Football season is well under way, and surprises abound. The Giants are 1-5 and had 4 wide receivers injured in one game. The Jets have a better record than the Giants (as of this writing at least). The Chargers no longer play at Qualcomm Stadium. The national anthem has even become front page news.

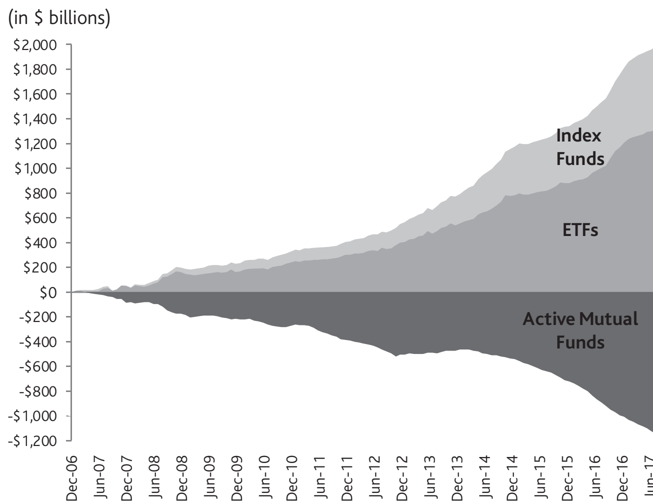
On the other hand, some things are not surprising at all: the Patriots are having another winning season and the Browns are having a losing one.

There haven't been a lot of surprises in the U.S. stock market this summer either. Stock prices continued to rise, bringing the S&P 500 Index up over 14% year to date. Steady growth, new historical highs, and low volatility have become the norm in recent quarters. Flows into index funds and ETFs continued to increase along with the stock market, largely at the expense of active managers.

## U.S. Equity Flows Have Continued to Go Out of Active and Into Passive

**Cumulative Net Flows in U.S. Equity and Sector Products**

(in $ billions)

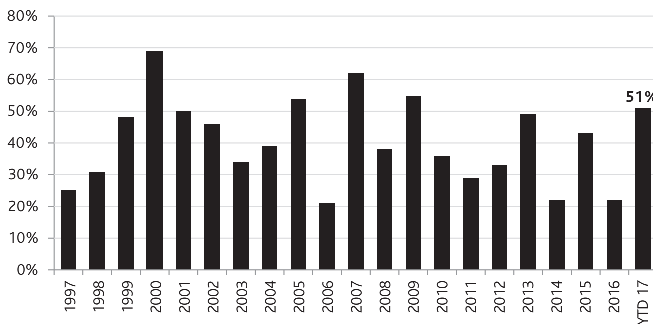



*Source: Morningstar Direct. Data includes obsolete funds.*

This trend in flows has gained so much momentum that even the improving scorecard of active managers does not seem to disturb it. We believe that one of the reasons behind this behavior could be late-stage bull market performance chasing, a particularly costly investor bias.

## More Active Managers Are Outperforming In 2017

**% U.S. Equity Active Managers Outperforming Primary Benchmark**




*Source: Morningstar Direct, BAMCO, Inc.*

*Note: The analysis includes all share classes of non-index funds in Morningstar's US Fund Large Blend, US Fund Large Growth, US Fund Large Value, US Fund Mid-Cap Blend, US Fund Mid-Cap Growth, US Fund Mid-Cap Value, US Fund Small Blend, US Fund Small Growth, and US Fund Small Value categories.*

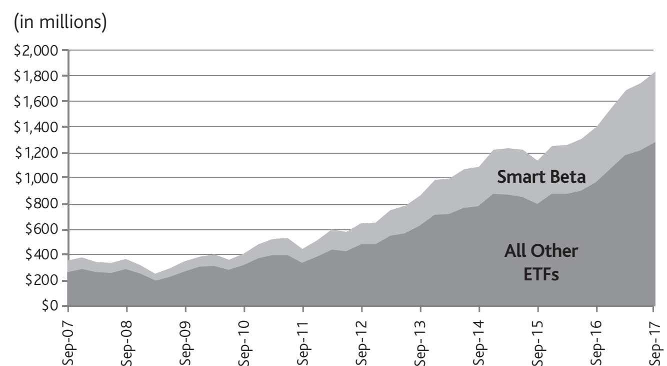
LINDA MARTINSON
CHAIRMAN, PRESIDENT AND COO

A closer examination of recent U.S. equity flows shows that substantial amounts have been invested in smart beta products, particularly in ETFs. Since December of 2013, almost $200 billion has been invested in smart beta U.S. equity and sector ETFs, representing 26% of flows into all U.S. equity and sector ETFs. As of September 30, 2017, total smart beta assets had grown to over $700 billion and represents around 30% of all U.S. equity and sector ETF assets, according to data from Morningstar.

