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Integrated Equity Quarterly Newsletter

Q2 2023

T. Rowe Price Integrated Equity Team

Quarterly Factor Returns

(Fig. 1) April 1, 2023–June 30, 2023

Universe	Total Return	Valuation	Growth	Momentum	Quality	Profitability	Risk	Size
MSCI Japan	15.60%	6.39%	-2.40%	2.58%	-3.88%	1.56%	2.94%	8.19%
Russell 1000 Growth	12.81%	-0.37%	-0.42%	-4.57%	-7.91%	-3.77%	9.62%	-4.74%
Russell 1000	8.58%	-4.16%	3.94%	0.90%	-4.26%	-0.87%	6.63%	0.07%
Russell 2500	5.22%	-1.63%	0.21%	2.85%	-0.48%	1.98%	3.22%	4.41%
Russell 1000 Value	4.07%	-4.08%	1.24%	1.47%	-3.37%	0.99%	4.59%	-0.95%
MSCI Europe	2.15%	0.21%	1.36%	2.79%	-1.74%	-1.45%	1.35%	3.97%
MSCI Emerging Markets	1.85%	4.36%	-4.65%	3.74%	1.09%	2.23%	-8.23%	2.07%
MSCI Pacific ex-Japan	-1.18%	-0.12%	5.75%	-3.52%	1.79%	1.90%	-1.17%	-2.88%

Past performance is not a reliable indicator of future performance.

Sources: IDC data/Refinitiv, Compustat, Worldscope/Refinitiv, Russell, MSCI. Analysis by T. Rowe Price. See Additional Disclosures. MSCI returns are in local currency. Factor returns are calculated as equal-weighted quintile spreads. Please see Appendix for more details on the factors.

For the second quarter of 2023, we highlight three key themes:

1. U.S. large-caps at the index level experienced significant outperformance, led by growth stocks, as well as low-quality/high-risk stocks.

We start with two observations from Figure 1:

- At the index level, growth significantly outperformed value, with more than an 800-basis-point spread between the Russell 1000 Growth and Russell 1000 Value Indexes.
- At the equal-weighted factor level, higher-risk and lower-quality companies outperformed. This was most pronounced in the Russell 1000 Growth Index, where momentum suffered a significant drawdown.

There were two related drivers behind these observations:

- Resilient economic data led investors to price a soft landing. This caused higher-risk, lower-quality stocks to rally, as we saw short covering and "fear of missing out" on the market rebound.
- The explosive interest in artificial intelligence (AI) led to a surge in related stocks. This contributed to the outperformance of mega-cap growth companies, which are widely viewed as AI beneficiaries. It also drove the outperformance of higher-risk stocks, as investor speculation returned to the market.

2. AI speculation was a significant driver of the market's advance.

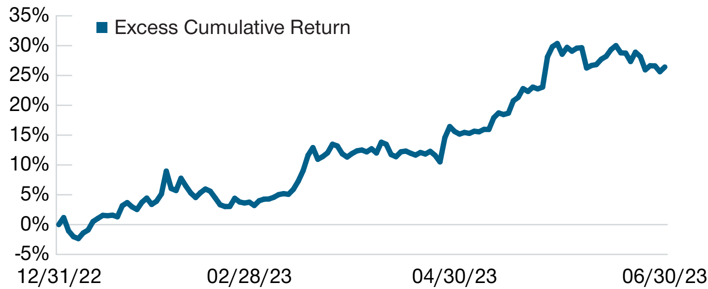
AI speculation has become a key theme driving the market. In response, we worked with our fundamental platform and data science team to build an "AI basket." Figure 2 shows that the "AI factor" has significantly outperformed this year, with particular strength this quarter when Microsoft and NVIDIA reported earnings. We plan to use (and evolve) this basket to continue monitoring performance, valuation, and fundamentals of presumed AI beneficiaries.

3. International markets demonstrated significantly different factor performance than U.S. large-caps.

Both factors driving U.S. large-caps—expectations of a soft landing as well as the continued AI strength—are related to

T. Rowe Price Artificial Intelligence Basket vs. Russell 1000 Growth Index

(Fig. 2) December 31, 2022–June 30, 2023



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U.S. large-cap technology leadership. With different market compositions abroad, we saw different factor performance.

Most notable was Japan, where local total returns were strong and led by value stocks, while returns in U.S. dollar terms suffered from the yen's depreciation. Value's strength reflects the Tokyo Stock Exchange's directive earlier this year for companies to focus on shareholder value and leveraging latent capital—specifically raising price/book ratios—alongside historically cheap valuations and rising investor interest (e.g., Berkshire Hathaway). Japan is an area of increased interest given valuations and an increased emphasis on shareholder-friendly activity. (The specific securities identified and described are for informational purposes only and do not represent recommendations.)

