Needham Aggressive Growth Fund (NEAGX/NEAIX): Review of the First Quarter 2020

Needham Aggressive Growth Fund's mission is to create wealth for long-term investors, and the first quarter of 2020 was unprecedented, as a significant portion of the world stayed at home to limit the spread of COVID-19.

In the quarter ended March 31, 2020, Needham Aggressive Growth Fund's Institutional and Retail classes returned -16.37% and -16.44%, respectively, well ahead of the Russell 2000 Index decline of -30.61% and the S&P 500 Index decline of -19.60%.

In April, the Fund recovered nearly its entire first quarter decline. The Fund's Institutional and Retail classes returned 16.73% and 16.60%, respectively, while the Russell 2000 gained 13.74% and the S&P 500, 12.82%. If one only saw the year-to-date returns as of the end of April, they would hardly know anything extraordinary had happened.

Macroeconomic Commentary

Entering the year, we were optimistic about 2020. We anticipated strategic progress and growth from our companies. That all changed with COVID- 19. From late February until March 23, the S&P 500 declined 34%, its largest drop in history. It was one of the worst quarters in the recorded history of the United States' markets, and in April 2020, the S&P 500 posted its best month since January 1987.

Along with the stock market performance, the monetary and fiscal policy responses to COVID-19 have also been unprecedented. The Federal Reserve announced an unlimited bond-buying program. These bonds include high-yield ETFs, bonds that were rated investment grade before the crisis, small business loans, municipals, asset-backed securities, collateralized loan obligations and commercial mortgage-backed securities. The fiscal response included the CARES Act and totaled over $2 trillion of grants and loans to all kinds of businesses, including airlines, hospitals and small business, payments to state and local governments, and a $1,200 direct payment to some individuals. We believe that the liquidity from the policy responses could be positive for equities.

Company earnings for the March quarter were as expected. Business in the U.S. was strong until shelter-in-place restrictions went into effect in mid-March. Although most companies have followed the legalistic path of withdrawing guidance, their commentary on second quarter revenue and bookings was much better than we expected.

Some of the companies that had reasonably positive outlooks are involved with infrastructure build-out. This type of infrastructure is not what one typically thinks of as infrastructure. We see the beneficiaries as companies involved with the build-out of cloud data centers, communications, software-as-a service applications, technology-based manufacturing and life-sciences research.

The ease with which much of the white-collar workforce has adapted to work from home is a testament to the communications infrastructure. In his book Digital Cathedrals, Mark Mills writes that the cloud is the first "foundationally new infrastructure in nearly a century." Datacenters are the physical representations of this infrastructure. Mills states that we are still very early in the build-out of this infrastructure and even earlier in the applications and societal benefits it will bring. Many of our portfolio companies are directly involved with datacenter build-out and delivery of applications to users:

- Equinix, Inc. (EQIX) is a leading public data center company; Taiwan Semiconductor Manufacturing ADR (TSMC), and Vicor Corporation (VICR) supply semiconductors used in the computers and storage systems used inside data centers. Super Micro Computer Inc. (SMCI) supplies computers and storage systems.
- Akamai Technologies Inc.'s (AKAM) distributed content delivery network and security services make delivery of data more efficient.
- Appian Corporation (APPN), Everbridge, Inc. (EVBG) and Q2 Holdings, Inc. (QTWO) are SaaS providers.

COVID-19 has also highlighted the risk of a concentrated supply chain. Manufacturing and pharmaceutical companies may look to build out capacity in the United States, Mexico and Canada to diversify supply chains and reduce transit routes. Our portfolio companies Aspen Aerogels, Inc. (ASPN), Clean Harbors, Inc. (CLH), IPG Photonics Corp. (IPGP), MKS Instruments Inc. (MKSI), National Instruments Corp. (NATI), and Vishay Precision Group, Inc. (VPG) could benefit from supply chain diversification.

We also see a build-out in scientific infrastructure used for life sciences research. Several of our portfolio companies supply equipment and consumables used for life science research, including Bruker Corp. (BRKR), Entegris Inc., (ENTG) and MKS Instruments Inc. (MKSI). CryoPort, Inc. (CYRX) supplies cold-chain logistics to transport therapies and samples used for both research and treatment.

Readjustment to a post-COVID-19 world will be difficult. The unprecedented unemployment is the biggest issue. The economy has serious issues ahead for the travel, retail, entertainment, hospitality and other consumer-facing industries. Some of those industries may employ less people than before. Opportunities in the growing sectors require new skills for displaced workers. There's a great deal of uncertainty ahead. However, April provided a preview of elements of an optimistic future. We are hopeful.

Needham Aggressive Growth Fund First Quarter Performance

There was only one significant contributor. Alpha Pro Tech, Ltd. (APT) manufactures disposable and protective apparel for health care and industrial markets and weatherization products for the construction industry. Alpha Pro Tech was by far the top contributor to the Fund's first quarter performance.

We discovered the company on a trip to Toronto and the Fund first invested in 2018. We were attracted by Alpha Pro Tech's management, double-digit return on capital and robust balance sheet. Lloyd Hoffman, son of the company's co-founder, has been at Alpha Pro Tech for 30 years and has been CEO for the last four years. At year-end 2017, Alpha Pro Tech had $9.1 million of cash, $27.0 million of current assets and just $2.8 million of total liabilities. The company has been profitable every year since 1997.

