

# SMALL-CAP OPPORTUNITIES MARKET COMMENTARY

4Q 2022

## The Quarter in Review

The Oberweis Small-Cap Opportunities Composite posted an exceptional year on a relative basis, returning –9.92% (-10.72% net of fees) versus –26.36% for the Russell 2000 Growth Index, an outperformance of 1,644 basis points (1,564 basis points net of fees). We are particularly pleased with our downside protection earlier in the year and our upside capture during the fourth quarter, when we returned +10.31% (10.08% net of fees) versus +4.13% for the benchmark, a delta of 618 basis points (595 basis points net of fees).

Year-end also marked the eighth anniversary of our track record since our leadership, philosophy, and process change, and the results have been extraordinary; in that time, the composite returned 15.25% (14.54% net of fees) annualized versus 6.00% for the benchmark, a difference of 925 basis points (854 basis points net of fees). Risk-adjusted performance during this timeframe is also highly favorable<sup>1</sup>.

While 2022 was the third-worst year in history for small-cap growth stocks, our relative outperformance was driven again by our steadfast focus on investing in small-cap companies where we believe underappreciated fundamental change is leading to greater-than-expected earnings growth. The vast majority of our investments are in companies with strong balance sheets, positive cash flow, and real earnings where we believe there exists a strong probability of upside surprises in the future. Importantly, valuation has always been an emphasis of our process, and that has served us well as the “unprofitable high-growth” bubble we repeatedly warned about burst spectacularly. Those non-earners and the most expensive quintile of stocks in the Russell 2000 Growth Index performed the worst in 2022<sup>2</sup>. In our view, that painful unwind is likely to continue in 2023 as the exposure to non-earners in the Russell 2000 Growth Index remains at elevated levels.

Although the Fed was clearly signaling its intent to become more hawkish in 2022 to curb excessive inflation, we were surprised by aggressiveness as the year unfolded; in fact, the Fed has executed its steepest hike cycle since the 1980’s. The abrupt policy change (it’s easy to forget the Fed was buying bonds under QE as recently as last spring) threw a heavy wet blanket over capital markets as liquidity was withdrawn at a rapid rate. Frankly, we applaud the move because we hope it brings us back to a more rational risk and return trade-off in the marketplace. A zero interest rate free-for-all is not an optimal environment for fundamental, bottom-up investors like us, as valuations essentially become an irrelevant consideration. The carnage over the last year suggests many others got caught in valuation fantasyland when the music stopped.

Of course, investors are now left to ponder a number of difficult questions: How effective will tight monetary policy be in normalizing inflation? How far is the Fed prepared to go? Will they be willing to put the economy in recession to break inflation? The outcome is unclear because we see the causes of inflation split into two distinct components: residual Covid-related supply chain disruptions and more permanent structural changes related to labor market tightness and a move away from globalization.

On the positive side, we saw supply chain issues ease in the second half of 2022 – a trend we expect will continue – allowing the Fed to make some headway in its inflation fight. Transportation costs and commodity prices have fallen, and companies we follow are seeing inventory challenges quickly abate. We are even hearing some companies talk of “inventory correction” as demand falters.

<sup>1</sup> Please contact our sales team for more information regarding risk-adjusted performance.

<sup>2</sup> Non-earners underperformed the lowest P/E quintile in the Russell 2000 Growth Index in 2022 by 3,201 basis points. The highest P/E quintile underperformed the lowest P/E quintile by 2,022 basis points.

### AVERAGE ANNUAL TOTAL RETURNS (as of December 31, 2022)

	QTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception (9/15/1996)
<b>Small-Cap Opportunities (gross of fees)</b>	<b>10.31%</b>	<b>-9.92%</b>	<b>20.58%</b>	<b>15.93%</b>	<b>16.34%</b>	<b>10.35%</b>
<b>Small-Cap Opportunities (net of fees)</b>	<b>10.08%</b>	<b>-10.72%</b>	<b>19.76%</b>	<b>15.11%</b>	<b>15.60%</b>	<b>9.55%</b>
Russell 2000 Growth Index	4.13%	-26.36%	0.65%	3.51%	9.20%	6.38%

**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. 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 \$2.5 million. Performance results, from 1-1-97 to 12-31-03 and from 7-1-08 to present, are derived solely from the performance of the Oberweis Small-Cap Opportunities Fund (formerly known as the Oberweis Mid-Cap Fund), a registered open-end mutual fund, for which OAM serves as investment adviser. Accounts are dollar-weighted within the composite and reported in U.S. dollars.*

*The Russell 2000 Growth Index measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted earnings growth rates. The index is an unmanaged group of stocks, whose performance does not reflect the deduction of fees, expenses or taxes.*

