Dear Baron Discovery Fund Shareholder:

Performance

September 30, 2017 marked the fourth anniversary of Baron Discovery Fund (the "Fund"). As we reflect back on the last four years, we are proud of our accomplishments, including outperforming our benchmark, the Russell 2000 Growth Index, by a cumulative 35.07% (Institutional Shares), increasing our asset base to around $250 million and obtaining a Lipper ranking since inception at the top 1% of all U.S.- based small-cap growth funds.* We have reached these milestones because we have stayed true to our core principles. These include seeking what we believe are high-growth companies with terrific managers and durable competitive advantages and analyzing these investments over a longer time horizon. We believe taking a longer-term view gives us an advantage over most market participants who are only focused on the short term.

RANDY GWIRTZMAN AND LAIRD BIEGER
PORTFOLIO MANAGERS

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

Table I.
Performance†
Annualized for periods ended September 30, 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]	5.28%	5.41%	6.22%	4.48%
Nine Months[3]	31.14%	31.41%	16.81%	14.24%
One Year	31.04%	31.41%	20.98%	18.61%
Three Years	15.45%	15.74%	12.17%	10.81%
(September 30, 2013) (Annualized)	15.79%	16.08%	10.01%	12.98%
Since Inception (September 30, 2013) (Cumulative)[3]	79.74%	81.56%	46.49%	62.92%

Over the last four years, we have been fortunate to meet with many of our investors (please say hello if you are attending the 2017 Baron Investment Conference!). During those meetings, we frequently get asked what we think makes the Baron Discovery Fund different from other high-growth, small-cap funds. Our uniqueness is found in the amalgamation of pure fundamental research, the ability to recognize potential at an early stage, a long-term investment horizon and a differentiated, but repeatable, research process. In addition to all of this is a multi-dimensional risk management strategy that is intended to balance different portfolio characteristics.

Our Process

As we have highlighted in previous letters, our process requires that we perform deep fundamental research on every company in which we invest. We focus on a company's management first, but we also spend significant time understanding its strategy, market opportunities, and competitive environment. This intensive due diligence is especially important in our smaller-cap companies as these companies are not closely followed and are not well understood. It's a lot of work, but it creates the opportunity for us to "discover" these exciting growth businesses before the rest of Wall Street catches on. As we like to say, "You have never heard of our portfolio companies, but you will."

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 **Lipper Small-Cap Growth Fund Category Average** is not weighted and represents the straight average of annualized returns of each of the funds in the category. The Fund has been included in the category since inception. As of September 30, 2017, the category consisted of 551 and 471 funds (share classes) for the 1-year and since inception (12/31/2013) periods. Lipper ranked **Baron Discovery Fund Institutional** Share Class in the 10th and 1st percentiles, respectively, in the category.

Source: Lipper Analytical Services, Inc.

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Risk Management

Because we do not hedge, and we are mandated to be nearly fully invested, our risk management is based upon our investment process and our portfolio structure. Our portfolio looks different from many of our small-capitalization, high-growth peers. Importantly, we balance our growth oriented investments with what we call "ballast" stocks which tend to have lower betas (correlation to market volatility) and less volatile revenue and cash flow characteristics than the higher-growth investments in the portfolio. We also keep reasonable position sizes, particularly in earlier stage companies. Finally, we are guided by our long-term analyses of each company in which we invest, so we do not attempt to time the market or the favorability of any particular industry. Our portfolio beta has been at about 1.0X over time (in other words, comparable to the benchmark index), which reflects the mix and balance of our portfolio investments. We believe this comparatively low beta is a big differentiator for us from other funds, and is reflected in our four-year return record. And, it is indicative of how our excess returns are gained through stock picking rather than market movements.

Quarter Ended September 30, 2017

For the quarter ended September 30, 2017, the Fund increased 5.41% (Institutional Shares). This was 0.81% less than the Fund's primary benchmark, the Russell 2000 Growth Index. During the quarter, the Fund outperformed relative to its benchmark in the Information Technology ("IT") and Real Estate sectors, overshadowed by underperformance in Consumer Discretionary, Industrials, and Materials. For the trailing nine months, the Fund was up 31.41%, which was greater than its benchmark by 14.60%. Overall, we remain pleased with how the year has progressed and we still believe we have multiple stock catalysts remaining.

