

# INTERNATIONAL OPPORTUNITIES MARKET COMMENTARY

4Q 2022

## Review

During the fourth quarter, the International Opportunities Strategy returned +12.79% vs. +13.58% for the benchmark, the MSCI World Ex USA Small Cap Growth Index. This marks the final quarter of a weak 1-year and a strong 3-year period for the strategy. For the year to December 31st, the strategy returned -36.76% vs. -27.02% for the benchmark. On a cumulative 3-year basis, the strategy outperformed its benchmark by over 800bps, with a positive return of +6.28% vs. a negative return of -2.38% for the benchmark.

Since inception, the strategy has vastly outperformed its benchmark and has returned a strong cumulative +235.59% vs. only +77.70% for the benchmark.

% Total Return <sup>1</sup>	2022	Annualized since Inception	Cumulative since Inception
International Opportunities	-36.76%	7.90%	235.59%
MSCI World ex-US SCG Net	-27.02%	3.68%	77.70%
MSCI World ex-US SC Net	-20.59%	3.44%	71.19%
MSCI ACWI ex-US Small Cap Growth Net	-26.09%	3.59%	75.32%
MSCI ACWI ex-US Small Cap Net	-19.97%	3.71%	78.49%
MSCI EAFE Small-Cap Net	-21.39%	3.53%	73.77%

As we have written in prior quarterly letters, we view quarterly and yearly results as “merely short-term data points along the road.” An evaluation of stock-picking skill is only statistically relevant over a long-term horizon. We seek to generate favorable absolute and relative returns over an entire market cycle rather than just quarterly or annual periods. As we have previously noted, even with effective application of our process, we do not expect to outperform in every period. Instead, we invest with an eye on long-term high alpha generation and try to avoid giving undue attention to short-term results, whether favorable or unfavorable. The strategy is not a benchmark-hugging strategy and thus may, unsurprisingly, deviate from its benchmark over the short-term, such as a couple of quarters or years.

Only strategies that do not hug their benchmarks have the potential to deliver excellent long-term results that meaningfully beat their benchmarks over time. This of course may at times require patience and level-headedness in the short-term, especially when conditions are most difficult, but the results show that it pays off in the long-term: the strategy ranks as the #1 top-performing international small-cap strategy since its inception. (Source: eVestment 12/31/2022)<sup>2</sup>. In other words, since inception, the strategy’s return has been the best in the entire asset class, better than any other peer strategy. Short-term fluctuations are expected, and, in fact, our experience has shown that times of short-term underperformance tend to be the best times to add to strategies with high long-term alpha.

During the fourth quarter, global equity markets continued to be materially influenced by inflation developments in the US and the Federal Reserve’s response to them. Where the Fed has led, other central banks in the developed world have followed. With the exception of China, the key central banks across the world have pursued a synchronous tightening of monetary policy. Inflation data has started to respond, looking less threatening with goods inflation coming down as supply chain constraints have eased.

<sup>1</sup> The strategy is managed with reference to the MSCI World ex-US SCG Net. The other benchmarks are given for information purposes only.

<sup>2</sup> Based on data submitted to eVestment as of 1/10/2023. eVestment provides third party databases, including the institutional investment database from which the presented information was extracted. Over 4,500 firms actively submit data to eVestment. No representation or warranty is made by Oberweis Asset Management, Inc. (“OAM”) as to the validity and appropriateness of the eVestment rating.

AVERAGE ANNUAL TOTAL RETURNS (as of December 31, 2022)						
	QTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception 2/1/2007
International Opportunities (gross of fees)	13.06%	-36.03%	3.01%	1.01%	10.01%	9.01%
International Opportunities (net of fees)	12.79%	-36.76%	2.05%	0.02%	8.96%	7.90%
MSCI World ex-US Small-Cap Growth Index	13.58%	-27.02%	-0.80%	0.55%	6.03%	3.68%

**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 \$5 million. Performance results from 2-1-07 until 7-31-08, were derived solely from the performance of the Oberweis International Opportunities 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 MSCI World ex-US Small-Cap Growth Index (Net) is a free float-adjusted market capitalization weighted index that is designed to measure the performance of small cap growth developed markets excluding the U.S. with minimum dividends reinvested net of withholding tax.*

## Review (continued)

Furthermore, the shelter component of US CPI, which constitutes more than 40% of the core measure, should soon start to reflect the loosening of the rental market for residential real estate, thus exerting further downward pressure. The Core PCE index (the Fed's favored inflation indicator) rose 3.6% in November on an annualized basis over the previous three months, the smallest rise in 3-month core PCE inflation since February 2021. On a year-over-year basis it rose +4.7% and month-on-month by +0.2%. If, hypothetically, it rose by a similar month-on-month amount in the next six months, core PCE inflation would be approximately +3.4% year-on-year in May.

