NEEDHAM AGGRESSIVE GROWTH FUND

4Q22 Quarterly Commentary

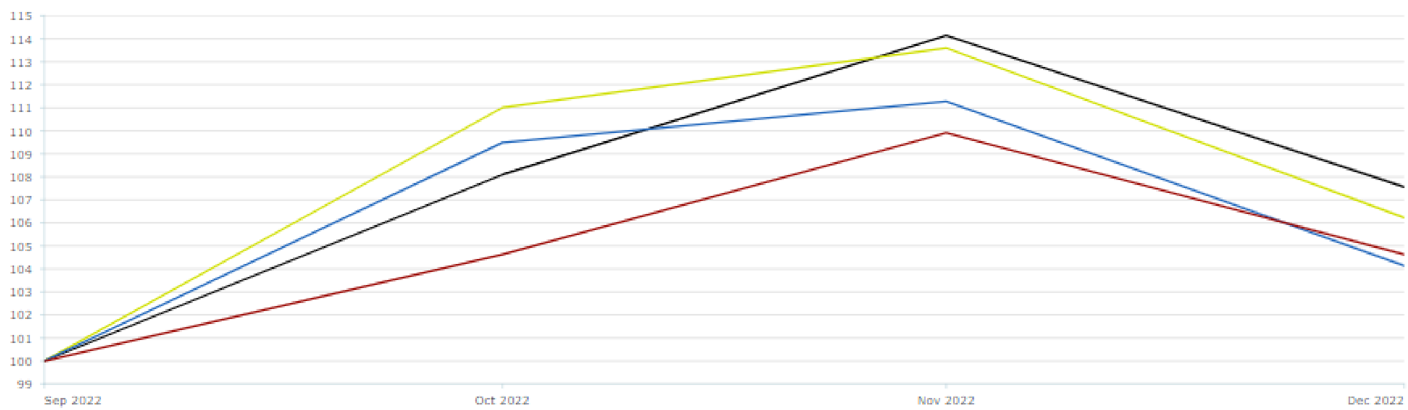
Investment Style: Small Cap Growth

Portfolio Manager: John O. Barr

MARKET REVIEW

- Despite the market's terrible angst and performance in 2022, the major indices were all higher in the second half of 2022. In Q4, the Russell 2000 Growth returned 4.13% and the S&P 500 returned 7.56%.

- As anticipated, the Federal Reserve raised interest rates by 75 bps to 3.75 - 4.00% on November 2nd and by 50 bps to 4.25 – 4.50% on December 14th. The Fed has indicated plans to increase rates by another 25bps in February.[1] [2]



	RETURN
Needham Aggressive Growth Institutional	4.63
Russell 2000 Growth	4.13
Russell 2000	6.23
S&P 500	7.56

Source: Zephyr Informais

MACRO OBSERVATIONS

- Economic announcements in 4Q22 went largely as expected. Year-over-year inflation dropped below 8.0% - historically a very high level, but below the level of Q3. Unemployment remained very low, below 4.0%, as it has all year. Manufacturing and healthcare were areas of strength in the labor market. Real GDP increased at an annual rate of 3.2% in Q3 after a negative Q2.[3]

- During 4Q22 the dollar was weak. The DXY index, which measures the U.S. dollar versus a basket of foreign currencies, declined by 7.38% during the quarter.[4] Foreign central banks spoke of raising interest rates just as the United States is approaching the end of its rate hike cycle. A weak dollar makes it less expensive for customers in foreign countries to buy goods priced in U.S. dollars.

- We continue to see atrocities from the Russian assault on civilians in Ukraine. Given the conflict does not seem to have an end in sight, countries and regions must shorten supply chains and become self-sufficient in energy and manufacturing.

IMPACTS ON PERFORMANCE

- The Fund's Institutional (NEAIX) and Retail (NEAGX) classes returned 4.63% and 4.44%, respectively, in 4Q22, outperforming the Russell 2000 Growth's 4.13% return.

- As manufacturing continues its process of reshoring to the U.S., over half of the Fund's top contributors are positioned well to continue to benefit.

- The top contributor was long-time holding Super Micro Computer, Inc. (SMCI). Super Micro designs and manufactures servers. It reported very strong Q3 results, sustained by growth from the large internet companies, which operate their own large data centers.

- PDF Solutions, Inc. (PDFS) was the second-best contributor and is the largest position in the Fund at 7.29% of net assets. PDF Solutions saw strong orders for its Exensio® big data analytics software. Exensio® helps customers across the electronics manufacturing industry improve manufacturing yield. PDF Solutions is benefitting from the resurgence of activity in building semiconductor manufacturing plants in the United States.

- The Fund's top detractor was Vacasa, Inc. (VCSA), which manages vacation rental properties. Vacasa reduced its outlook during its 3Q earnings call. Despite reporting losses, Vacasa has a positive cash cycle and has continuously been cash flow positive.

