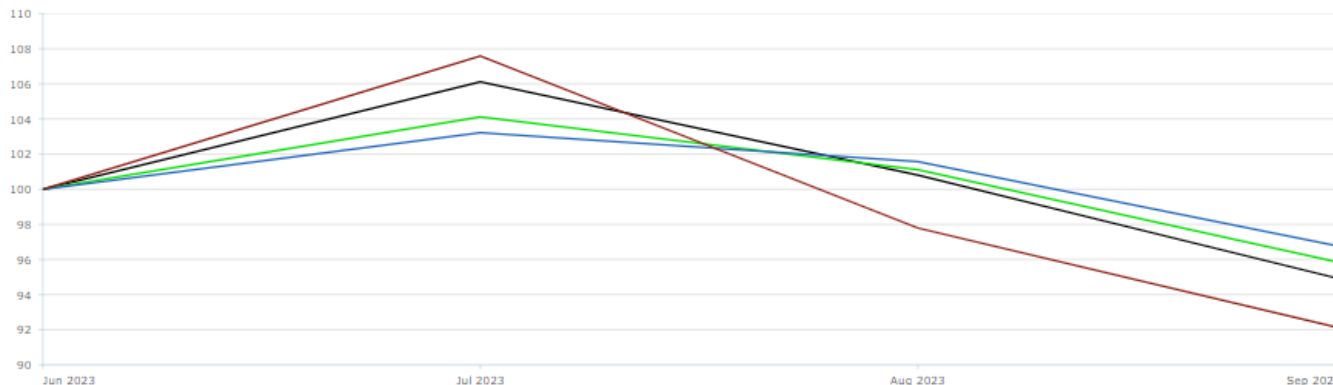


MARKET REVIEW

- In 3Q23, the S&P 500 Index lost 3.27%, the S&P MidCap 400 lost 4.20%, and the Russell 2000 lost 5.13%.
- In July, the Federal Reserve raised interest rates 25 bps to 5.25% - 5.50% and then paused in September. The Fed indicates that there could be one more rate increase in 2023.¹
- 10-year Treasury yields increased from 3.8% to 4.6%, the highest level since 2007.



	RETURN
■ Needham Growth Institutional	(7.92)
■ S&P 500	(3.27)
■ S&P 400	(4.20)
■ Russell 2000	(5.13)

Source: Zephyr Informais

MACRO OBSERVATIONS

- The economy continued to move forward with estimated 3Q23 GDP growth of 5.8%, well above 2Q23's 1.7%. This marks the fifth successive growth quarter.
- 3Q23 is estimated to be the fifth quarter of 3-4% consumer price index inflation, after 5-7% the preceding four quarters.
- We were shocked and saddened by the Hamas terror attack on Israel on October 7. Our portfolio companies have employees in Israel, and every one of those employees is affected. We believe Israel will prevail over those that seek its destruction.
- Our investment focus on the reshoring of U.S. manufacturing and infrastructure seems all the more relevant. We consider Israel to be an important participant in providing technology and products for its own infrastructure and for that of the United States.

IMPACTS ON PORTFOLIO PERFORMANCE

- In 3Q23, the Fund's Institutional (NEEIX) and Retail (NEEGX) classes returned -7.92% and -7.99%, respectively, underperforming its benchmark indices.
- Super Micro Computer, Inc. (SMCI) was again one of the Fund's top contributors. Super Micro designs and manufactures servers. It reported strong results driven by its high-growth Artificial Intelligence GPU (graphics processing units) and rack-scale solutions. Super Micro was the Fund's largest position at 10.17% of net assets as of September 30. The Fund has owned the stock since 2009.

