Oberweis Asset Management

MICRO-CAP GROWTH MARKET COMMENTARY

2Q 2023

The Quarter in Review

The Oberweis Micro-Cap Growth Composite returned +9.03% (8.82% net of fees) versus +6.35% for the Russell Microcap Growth Index during the second quarter, outperforming by 268 basis points (247 basis points net of fees). Year-to-date, the Composite returned +19.31% (18.82% net of fees) versus +7.16% for the benchmark, outperforming by 1,215 basis points (1,166 basis points net of fees).

The portfolio performed well despite a sizable headwind during the quarter – namely that the market was led by low-quality growth companies without earnings and companies with low returns on equity. Within the Russell 2000 Growth Index, non-earners returned twice as much as companies with earnings, and the two lowest ROE quintiles in the benchmark outperformed the higher ROE quintiles. Our portfolio outperformed despite having less than 20% exposure to these bottom two ROE quintiles. Despite their strength in the current quarter, we still believe this cohort of companies is poised to underperform the market over the near-term as the Federal Reserve continues to reset interest rate policy, and over the long-term as higher ROE equities historically outperform lower ROE stocks and non-earners. Valuation has always been an essential part of our process, and we believe a more normalized interest rate regime going forward should mean valuations will start to matter again to growth investors. The price one pays for growth is, contrary to popular opinion over the last decade or so, important.

Broadly, it seems many investors are paralyzed by economic fear in some sort of Shakespearean tragedy: To recession or not to recession? That is the question. While the mainstream financial media spends a significant amount of time debating the merits and timing and magnitude of a supposed "impending recession," most economists would admit economics is an inexact science and predicting a recession is often a fool's errand. As bottom-up stock pickers, we don't have a material "macro" edge. Instead, we assess macro risks and influences on individual company fundamentals and discount those risks as we would any other.

What we see in the economy is a mixed picture: there are plenty of positive and negative data points out there to substantiate one's position (as behavioral finance folks, we call this "confirmation bias"). On the negative side, the Fed continues to raise rates and has signaled its intention for additional hikes later this year, and we know the impact of tighter monetary policy on the economy has historically lagged. The U.S. ISM Manufacturing Purchasing Managers' Index (PMI) reading of 46 signals contraction, and the Eurozone reading of 43 is even worse. The resilient consumer – who drives 70% of the U.S. economy -- has seen excess savings they accumulated during Covid dwindle just as student loan forgiveness is set to expire. They are also facing the worst housing affordability picture since 2008 as mortgage rates eclipse 7%.

On the positive side, the Services PMI reading of 54 signals expansion, so that part of the U.S. economy remains resilient. Future earnings estimates point to growth as inflation is finally abating and corporate profit margins rebound. While the consumer is seeing savings shrink, they enjoy a record-low debt-service ratio and they still have jobs. Rising rates have yet to hit employment, which continues to surprise to the upside. Job openings are still near all-time highs and non-farm layoffs have yet to inflect upward.

What's it all mean? We don't profess to know. But here's what we do know. First, we continue to find micro-cap companies posting significant positive earnings surprises driven by misunderstood fundamental changes that should, based on our research, lead to additional earnings surprises in the future. These are idiosyncratic fundamental changes that tend to trump economic headwinds. Second, we know micro-cap stocks (as a sub-set of small-caps) are cheaper relative to large-cap stocks than they've been in more than 20 years. In fact, today's relative valuation discount sits around two standard deviations, which means the current valuation delta between micro-cap and large-cap stocks only happens around 5% of the time. Third, the large-cap market is led by a narrow group of stocks trading at high valuations. The top 10 stocks in the capitalization-weighted S&P 500 Index comprise a record 32% of that index. Apple (AAPL) is now bigger in capitalization than the entire Russell 2000 and the top 5 market cap names are 3.5 times the market cap of small caps. Index investors unknowingly have a lot of eggs in a very small basket, and as a contrarian that set-up seems pretty compelling to us. We'd be surprised if micro-caps and small-caps didn't outperform large-caps over the next decade.