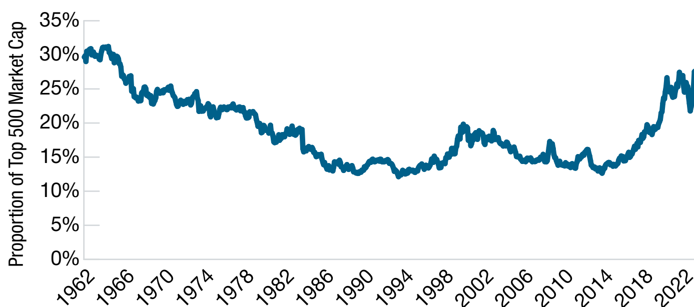
MARKET INSIGHT—WHAT WE'RE MONITORING

Introduction: An Outside View on Market Concentration

The U.S. equity market is historically concentrated. The top seven stocks among the top 500 stocks by market capitalization accounted for 28% of the universe weight as of June 30 (Figure 3).

Weight of Top Seven Stocks Over Time: Two Most Concentrated Precedents Are Nifty Fifty and Tech Bubble

(Fig. 3) March 30, 1962–June 30, 2023



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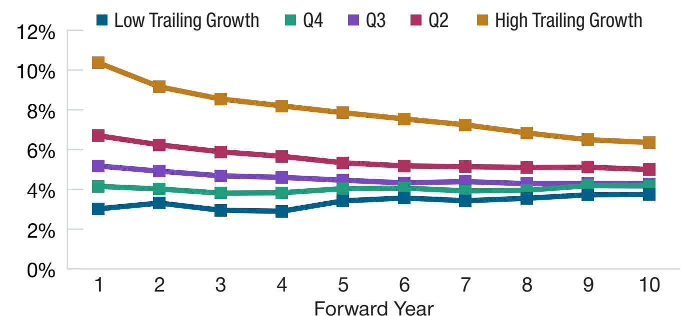
In this quarter's newsletter, we provide an "outside view" on today's market concentration. To frame the discussion, we identify four interrelated characteristics of the current market environment: The largest companies have historically strong fundamentals, which has led to elevated valuations, historically narrow market performance, and concentrated benchmark weights. Analyzing these four points in turn, we conclude that investors should proceed with caution regarding future stock returns of the so-called Magnificent Seven. Our four key points are:

- **Fundamentals.** Robust fundamentals are challenging to maintain and generally revert to the mean.
- **Expectations.** Stocks with high expectations/valuations on average struggle to meet those elevated expectations and are more likely to subsequently underperform.
- **Narrow markets.** Top-performing stocks in narrowly led markets typically underperform going forward.
- **Concentrated benchmarks.** Periods with highly concentrated benchmarks historically have been followed by de-concentrating periods in which the top benchmark weights underperform.

Sales Growth Is Mean Reverting

(Fig. 4) 1990–2022



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Strong Fundamentals Generally Mean-Revert

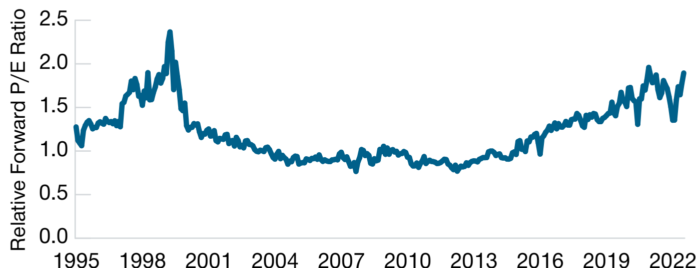
The digital era, cloud technology, and AI have empowered today's mega-cap platform companies to achieve double the market's five-year revenue growth. These companies have exhibited high margins, high revenue and earnings growth, and solid balance sheets. Historically, we have seen that fundamentals are mean reverting for the entire market (Figure 4); our research shows this pattern also holds for the seven largest stocks in the market.

High Expectations Are Generally Not Met

Even if the benchmark leaders continue outgrowing the U.S. equity market, another risk is that they will fall short of elevated expectations. Today, the Magnificent Seven trade at a multiple of 32x forward earnings, almost twice the rest of the top 500 stocks by market cap (Figure 5). We have done extensive research on high-expectation stocks and have found that while they generally experienced above-average future growth, they also experienced below-average stock returns (Figures 6 and 7). Investors typically over-extrapolate past success and underappreciate mean reversion, thereby pricing unrealistic expectations into these stocks. We note that, over the last several years, the U.S. mega cap stocks have defied this trend, consistent with our research that some of the biggest earnings compounders also come from the high-expectations group.

