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August 2018

Dear Shareholders, Friends of Needham and Prospective Shareholders,

We are pleased to report results for the quarter and half-year ending June 30, 2018 for the Needham Growth Fund, Needham Aggressive Growth Fund, and Needham Small Cap Growth Fund. Our mission is to create wealth for long-term investors.

Needham Funds' Second Quarter & First Half 2018 Results

In the second quarter, the Needham Growth Fund Institutional and Retail classes returned 4.68% and 4.54%, respectively; the Needham Aggressive Growth Fund Institutional and Retail classes returned 7.28% and 7.12%, respectively; and the Needham Small Cap Growth Fund Institutional and Retail classes returned 4.41% and 4.25%, respectively. The Russell 2000 Total Return Index returned 7.75% and the S&P 500 Total Return Index returned 3.43%.

For the six-month period ended June 30, 2018, the Needham Growth Fund Institutional and Retail classes returned 3.73% and 3.50%, respectively; the Needham Aggressive Growth Fund Institutional and Retail classes returned 6.64% and 6.33%, respectively; and the Needham Small Cap Growth Fund Institutional and Retail classes returned 5.14% and 4.85%, respectively. The Russell 2000 Total Return Index returned 7.66% and the S&P 500 Total Return Index returned 2.65%.

Review of the First Half of 2018

It's interesting to look back at previous quarterly letters and read the economic and geopolitical concerns that were seen as risks to the markets. We remain focused on our portfolio companies and view much of the macro, event-driven discussion in the media as distraction. Our job is to understand the fundamentals of our companies, their markets, and their competitors.

2018 began as a continuation of the dream market of the last three years. The market and the Needham Funds responded positively to the first sweeping overhaul to the U.S. tax code in over 30 years, the new Tax Cut and Jobs Act of 2017. In the beginning of February, the markets took a sharp downturn as the Federal Reserve raised interest rates and $1.5 trillion in "risk parity" trades, which are short the market's volatility, began to unravel. (*Grant's Interest Rate Observer* published a great write-up on risk parity in its March 10, 2017 issue.) Trading volatility is so far from our investment philosophy. We look to create wealth for long-term investors by investing in companies with strong management teams and attractive valuations. The markets and the Funds ended the first quarter near flat.

Needham Funds underperformed the Russell 2000 and the S&P 500 in April, which were flat. The market's laundry list of worries at the end of April included the 10-year Treasury yield, which rose above 3% for the first time in 4 years, and trade wars and geopolitical risk with Russia, China, North Korea, and Iran. On the other hand, April brought the first meetings between U.S. Secretary of State Mike Pompeo and North Korean leader Kim Jong-un, which raised the prospect of a summit between the two countries. May delivered a strong market and outperformance by the Needham Funds, despite more talk of trade wars. The April employment report once again showed a decline in labor force participation, but it also showed just 3.9% unemployment. The economy and inflation seemed to be not too hot and not too cold. Earnings broadly, and for our portfolio companies, were better than feared.

The markets and the Funds were both positive in June. A strong jobs report was followed by the Federal Open Market Committee's raise of its target interest rates for the second time in 2018, to 1.75-2.00%. One or two additional rate hikes are expected in 2018. In June, President Trump had a summit with North Korean leader Kim Jong-un and reached broad outlines of a peace agreement—quite a shift from the fears of nuclear war that made headlines earlier in the year. By the end of June, global growth appeared to be robust, answering concerns of earlier in the year.

Our outlook for 2018 remains positive, with the possibilities of stronger economic growth and reward of value recognition in our small cap companies that lagged in 2017. We look forward to a year of patience rewarded.

Needham Growth Fund (NEEGX/NEEIX)

In the second quarter of 2018, the Needham Growth Fund Institutional class returned 4.68% and the Retail class returned 4.54%, compared with the S&P 500 Total Return Index, which returned 3.43%. For the half-year ended June 30, 2018, the Needham Growth Fund Institutional class returned 3.73% and the Retail class returned 3.50%.

