DEAR BARON DISCOVERY FUND SHAREHOLDER:

PERFORMANCE

What a difference a year makes! Whereas last year's first quarter was highly volatile as investors sought clarity on the economy and interest rates, 2017's first quarter looked downright benign in comparison. The CBOE Volatility Index (otherwise known as the "fear index"), a measure of the market's expectations for future volatility, hit levels we had not seen since before the financial crisis. In fact, during the quarter, the S&P 500 Index had its longest streak without a 1% down day going back to 1995. During this period of lower volatility, we also saw stock correlations fall, meaning that stocks moved less in tandem and more on their individual merits. For bottom-up, fundamental investors like us, we like the type of "stock picker's" market we are experiencing today. We believe our performance in the quarter illustrates this. And while we know stock market volatility will return at some point (and have positioned the portfolio accordingly), we remain optimistic that U.S. economic growth will continue its recent improvement as we move through the year.

Our portfolio of smaller, earlier stage companies performed well in the quarter with Baron Discovery Fund (the "Fund") increasing 11.70% (Institutional Shares), or 6.35% better than the Russell 2000 Growth Index. The largest contributor to our first quarter outperformance was our investment in the Health Care sector. This reversed the underperformance of Health Care stocks in the fourth quarter of 2016 and validated the incremental investments we made in the sector. We continue to favor investments in areas where we think there are long runways of secular growth (thus our heavier weightings to the Information Technology and Health Care sectors) despite the recent strong performance of more cyclical growth sectors, such as Financials and Industrials.

For the last twelve months, we are happy to report Baron Discovery is up 41.98% (18.95% better than the Russell 2000 Growth Index). This made Baron Discovery the #1 overall small-cap growth fund during that period.*

In our last letter, we mentioned 11 companies that we believed had specific catalysts that made us optimistic about our portfolio in 2017. We are happy to say that two of them, **Foundation Medicine, Inc.** and **Flexion Therapeutics Inc.**, were in our top five contributors for the first quarter. And despite the Fund's outperformance in the first quarter and last twelve months, we continue to be excited about the portfolio's growth prospects and can point to specific catalysts that we believe are still to come over the next three quarters of 2017.

RANDY GWIRTZMAN AND LAIRD BIEGER

PORTFOLIO MANAGERS

Retail Shares: BDFFX
Institutional Shares: BDFIX
R6 Shares: BDFUX

Table I.
Performance†
Annualized for periods ended March 31, 2017

	Baron Discovery Fund Retail Shares[1,2]	Baron Discovery Fund Institutional Shares[1,2]	Russell 2000 Growth Index[1]	S&P 500 Index[1]
Three Months[3]	11.65%	11.70%	5.35%	6.07%
One Year	41.56%	41.98%	23.03%	17.17%
Three Years	6.38%	6.63%	6.72%	10.37%
Since Inception (September 30, 2013) (Annualized)	12.93%	13.20%	8.28%	12.55%
Since Inception (September 30, 2013) (Cumulative)[3]	53.03%	54.33%	32.11%	51.26%

Performance listed in the above table is net of annual operating expenses. Annual expense ratio for the Retail Shares and Institutional Shares as of September 30, 2016 was 1.88% and 1.49%, but the net annual expense ratio was 1.35% and 1.10% (net of the Adviser's fee waivers which the Adviser has contractually agreed to for so long as it serves as the adviser to the fund), respectively. *The performance data quoted represents past performance. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate; an investor's shares, when redeemed, may be worth more or less than their original cost. The Adviser has reimbursed certain Fund expenses (by contract as long as BAMCO, Inc. is the adviser to the Fund) and the Fund's transfer agency expenses may be reduced by expense offsets from an unaffiliated transfer agent, without which performance would have been lower. Current performance may be lower or higher than the performance data quoted. For performance information current to the most recent month end, visit www.BaronFunds.com or call 1-800-99BARON.*

† The Fund's historical performance was impacted by gains from IPOs and/or secondary offerings. There is no guarantee that these results can be repeated or that the Fund's level of participation in IPOs and secondary offerings will be the same in the future.