Table II.
Performance Based Characteristics as of September 30, 2017

	Time Interval	
Institutional Shares	Three Years	Inception 9/30/2013 to 9/30/2017
Upside Capture (%)	101.70%	112.21%
Downside Capture (%)	82.22	86.61

We are pleased with our upside and downside capture for the three-year and since inception periods. We continue to have about three quarters of the portfolio in high-growth and growth names with the remaining in cash and "ballast" investments.

Table III.
Top contributors to performance for the quarter ended September 30, 2017

	Percent Impact
Sientra, Inc.	1.28%
Myriad Genetics, Inc.	1.03
Qualys, Inc.	0.90
Novanta Inc.	0.63
Ichor Holdings, Ltd.	0.59

Sientra, Inc. is a medical device company that is focused on the aesthetics and reconstruction markets. It is one of only three companies that have FDA certification to sell silicone breast implants in the U.S. More recently, it has broadened its product set through a number of strategic acquisitions. We invested in Sientra in 2016 as a special situation following a significant drop in its share price. After a manufacturing issue temporarily halted its ability to manufacture breast implants at the end of 2015, Sientra brought in Jeff Nugent, a new, highly qualified CEO to stabilize operations. Mr. Nugent has executed well, and the company expects to resume manufacturing operations at the end of 2017. In addition, Sientra has added some exciting assets including a device called MiraDry, which is an FDA device that effectively treats sweat, hair and odor in the underarm area. Shares rallied in the quarter as investors realized that the company is highly likely to succeed in its strategy, and sell side analysts began to upgrade the stock. This is precisely the type of situation that suits our investment style, and we are excited to watch Mr. Nugent's strategic plan as it unfolds over the next couple of years.

Myriad Genetics, Inc. is a "fallen angel" investment we initiated in the third quarter of 2016. Myriad has a stable of what we view as best-in-class proprietary health care diagnostic panels. As we outlined in our letter from the third quarter of 2016, we continue to believe that Myriad's base Hereditary Cancer Testing ("HCT") business, which tests for inherited risk of severe cancers is in better shape than many investors believed. Myriad has a stable of additional tests, including an anti-depression drug compatibility test it acquired in 2016 called GeneSight, which we think should provide solid growth for years to come. Shares rose substantially in the third quarter of 2017 as Myriad stabilized its base HCT business (via new contract signings and meaningful improvements to the test) and saw good growth and progress in reimbursement for its other diagnostic tests. The company has a terrific balance sheet with $100 million in net cash, and generates substantial (and growing) free cash flow. We believe there will be significant growth from here, and continue to be excited about our investment in the company.

Qualys, Inc. provides cloud-based software for vulnerability management, policy compliance and other security related products. The company outperformed after reporting increasing traction with its new product lines, leading to larger deals and additional penetration into existing accounts. These new products use clever "agent" technology to provide dynamic updating of information about devices connected to a company's network. This information has allowed Qualys to extend its traditional functionality to new uses such as intrusion prevention and file integrity monitoring. In addition, regulation and recent cyberattacks (like those on the SEC and Equifax) have increased expectations that customers will adopt the company's solutions, thereby accelerating revenue and cash flow growth. Qualys continues to generate high margins even while investing in growth, suggesting an even higher profitability as the business matures, and we continue to like our investment prospects from here.

Novanta Inc. sells highly-engineered photonics, vision and precision motion control solutions to original equipment manufacturers in medical and advanced industrial markets. These products are used in medical robots, precision cutting lasers, and devices to precisely measure the anatomy of a patient's eyes. We particularly like the medical end markets, which are growing as a proportion of the total business, and which are "sticky" since Novanta's products are generally incorporated into FDA approved devices. It is expensive and time consuming to swap parts in such devices as the FDA would have to approve such changes. The stock outperformed after the company reported better-than-expected second quarter financial results and financial guidance. We retain conviction in the thesis because we believe management is in the early stages of building a much bigger business with a higher percentage of sales in more stable and attractive medical markets through a combination of organic growth and acquisitions.