Alpha Pro Tech was one of only a few companies with N-95 mask manufacturing in the United States. Its N-95 masks have long been approved by the NIOSH (part of the CDC), and cleared by the FDA as a surgical mask. The company typically had about $5 million of annual mask revenue, but has recently been receiving about $500,000 of orders per day. It has a capacity expansion plan in place for May, and a second expansion for September. It also has about $1.5 million of PPE revenue produced by a minority-owned manufacturing joint venture in India. We believe the company could grow significantly larger in 2020 and beyond.

PDF Solutions, Inc. (PDFS) was a leading contributor in 2019, but the largest detractor in the first quarter of 2020. PDF's 2019 results showed continued progress with its Exensio big data platform. PDF's stock traded down in early February when China was the center of the COVID-19 outbreak. PDF has an engineering team in Shanghai and generated 16% of revenue from China in 2019. We believe Exensio data analytics will provide even more value for a semiconductor manufacturing team in a post-COVID-19 era where there may be less operators and manufacturing engineers on a plant floor.

DIRTT Environmental Solutions Ltd. (DRTT) was the second largest detractor to the Fund's performance. DIRTT provides customized, prefabricated interior office spaces. It has an incredible virtual reality CAD system, and it manufactures the walls and interior components, which are shipped and assembled on-site. As a result, there is less on-site waste and a more predictable construction schedule. DIRTT competes with dry wall construction and the requirement for skilled workers. We believe DIRTT is the future of interior construction.

DIRTT's fourth quarter revenue and earnings were disappointing. The company also guided to continued weakness in the first quarter. We are concerned about the impact of the weak economy, and the impact of future social distancing needs on office construction. We believe companies will be rethinking their office plans. Longer-term, we believe DIRTT could benefit from a need to modify floor plans; however, there will be a pause before companies make such changes. Consequently, the Fund sold about 80% of the DIRTT position and realized a tax-loss. We will revisit this decision as we develop a view of the future of office environments. Right now, there is too much uncertainty.

Apple, Inc. (AAPL) was the third largest detractor in the first quarter. In January, Apple reported very strong results and positive guidance for iPhones, Services and Wearables. However, on February 16, Apple pre-announced a negative quarter based on manufacturing, supply chain and demand issues in China. In mid-February, we had little idea of what was to come.

The Fund added small new positions in Clean Harbors, Inc. (CLH) and AXT, Inc. (AXTI). We hope to build both positions over time. The biggest addition to an existing holding was to Smith-Midland Corporation (SMID), a micro-cap maker of pre-cast concrete systems for road barriers and construction. We are impressed by the company's management and we believe the market misunderstands the returns from their barrier rental business.

The Fund exited Bill.com Holdings (BILL) and Coupa Software, Inc. (COUP) over concern for their small business customer bases. Both were small positions, but big winners. We hope to have a chance to repurchase shares in the future. The Fund also reduced our positions in some of the longer-term, larger holdings in the Fund, including Apple, Akamai Technologies (AKAM), Entegris (ENTG) and Everbridge (EVBG).

At March 31, 2020, the Fund's top 10 positions were 65.88% of net assets. The Fund held 1.2% of net assets in cash and was short 0.1%. The Fund had an Active Share of 98.9% versus the Russell 2000 and trailing 12-month turnover was 14.7%.

Morningstar categorizes the Fund as Small Cap Growth, and as of April 30, 2020, Lipper also categorizes it as Small Cap Growth. When you hold companies for 10-15 years, and they succeed, they grow to larger market cap categories. My mission is to find companies that may be compounders over many years, independent of their industry or market cap.

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. For information about the Needham Aggressive Growth Fund, please visit our website at www.needhamfunds.com.

Sincerely,

John Barr, Portfolio Manager

AVERAGE ANNUAL RETURNS AS OF 3/31/20

	3 MO	YTD	1YR	3YR	5YR	10YR	SINCE INCEPT.
Needham Aggressive Growth Fund Inst Class**	-16.37%	-16.37%	3.50%	3.28%	4.36%	9.16%	8.99%
After Taxes on Distributions	-16.37%	-16.37%	1.01%	0.98%	2.11%	7.86%	7.94%
After Taxes on Distributions & Redemptions	-9.69%	-9.69%	4.21%	2.55%	3.25%	7.42%	7.53%
Needham Aggressive Growth Fund Retail Class	-16.44%	-16.44%	2.98%	2.71%	3.79%	8.56%	8.40%
After Taxes on Distributions	-16.44%	-16.44%	0.46%	0.40%	1.53%	7.26%	7.34%
After Taxes on Distributions and Redemptions	-9.74%	-9.74%	3.93%	2.12%	2.82%	6.91%	7.00%
Russell 2000 Index	-30.61%	-30.61%	-23.99%	-4.64%	-0.25%	6.90%	6.41%
S&P 500 Index	-19.60%	-19.60%	-6.98%	5.10%	6.73%	10.53%	6.66%

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 2.17% for the Retail Class and 1.90% for the Institutional Class. The Needham Aggressive Growth Fund's Net Expense Ratio is 2.02% for the Retail Class and 1.46% 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, 2021 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

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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 & 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 3/31/20: EQIX: 2.96%; SMCI: 3.34%; TSMC: 0.85%; VICR: 8.41%; AKAM: 3.13%; EVBG: 0.63%; QTWO: 1.12%; ASPN: 2.01%; CLH: 0.24%; IPGP: 1.83%; MKSI: 4.42%; NATI: 0.55%; VPG: 0.71%; BRKR: 0.94%; ENTG: 10.30%; CYRX: 1.26%; APT: 2.15%; PDFS: 10.10%; DRTT: 0.17%; AAPL: 9.90%; AXTI: 0.19%; SMID: 1.58%; BILL: 0.00%; COUP: 0.00%.