1 The indexes are unmanaged. The Russell 2000® Growth Index measures the performance of small-sized U.S. companies that are classified as growth and the S&P 500 Index of 500 widely held large cap U.S. companies. The indexes and the Fund are with dividends, which positively impact the performance results. Russell Investment Group is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell is a trademark of Russell Investment Group.

2 The performance data in the table does not reflect the deduction of taxes that a shareholder would pay on Fund distributions or redemption of Fund shares.

3 Not annualized.

* The Institutional Share Class was ranked #1 by Morningstar out of 670 funds (share classes) in the Morningstar US Fund Small Growth Category, for the 1-year period ended March 31, 2017, and #4 by Morningstar out of 576 funds (share classes) in the Morningstar US Fund Small Growth Category, for the Since Inception (9/30/2013) period ended March 31, 2017. Morningstar rankings are based on total returns for the 1-year and Since Inception periods ended 3/31/2017. The **Morningstar US Fund Small Growth Category Average** is not weighted and represents the straight average of annualized returns of each of the funds in the Small Growth Category. Morningstar rankings are based on total returns and do not include sales charges. Total returns do account for management, administrative, and 12b-1 fees and other costs automatically deducted from fund assets. As of March 31, 2017, the Category consisted of 670 and 576 funds (share classes) for the 1-year and Since Inception periods. The number of funds in the Category may vary depending on the date that Baron made the calculation. **Baron Discovery Fund Institutional** Share Class ranked in the 1st and 1st percentiles, respectively.

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Table II.
Top contributors to performance for the quarter ended March 31, 2017

	Percent Impact
Foundation Medicine, Inc.	1.44%
Mercury Systems, Inc.	1.06
Flexion Therapeutics Inc.	0.81
Glaukos Corporation	0.81
Ichor Holdings, Ltd.	0.80

Foundation Medicine, Inc. is a high-end genomic cancer testing and database company. As we have noted in some of our prior quarterly letters, Foundation focuses on the most highly complex tests for the most challenging cancer cases. Its testing database now has over 100,000 patient entries and is supplemented by "outcomes" data (medical treatments used and the results thereof) for 20,000 of these patients. The database is used by oncologists who are treating patients, as well as by over 30 pharmaceutical companies that use the data to target cancer drug research. There is no other non-hereditary cancer diagnostics company that has this volume of high quality data, and no other company has Foundation's breadth of clinical validation. And the more tests that are run, the more Foundation expands its lead in a "network effect" manner. Since Roche, Inc. purchased a majority interest in Foundation in January of 2015 for $50 per share, delays in payer reimbursement have caused guidance reductions, and share value dropped significantly to under $20 per share. Now there is a major catalyst, and as a result shares have rallied significantly in 2017; they now trade over $30 per share. The company has submitted its Foundation One solid tumor test for FDA approval, which would sanction its use as a companion diagnostic for FDA approved drugs covering over 40% of the metastatic cancer population in the U.S. At the same time, CMS (the agency that oversees Medicare and Medicaid reimbursement) is evaluating approving Foundation's test for reimbursement. This is significant, as about one-third of the company's testing volume is from Medicare patients, and is not currently being reimbursed. We expect FDA/CMS approval to be obtained in the second half of 2017.

Mercury Systems, Inc. is a provider of complex electronic subsystems to major defense contractors. During the first quarter, shares performed well as Mercury continued to win contract awards. It also completed a successful secondary offering, which raised over $200 million, providing funding for accretive future acquisitions. We believe defense spending and outsourcing will continue to grow under the Trump administration, and there is still a multi-billion dollar outsourcing opportunity for Mercury to chase.

