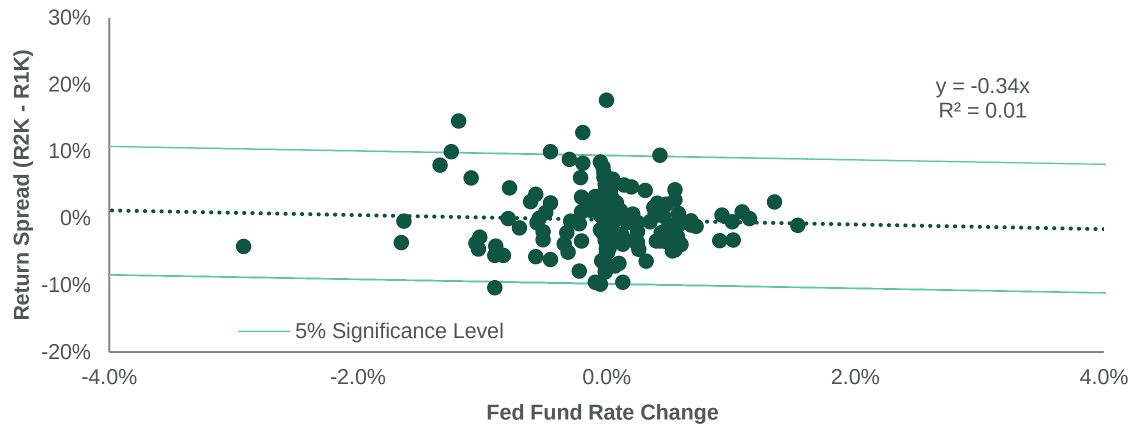
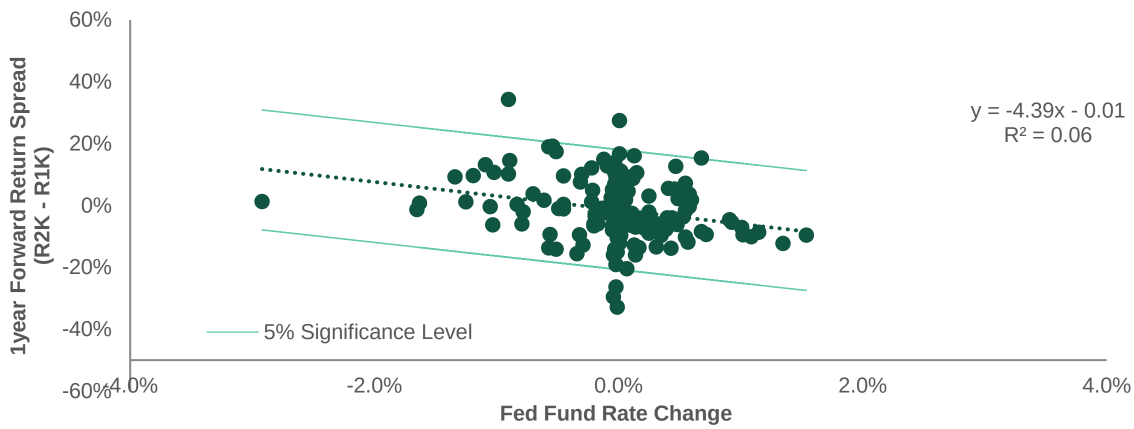


EXHIBIT 8B: INTEREST RATE SENSITIVITIES OF SMALL CAP VERSUS LARGE CAP



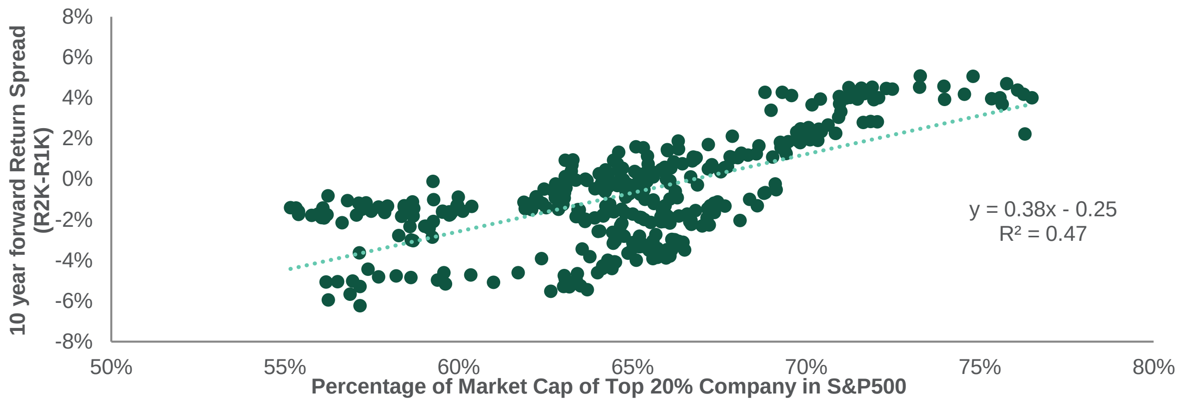
Source: Bloomberg, NTAM Global Asset Allocation Quantitative Research. Quarterly data from 01/01/1984 to 09/30/2024.