Ichor Holdings, Ltd. is a supplier of critical gas and chemical delivery subsystems to semiconductor equipment manufacturers. Ichor's subsystems are incorporated into etch and deposition tools, which accomplish critical steps in the semiconductor manufacturing process. Ichor's stock was up in the quarter as it continued to benefit from increasing complexity in chip manufacturing, which is helping its key customers with significant equipment order flow. An example of this is the increased penetration of 3D NAND memory, which requires more etch and deposition steps to manufacture versus its predecessor. Ichor continues to drive market penetration in its key markets, and is also acquiring key competitors, often at the request of its customers who desire to solidify the reliability of their supply chains. We believe that the current semiconductor cycle will be longer than many expect, and that Ichor can still drive significant growth from here.

Table IV.
Top detractors from performance for the quarter ended September 30, 2017

	Percent Impact
MACOM Technology Solutions Holdings, Inc.	–0.96%
Gemphire Therapeutics Inc.	–0.58
The KEYW Holding Corporation	–0.45
Glaukos Corporation	–0.42
Flotek Industries, Inc.	–0.37

MACOM Technology Solutions Holdings, Inc. designs and manufactures analog semiconductors used for industrial, military, and communications end markets. Shares were down in the quarter after the company took down guidance for the December quarter. This was due to weakness in certain optical networking markets related to Chinese telecommunications. While this was disappointing, we believe that the company has been conservative in its guidance, nearly zeroing out all revenue contribution from this product line. Meanwhile, MACOM is continuing to execute on markets that we believe will be much larger revenue contributors in the future, including optical networking inside the data center (which relies on more proprietary components than the telecommunications related markets), radar technology (including upgrades to F-16 fighters and civilian weather and air traffic control systems) and cellular base station power amplifiers. These latter products address market opportunities that could each be over $1 billion in potential value, and for which MACOM has proprietary, patented components. We remain confident in our investment thesis in MACOM and expect to see tremendous growth in new product revenue in 2018.

Gemphire Thereapeutics Inc., a developer of drugs to lower cholesterol, triglicerides and inflammation markers related to cardiovascular disease, underperformed after we initiated a position in late July. In August, Gemphire released a data read out for a clinical trial of its hypercholesterolemia drug called gemcabene. The trial read out positively, but suffered from both placebo arm outperformance (making the drug's effect look less potent than expected) and the inclusion of sicker patients than the appropriate competitive comparator trial (Esperion Therapeutics), which again made gemcabene look comparatively less effective). Upon deeper analysis of the data that has since been buttressed by an additional company disclosure, we believe the trial results were more positive than other investors' assessments and expect future read outs, particularly the INDIGO trial (showing the effect of gemcabene in lowering triglyceride levels), to help catapult share appreciation. We added to our investment at these lower levels.

The KEYW Holding Corporation provides products and services to the U.S. intelligence community. It focuses on critical needs including cybersecurity, aerial imagery and unique products for the military. Since taking over in 2016, CEO Bill Weber has been driving a strategic plan to overhaul KEYW's business development group. We believe that this strategy is showing success, as KEYW has built a $1.2 billion backlog, with an additional $3 billion in bids pending submission or awaiting evaluation. Shares were down in the quarter after KEYW announced the departure of the leader of that business development unit. While such management changes can have negative implications, we don't believe that this will be the case here. In this situation, the company and the prior development leader agreed to part ways, to allow a new manager from Sotera Defense Solutions (an acquisition completed in early April 2017) to take over. Sotera had a more mature team, and its product set gives KEYW significantly increased scale with new intelligence customers including at the FBI and DHS. We believe that Mr. Weber's strategy is sound, and we were buyers of the stock on weakness.