The Fund's top contributor in the second quarter and the first half was KVH Industries, Inc. (KVHI), which returned 29.5% in the second quarter after being flat in the first quarter. On its second quarter conference call in May, KVH announced that Mini-VSAT maritime satellite terminal shipments increased 62% year over year. The recently launched AgilePlans and High Throughput Satellite (HTS) offerings were catalysts for this growth. KVH also announced strong fiber-optic gyroscope (FOG) sales and progress with the new low-cost FOG, which we believe could be in customer trials later this year. Fiber-optic gyroscopes are used for augmenting global-positioning satellite (GPS) location systems. We believe KVH FOGs are used on most autonomous vehicles. The low-cost FOG is positioned to address the much larger autonomous vehicle market of the future.

Super Micro Computer, Inc. (SMCI) was the second-leading contributor for the second quarter and returned 39.1%. Super Micro designs and manufacturers compute servers and storage systems using x86 microprocessors from Intel (INTC) and Advanced Micro Devices, Inc. (AMD). Super Micro's customers include Hewlett Packard Enterprise (HPE) Nimble Group, Nutanix, Inc. (NTNX), and NetApp Inc. (NTAP). These companies supply leading-edge, NAND memory-based storage systems and their businesses are robust. Super Micro should benefit along with these companies. In May, Super Micro provided revenue guidance for the second quarter with strength in AI machine learning, internet, data center, and cloud storage. The company is facing an August 24 deadline to complete its 10-K filing for its fiscal year end June 2017 with the SEC. If the filing is not completed, Super Micro faces delisting by the NASDAQ. Should Super Micro be delisted, it would then trade Over-The-Counter.

CarMax, Inc. (KMX) was the third-leading contributor for the quarter with a 13.6% return and the half year with 13.6% return. CarMax reported better comparable store sales than expected for the quarter ending May 30.

Amber Road, Inc. (AMBR) was another top contributor with a year-to-date return of 28.2%. AMBR provides cloud-based global trade management software, trade content and training that helps companies realize value in their global supply chains. In February, private company E2Open made an unsolicited and, as it turns out, unwanted offer to purchase Amber Road for $10.50 per share. E2Open sees Amber Road's trade management database as a value-added adjunct to its own trade management offerings, but the board of Amber Road declined E2Open's offer. We believe Amber Road will either accomplish its business plan in 2018 or E2Open or another acquirer will succeed. Either way, we see value in AMBR.

The leading detractor in the second quarter was the Fund's short position in Ubiquiti Networks, Inc. (UBNT), as the stock rebounded sharply. On February 20, the company announced that on February 13, "The Securities and Exchange Commission (the "SEC") issued subpoenas to Ubiquiti Networks, Inc. (the "Company") and certain of the Company's officers requesting documents and information relating to a range of topics, including metrics relating to the Ubiquiti Community, accounting practices, financial information, auditors, international trade practices, and relationships with distributors and various other third parties. The Company is in the process of responding to the requests and intends to cooperate fully with the SEC." The stock fell 21% that day. However, Ubiquiti's stock price then proceeded to rise, from $71.02 on March 30 to $84.72 on June 29. Ubiquiti continued to execute a $150 million stock buyback announced on February 6. On March 13, Ubiquiti announced a new $200 million stock repurchase plan. As of March 30, Ubiquiti had $467 million of debt from a syndicate led by Wells Fargo. On May 8, the Board approved CEO Robert Pera to pledge up to 28% of his shares to secure a loan. Mr. Pera used that loan to buyout his partners' ownership of the Memphis Grizzlies NBA basketball team. He owns 56.3 million shares worth $4.7 billion and is pledging up to 15.8 million shares worth $1.3 billion as of June 30. In my career, I have seen CEO margin loans gone bad.

Other detractors in the first half of 2018 included PDF Solutions Inc. (PDFS), ViaSat, Inc. (VSAT), FormFactor, Inc. (FORM), and Comcast Corp. Class A (CMCSA).

