the ithaka group

Concentrated Growth Equity Managers

ITHAKA EAFE STRATEGY

FIRM OVERVIEW
- Founded in 2008
- Based in Bethesda, MD
- Concentrated growth investors
- 100% employee-owned
- ~$910M AUM

STRATEGY OVERVIEW
- Seeking high-quality companies with durable growth
- Bottom-up, fundamental focus
- Concentrated, low-turnover portfolio
- Maximum of 30 large-cap and mid-cap holdings

PORTFOLIO OVERVIEW
- Inception date: December 1, 2017
- Benchmark: MSCI EAFE NR
- 4 member investment team

OBJECTIVE
- Long-term growth of capital

PORTFOLIO MANAGERS
- Andy Colyer, CFA
- Scott O'Gorman, CFA

SUMMARY

The Ithaka EAFE Strategy ("IES") gained 16.1% in 4Q22, trailing the MSCI EAFE NR (the net return MSCI EAFE index, or "EAFE") by 1.2 ppts. Turnover for the trailing twelve months was 27%.

PERFORMANCE (%)	4Q22	1 Year	3 Year	5 Year	ITD[1]
Ithaka EAFE Strategy (Net)	16.1	(36.8)	2.5	6.4	6.6
MSCI EAFE NR	17.3	(14.5)	0.9	1.5	1.8
MSCI EAFE Growth NR	15.0	(22.9)	0.5	2.5	2.8

[1] ITD = Inception (12/1/17)-to-date, annualized.

COMMENT

When we started the Ithaka EAFE Strategy in November 2017, we had the idea that an investor should not have to accept the long-term mid-single-digit returns of the MSCI EAFE to get diversification outside the United States. We created the strategy to meaningfully outperform the EAFE over time. As with our US strategy, we would own a portfolio of 20 to 30 high quality companies with fairly low turnover, fully invested at all times. We would make money for our clients *with time, not timing* in the words of markets commentator James Glassman.

This latest quarter is the first with a five year track record. Even measured after five quarters that have been very challenging for our style of growth investing, we are just shy of five percentage points ahead our our MSCI EAFE benchmark on a compounded basis over five years. This puts us in the top 5% of developed ex-US fund managers according to InvestmentMetrics.

We create a portfolio that targets the performance of the Russell 1000 Growth index, not the EAFE. If we are within range of the Russell 1000 Growth index over time, we like our odds of doing well, both absolutely and relative to our EAFE benchmark. Over the last ten years, the Russell index has delivered a ~13% CAGR, while the EAFE has delivered a ~2% CAGR.

Using the framework we've outlined in commentaries of the last few quarters, we slightly outperformed expectations this past quarter. The chart below compares the performance of the IES to that of the Russell 1000 Growth, adjusted for the impact of foreign exchange. Another column removes the top 10 holdings of the Russell 1000 Growth index, which represent >40% of the index but move differently quarter-to-quarter due in part to their size.

QTR (%)	R1KG[1]	FX[2]	R1KG + FX	R1KG - Top 10 + FX	IES
1Q22	(9.0)	(2.2)	(11.2)	(17.0)	(17.1)
2Q22	(20.9)	(6.7)	(27.6)	(26.6)	(26.3)
3Q22	(3.6)	(5.8)	(9.4)	(9.8)	(10.6)
4Q22	2.2	8.6	10.8	14.9	16.1

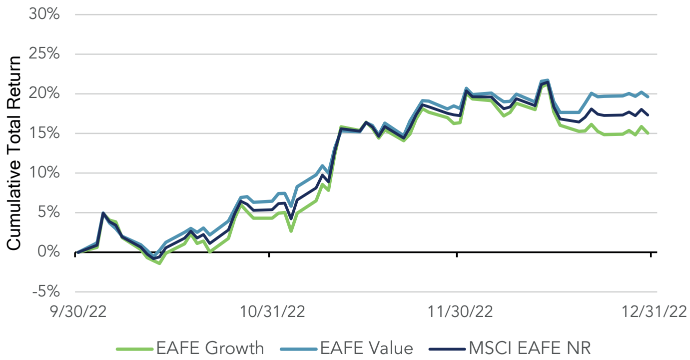
[1] R1KG = Russell 1000 Growth Index.
[2] FX adjustment is the impact of foreign currency translation.
We use the FX impact on the EAFE as a proxy for the impact of FX on the IES.

While we are generally happy with the performance of the IES over the last five years, we will continue to strive to do even better.

DEVELOPED INTERNATIONAL MARKETS

After a tumultuous first three quarters of the year, the MSCI EAFE rallied in 4Q22 and finished the quarter up 17.3%. Global markets moved on optimism that the US Federal Reserve would move away from aggressive policy tightening as inflation expectations slowly receded. A mild winter helped Europe avert a disastrous energy crisis. And civilian unrest led President Xi to unwind zero-COVID policies and renew focus on economic growth in China. Every sector was up at least 10%, with financials, materials, and energy leading the way. Technology and healthcare lagged the index. These two sectors have greater representation in the growth portion of the MSCI EAFE index and the IES.

