

MARKET REVIEW

- In 2Q22, the Russell 2000 Growth returned -19.25% and the S&P 500 returned -16.10%.
- For the half year, the S&P 500's -19.96% was the worst performance since 1970. The 10-year U.S. Treasury bond market had its worst half-year since 1788. ¹



	RETURN
Needham Aggressive Growth Institutional	(19.62)
Russell 2000	(17.20)
Russell 2000 Growth	(19.25)

Source: Zephyr Informais

MACRO OBSERVATIONS

- 2Q22 was shocking in many ways. We saw daily atrocities from the Russian assault on civilians in Ukraine. The war reinforced the importance of increased defense spending and the vulnerability of Eastern Europe. Europe's reliance on Russian natural gas resulted in price spikes as countries started to isolate Russia economically. Countries and regions must shorten supply chains and become self-sufficient in energy and manufacturing.
- Inflation continued to be a top headline. Year-over-year inflation in June 2022 was 9.1%, the highest level since 1981. The price of gasoline increased 59.9% year-over year. ² Our portfolio companies seem to be adapting well to inflation after a few difficulties in 4Q21 and 1Q22.
- In May, the Federal Reserve raised its target interest rates by 50 bps to 0.75-1.00%. June brought a 75 bps increase to 1.50-1.75%, as the Fed attempts to control inflation by slowing the economy and tightening monetary policy. Another rate hike is expected in July.

IMPACTS ON PERFORMANCE

- The Fund's Institutional (NEAIX) and Retail (NEAGX) classes returned -19.62% and -19.72%, respectively, in 2Q22, slightly underperforming the Russell 2000 Growth's -19.25%.
- Many of the Fund's largest holdings underperformed, including Aspen Aerogels, Inc. (ASPN), Entegris Inc. (ENTG), PDF Solutions Inc. (PDFS) and Vicor Corporation (VICR).
- Aspen Aerogels needs to add capacity to provide its PyroThin[®] aerogel to the EV market. It has plans to build a plant in Georgia but needs capital. In late June, Aspen announced a deal to raise \$375 million in a convertible and equity offering. However, the stock fell after the offering was announced, and Aspen elected to not proceed with the deal.

- The Fund's cash was a positive contributor to the allocation effect. Aspen Aerogels was the only significant negative contributor to selection effect.
- Parsons Corp. (PSN) was a leading contributor, although its contribution was insignificant compared to the detractors. Parsons infrastructure and security divisions are well-positioned for the current environment.
- The Fund closed the quarter with 15.9% cash, down from 1Q22's 22.5%; we invested in several new positions and added to a number of existing holdings.
- With 8% turnover, the Fund does not rotate into or out of sectors but invests in companies we believe can outperform over the long-term.

PORTFOLIO CHANGES

- ASML Holding NV ADR (ASML), Markel Corporation (MKL) and Research Solutions, Inc. (RSSS) were the most significant new investments. We are hopeful that these will be holdings for many years to come.
- We took advantage of market weakness to add to many of the Fund's positions:
 - Our largest purchase was Bright Horizons Family Solutions, Inc. (BFAM). Bright Horizons is a leading provider of child care centers. It has suffered due to COVID, limited staff availability and a slow return to the office. We've waited years for a chance to purchase Bright Horizons at our target price.
 - Clean Harbors, Inc. (CLH) was another top addition. Clean Harbors is an environmental services and used oil repurposing company serving energy and industrial markets. Clean Harbors' Safety-Kleen collects about 600K barrels/day. We believe the current stock price reflects little more than the replacement value of their incinerators and landfills. We've also waited years to add to Clean Harbors.
 - We also added to Neenah, Inc. (NP), which was a specialty materials company making filtration media and fine paper and packaging products. Please note this holding is now Mativ, Inc. (MATV), which was created by the merger of Neenah, Inc. and Schweitzer-Mauduit on July 6, 2022.
- The Fund exited Everbridge, Inc. (EVBG) on a surprise resignation of its CEO. It also exited IPG Photonics Corporation (IPGP) and SEMrush Holdings (SEMR), which have significant operations in Russia.