However, the trip back to the Fed's stated 2% target looks to be a difficult one, due in large part to services. They constitute almost a third of core CPI and this broad category was up by +7.25% on a year-over-year basis in November, driven by strong wage growth. With the job fill rate in these industries low, and almost a year of tighter monetary policy unable to meaningfully impact the labor market, the implication is that the quest to lower inflation to 2% is not going to be easy. The great majority of yield curve spreads have remained inverted, often considered to be a leading indicator of an economic slowdown, while the latest Philadelphia Federal Reserve survey of professional forecasters shows the probability of recession in the next year to be the highest in the 50+ years the survey has been conducted.

Also of importance, towards the end of the quarter, China formally relaxed many of the severe Covid-related restrictions it had placed upon its population, and is now enacting a policy that looks increasingly like the out-and-out pursuit of herd immunity. Such a dramatic U-turn is likely to have considerable implications. The lockdowns meant that retail sales in China were about US\$400bn below trend this year, representing significant pent-up demand, so a reopening has the potential to be a stimulative event of material proportions as well as an inflationary tailwind.

## Outlook

After a year when global bonds and equities have seen their biggest ever loss in market value, and with more forecasters expecting a recession than at any point in recent history, pessimism is not hard to find amongst developed market investors. Evidently the Federal Reserve has a challenging task in front of it. As we have discussed in prior letters, the diminished rate sensitivity of the consumer has affected its ability to push the underlying inflation rate down to 2%. Without the tools to micromanage the economy, investors fear a policy misstep is growing in likelihood.

The central puzzle to solve remains the tight labor market in the US, which appears to be a structural byproduct of demographics and is also, to a greater or lesser degree, replicated across developed markets. Consensus estimates have consistently been too bearish on jobs with payrolls data in the US beating Bloomberg's median estimate in 11 of the last 12 months. Some labor market indicators have weakened: layoffs are up from a low base, primarily at technology or mortgage-related companies, and the use of temporary workers appears to have peaked in September. However, job openings per unemployed person are still elevated at 1.7:1, and the most critical measure, initial unemployment claims, have not risen in a marked way. Until we see unmistakable signs of weakening, it seems unlikely that the Fed will drastically change course. Chairman Powell indicated as much in his December press conference, pointing to a restrictive policy stance "for some time".

It seems clear that while the Fed (and by extension other global central banks) may slow the pace of its interest rate increases, it is unlikely to return to stimulative policies any time soon, barring a serious recession. Ten-year inflation expectations, as derived from capital markets and surveys, currently sit at around +2.2%, just below where they were in 2002-2008. The associated real ten-year yield is almost +1.5%, a bit below the average for this period. The retirement of the Baby Boomers and global budget deficits both argue for real rates to be similar to the pre-GFC period, which is to say higher than what we have seen over the past decade. In short, the idea that economies weaken, central banks pivot, and markets soar, to our mind is a less likely scenario when the disinflationary force of excess labor supply is no longer present.

While the above may read bearishly, this is not necessarily so. The drop in consumers' rate sensitivity and the tight labor supply are arguably providing a roadmap to avoiding recession. The differential between wage gains and core inflation, which was -2% a year ago, over the last four months has been +4%. It seems likely that wage growth will continue to outstrip inflation in the coming months which, together with central banks slowing monetary tightening, would be a bullish combination for spending growth next year.

