

**Portfolio Manager:**  
John O. Barr

**Investment Style:**  
Small Cap Growth

## NEEDHAM AGGRESSIVE GROWTH FUND

3Q19 Quarterly Commentary

### Needham Aggressive Growth Fund (NEAGX/NEAIX): Review of the 3rd Quarter

The Needham Aggressive Growth Fund's mission is to create wealth for long-term investors—and the third quarter was another step forward. The Fund's Institutional and Retail classes returned 3.68% and 3.54%, respectively, in the quarter ended September 30, 2019. The Russell 2000 Index returned -2.40% and the S&P 500 Index returned 1.70% in the quarter.

Year-to-date through September 30, 2019, the Fund's Institutional and Retail classes returned 27.17% and 26.63%, respectively. The Russell 2000 Index returned 14.18% and the S&P 500 Index returned 20.55%.

#### Creating Wealth for Long-Term Investors

To create wealth for long-term investors, I look to invest in companies that have the potential to compound returns at above-market rates. U.S. equity markets make it easy to become a financial partner of great entrepreneurs and corporate managers. Investors and stock traders can easily and inexpensively execute trades and become partial owners of any of over 4,000 companies in the U. S.

On October 2, Charles Schwab announced commission-free equity trades and was soon followed by many other brokers. The danger of our markets is that they make it so easy to trade that the concept of being a business owner is abstract and lost in the thrill or pain of short-term results and the 24-hour news cycle.

As a long-term investor, I look for three investment criteria for potential compounders:

- 1) Can the company grow to be 5-10x larger?
- 2) Is the company managed by founders, family or long-tenured CEOs? These managers tend to think longer-term. Some of the great wealth creation has come from public and private family-run businesses.
- 3) Does the company have the potential for high-return on capital? Has the company been investing in new products, services or distribution that have yet to show results and that the stock market has yet to value appropriately?

Let's look at the investment process of an ETF or quantitative fund. An ETF buys or sells all of the stocks in an index at the market price based on flows into or out of the ETF. An index-based ETF makes no assessment of the value of the stock it is buying. Quant funds use math to discern which factors will lead to outperformance. Most of these factors are based on past financial and stock performance. Some quantitative investors may take into account analysts' estimates and data about CEOs, if it can be quantified. My three criteria, particularly the first and third, are impossible for a quant fund to quantify.

Considering the Fund's four largest positions, I view the Needham Aggressive Growth Fund as a financial partner of John Kibarian, CEO of PDF Solutions (PDFS), Bertrand Loy of Entegris (ENTG), Martin Kits van Heyningen of KVH Industries (KVHI), and Tim Cook of Apple (AAPL). In contrast to the manager of a quant fund or ETF, I know three of these four CEOs well. (You can guess which three.) My predecessor (who invested in Apple before the first iPhone release) and I invested in these companies when they were in investment cycles that obscured the companies' underlying progress.

On average, the Fund has owned shares of these companies for almost 10 years. Entegris and Apple have contributed returns well above the market's average performance. PDF has contributed positively, but has been below the market, and KVH Industries has lost money for the Fund. I am optimistic about both PDF Solutions and KVH Industries' potential to be positive contributors over the long term.

In 2019, Entegris, PDF and Apple have been the top three contributors to the Fund and all have outperformed. KVH has been a positive, but underperforming contributor in 2019. In October, KVH announced a \$10 million share buyback program. Also, KVH is holding an investor day at its headquarters in Middletown, RI, on November 14. The buyback and investor day are both firsts in many years for the company. I believe KVH is well positioned for 2020, based on progress with its fiber-optic gyroscopes for autonomous vehicles, and AgilePlans for maritime communications.

Beyond these top four holdings are 54 other investments. The top 10 investments represented 65.97% of net assets. The smaller investments are newer, and I am looking for these companies to prove themselves as compounders over time.

Morningstar categorizes the Fund as Small Cap Growth, and Lipper categorizes it as Small Cap Core. At September 30, the trailing 12-month turnover in the Needham Aggressive Growth Fund was 7.7%, implying a 13-year holding period. When you hold companies for 10-15 years, and they succeed, they grow to larger market cap categories. I am not concerned about where the Fund falls in the style boxes. My mission is to find companies that match the three criteria and may be compounders over many years, independent of their industry or market cap.