Flexion Therapeutics Inc. has developed an extended release steroid drug called Zilretta that is injected into patients' knees to relieve osteoarthritic pain. The drug is expected to be approved by the FDA in October 2017. Zilretta has a large addressable market of $5 billion in knees, and the drug saves costs to the health care system by lessening the frequency of physician visits and, potentially, knee replacement surgeries. Patients also benefit from significantly less pain. The company's shares gained in the quarter as investors gained confidence that the FDA will approve the drug, and reports of a potential takeout by a major pharmaceutical company came to light. Despite the run-up in the shares in the first quarter, we still believe that the company is undervalued, and we are eagerly awaiting approval of Zilretta later this year.

Glaukos Corporation is a medical device company commercializing a stent implant, branded the iStent, as a treatment to relieve eye pressure in glaucoma patients. Currently, the device is approved for the treatment of glaucoma in patients who are also receiving cataract surgery (approximately 600,000 to 800,000 patients per year in the U.S.). Longer term, the company will have a product that not only injects two stents (versus the one stent currently), but a product that can be used to treat glaucoma only patients, which is a 3.5 million U.S. patient population that will dramatically expand the potential revenue base for the company. And the company will continue to expand its international opportunities, which are currently under 10% of total sales. Glaukos' shares gained in the first quarter as the company beat consensus revenue estimates for the fourth quarter of 2016, with quarterly revenues surging 60% year-over-year and full year revenues up 64%. Concomitantly, the company guided to roughly 40% revenue growth for 2017, which the Street viewed favorably. We think the company can grow even faster, given volume momentum, favorable 2017 reimbursement dynamics, and a misstep by a key competitor.

Ichor Holdings, Ltd. is a leading manufacturer of gas and liquid delivery sub-systems used for the "etch and deposition" processes in semiconductor manufacturing. We originally purchased our investment in a December 2016 IPO, which at $9 per share was priced far below its original offering range of $12 to $14 per share. We believe this was due to its smaller market cap size (just over $200 million at the IPO), and a general investor concern regarding small companies in the semiconductor capital equipment space. After we met management (which is terrific in our opinion) and did our due diligence, our long history of experience in the sector convinced us that this could be a terrific growth story. We were able to purchase Ichor at what we believed to be a big discount (just six times our cash flow estimates for this year and four times for next year's). Ichor was up in the first quarter, driven by accelerating revenues as well as multiple expansion (as investors realized the IPO was priced at too steep of a discount). Ichor's growth was propelled by multi-patterning (a multi-stage semiconductor manufacturing process), the transition to 3D NAND (a three-dimensional memory format) and FinFet (a more complex logic chip format), all of which increased etch and deposition intensity. These processes are required as transistors continue to shrink in size and become more complex to build. Moreover, Ichor was able to gain market share as its customers outsourced higher proportions of their tool manufacturing. We believe Ichor has the potential to continue outgrowing the semiconductor industry for a long time.

Table III.
Top detractors from performance for the quarter ended March 31, 2017

	Percent Impact
Jones Energy, Inc.	–0.61%
The KEYW Holding Corporation	–0.33
Barfresh Food Group, Inc.	–0.27
Medpace Holdings, Inc.	–0.21
Impinj, Inc.	–0.21

Jones Energy, Inc. is an independent exploration and production company operating in the Anadarko Basin in Oklahoma. Shares fell in the quarter due to announcement of a much higher than expected 2017 capital budget and concerns over falling oil prices in the quarter. We continue to like Jones due to company's exposure to the emerging Southern STACK region (also known as the Merge), where several offset operators had strong well results and Jones is testing its first operated wells. We still believe there is a high probability of success in the Merge and, if we are correct, we believe Jones could triple its economic inventory and improve its production growth metrics from high single digits to over 20% per year.