PDF Solutions, Inc. has continued to make progress on its new initiatives, but this progress has been masked by the outlook for PDF's Integrated Yield Ramp services. PDF announced that its Exensio Big Data Analytics platform now has over 130 customers across the semiconductor design, manufacturing, and test industries. The Design-for-Inspection (DFI) initiative has made progress in the first half of 2018. DFI is used by customers to detect electrical failures on semiconductors during the manufacturing process. We think that in the next quarter or two, PDF will renew its agreement with its lead customer, which we believe to be Taiwan Semiconductor Manufacturing Co., Ltd (TSM). Exensio and DFI address markets that might be much larger than PDF's current market. We own the stock in anticipation of PDF addressing these markets and growing to be a much larger company over the years ahead. Investments like PDF take patience.

ViaSat provides high-speed satellite broadband and secure networking systems to military and commercial markets. In February, the company reported a mixed quarter and launched the ViaSat 2 high-throughput satellite. In April, Eutelsat Communications S.A. (ETL Paris Euronext) announced that it was withdrawing from its partnership with ViaSat and ordering a satellite from Thales Group (HO Euronext Paris). We note that both Thales and Eutelsat are partially owned by the French Government. They have yet to build a high-throughput satellite and have no experience offering consumer/business broadband service to the masses. We believe ViaSat might find another, even more attractive partner.

In the first half, the Needham Growth Fund exited long-term holdings of CONMED Corp. (CNMD), Dick's Sporting Goods (DKS), Nutanix, and United Continental Holdings (UAL). Our reduced positions include Becton Dickinson & Co. (BDX), Medtronic Plc (MDT), Akamai Technologies, Inc. (AKAM), and Entegris (ENTG).

The Fund added new positions in Zuora, Inc. Class A (ZUO), Carbon Black, Inc. (CBLK), Pluralsight, Inc. (PS), and nLight, Inc. (LASR). All of these were IPOs and could provide starting positions toward long-term holdings.

As of June 30, 2018, the top 10 positions were 54.8% of net assets. Trailing 12-month turnover was just 7% and the Fund's Active Share[1] vs. the S&P 500 was 107.4%. Once again, the Fund looks nothing like the S&P 500 and its performance is not correlated. Short positions comprised 5.8% of total investments.

Needham Aggressive Growth Fund (NEAGX/NEAIX)

In the second quarter of 2018, the Needham Aggressive Growth Fund Institutional class returned 7.28% and the Retail class returned 7.12%. For the half-year ended June 30, 2018, the Needham Aggressive Growth Fund Institutional class returned 6.64% and the Retail class returned 6.33%.

Like the Needham Growth Fund, the leading contributor during the second quarter and the second-leading contributor for the first half was KVH Industries.

Vicor Corporation (VICR) was the second-leading contributor for the quarter and returned 52.5%. Year to date, Vicor has returned 108.4% and is the Fund's leading contributor. Vicor is a great example of a successful investment for the Fund. The company makes sophisticated modular power converters used in data centers, on servers and in transportation systems, including automobiles. Vicor announced strong results for its March quarter. We first bought the stock in 2014 at $7 per share. Vicor has continued investment in a new series of products over the last four years.

We increased our position in the first and second quarters of 2015, the first and second quarters of 2016, and the second quarter of 2017. Vicor's most important commercial advance to date was in the second quarter of 2016, when I wrote in our quarterly letter, "The Fund also added (to) Vicor Corporation. Vicor has worked with Alphabet Inc.'s Google (GOOGL)

[1] Active Share is a measure of the differentiation of the holdings of a portfolio from the holdings of its appropriate passive benchmark index. Active Share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the manager's portfolio versus the weight of each holding in the benchmark index and dividing by two.

on its Open Compute data centers to distribute DC (direct current) power throughout the data center rather than go through the inefficient conversions to AC (alternating current) and back again to DC." We believe Vicor's approach is now being adopted by a number of data center customers. In March 2018, Vicor and NVIDIA (NVDA) announced that they were working together. Many of today's computing needs require sophisticated power conversion and Vicor is uniquely positioned to meet these conversion needs.