REASON 4: SMALL CAPS HAVE OUTPERFORMED FOLLOWING PERIODS OF MARKET CONCENTRATION

The concentration in large caps has been particularly pronounced in U.S. stocks. Empirically, the forward relative performance of small caps has been better in periods following an increase in the concentration of large caps. Exhibit 9 shows a scatterplot between the percentage of market cap in the top 20% largest S&P 500 companies and the forward 10-year return spread of small caps relative to large caps in the U.S. Similar results are applicable for global small caps.

The positive slope shows that following periods of high market cap concentration, small caps have historically outperformed.

EXHIBIT 9: MARKET CONCENTRATION VS.10 YR FORWARD RETURN SPREAD (R2K - R1K)

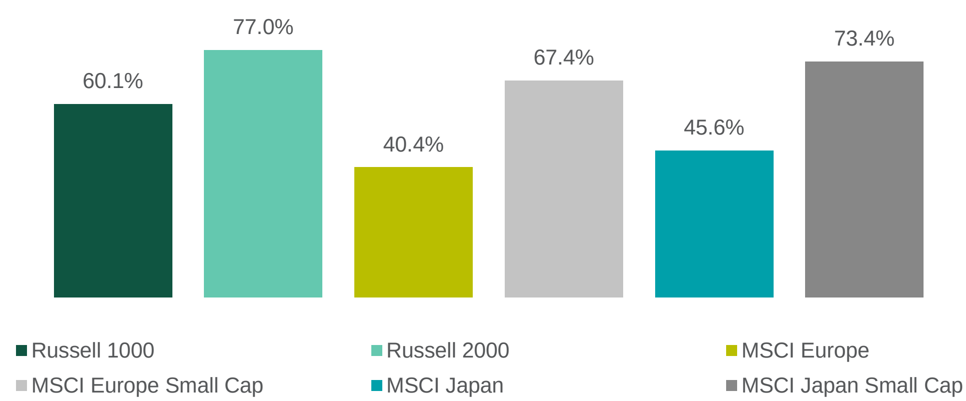


Source: FactSet, Bloomberg, NTAM Global Asset Allocation Quantitative Research. Data is from 01/01/1984 to 09/30/2024.

REASON 5: PEAKED GLOBALIZATION MAY BENEFIT SMALL CAP IN THE LONG TERM

According to a research report published by the International Monetary Fund (IMF) (See Reference), Globalization has entered a new phase of “Slowbalization.” The global trade openness index plateaued as trade tensions are rising between the two largest economies (Appendix A2). As globalization peaks, large multi-national corporations started to shift their supply chains back to domestic suppliers. Small cap firms tend to generate a substantial proportion of their revenues in domestic markets (Exhibit 10). “Reshoring” is a long-term theme which may benefit small cap companies and provide investors with additional diversification benefits.

EXHIBIT 10: DOMESTIC REVENUE SHARE (%)



Source: Factset, NTAM Global Asset Allocation Quantitative Research. Data as of 09/30/2024.

BEST TO STICK TO HIGH QUALITY PROFITABLE SMALL CAPS

The reasons discussed above make a compelling case for small caps. However, one criticism of the small cap universes that we need to address is that they have had a significantly higher number of stocks with higher debt and distressed balance sheets relative to large caps. In fact, around 40% of companies in the Russell 2000 Index and one in three companies in MSCI World Small Cap Index are distressed i.e., companies with insufficient earnings to cover their interest expense.