- Akamai Technologies, Inc. (AKAM) was another top contributor after it reported a strong quarter. Its Content Delivery Network (CDN) business has seen negative growth, but Akamai leverages the infrastructure from this legacy business for its Security and Compute solutions. Security, which includes distributed web application firewalls, bot mitigation, and microsegmentation, is now Akamai's largest segment. Akamai is leveraging its widely distributed CDN locations to offer its new Edge Compute solution to complement large data center companies, such as Amazon Web Services. 2023 is a year of investing in Compute.
- The Fund's top detractor in 3Q23 was PDF Solutions, Inc. (PDFS). PDF's Exensio® data analytics platform helps customers across the electronics manufacturing industry improve manufacturing yield. PDF reported strong 2Q23 earnings, but analysts' estimates of second half revenue growth were reduced from 18% to 13%. We took advantage of the market weakness and added to our position.
- KVH Industries, Inc. (KVHI) was the second leading detractor. On its earnings call, KVH announced that the Board of Directors had concluded its review of strategic alternatives without changes. The market was expecting a merger or sale to take advantage of economies of scale. We believe KVH now needs to improve profitability and seek consolidation.
- With 7% 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 made several new investments and added to a number of existing holdings. It also sold a few small positions and reduced one major holding.
- New purchases:
 - The largest new holding is Carter's, Inc. (CRI), the leader in children's apparel. The stock and business have suffered due to the weak consumer cycle. We believe it is a durable, growing company with great management.
 - Fortrea Holdings, Inc. (FTRE) – Fortrea performs randomized drug trials. The Fund received shares from its spin-out from Laboratory Corporation of America Holdings (LH) and purchased additional shares.
- Major additions:
 - Alteryx, Inc. (AYX) – a data analytics software company that we believe is undergoing a misunderstood transition to SaaS.
 - Aspen Aerogels, Inc. (ASPN) – manufactures aerogel insulation. On its August conference call, Aspen announced plans to outsource manufacturing for its product for the energy industry and to focus its Providence, RI plant on the rapidly growing opportunity for preventing fires in EV batteries. Aspen also put the construction of its Georgia plant on hold. As a result, we believe Aspen is fully funded.
- Reduced position:
 - Super Micro Computer, Inc. (SMCI) – the Fund sold about 8% of its position to manage position size. Super Micro closed the quarter as the Fund's largest position at 10.17% of net assets.

RECOMMENDED READING - Outlive by Peter Attia, MD

- I'd like to close with an optimistic note. Some think that the investment story of 2023 is not AI, but the GLP-1 (glucagon-like peptide) agonist drugs, such as Novo Nordisk's Ozempic and Wegovy, and Eli Lilly's Mounjaro. These "miracle drugs" are credited with managing diabetes and weight loss and have ongoing studies for the treatment of other chronic diseases. These drugs help the body deal with glucose, and their rapid adoption has affected stocks for medical devices, retailers, and even food companies.
- However, the benefits of GLP-1s reverse when one stops taking them, and their long-term side effects are unknown. The drugs are so expensive that they could overwhelm government and private payors. We see GLP-1s as providing benefits for patients without alternatives. However, there is an alternative for many.
- My favorite private company is Virta Health,² which has a mission to reduce Type-2 diabetes in millions of people through nutrition, coaching, and education. We featured Virta in The Growth Factor 28.³
- I recommend Dr. Peter Attia's Outlive,⁴ which presents the case for a different healthcare model built around exercise, nutrition, sleep, and emotional health. Our legacy healthcare model – built on hospitals, specialists, and drugs like GLP-1 – attempts to address acute diseases but is terrible at adding years of functional life. It is incredibly hopeful to imagine a future with true, functional health and enough cost savings to eliminate the Federal deficit. For more information, we recommend the writings of podcasts with Virta's CEO, Sam Inkinen⁵ and Dr. Attia's, The Drive podcast. I believe there will be more to follow on this topic in future commentaries and Growth Factors.

- [1] <https://www.barrons.com/livecoverage/fed-september-meeting-rate-decision-powell-speech-today/card/fed-s-dot-plot-points-to-one-more-rate-increase-this-year-VVkoDxho88efLq15BdOY>
 [2] https://www.virtahealth.com/join/benefits?utm_source=Googlead&utm_medium=GA-Brand-Exact-Search&utm_campaign=2022-Q3-Brand-Exact&utm_content=GA-Brand-Exact&campaignid=16934261972&adgroupid=135659886717&adid=593274558903&gad=1&gclid=EAIaIQobChMI2eTh7erzQMV1IBHAR2aGA8tEAYASAAEgJ7KPD_BwE
 [3] https://www.needhamfunds.com/gf_commentary/private-company-profile-virta-health-inc/
 [4] Attia, Peter, and Bill Gifford. Outlive: The Science & Art of Longevity. Vermilion, 2023.
 [5] <https://www.ncqa.org/videos/quality-talks-2022-sami-inkinen-on-taking-diabetes-reversal-mainstream/>