Glaukos Corporation is a medical device company that has pioneered minimally invasive glaucoma surgery. Its quick procedure implants a stent, the "iStent," into the eye's clogged outflow drain to reduce pressure inside the eye and slow glaucoma progression. In the quarter, Glaukos ran into execution issues as a significant Medicare price increase (which must be applied universally to all customers) caused commercial insurance volume deceleration (due to difficulty in obtaining reimbursement for the higher prices) and therefore underperformance versus expectations by the company. Glaukos is currently only FDA approved for a subset of the market (where a patient is undergoing simultaneous cataract surgery in the eye). Because this is only about 20% of the total market for glaucoma patients, we believe that an ultimate indication for a standalone glaucoma procedure (being worked on by the company) could open up a much larger potential market. In addition, Glaukos is working on implantable devices that can deliver well-characterized and effective glaucoma drugs right into the eye, which could open up even more market opportunity.

Flotek Industries, Inc. is a supplier of chemical additives to the global oil & gas industry with some other ancillary oilfield service operations. The company has a proprietary product dubbed the complex nano-fluid ("CnF") that is proving to be extremely effective at increasing oil & gas shale well productivity. The company's shares fell sharply in the third quarter on lower-than-expected domestic CnF sales, and after one of the company's main customers on its earnings call identified surfactants as one of the potential areas for cost savings. The shares were also impacted by the hurricane-related disruptions to the supply chain in the third quarter. We believe these are transitory factors and that the shares are significantly undervalued on a comparable company and sum-of-the-parts basis. Furthermore, we expect sales of its CnF and other oilfield chemistries to resume a differentiated growth path in the fourth quarter and in 2018.

Portfolio Structure

Our key sector weightings at the end of September 2017 were 36.9% IT, 23.4% Health Care, 13.7% Consumer Discretionary, and 11.7% Industrials.

At September 30, 2017, our top 10 holdings represented 30.2% of the portfolio. We have typically held about 30% of the Fund's value in the top 10 holdings since inception.

Table V.
Top 10 holdings as of September 30, 2017

	Year Acquired	Quarter End Investment Value (millions)	Percent of Net Assets
Qualys, Inc.	2013	$8.9	3.6%
MACOM Technology Solutions Holdings, Inc.	2015	8.3	3.3
Novanta Inc.	2017	8.1	3.3
Myriad Genetics, Inc.	2016	7.8	3.1
Sientra, Inc.	2016	7.7	3.1
General Communication, Inc.	2017	7.5	3.0
Teladoc, Inc.	2017	6.8	2.8
The Trade Desk	2016	6.8	2.7
Alexander & Baldwin, Inc.	2017	6.7	2.7
Mercury Systems, Inc.	2015	6.5	2.6

Recent Activity

Table VI.
Top net purchases for the quarter ended September 30, 2017

	Year Acquired	Quarter End Market Cap (billions)	Amount Purchased (millions)
Alexander & Baldwin, Inc.	2017	$2.3	$6.2
Dominion Energy Midstream Partners, LP	2016	3.2	3.7
Gemphire Therapeutics Inc.	2017	0.1	3.3
AxoGen, Inc.	2017	0.6	3.2
PDF Solutions, Inc.	2017	0.5	3.2

We initiated a position in **Alexander & Baldwin, Inc.**, a leading owner and developer of Hawaiian real estate assets. The company recently announced that it will be converting from a C-corporation to a real estate investment trust (REIT). We applaud this decision as we believe that making the corporate structure more tax efficient, while at the same time simplifying it, will allow investors to better understand and value the company's various assets. Specifically, the company's income producing assets trade at a discount to peer companies, and it is our view that this discount will narrow when it converts to a REIT structure.

We added to our position in **Dominion Energy Midstream Partners, LP** during the quarter. The company's shares had been underperforming for what we believe were technical as opposed to fundamental reasons. We believe fundamentals remain solid and there is significant visibility into the longer-term asset "drop down" opportunity from Dominion Midstream's parent, Dominion Energy Inc. We conclude that this "drop down" pipeline supports management's 22% distribution growth guidance.