The Top 7 Stocks Are Almost Twice as Expensive as the Rest of the Top 500 by Market Cap

(Fig. 5) December 31, 1995–June 30, 2023



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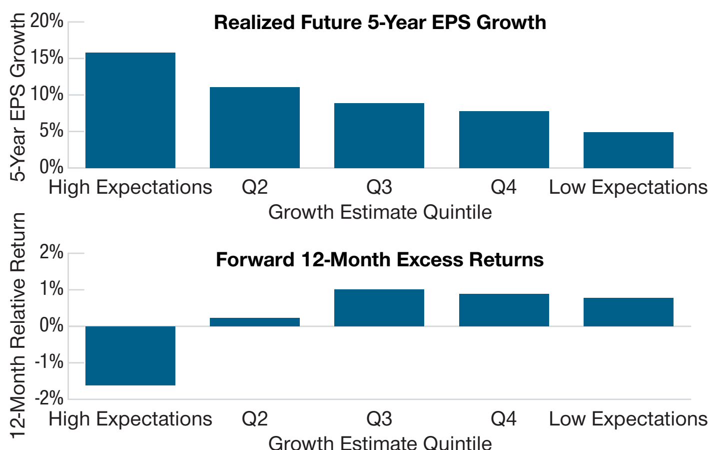
High-Expectation Stocks: Above-Average Future Growth, but Below-Average Forward Returns

(Figs. 6 and 7) 1990–2022



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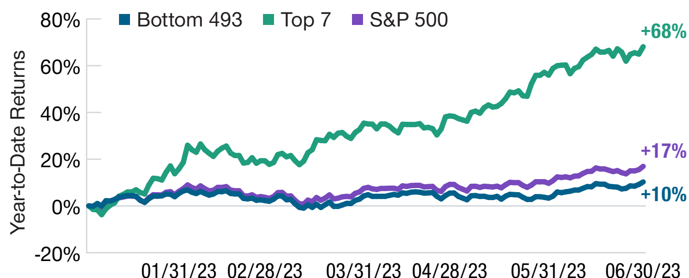
Sources: Russell, IBES, Compustat, FactSet. Analysis by T. Rowe Price. Quintiles are rebalanced monthly and are equal-weighted and with Figure 7 compared to an equal-weighted universe of the Russell 1000. See Appendix for additional detail. T. Rowe Price calculations using data from FactSet Research Systems, Inc. All rights reserved. See Additional Disclosures. I/B/E/S © 2023 Refinitiv. All rights reserved.

Narrow Markets Have Generally De-concentrated

Markets can often be narrowly led without being concentrated—for example, the energy sector in the 1970s and early 2000s, low-risk stocks in 2008, and stay-at-home stocks in 2020. Today, we are clearly in a narrowly led market: As shown in Figure 8, seven stocks have driven more than half of the U.S. stock market's return, and investors would have underperformed the S&P 500 by seven percentage points just by excluding these stocks for six months. Moreover, going back to 1962, this is the most that seven stocks have contributed to the market; the two previous highs occurred during the late 1990s tech bubble and in the 2020 COVID rebound. Our research shows that, following narrowly led markets, the group that was most in favor typically underperformed over the following six months (Figure 9).

Seven Stocks Have Driven More Than Half of Year-to-Date S&P 500 Index Returns

(Fig. 8) January 2, 2023–June 30, 2023



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Concentrated Benchmarks Have Generally De-concentrated

As a result of these factors—strong fundamentals, elevated expectations, and narrow markets—we now find the U.S. market to be historically concentrated, with the top seven companies accounting for 28% of the S&P 500 Index weight.

Following Narrow Markets, Leaders Have Typically Underperformed

(Fig. 9) March 1962–June 2023

Trailing 6-Month Returns

Period	Top 500	Top 7	Remaining 493	Spread: Top 7 - Remaining 493
Narrow Periods	13.5	27.5	10.7	16.8
All Periods	6.2	7.5	6.0	1.5

Forward 6-Month Returns

Period	Top 500	Top 7	Remaining 493	Spread: Top 7 - Remaining 493
Narrow Periods	3.6	1.8	4.2	-2.4
All Periods	5.4	5.2	5.5	-0.3

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Two periods in the past 60 years exhibit similar concentration, and today's market shows attributes consistent with each. The first period is at the start of our data in 1962, which precedes the "Nifty Fifty" era in the early 1970s, and the second is the tech bubble in the late 1990s. The 1960s are relatable because the period followed a low interest rate regime, characterized by perceived Federal Reserve policy missteps, and stubborn inflation, which aided an unwind of the market concentration. The tech bubble concentration is relatable because it was driven by technological innovation, but featured lower-quality "internet at any price" stocks with weak margins and extraordinary valuations. Both periods were followed by significant de-concentration and underperformance of the previous leadership. Although we only have two comparable precedents, the results are consistent with our mosaic.