The KEYW Holding Corporation provides products and services to the U.S. intelligence community. In 2016 the company's new CEO executed on his plan to sell an underperforming software subsidiary and to dramatically boost KEYW's revenue pipeline to drive long- term growth. While he has had excellent success in these areas, shares declined in the first quarter as revenue and cash flow for the quarter missed consensus expectations. However, this was partly due to timing, and we are encouraged by the company's current pipeline and contract win rates and volumes, which we believe will lead to accelerating organic growth in the near future. Importantly, the company announced the accretive acquisition of Sotera Defense Solutions, Inc. at the end of 2016, which it completed in early April 2017. The company believes it will increase estimated 2017 revenues from $316 million to $535 million, and will drive cash flow growth from about $36 million to $55 million. Sotera gives KEYW significantly increased scale and it also provides KEYW with new intelligence customers including the FBI and Department of Homeland Security. We remain confident in the medium- to long-term prospects for the business.

Barfresh Food Group, Inc., a manufacturer and distributor of ready-to-blend beverages, was a detractor in the quarter. While the company has continued to make progress executing its business plan, the pace at which the company has signed large national customers has disappointed investors. We continue to believe the company has a compelling offering for restaurants and that it will be able to continue to grow revenues as we move through the year.

Medpace Holdings, Inc. is a full service contract research organization providing outsourced drug development services targeting smaller- and mid-sized biopharma companies. Its shares dropped on unexpectedly weak fourth quarter bookings and 2017 guidance calling for in-line earnings on lower than consensus revenue growth. At the midpoint of guidance, revenue and cash flow growth are projected to be 7% and 10%, respectively, versus the 12 to 14% range for both that management targeted at the time of its August 2016 IPO. This growth reduction was primarily driven by delays in contract bid conversions. We believe that this conversion slowdown will prove transitory, that contract proposal flow and win rates will remain unchanged, and that the current valuation is very reasonable.

Impinj, Inc. is a provider of radio frequency identification ("RFID") solutions to the retail, travel and health care verticals. The company's stock fell in the quarter when the company issued 2017 RFID chip sales guidance that disappointed investors. We continue to believe the company's prospects are bright given that it is early in the penetration of its targeted verticals. As we move through the year, we also think this initial chip sales guidance will prove conservative. We added to this position in the quarter (see Table V).

Portfolio Structure

Our key sector weightings at the end of March 2017 were 31.3% Information Technology (6.3% above the Russell 2000 Growth Index), 26.0% Health Care (4.2% above the Index), 15.8% Consumer Discretionary (1.0% above the Index), and 12.7% Industrials (3.2% below the Index).

We continue to be overweight Health Care and Information Technology and would expect that to continue for the foreseeable future. We increased our exposure to Consumer Discretionary during the quarter as valuations became more compelling.

Our top 10 holdings at March 31, 2017 represented 30.0% of the portfolio. This is in line with what we have held historically.

Table IV.
Top 10 holdings as of March 31, 2017

	Year Acquired	Quarter End Investment Value (millions)	Percent of Net Assets
Qualys, Inc.	2013	$4.6	3.9%
Mercury Systems, Inc.	2015	4.6	3.8
MACOM Technology Solutions Holdings, Inc.	2015	4.5	3.7
Red Rock Resorts, Inc.	2016	3.7	3.1
Wingstop Inc.	2015	3.3	2.8
The Trade Desk	2016	3.3	2.7
Liberty Expedia Holdings, Inc.	2016	3.3	2.7
Impinj, Inc.	2016	3.0	2.5
Varonis Systems, Inc.	2014	2.9	2.4
Flexion Therapeutics Inc.	2016	2.8	2.4

Recent Activity

Table V.
Top net purchases for the quarter ended March 31, 2017

	Year Acquired	Quarter End Market Cap (billions)	Amount Purchased (millions)
Red Rock Resorts, Inc.	2016	$2.6	$2.5
Impinj, Inc.	2016	0.6	1.9
Teladoc, Inc.	2017	1.4	1.7
Wingstop Inc.	2015	0.8	1.4
Qualys, Inc.	2013	1.4	1.4

We increased our position in **Red Rock Resorts, Inc**., an operator of casinos that cater to local Las Vegas residents. The company traded lower after it reported fourth quarter earnings due to what we believe is a short-term impact to profits from renovations at two of its properties. While this construction disruption will negatively impact 2017's reported results, we believe these extensive property upgrades will benefit profitability in 2018 and beyond. We also think the company can continue to show nice organic growth at its remaining 20 properties as the Las Vegas economy continues to improve.