AVERAGE ANNUAL TOTAL RETURNS ***(as of June 30, 2023)***

	QTD	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception 1/1/1996
Micro-Cap Growth (gross of fees)	**9.03%**	**19.31%**	**37.59%**	**34.82%**	**17.04%**	**18.53%**	**13.37%**
Micro-Cap Growth (net of fees)	**8.82%**	**18.82%**	**36.37%**	**33.76%**	**16.01%**	**17.51%**	**12.33%**
Russell Microcap Growth Index	6.35%	7.16%	12.41%	1.45%	0.32%	5.83%	N/A

Past performance is not necessarily indicative of future results. Performance is historical and includes the reinvestment of dividends and other income. Unusually high returns may not be sustainable. The strategy invests in rapidly growing smaller and medium-sized companies that may offer greater return potential. However, these investments often involve greater risks and volatility. Foreign investments involve greater risks than U.S. investments, including political and economic risks and the risk of currency fluctuations. Net-of-fee composite returns are calculated using the highest model investment advisory fees applicable to portfolios within the composite. Advisory fees are disclosed in Part II of Form ADV.

Oberweis Asset Management, Inc. ("OAM") is an independent investment management firm that is not affiliated with any parent organization. The composite returns are comprised of all fully discretionary accounts with a minimum value of $5 million. Performance results, from 1-1-96 until 12-31-03 and 9-1-11 to present were derived solely from the performance of the Oberweis Micro-Cap Fund, a registered, open-end mutual fund, for which OAM serves as investment adviser. Prior to November 4, 2001, James D. Oberweis was the sole portfolio manager for the Micro-Cap Fund during the period of the performance results noted. Accounts are dollar-weighted within the composite and reported in U.S. dollars.

The Russell Microcap Growth Index measures the performance of those Russell Micro Cap companies with higher price-to-book ratios and higher forecasted growth values. The performance data includes reinvested dividends. The Russell Microcap Index is represented by the smallest 1,000 securities in the small cap Russell 2000 Index plus the next 1,000 securities. Each index is an unmanaged group of stocks, whose performance does not reflect the deduction of fees, expenses or taxes. It is not possible to invest directly in an index.

The Quarter in Review (continued)

While sentiment may swing wildly in the short-run in response to incremental economic data, comments by the Federal Reserve, headlines, and TV soundbites, our bottom-up investment strategy focuses instead on companies demonstrating better-than-expected earnings power driven by transformational change. The P/E multiples afforded such companies may vary from quarter to quarter, but we believe a diversified portfolio of these investments is likely to outperform the market over the longer-term.

Portfolio Highlights

As of June 30, 2023, the portfolio was 97.8% invested in 82 different positions. The portfolio had its largest over-weightings in information technology (32.3% average weighting during the quarter versus 17.8% for the Russell Microcap Growth Index), industrials (18.2% versus 12.3%), and communication services (2.9% versus 1.8%). The portfolio was most underweight health care (17.8% versus 37.1%, primarily due to our significant biotech underweighting), energy (3.1% versus 6.0%) and materials (1.0% versus 3.0%).

Overall performance in the second quarter was positively impacted by strong stock selection, particularly in information technology (where our holdings returned 15.66% versus a 4.90% return for the benchmark's information technology holdings), industrials (13.36% versus 8.10%), and health care (16.92% versus 12.86%).

Organization Update

There was no change to the team during the quarter.

Oberweis Asset Management's Investment Philosophy

We believe that investing in smaller companies driving revenue and earnings growth in excess of expectations results in superior investment performance over long periods of time. We believe that innovation is the key to economic growth and wealth creation and are committed to investing in companies at the forefront of innovation – smaller company stocks that offer the potential for extraordinary revenue and earnings growth.

The entrepreneurial spirit is alive and well at these companies. Many are nimble and uniquely address the needs of their customers with patented new products and services. Successful investing, however, demands more than finding companies with good growth prospects. We must also buy these stocks for our clients at prices that make sense. By paying careful attention to companies' valuations in relation to expected earnings growth rates, we seek to purchase stocks when they still have considerable appreciation potential.

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