### **Third Quarter Performance: Needham Aggressive Growth Fund (NEAGX/NEAIX)**

Three of the top third quarter performers for the Needham Aggressive Growth Fund supply technology and capital equipment for semiconductor manufacturing. While the semiconductor memory market has too much manufacturing capacity, the logic market is strong. Taiwan Semiconductor Manufacturing ADR (TSM.NA) is spending aggressively on the leading-edge 7 nanometer production process, which is used to manufacture the processors for Apple's fall 2019 iPhones, as well as other high-end semiconductors.

Entegris, Inc. (ENTG) was the Fund's top contributor in the third quarter. Entegris supplies filters and chemicals used in semiconductor advanced manufacturing processes. Based on confidence in its business, Entegris said the second quarter represented a bottom in revenue, and it expects revenue growth in the third quarter and beyond. Technology transitions by customers could drive adoption of new Entegris products. The company also announced \$20 million in annual cost savings, which is expected to be in place by the end of 2019.

In April, Entegris announced a merger with Versum Materials, which was bested by a competing offer from Merck AG (MKGAF). Entegris continued with its acquisition strategy by acquiring Digital Specialty Chemicals (DSC) in March, and then MPD Chemicals for \$165 million cash in July. MPD makes advanced materials for the specialty chemical, technology and life sciences industries. In September, Entegris acquired Hangzhou Anow Microfiltration for \$73 million. With the expense reduction and acquisitions, Entegris is doing a mini-version of what might have been with Versum.

Apple Inc. (AAPL) was the second-leading contributor. In the fourth quarter of 2018, Apple reported weakness in China with its new, high-end phones. It's hard to remember, but 2018 brought the worst December for the U.S. stock market since 1931, and Apple fell to \$143 per share on January 3, 2019. In the September 2019 quarter, iPhone sales stabilized in China, Taiwan and emerging markets. Wearables (Apple Watch and home and accessories) were a meaningful driver of growth. With the mix shift to higher margin services, Apple saw gross and operating margin expansion.

The third-leading contributor was Nova Measuring Instruments Ltd. (NVMI). Nova Measuring reported its June quarter at the high end of its guidance. The company also announced progress with major customers for its VeraFlex X-ray metrology system, used for material metrology. VeraFlex was acquired by Nova Measuring in 2015. As leading-edge semiconductors are developed, they require materials engineering and sophisticated metrology.

MKS Instruments, Inc. (MKSI) was the fourth-leading contributor. MKS' laser sales into the industrial market have suffered owing to the U.S./China trade war, and the company's sales into semiconductor manufacturing have been hurt by the overcapacity in memory. Industry results showed strong spending in the June quarter on logic manufacturing by Taiwan Semiconductor and Intel Corporation, both indirect customers of MKS. I believe MKS is well-positioned for a rebound in semiconductor capital equipment.

For the second quarter in a row, GSE Systems (GVP) was the leading detractor. GSE's mission is to be a leader in training, consulting and technology-enabled engineering solutions for the power and process industries.

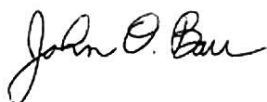
In February 2019, GSE announced the acquisition of DP Engineering Ltd. for \$13.5 million in cash. DP acts as "Engineer of Choice" in mechanical, civil, electrical, instrumentation and controls, cybersecurity and fire protection for projects in nuclear power plants. About a week after the DP acquisition, an adverse event occurred at a major DP customer that affected plant operations. In August, this customer announced that GSE/DP Engineering lost its designation as an "Engineer of Choice," which meant a significant reduction in business from this customer. We had expected that GSE would be able to resume its significant business with this customer in October, but it will not. As a result, GSE reduced its head count at DP and at the corporate level. It also stated that its acquisition activity is on hold. I view this as a significant setback for GSE Systems' strategy. I see value in GSE in a consolidating nuclear services industry.