The Fund's third-largest contributor for the quarter was Super Micro Computer, Inc. The third-largest contributor for the first half was Entegris, which remains the largest position in the Fund at 9.07% of net assets as of June 30, 2018. Entegris reported strong results in January and April. The company is benefiting from the advanced filtration requirements of the semiconductor industry.

For the year to date, the Fund's leading detractor was PDF Solutions, Inc. The second-leading detractor was the short position in Medallion Financial (MFIN). I continue to believe that Medallion Financial has overstated the value of its Medallion Bank subsidiary, its owned medallions, and its medallion loans. The third-leading detractor was FormFactor.

In the first half, we increased our investment in DIRTT Environmental Solutions Ltd. (DRT) from 100,000 to 207,500 shares. DIRTT supplies semi-custom manufactured office interiors, designed using its incredible ICE virtual reality computer-aided design system. Using DIRTT replaces on-site, sheet-rock construction and eliminates the associated waste. It also reduces the schedule variability of on-site construction. The construction industry has yet to benefit from the technology revolution. I believe DIRTT is a disruptor of the $50 billion interiors construction industry with an opportunity to grow much larger than its current $250 million of sales. I highly recommend the DIRTT website and the ICE virtual reality website to see what digital construction is all about.

Mogens Smed is the charismatic Co-Founder, Executive Chairman and visionary for DIRTT. Until the end of December 2017, he was also CEO. The Board of Directors decided that a change in leadership was necessary and Mogens' role was changed. He is still responsible for sales and continues to be the company's visionary leader. This ongoing leadership change has created what I see as an opportunity, since the stock was down 7.1% year-to-date as of June 30. I like the valuation and the company's long-term opportunity.

The Fund also added new positions in Zuora, Carbon Black, Pluralsight, nLight, and Alpha Pro Tech, Ltd. (APT).

The Fund exited its positions in Xcerra Corporation (XCRA) on its announced merger with Cohu, Inc. (COHU) and Corium International Inc. (CORI). We reduced positions in Akamai (AKAM), comScore, Inc. (SCOR), and Vicor on their strength. We trimmed positions in Entegris (ENTG), MKS Instruments, Inc. (MKSI), TradeDesk, Inc. (TDD), Nova Measuring Instruments, Ltd. (NVMI), Gilead Sciences, Inc. (GILD), and Becton Dickinson (BDX).

At June 30, 2018, the Fund's top 10 positions were 56.75% of net assets. The Fund had an Active Share of 112.6% versus the Russell 2000 and had trailing 12-month turnover of 7%.

Needham Small Cap Growth Fund (NESGX/NESIX)

The Needham Small Cap Growth Fund Institutional class returned 4.41% and the Retail class returned 4.25% in the quarter ended June 30, 2018. For the half-year ended June 30, 2018, the Needham Small Cap Growth Fund Institutional class returned 5.14% and the Retail class returned 4.85%.

While volatility may seem to be a bad word for the overall markets, it is a great chance for active managers to find buying opportunities. It is in these volatile markets when a cash position is truly strategic for small cap fund managers. Many small cap investment opportunities "trade by appointment," and we like to capitalize on these opportunities when liquidity is available to both buy and sell stock positions. The Fund continued its lean toward a concentrated portfolio of stocks, with the top 10 holdings representing 47.92% of net assets at June 30, 2018.

SuperMicro Computer, Inc. was the Fund's top contributor in the second quarter, as its fundamental operations continue to do well and spending persists in enterprise and data centers. While we wait for its financial filings, the quarterly operational updates the company provides remain upbeat and show the underlying strength in its end markets and partners. We look forward to the conclusion of Super Micro's financial reporting delays.

Another strong contributor and long-time holding in the Fund was KVH Industries, Inc. The stock recovered in the second quarter as business has improved and offshore energy markets have seen more activity. We expect KVH will continue to make progress in its longer-term investments targeting the autonomous driving industry. We took advantage of the stock price improvement and substantially reduced the Fund's exposure to KVH, to help reduce volatility in this thinly traded stock.