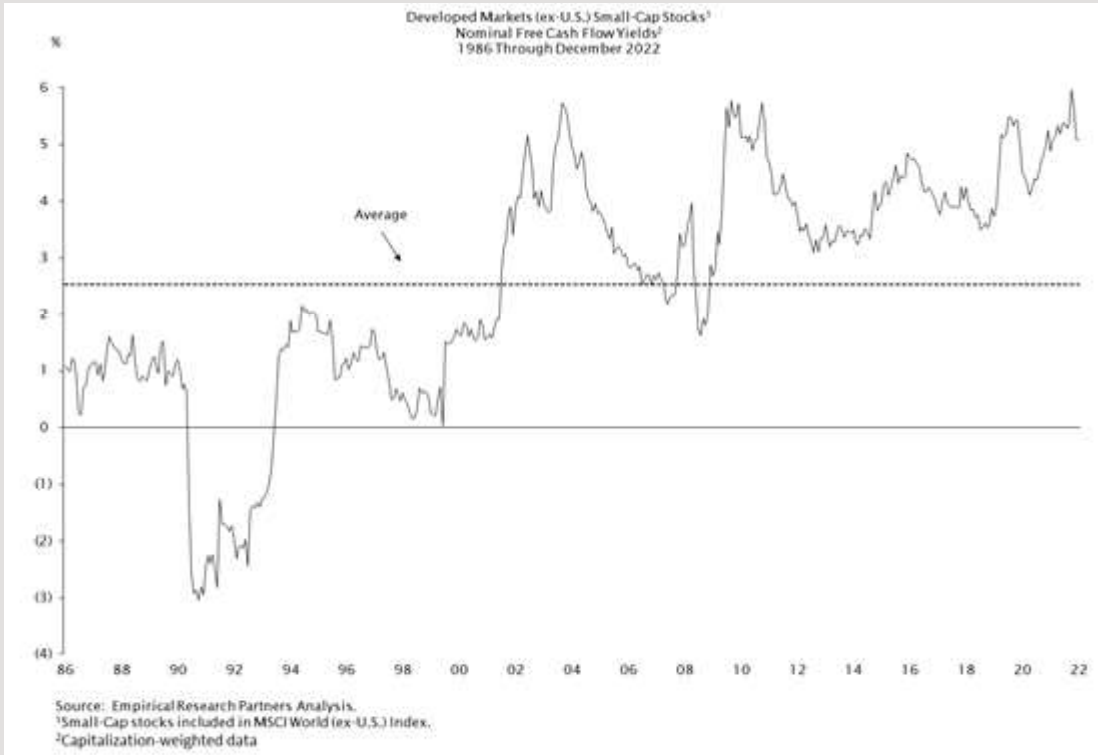
In a soft-landing scenario, current earnings forecasts for 2023 would likely be too low. And, perhaps most importantly, it does now appear that the outlook for inflation has improved with the easing of supply chain bottlenecks and residential rental market. Moreover, rarely has the consensus opinion been as negative on the economic outlook as it is today. Given the unprecedented path to the current point, we approach any confident macro forecasts with a great deal of humility and skepticism. The implications of this uncertainty for portfolio allocation are clear: remain diversified, tilt towards free cashflow generators, be careful of stretched balance sheets.

With respect to valuation across our investible universe, free cash flow yields for small cap stocks in developed markets – which in last quarter's letter we suggested as a highly attractive investment entry point – remain near historical highs, even after the subsequent strong fourth quarter:

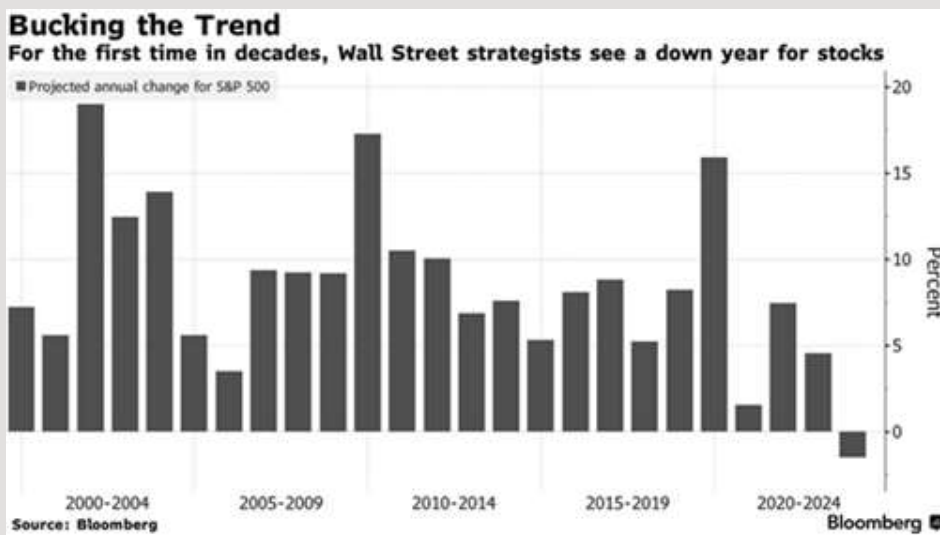
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Outlook (continued)



Further, expectations for forward returns are among the lowest they have ever been. Rarely ever has the consensus opinion been as pessimistic. Historically, attractive valuations and trough expectations have made an excellent set-up for forward-looking returns.





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### Portfolio Highlights

At quarter-end, the portfolio was invested in 62 stocks in 14 countries. Our top five country weightings (portfolio weighting versus the MSCI World Ex USA Small Cap Growth Index) at the end of the quarter were Canada (18.0% vs. 9.9%), Japan (16.0% vs. 28.6%), United Kingdom (15.7% vs. 13.4%), Australia (8.9% vs. 9.2%), and France (7.4% vs. 2.7%). On a sector basis, the portfolio was overweight industrials (38.7% vs. 23.6%) and underweight health care (1.1% vs. 11.2%).

### 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.

### 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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