In the third quarter, the Needham Aggressive Growth Fund added to its positions in Vicor Corporation (VICR), Bruker Corporation (BRKR), and Wabtec (Westinghouse Air Brake Technologies Corp.) (WAB), a leading locomotive manufacturer. In February 2019, Wabtec closed its transformational acquisition of General Electric's locomotive business. We believe there could be a strong market for new and retrofit locomotives over the next few years, as technology is more widely adopted and the cost of trucking and shortage of drivers makes rail an even more attractive shipping option. The Fund's largest sale in the quarter was a tax loss sale of about 10% of the Fund's position in GSE Systems. At September 30, 2019, the Fund's top 10 positions were 65.97% of net assets. The Fund had an Active Share of 100.7% versus the Russell 2000 and had trailing 12-month turnover of 8%. The Fund was short 1.0% of total investments. Once again, the Fund looks nothing like the S&P 500 and its performance was not correlated.

We believe the U.S. remains the best place in the world to be investing, and we continue to see an opportunity to invest in small and mid-cap stocks. Most importantly, we see a revolution happening in technology that has created and continues to create investment opportunities. We see opportunity in our strategy of investing in companies that we know well and that we believe are positioned with secular growth drivers.

We welcome our new investors and thank all of our investors for their continued support. If you have any questions, thoughts or concerns, please contact us at (800) 625-7071 or [jbarr@needhamco.com](mailto:jbarr@needhamco.com). For information about the Needham Aggressive Growth Fund, please visit our website at [www.needhamfunds.com](http://www.needhamfunds.com).

Sincerely,



John Barr, Portfolio Manager

## AVERAGE ANNUAL RETURNS AS OF 9/30/19

|  | 3 MO    | YTD    | 1YR     | 3YR    | 5YR    | 10YR   | SINCE INCEPT. |
|--|---------|--------|---------|--------|--------|--------|---------------|
| Needham Aggressive Growth Fund Inst Class**  | 3.68%   | 27.17% | 3.75%   | 9.11%  | 8.26%  | 11.22% | 9.55%         |
| After Taxes on Distributions                 | 3.68%   | 27.17% | 0.53%   | 6.97%  | 6.29%  | 10.16% | 8.61%         |
| After Taxes on Distributions & Redemptions   | 2.18%   | 16.08% | 3.92%   | 6.75%  | 6.15%  | 9.14%  | 7.96%         |
| Needham Aggressive Growth Fund Retail Class  | 3.54%   | 26.63% | 3.22%   | 8.50%  | 7.67%  | 10.61% | 8.95%         |
| After Taxes on Distributions                 | 3.54%   | 26.63% | (0.02)% | 6.37%  | 5.70%  | 9.55%  | 8.01%         |
| After Taxes on Distributions and Redemptions | 2.10%   | 15.77% | 3.63%   | 6.37%  | 5.74%  | 8.61%  | 7.43%         |
| Russell 2000 Index                           | (2.40)% | 14.18% | (8.89)% | 8.23%  | 8.19%  | 11.19% | 8.20%         |
| S&P 500 Index                                | 1.70%   | 20.55% | 4.25%   | 13.39% | 10.84% | 13.24% | 7.63%         |

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 2.97% for the Retail Class and 2.79% for the Institutional Class. The Needham Aggressive Growth Fund's Net Expense Ratio is 2.91% for the Retail Class and 2.35% 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, 2020 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). 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. Fact Sheet Link: [Needham Aggressive Growth Fund](#)

*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. Shares are sold only through the currently effective prospectus. Please read the prospectus or summary prospectus and consider the investment objectives, risks and charges and expenses of the Funds carefully before you invest. The prospectus and summary prospectus contain this and other information about the Funds and can be obtained on our website, [www.needhamfunds.com](http://www.needhamfunds.com).

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 & Company, LLC, member FINRA/SIPC, is the distributor of The Needham Funds, Inc.

Portfolio holdings are subject to change. The Needham Aggressive Growth Fund's ownership as a percentage of net assets in the stated securities as of 9/30/19: PDFS: 10.25%; ENTG: 11.82%; KVHI: 8.44%; APPL: 9.61%; TSM: 0.70%; MKGAF: 0.00%; NVMI: 4.30%; MKSI: 4.55%; GVP: 3.84%; VICR: 5.07%; BRKR: 0.00%; WAB: 1.31%.

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 2019. 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.