Our investment in newly public Zscaler, Inc. (ZS) is a not a large share position, but it was the Fund's third-largest contributor in the quarter. We added to the position after the IPO, as we have known the company for many years and understand the long-term fundamental strengths of the business. Providing security to networks globally will continue to remain a requirement of all participants in the interconnected digital age.

For the half year, Amber Road, Inc., Pure Storage, Inc. (PSTG) and Nutanix, Inc. were the top three contributors to the Fund. As mentioned in the commentary for Needham Growth Fund, Amber Road received a takeover offer of $10.50, but its board of directors decided the offer price was insufficient when compared to its long-term business plan. We will closely monitor the fundamental performance of the company over the next few quarters, as we expect management to significantly improve revenue growth and profitability.

Our investments in Pure Storage and Nutanix both benefited from the ever-evolving enterprise technology industry. Like many new technologies, it took some time for the adoption of their products, but they ultimately recognized an accelerated sales environment. The stocks performed very well and hit our valuation targets. We exited both positions by the end of the second quarter and will continue to monitor their stock performance and any correction that may occur.

While we were more defensive in our positioning versus the markets, we were negatively impacted by stock-specific news that caused the Fund to underperform. Agile Therapeutics (AGRX) continued to face challenges in its approval process and its product partner, Corium International, was also negatively impacted in sympathy. The Fund had substantially reduced its exposure to these companies; however, the negative news was significant. At this time, the Fund's holding in Agile remains an option on a favorable appeals ruling; otherwise the stock may be harvested as a tax loss.

Another major holding that negatively impacted the Fund was NeoPhotonics, Inc. (NPTN). NeoPhotonics is a supplier to the Chinese technology firm ZTE, which was banned from buying U.S. components; however, that penalty has since been resolved. While the ZTE ban was just a temporary cause of volatility to the stock, damage to near-term financials was done. We hope to see NeoPhotonics return to business as usual over the next few quarters.

Our exposure to the semiconductor capital equipment industry was also negatively impacted in the second quarter. However, we believe that we may be nearing a bottom in the cycle and have been deploying capital into stocks within the sector. We have substantial positions in Photronics, Inc. (PLAB) and Ultra Clean Holdings, Inc. (UCTT). Photronics continues to invest in its overseas operations and has been focused on its business within mainland China. We expect the company to start recognizing a return on its investments within the next year, as Chinese semiconductor companies begin operations and require products from Photronics.

We have initiated a small position in Ultra Clean Holdings, and we believe that it is a value investment, as its stock has corrected over the past twelve months. While hard to pick the bottom in the cycle, we believe Ultra Clean is well-positioned for the continued long-term growth semiconductor capital equipment companies have been enjoying.

We added a few new small positions to the Fund, including Advanced Energy Industries (AEIS), Coherent, Inc. (COHR), Hawaiian Holdings, Inc. (HA), nLight, Inc., Zscaler, Inc., and Zuora, Inc. We sold out of our remaining positions in Nutanix, Inc., Pure Storage, Inc., and Channel Advisor Corp. (ECOM). The Fund ended the quarter with a cash position of 12.9%, and we will remain patient as we deploy that capital.

We continue to believe that a good environment remains for investment in equities. Three themes we are focused on include: 1) continuation of the growth in the semiconductor capital equipment industry; 2) cyber-security; and 3) military and defense modernization. These three areas of investment that impact much of our portfolio, and we believe that they should create shareholder value in the long term.

We expect the increased volatility to continue throughout 2018. The Federal Reserve continues to raise short-term interest rates, but at a gradual pace. We expect more rate increases this year. The expectation of pro-growth policies has boosted confidence for both individuals and corporations, and this should ultimately translate into higher economic activity for many of our portfolio companies. The high-yield markets remain strong, which is supportive of the small cap asset class valuations. We reiterate from our last quarterly letter that mergers and acquisitions continued in the small cap universe, but have slowed since 2016. We believe this trend is a pause, and we expect to see increased M&A activity. We expect economic growth to improve and benefit our portfolio stocks in the second half of 2018.