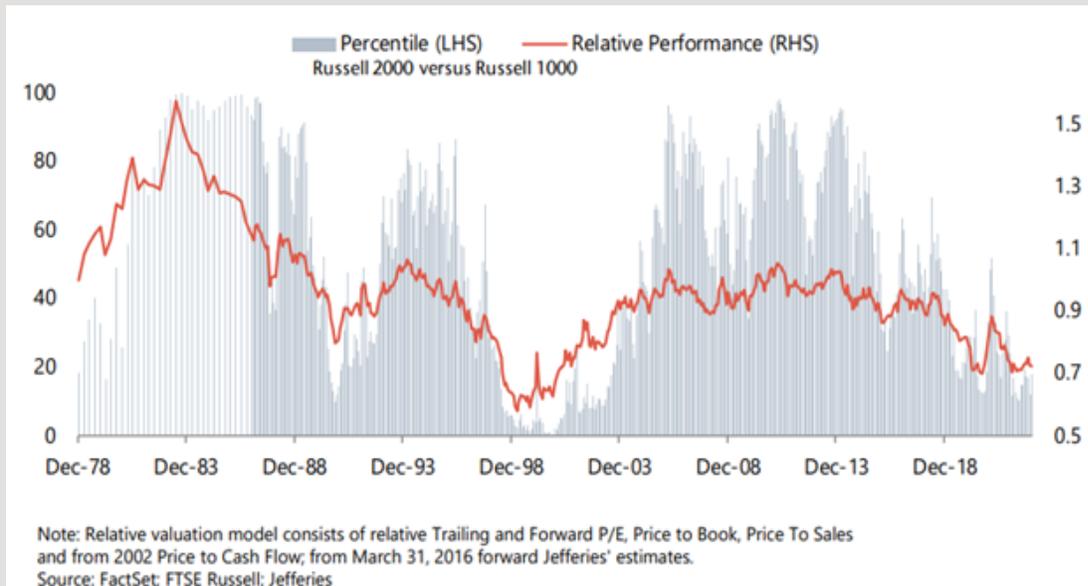
**The Quarter in Review (continued)**

Unfortunately, the structural causes of inflation are sticky and may be more immune to tight monetary policy. Labor market supply is constrained as baby boomers retire in record numbers and restrictive immigration policies dampen the inflow of qualified labor participants. Revived nationalism in China, the U.S., and other countries is also causing a shift away from globalization. While it's noble (and likely necessary) that the government promotes policies aimed at increasing U.S. manufacturing, onshoring will surely come at a higher cost. One risk to the "Fed pivot" expectation is that inflation reduction stalls as these pesky structural challenges result in diminishing marginal progress. The good news is that, according to research by Jefferies, "this is the ideal inflationary backdrop for small caps."

We believe current recession expectations are already at levels typically seen during a recession, and small-cap stocks in particular are largely discounting such an event. This can be seen in today's below-average P/E ratio for the stocks in our investable universe. While volatility is likely to remain high this year, we believe our focus on investing in companies generating significant positive earnings surprises should help us add value. In our experience, there are always companies experiencing positive and under-appreciated changes irrespective of macro-level factors. To start the year, we are optimistic about our current portfolio, where we believe we own companies with compelling fundamentals trading at attractive valuations. Additionally – while we are unsure of the timing of any economic bottom – the portfolio has historically performed well exiting periods of diminished expectations because the bar for earnings surprise is abnormally low. Whenever the Fed ultimately becomes incrementally less hawkish, we expect small-cap stocks will lead the market.

Even more compelling, we also see significant evidence that small-cap stocks are highly attractive on a valuation basis relative to large caps. According to a Jefferies relative valuation model shown below, small caps are trading at the lowest relative valuation levels versus large caps since 2000. When the market eventually turns, we see small caps outperforming their large cap brethren, providing another tailwind to the portfolio.

**JEFFERIES RELATIVE VALUATION MODEL: SMALL CAPS VS. LARGE CAPS**



Although above-average volatility will likely continue this year, our bottom-up strategy has always been focused on investing in businesses with idiosyncratic attributes that we believe will result in positive earnings surprise. These companies are often undergoing a significant change or event we believe is misunderstood or underestimated by other investors. While the earnings multiples paid for such companies can vary in the short-run, we believe a diversified portfolio of companies with better-than-expected earnings growth prospects is likely to outperform the market over the long-run.



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### Portfolio Highlights

As of December 31, 2022, the portfolio was 95.5% invested in 73 different positions. The portfolio had its largest over-weightings in technology (22.2% average weighting during the quarter versus 16.4% for the Russell 2000 Growth Index), consumer discretionary (16.1% versus 10.8%), and materials (8.6% versus 7.1%). The portfolio was most underweight health care (15.2% versus 20.2%), financial services (3.4% versus 8.2%), and producer durables (19.0% versus 23.1%).

Overall performance in the fourth quarter was positively impacted by strong stock selection, particularly in technology (where our holdings returned 22.06% versus a 4.92% return for the benchmark's technology holdings), producer durables (13.17% versus 4.33%), and health care (-0.95% versus -3.47%).

### Organization Update

We are pleased to announce that Eric Hannemann, our new chief financial officer, and Tom Joyce, our new chief compliance officer, have been named Partners of Oberweis Asset Management, Inc. As we disclosed previously, Eric and Tom have assumed the responsibilities of our former colleague Pat Joyce, who retired on December 31, 2022.

### 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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