Catalysts For De-concentration

Given that the current situation fits all four of the above criteria, we believe the "outside view" on mega-caps is cautionary. What would be the most likely catalysts for de-concentration?

We see four possibilities:

1. Changing valuation and growth expectations: As discussed above, mega-caps trade at a forward price-to-earnings (P/E) valuation almost twice that of the remaining S&P 500 Index as of June 30.

2. Escalating capex costs for generative AI: NVIDIA's recent surge in revenue could hurt profitability and free cash flow for the mega-cap customers.

3. Vulnerability of growth stocks to higher interest rates: As growth stocks tend to have longer durations, their multiples are more susceptible to compression from higher rates. We have seen this relationship break down recently, and we expect it will regain focus at some point.

4. Continuing opposition from governments: The mega-caps are likely to face ongoing regulatory resistance from governments if their perceived power is too strong.

Implications and Best Practices in a Concentrated Market

Based on our research and experience in portfolio construction, we identify four best practices for investors in today's market environment:

- **Beware of passive investing:** One appeal of index investing is being able to buy a diversified slice of the market in one portfolio. However, when markets become this concentrated, passive investing offers less diversification and, as we have demonstrated, increased exposure to seven primary stocks. To this point, the Nasdaq 100 Index is performing a special rebalance this month; when index providers acknowledge this, they imply that passive investments are not sufficiently diversified and that investors are outsourcing active management decisions to the index provider.

- **Manage risk to these stocks as a "sector":** Because high-expectation stocks often move together, investors need to monitor their aggregate exposure to these stocks. At the same time, investors should recognize the opportunity for active stock selection within this group.

- **Understand risk-budgeting implications:** Investors should take risk where they have information, rather than wherever they can. With concentrated benchmarks, investors sometimes underweight a large benchmark holding because it's a convenient source of funds, but they do not necessarily understand the risk consequences. We emphasize that thoughtful risk management is a critical, yet often misunderstood, part of investing in concentrated benchmarks.

- **Differentiate between good companies and good stocks:** There's a temptation to assume that, because these companies may be long-term winners in their domains, their stocks will necessarily outperform. We highlight that great companies can underperform when expectations are too high, and we encourage investors to ask whether the stock is likely to be a winner, not whether the company is.

Summary

We recognize the tremendously strong fundamentals that have driven these conditions. However, history (or the "outside view") suggests that the odds are against the current market leaders continuing to outperform. We advocate that investors avoid passive benchmarks in highly concentrated markets, manage their aggregate exposure to this basket of stocks, and allocate risk where they have the largest information advantage.

Appendix

Factors are our internally constructed metrics defined as follows:

Valuation: Proprietary composite of valuation metrics based on earnings, sales, book value, and dividends. Specific value factor weighting may vary by region and sector.

Growth: Proprietary composite of growth metrics based on historical and forward-looking earnings and sales growth. Factor selection and weighting vary by region and industry.

Momentum: Proprietary measure of medium-term price momentum.

Quality: Proprietary measure of quality based on fundamental and stock price stability, balance sheet strength, various measures of profitability, capital usage, and earnings quality.

Profitability: Return on equity.

Risk: Proprietary composite capturing stock return stability over multiple time horizons (positive return means risky stocks outperform stable stocks).

Size: Market capitalization (positive return means larger stocks outperform smaller stocks).

Methodology Disclosures

Figure 2: The AI basket was created by fundamentally identifying names with clear AI exposure, then providing that list to our data science team to use NLP techniques to expand the potential universe, then reviewing the NLP output to curate the list down to our final basket. The final basket has 18 stocks, is equal weighted, and does not get rebalanced.

Figure 4: Chart shows sales growth based on revenue. We are quintiling stocks by their trailing sales growth rate at time 0, then looking at annual sales growth rates over forward 1- to 10-year periods. The basket is fixed at time 0 and never changes.

Figures 6 & 7: High expectations are defined as high sell-side consensus long-term earnings growth rate. Analysis covers the Russell 1000 Index from 1990–2022. Returns in Figure 7 are relative to the equal-weighted Russell 1000 universe.

Figure 9: There are 30 narrow periods. They are defined as periods where the top 500 companies by market cap are up at least 5% with the greatest difference in returns between the top 7 and remaining 493 stocks. There were 8 distinct periods in this sample, in many cases with multiple overlapping months. For robustness, we averaged each period, then took an average of those 8 averages.

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