<u>Closing</u>

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, the continued technology revolution 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 at cretzler@needhamco.com or jbarr@needhamco.com. For information about the funds, please visit our website at www.needhamfunds.com.

Sincerely,

Chris Retzler
Portfolio Manager

John O. Barr
Portfolio Manager

Needham Funds Fact Sheet Links

Average annualized total returns as of the most recent quarter end may be obtained by clicking on the hyperlinked Fund fact sheets below:

Needham Growth Fund
Needham Aggressive Growth Fund
Needham Small Cap 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 commentary is not an offer of the Needham Growth Fund, the Needham Aggressive Growth Fund and the Needham Small Cap Growth Fund. Shares are sold only through the currently effective prospectus, which must precede or accompany this report.

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

Investment returns and principal value will fluctuate, and when redeemed, shares may be worth more or less than their original cost. Past performance does not guarantee future results and 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.

Short sales present the risk that the price of the security sold short will increase in value between the time of the short sale and the time the Fund must purchase the security to return it to the lender. The Fund may not be able to close a short position at a favorable price or time and the loss of value on a short sale is potentially unlimited.

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 Funds' ownership as a percentage of net assets in the stated securities as of 6/30/18:

SECURITY	NEEGX	NEAGX	NESGX	SECURITY	NEEGX	NEAGX	NESGX
KVHI	6.58%	8.44%	3.01%	GOOGL	0.00%	0.00%	0.00%
SMCI	4.69%	3.56%	5.62%	NVDA	0.00%	0.00%	0.00%
INTC	0.00%	0.00%	0.00%	MFIN	-1.29%	-2.57%	0.00%
AMD	0.00%	0.00%	0.00%	DRTTF	0.00%	1.77%	0.00%
HPE	0.00%	0.00%	0.00%	APT	0.00%	0.12%	0.00%
NTNX	0.00%	0.00%	0.00%	XCRA	0.00%	0.00%	0.00%
NTAP	0.00%	0.00%	0.00%	COHU	0.00%	0.00%	0.00%
KMX	6.02%	2.55%	0.00%	CORI	0.57%	0.00%	1.49%
AMBR	4.00%	2.62%	7.87%	AKAM	2.52%	3.49%	0.00%
UBNT	-4.00%	-3.61%	0.00%	SCOR	1.04%	0.92%	1.75%
PDFS	4.43%	6.69%	4.00%	MKSI	2.26%	3.75%	0.00%
VSAT	4.96%	1.90%	1.02%	TDD	0.00%	0.00%	0.00%
FORM	4.33%	3.85%	0.41%	NVMI	1.50%	2.93%	0.00%
CMCSA	3.56%	0.00%	0.00%	GILD	5.85%	1.15%	0.00%
TSM	0.00%	0.00%	0.00%	BDX	5.09%	0.82%	0.00%
CNMD	0.00%	0.00%	0.00%	ZS	0.00%	0.00%	2.22%
DKS	0.00%	0.00%	0.00%	PSTG	0.00%	0.00%	0.00%
UAL	0.00%	0.00%	0.00%	AGRX	0.05%	0.01%	0.20%
BDX	5.09%	0.82%	0.00%	NPTN	0.00%	0.00%	3.76%
MDT	1.82%	0.00%	0.00%	PLAB	1.22%	1.33%	6.18%
AKAM	2.52%	3.49%	0.00%	UCTT	0.00%	0.00%	1.54%
ENTG	4.59%	9.07%	0.00%	AEIS	0.00%	0.00%	0.90%
ZUO	0.87%	0.89%	1.05%	COHR	0.00%	0.00%	1.70%
CBLK	0.03%	0.03%	0.03%	HA	0.00%	0.00%	1.11%
PS	0.14%	0.21%	0.23%	ECOM	0.00%	0.00%	0.00%
VICR	0.72%	4.17%	0.00%				