We recently initiated a position in **Teladoc, Inc**., the U.S.'s first and largest telehealth company providing on-demand remote medical care using telephones or videoconferencing. We believe the lower cost, greater convenience and broader access afforded by telemedicine is a powerful secular growth story, as a rapidly growing number of insurers and large employers are incorporating telehealth into their benefit packages. With penetration of the $30 billion addressable telehealth market at only ~1%, we believe Teladoc will be able to build on its highly scalable technology platform as well as its commanding 75% market share, driving 30% or greater revenue growth for at least the next several years. In addition to adding new customers, growth will come through higher utilization (currently about 5% company-wide, but at levels as high as 30% to 50% at its most mature customers), additional specialized services such as dermatology and behavioral health, and a mix shift to more contracts priced on a per member per month basis.

We added to our position in **Wingstop Inc.,** a franchisor of chicken wing focused restaurants. The company's stock traded lower following the release of its 2017 sales guidance, which came in below expectations. We still believe that the company has a long runway of growth with approximately 1,000 stores today, an opportunity for 2,500 stores domestically, and additional stores in international markets. We also expect the company's new national advertising campaign to help drive sales higher as we progress through the year.

We increased our investment in **Qualys, Inc.** when shares experienced a short-term sell off after earnings were announced. We think some investors grew overly concerned about a slight delay in revenue acceleration from new products and a modest deceleration in the company's base cybersecurity business (vulnerability management, which automates the process by which companies can confirm that application and system software updates are completed on all network connected devices). We believe that we will see an acceleration in revenues starting in late 2017 or early 2018, and the company trades at reasonable multiples of free cash flow.

Table VI.
Top net sales for the quarter ended March 31, 2017

	Year Acquired	Market Cap When Acquired (billions)	Market Cap When Sold (billions)	Amount Sold (millions)
Education Realty Trust, Inc.	2015	$1.7	$2.9	$1.4
MGP Ingredients, Inc.	2016	0.8	0.7	0.8
Mellanox Technologies Ltd.	2016	1.8	2.3	0.7
Neos Therapeutics, Inc.	2015	0.2	0.1	0.6
Benefitfocus, Inc.	2014	0.8	0.8	0.6

We sold **Education Realty Trust, Inc.** as we felt the valuation was full in the context of the current interest rate environment. We sold **MGP Ingredients, Inc.** when our research determined that future supply growth could impact the pricing of some of MGP's products. We sold **Mellanox Technologies Ltd.** after concluding that business results were too difficult to predict. We sold our investment in **Neos Therapeutics, Inc.,** a pharmaceutical company developing drugs to treat attention deficit hyperactivity disorder (ADHD), after we grew concerned that the level of rebates needed on an ongoing basis, would be materially higher than we had initially modelled, weighing on our view of long-term revenues and cash flow. Finally, we liquidated our small position in **Benefitfocus, Inc.** as we felt that we had other, more compelling investment ideas in the software space.

OUTLOOK

Thank you for your support! We hope that this letter gives you a sense of why we remain excited by our portfolio companies' prospects.

Randy Gwirtzman & Laird Bieger
Portfolio Managers
April 20, 2017

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The Adviser believes that there is more potential for capital appreciation in smaller companies, but there also may be more risk. Specific risks associated with investing in smaller companies include that the securities may be thinly traded and they may be more difficult to sell during market downturns. The Fund may not achieve its objectives. Portfolio holdings are subject to change. Current and future portfolio holdings are subject to risk.

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