When in distress, small cap companies are prone to bankruptcy or significant downside in their market capitalization, posing an additional risk for small cap investors. Investors can be at risk of significant wealth erosion in distressed businesses, and we believe investment in small cap companies that have lost their earnings potential is best avoided. Small cap stocks showing signs of distress in earnings, decreasing operating efficiency, weak growth and significant debt on their balance sheet have historically underperformed and disappointed investors.

Identifying and avoiding investment in these distressed small cap stocks has the potential to improve investment outcomes from small cap investing. Our research has shown that high quality small cap stocks with favorable profitability and fundamentals have significantly outperformed the lower quality names globally, as shown in Exhibit 11. Overall, it pays to avoid the worst quality small cap stocks.

EXHIBIT 11: STRONG RELATIVE RETURNS FROM HIGH QUALITY IN SMALL CAPS

Source: Kenneth French Data library. Returns for portfolios sorted on size and operating profitability . US stocks returns are for the period June 1963- August 2024; Europe and Global Developed stocks returns for June 1990- August 2024.Past performance is no guarantee of future results.

CONCLUSION

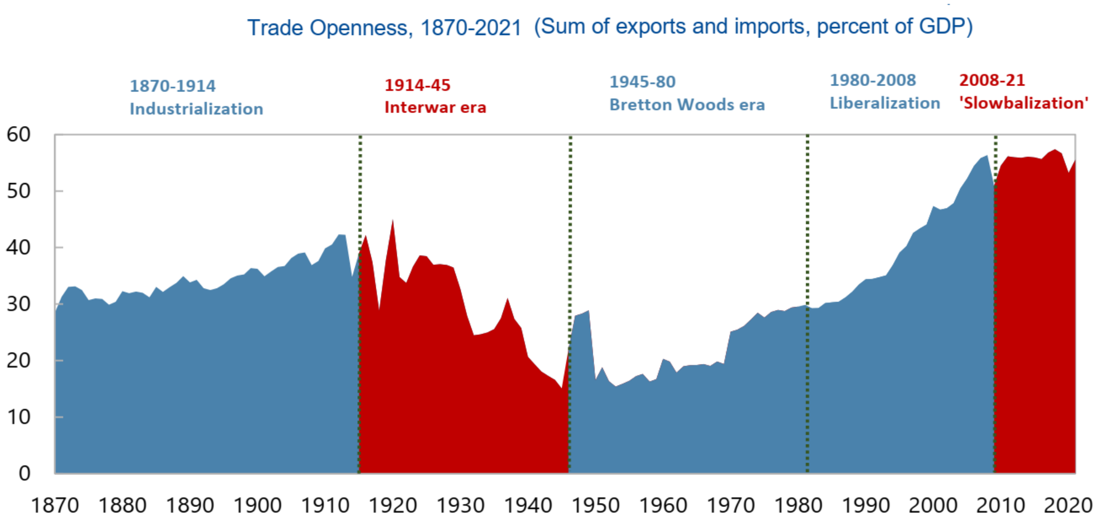
Global Equity allocations are critical to meeting an investor's long term investment outcomes. However, investors are increasingly concerned about high market concentration and elevated stock valuation in large cap stocks. In contrast, small cap stocks offer a variety of desirable characteristics including higher stock and sector level diversification, along with exposure to local economies at a time following peak globalization. Recent events have highlighted the potential for small caps to be a source of diversification in an investment portfolio. Current economic conditions, in addition to monetary easing, remain conducive to the performance of small cap stocks. The reshoring theme may also benefit global small cap firms in the long run. We believe there is a compelling case for investors to have an allocation in small cap portfolios, with specific attention paid to the fundamentals, or quality, of companies selected in portfolios.

Exhibit A1 Macro Economic Regime Model

A cyclical trend was extracted from month-over-month changes in The Conference Board's Leading Economic Index (LEI) by applying an HP filter. Macroeconomic regimes were then inferred from the cyclical trend based on the rules below.

Expansion:	LEI trend is positive with upward slope;
Slowdown:	LEI trend is positive with downward slope;
Contraction:	LEI trend is negative with downward slope;
Recovery:	LEI trend is negative with upward slope;

Exhibit A2 Trade Openness (1870 – 2021)



Source: Jordà -Schularick-Taylor Macrohistory Database; Penn World Data (10.0); Peterson Institute for International Economics; World Bank; and IMF staff calculations. Historical trends are not predictive of future results
Note: Sample composition changes over time.

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