LOOKING AHEAD & OPPORTUNITIES

- Many of our top small-cap portfolio holdings have made multi-year investments that position them to deliver growth and positive returns over the next few years. We believe if these investments succeed, they could provide a hedge to macroeconomic factors such as inflation.
- We are optimistic about the short and long term opportunities in semiconductor manufacturing technology, which represents approximately 25% of the Fund's investments.
- The Fund targets investments that we perceive to have significant, unrecognized growth opportunities. COVID-19 hastened the revolutionary development in technology and life sciences; the Fund is a long-term investor in companies that enable the research and manufacturing to bring these developments to market. Semiconductor manufacturing is an important example.

[1] <https://financialpost.com/investing/markets-in-h1-the-almost-perfect-storm>

[2] <https://www.bls.gov/news.release/cpi.nr0.htm>

	3 MO	YTD	1YR	3YR	5YR	10YR	SINCE INCEPT.
Needham Aggressive Growth Fund Inst Class**	-19.62%	-31.32%	-19.83%	19.58%	13.85%	13.28%	10.87%
After Taxes on Distributions	-19.62%	-31.32%	-21.05%	17.63%	11.77%	11.69%	9.78%
After Taxes on Distributions & Redemptions	-11.62%	-18.54%	-10.41%	15.42%	10.72%	10.70%	9.15%
Needham Aggressive Growth Fund Retail Class	-19.72%	-31.55%	-20.36%	18.82%	13.17%	12.63%	10.25%
After Taxes on Distributions	-19.82%	-31.55%	-21.61%	16.83%	11.06%	11.03%	9.16%
After Taxes on Distributions and Redemptions	-11.67%	-18.68%	-10.39%	14.82%	10.17%	10.14%	8.58%
Russel 2000 Growth Total Return	-19.25%	-29.45%	-33.43%	1.40%	4.80%	9.30%	7.35%
Russell 2000 Index	-17.20%	-23.43%	-25.20%	4.21%	5.17%	9.35%	7.85%
S&P 500 Index	-16.10%	-19.96%	-10.62%	10.60%	11.31%	12.96%	8.06%

Average Annual Returns as of June 30, 2022. The Needham Aggressive Growth Fund inception date is 9/4/01.

**Performance for any periods prior to the inception date of Institutional Class Shares are based on the historical performance of the Retail Class Shares adjusted to assume the expenses associated with Institutional Class Shares.

The Needham Aggressive Growth Fund's Gross Expense Ratio is 1.53% for the Retail Class and 1.82% for the Institutional Class. The Needham Aggressive Growth Fund's Net Expense Ratio is 1.86% for the Retail Class and 1.18% for the Institutional Class. The Net Expense Ratio reflects a contractual agreement by the Fund's investment adviser to waive its fee and/or reimburse the Fund through April 29, 2023, to the extent the Gross Expense Ratio exceeds 1.85% and 1.18% of the average daily net assets of Retail Class Shares and Institutional Class Shares (Expense Cap). The Expense Cap excludes taxes, interest, brokerage, dividends on short positions, fees and expenses of "acquired funds," extraordinary items and shareholder redemption fees but includes the management fee.

[Needham Aggressive Growth Fund Fact Sheet Link](#) [Prospectus Link](#)

Definitions and Disclosures

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Investment returns and principal value will fluctuate, and when redeemed, shares may be worth more or less than their original cost. Performance data quoted represents past performance and does not guarantee future results. Current performance may be higher or lower than these results. Performance current to the most recent month-end may be obtained by calling our transfer agent at 1-800-625-7071. Total return figures include reinvestment of all dividends and capital gains.

All three of the Needham Funds have substantial exposure to small and micro capitalized companies. Funds holding smaller capitalized companies are subject to greater price fluctuation than those of larger companies. Needham Aggressive Growth Fund's ownership as a percentage of net assets in the stated securities as of 6/30/22: ASPN: 1.79%, ENTG: 4.64%, PDFS: 6.06%, VICR: 4.19%, PSN: 2.68%, ASML: 1.05%, MKL: 0.78%, RSSS: 0.14%, BFAM: 1.46%, CLH: 1.94%, MATV*: 0.69%, EVBG: 0.00%, IPGP: 0.00%, SEMR: 0.00%.

* Formerly Neenah, Inc. (NP)

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