- Entegris, Inc. (ENTG) was the second largest detractor. Entegris supplies filters, specialty materials, chemicals, and delivery systems used primarily for semiconductor manufacturing. Entegris reported an earnings and guidance shortfall, partially due to the United States' federal restrictions on trade with China.

- With 11% 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

- 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 research and manufacturing to bring these developments to market.

- The Fund did not add any new positions in 4Q22 but took advantage of market weakness to add to many of our existing positions. We believe the public markets are not adequately recognizing the value in many of our holdings. Many of these stocks were down over 30% in 2022. Here, we highlight some of the largest additions:

    - Adams Resources & Energy, Inc. (AE) owns trucks and storage terminals for transporting liquid chemicals, pressurized gases, asphalt, and dry bulk loads across the South. Its customers include BASF SA (BASFY) and Dow, Inc. (DOW). It also transports crude oil via truck and pipeline from the Eagle Ford to the Gulf of Mexico. Finally, it has entered the environmental remediation business through its acquisition of Phoenix Oil, which collects and repurposes off-spec fuel. In November, the company reduced its share count from 4.2 million to 2.4 million shares by purchasing shares from its then largest holder. We believe this was the latest of a number of astute capital allocation decisions by management. Adams has a $100 million market cap and has no Wall Street coverage or active small cap institutional ownership. We increased our ownership from 49,000 to 90,500 shares.

    - Aspen Aerogels, Inc. (ASPN) was a very disappointing stock in 2022. The company was selected by General Motors Company (GM), Toyota Motor Corp. (TM), and other electric vehicle makers to provide aerogel insulation to prevent fires in lithium ion batteries. However, the company needs to build a plant to meet the demand and needed to raise capital to build the plant. We added 150,000 shares in the company's secondary stock offering in November.

- The Fund exited Taiwan Semiconductor Manufacturing Co., Ltd. (TSM). Over the long-term, we think the company may experience challenges as it builds out manufacturing capacity outside of Taiwan. We also trimmed a few other holdings, primarily for tax planning.

LOOKING AHEAD & OPPORTUNITIES

- We continue to see opportunities in the reshoring of manufacturing in the United States. We recommend reading *The Titanium Economy: How Industrial Technology Can Create a Better, Faster and Stronger America* by Asutosh Padhi, Gaurav Batra, and Nick Santhaman of McKinsey and Company. [5] Portfolio holding Clean Harbors, Inc. (CLH) is featured in the book. Over half of the Fund's top contributors in 4Q22 are part of the industrial technology universe.

- Many of our largest portfolio holdings have made multi-year investments that we believe positions them to deliver growth and positive returns over the next few years. We believe if these investments succeed, they could provide a hedge against macroeconomic factors, such as inflation.

[1] https://www.federalreserve.gov/newsevents/pressreleases/monetary20221102a.htm
[2] https://www.federalreserve.gov/newsevents/pressreleases/monetary20221214a.htm
[3] https://www.bls.gov/
[4] https://www.marketwatch.com/investing/index/dxy
[5] Padhi, Asutosh, et al. The Titanium Economy How Industrial Technology Can Create a Better, Faster, Stronger America. PublicAffairs, 2022.

	3 MO	YTD	1YR	3YR	5YR	10YR	SINCE INCEPT.
Needham Aggressive Growth Fund Inst Class**	4.63%	-27.02%	-27.02%	15.46%	13.53%	13.33%	10.92%
After Taxes on Distributions	4.63%	-27.02%	-27.02%	14.50%	11.71%	11.74%	9.85%
After Taxes on Distributions & Redemptions	2.74%	-16.00%	-16.00%	12.30%	10.47%	10.69%	9.19%
Needham Aggressive Growth Fund Retail Class	4.44%	-27.53%	-27.53%	14.70%	12.83%	12.67%	10.29%
After Taxes on Distributions	4.44%	-27.53%	-27.53%	13.71%	10.98%	11.07%	9.22%
After Taxes on Distributions and Redemptions	2.63%	-16.30%	-16.30%	11.70%	9.90%	10.12%	8.62%
Russell 2000 Growth Index	4.13%	-26.36%	-26.36%	0.65%	3.51%	9.20%	7.39%
Russell 2000 Index	6.23%	-20.44%	-20.44%	3.10%	4.13%	9.01%	7.85%
S&P 500 Index	7.56%	-18.11%	-18.11%	7.66%	9.42%	12.56%	7.98%

Average Annual Returns as of December 31, 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 1.82% for the Retail Class and 1.53% 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 12/31/22: SMCI: 3.96%, PDFS: 7.29%, VCSA: 1.17%, ENTG: 3.04%, AE: 2.61%, BSAFY: 0.00%, DOW: 0.00%, ASPN: 3.12%, GM: 0.00%, TM: 0,00%, TSM: 0.00% and CLH: 2.20%.

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