	3 MO	YTD	1YR	3YR	5YR	10YR	SINCE INCEPT.
Needham Growth Fund Inst Class**	-7.92%	14.05%	18.68%	6.05%	11.25%	9.30%	12.60%
After Taxes on Distributions	-7.92%	14.05%	18.21%	4.88%	9.21%	7.62%	11.21%
After Taxes on Distributions & Redemptions	-4.69%	8.32%	11.33%	4.74%	8.58%	7.18%	10.77%
Needham Growth Fund Retail Class	-7.99%	13.73%	18.25%	5.62%	10.74%	8.80%	12.11%
After Taxes on Distributions	-7.99%	13.73%	17.76%	4.42%	8.66%	7.11%	10.73%
After Taxes on Distributions and Redemptions	-4.73%	8.13%	11.08%	4.42%	8.18%	6.77%	10.32%
S&P 500 Index	-3.27%	13.07%	21.62%	10.15%	9.92%	11.91%	9.26%
S&P 400 Index	-4.20%	4.27%	15.51%	12.05%	6.06%	8.94%	10.75%
Russell 2000 Index	-5.13%	2.54%	8.93%	7.16%	2.40%	6.65%	7.87%

Average Annual Returns as of September 30, 2023. The Needham Growth Fund inception date is January 1, 1996.

**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.

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.

The Needham Growth Fund's Gross Expense Ratio is 1.86% for the Retail Class and 1.59% for the Institutional Class. The Needham Growth Fund's Net Expense Ratio is 1.86% for the Retail Class and 1.41% 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 May 1, 2024 to the extent the Gross Expense Ratio exceeds 1.95% and 1.40% of the average daily net assets of Retail Class Shares and Institutional Class Shares (Expense Cap), respectively. 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 Growth Fund Fact Sheet Link](#) [Prospectus Link](#)

Definitions and Disclosures

The information presented in this commentary is not intended as personalized investment advice and does not constitute a recommendation to buy or sell a particular security or other investments. This message is not an offer of the Needham Growth Fund, the Needham Aggressive Growth Fund or the Needham Small Cap Growth Fund (each a "Fund" and collectively, the "Funds"). Shares are sold only through the currently effective prospectus, which must precede or accompany this report. Please read the prospectus or summary prospectus and carefully consider the investment objectives, risks and charges and expenses of the Funds before you invest. To obtain a copy of the Fund's current prospectus, please visit www.needhamfunds.com or contact the Fund's transfer agent, U.S. Bancorp Fund Services, LLC at 1-800-625-7071.

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. Portfolio holdings are subject to change. Needham Growth Fund's ownership as a percentage of net assets in the stated securities as of September 30, 2023: SMCI: 10.17%, AKAM: 2.58%, AMZN: 0.00%, PDFS: 6.72%, KVHI: 1.87%, CRI: 0.81%, FTRE: 0.37%, LH: 1.58%, AYO: 0.62%, ASPN: 2.68%, NVO: 0.00%, LLY: 0.00% and Virta Health (Private): 0.00%.

The Global Industry Classification Standard (GICS[®]) was developed by and/or is the exclusive property of MSCI, Inc. and Standard & Poor's Financial Services LLC ("S&P"). GICS is a service mark of MSCI and S&P and has been licensed for use by U.S. Bancorp Fund Services, LLC. The S&P 500 Index and the S&P 400 Index are both broad unmanaged measures of the U.S. stock market. The Russell 2000 Index is a broad unmanaged index composed of the smallest 2,000 companies in the Russell 3000 Index. An investor cannot invest directly in an index. Needham & Company, LLC is a wholly owned subsidiary of The Needham Group, Inc. Needham & Company, LLC, member FINRA/SIPC, is the distributor of The Needham Funds, Inc.

The source of the data for each of the Russell 2000 Index and the Russell 3000 Index (together, the "Indexes") is the London Stock Exchange Group plc and its group undertakings (collectively, the "LSE Group"). © LSE Group 2023. © LSE Group 2022. All rights in the Indexes vest in the relevant LSE Group company which owns the Index. The Indexes are calculated by or on behalf of FTSE International Limited or its affiliate, agent or partner. Neither the LSE Group nor its licensors accept any liability for any errors or omissions in the Indexes; no party may rely on the Index returns shown; and the LSE Group makes no claim, prediction, warranty or representation about the Fund or the suitability of the Indexes with respect to the Fund. No further distribution of data from the LSE Group is permitted without the relevant LSE Group company's express written consent. The LSE Group is not connected to the Fund and does not promote, sponsor or endorse the Fund or the content of this prospectus.