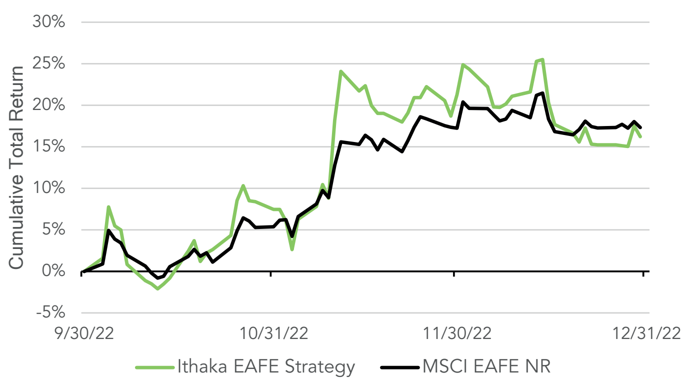
4Q22 MSCI EAFE TOTAL RETURN



IES 4Q22 PERFORMANCE

The Ithaka EAFE Strategy gained 16.1% for the quarter, underperforming the MSCI EAFE by 1.2 ppts. The IES was ahead of the benchmark for much of the quarter. In mid-December, in the wake a 25bp increase in the federal funds rate, Fed Chairman Jerome Powell warned that peak interest rates would be higher than the Fed had previously anticipated. This warning disproportionately impacted growth equities. This can be seen in both the impact on the growth portion of the EAFE index in the previous chart and the impact on the growth-oriented IES in the chart below.

4Q22 IES VS MSCI EAFE TOTAL RETURN



With few exceptions, which we consider temporary, our companies continue to perform well fundamentally. All but two holdings—one an investment firm with significant exposure to venture capital and the other a private equity firm—continue to experience year-over-year revenue growth, the median of which was 25% for the most recent period reported. All of the companies held in the IES have strong balance sheets.

TOP CONTRIBUTORS

Keywords Studios. Dublin-based Keywords Studios (KWS) is the largest provider of outsourced IT services for video game publishers globally. In a highly fragmented industry where scale is useful, KWS is three times the size of its nearest competitor and still has less than 6% share of the growing outsourced video game development market. It is the only third party developer able to offer game studios every aspect of game development, from art creation to software engineering to localization and customer support, all of which it can do globally. As outsourced development is growing faster than the gaming market, KWS's full suite of services and ability to uniquely meet client requirements is driving KWS to grow faster than its market. This was reflected in the company's announcement of a strong first half of 2022, which saw revenues grow ~22% organically. Management reinforced the company's strong prospects with a November trading update, which showed that the strong growth had continued into the second half of the year and that prospects for 2023 look strong.

DSV. Danish logistics company DSV has been systematically rolling up the logistics / freight forwarding industry, moving the company up from the 25th largest logistics / freight forwarder globally in 2000 to the 3rd largest by the end of 2022. Even with that, DSV still has only 4% of global share, while #1 DHL has 6% share and #2 Kuehne + Nagel has 5% share. This is a business where scale impacts pricing and performance. DSV is both the best operator in the business and the best acquirer in the business. It's playbook is to make large acquisitions of relatively underperforming competitors roughly every two years. DSV improves their operations and pulls excess costs out, improving margins to above industry averages. After a challenging prior year period, which saw the stock collapse by almost half, shares rebounded on strong cost containment, which helped offset lower freight volumes. Additionally, shares likely benefitted from the possibility of another large acquisition in 2023.

LVMH. LVMH is a French luxury goods conglomerate that manages many well-known and prestigious brands across the retail spectrum, including Louis Vuitton, Fendi, Moët & Chandon, and Sephora. The strength of the various brands in LVMH's portfolio provides a high barrier to entry and allows for pricing power and related high margins. Strong first half results, which included comparable sales growth of 19%, showed that the luxury industry continues to be resilient despite a challenging overall economy. The strong results came despite weakness in China from ongoing COVID-related lockdowns.

TOP DETRACTORS

Lonza Group. Lonza Group is one of the largest contract development and manufacturing organizations (CDMOs) globally. Just as the semiconductor industry has separated design and marketing from manufacturing, similar forces—increasing complexity, capacity management, and benefits of scale—are driving the same phenomenon in biopharma. Lonza is one of a few large CDMOs racing to become the Taiwan Semiconductor of the biopharma space. Lonza's strength in biologics, which are much more complex than the small molecules of traditional pharmaceuticals, will ensure that it is among the long-term winners. As Lonza reports only semi-annually, the information void is filled with news from other CDMOs that did report earnings during the quarter. Soft results and cautious guidance from some competing firms largely restrained Lonza shares from participating in the market rally that many other companies experienced in the 4th quarter.

WiseTech Global. WiseTech is digitizing the logistics industry, becoming the operating system for logistics and transportation. WiseTech's logistics software helps the various entities in the supply chain communicate and track cargo moving through the supply chain. Additionally, WiseTech's software helps customers understand freight regulations and required tariffs and duties. In so doing, the software ensures clean handoffs throughout the supply chain. After being the top contributor to the fund in the third quarter, WiseTech shares lagged in 4Q22. Lackluster freight volumes may have cooled share price performance despite strong three-year revenue guidance offered at their annual general meeting in November.

Dassault Systèmes. Marcel Dassault, creator of the French Mirage fighter jet and founder of parent company Dassault Aviation said "When a plane is beautiful, it flies well." That beauty, and the translation of that beauty into capable flight, comes from complex mathematical algorithms that calculate aerodynamic flows along wings and fuselages. Francis Bernard and his team transitioned these algorithms from paper and pencil to a pair of IBM 1800 mainframe computers in the late 1960s and early 1970s. They refined their programs into the first 3D computer-aided design software, CATIA. With encouragement from the French government, Bernard led a spin off of Dassault Systèmes in 1981 with IBM as its marketing partner. Boeing and major automobile manufacturers became customers in the first few years. Dassault Systèmes continues to be a leader in 3D computer aided design, and has widely expanded the capabilities of the software and the industries addressed, both through internal development and acquisitions. Like many application software companies in the past decade, Dassault Systèmes is transitioning its revenue model from license to subscription. That transition necessarily involves slowing revenue growth, often reflected in a choppy market response, as was the case this past quarter.

TRANSACTIONS

There were no transactions during the quarter.

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