We initiated a position in **AxoGen, Inc.**, a medical device company that makes an off-the-shelf processed human nerve allograft (a nerve taken from a cadaver) for bridging severed nerves. The company's principle product, Avance, is as effective as autografts (nerves taken from another part of the same patient's body) but avoids the comorbidities associated with a second surgical site, and saves procedure time and costs. We think Avance is in the early stages of adoption and has a long runway for growth with expanding applications and patents and regulatory barriers against competition. Axogen has several other products in the portfolio, which we believe can also add to growth.

PDF Solutions, Inc. serves the semiconductor manufacturing industry. It is the leading provider of yield improvement technologies and services for end customers in this space. We invested in PDF Solutions anticipating a big opportunity for its new product, Design-For-Inspection ("DFI"), as well as optionality from growth in the Chinese semiconductor industry. DFI includes billions of proprietary electrical pads designed by PDF Solutions that are connected to the 3D structures inside chips. PDF Solutions allows its customers to rapidly scan these pads for defect inspection, and it is the only party that has the map of where all of the pads are located (creating a wide technology moat). As chips get smaller and become three dimensional, DFI solves the limitations of existing technology as DFI is able to 'see' underneath the top layer, and it also allows scanning speeds that are multiples faster than the E-beam-based technologies currently used.

Table VII.
Top net sales for the quarter ended September 30, 2017

	Year Acquired	Market Cap When Acquired (billions)	Market Cap When Sold (billions)	Amount Sold (millions)
The Spectranetics Corporation	2013	$0.7	$1.7	$4.1
Pacira Pharmaceuticals, Inc.	2015	2.3	1.5	2.7
MSG Networks Inc.	2017	1.6	1.6	2.7
Ambarella, Inc.	2017	1.9	1.8	1.7
Domino's Pizza Group plc	2016	2.3	1.4	1.3

We sold our investment in The Spectranetics Corporation after it rallied on news Koninklijke Philips NV was going to acquire the company. While we've earned solid returns on our investment in Pacira Pharmaceuticals, Inc., we sold our position after it announced yet another clinical trial with mixed results, this time in the use of its non-opioid pain killer for a nerve block indication. Pacira's EXPAREL product could help to fight the opioid epidemic, but we are going to wait for better data and sales traction for the time being. We sold our position in MSG Networks Inc. as we became concerned that cable operators were taking a harder stance in negotiations with sports networks. We sold Ambarella, Inc. in the quarter after we determined that the current end markets for its vision-based chips are more competitive than we initially thought, and a game-changing new vision technology that could help with autonomous vehicles is still years from commercialization. We sold Domino's Pizza Group plc as we determined that the competitive environment had become more challenging.

Outlook

As always, thank you for your support! As we finish up 2017 and look forward to 2018, we continue to see a plethora of upcoming catalysts that could positively impact our investments. We look forward to seeing you at the annual Baron Investment Conference.

Randy Gwirtzman & Laird Bieger
Portfolio Managers

Investors should consider the investment objectives, risks, and charges and expenses of the investment carefully before investing. The prospectus and summary prospectus contains this and other information about the Funds. You may obtain them from its distributor, Baron Capital, Inc., by calling 1-800-99BARON or visiting www.BaronFunds.com. Please read them carefully before investing.

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.

The discussions of the companies herein are not intended as advice to any person regarding the advisability of investing in any particular security. The views expressed in this report reflect those of the respective portfolio manager only through the end of the period stated in this report. The portfolio managers' views are not intended as recommendations or investment advice to any person reading this report and are subject to change at any time based on market and other conditions and Baron has no obligation to update them.

This report does not constitute an offer to sell or a solicitation of any offer to buy securities of Baron Discovery Fund by anyone in any jurisdiction where it would be unlawful under the laws of that jurisdiction to make such offer or solicitation.

Beta: measures a fund's sensitivity to market movements. The beta of the market (Russell 2000 Growth Index) is 1.00 by definition.

Upside Capture: explains how well a fund performs in time periods where the benchmark's returns are greater than zero.

Downside Capture: explains how well a fund performs in time periods where the benchmark's returns are less than zero.