## Smart Beta Assets Have Been Growing Significantly

**Assets Under Management in U.S. Equity and Sector ETFs**

(in millions)



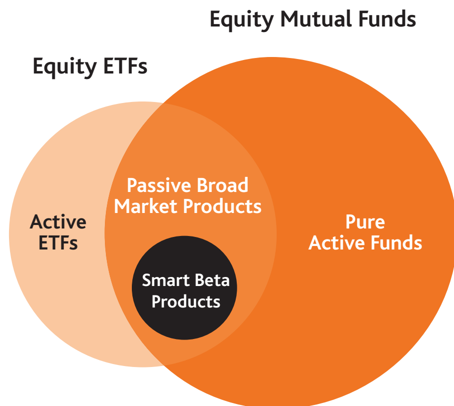

*Source: Morningstar Direct, BAMCO, Inc.*

Smart beta, also referred to as strategic beta, are passively managed products, like index funds and ETFs, which may have lower fees than actively managed products. When referring to index funds, investors usually mean products that are tracking the performance of broad, market capitalization-weighted indexes, like the S&P 500. Smart beta products are different in that their scope is narrower and they typically focus on specific factors. Some of the most common factors for smart beta products include growth, value, dividend yield, volatility, and momentum, though the list of factors is seemingly endless. Multi-factor smart beta portfolios employ combinations of such factors.

From a portfolio management perspective, the only human-made decision for smart beta products is the selection of the factors. Thereafter, stock selection and rebalancing are dictated by formula. While investors are choosing a passively managed product, they are **making an active bet** on the factors they believe will outperform the broad market.

# Letter from Linda

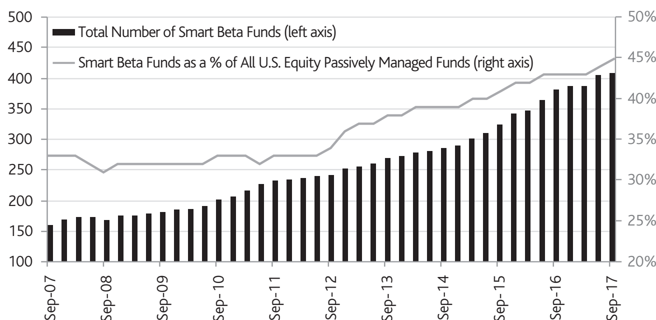
## Smart Beta is a Different Type of Passive Product




Over the past three years, half of all new U.S. equity and sector ETFs and index funds that were created were smart beta. During this time, 123 new smart beta equity products were launched, a 43% increase. According to Morningstar, as of September 30, 2017, about half of passive equity products were considered to be smart beta.

## The Number of Smart Beta Products Has Been Growing Steadily

**U.S. Equity and Sector Smart Beta Products**




*Source: Morningstar Direct, BAMCO, Inc.*
*Note: Data includes U.S. equity ETFs and index funds.*

Part of the reason behind this is that ETF and index fund manufacturers, like Blackrock and Vanguard, wanted to expand the variety of their product lines – after all, there are only so many S&P 500-indexed products that the market needs. Smart beta was a natural solution. It is relatively easy to engineer, has academic theory behind it, and a potentially unlimited variety of products can be created by coming up with new factors or combining existing ones.

Along the way, some existing passive products, like small cap growth and small cap value index funds and ETFs, were repackaged as smart beta: a simple but effective marketing tactic to attract new assets and give reassurance to current investors that they are not on the "stupid" side of the trade. Others have been drawn by the near-perfect historical price charts of some of these products or simply by their trendy names. While there may be substance behind smart beta, there seems to be significant emphasis on the packaging, which could be making it more alluring to speculative investors and performance chasers.

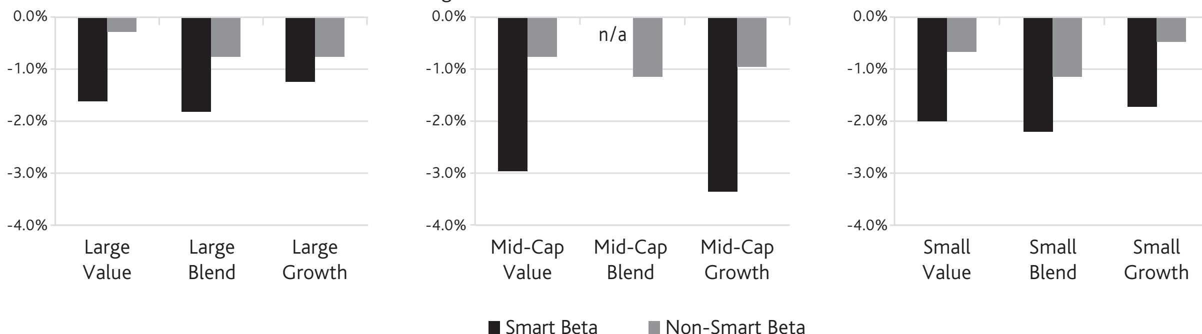
Whatever the reasons behind its rising popularity, in our opinion, one of the effects of **smart beta has been the facilitation and exacerbation of poor investor decisions**, like market timing and performance chasing. As if trying to time the broad market successfully is not difficult enough, investors have been given a new way to take on the even more challenging task of timing specific market trends.

We have previously remarked that equity fund investors tend to generate lower returns than the underlying funds they invest in because of behavioral biases and poor market timing abilities (see Letter from Linda from December 31, 2016). We updated our analysis using only mutual fund data from Morningstar because investor return calculations are not available for ETFs. In this data, smart beta index funds represent 28% of all smart beta assets. The analysis shows that on average, over the past five years, smart beta index fund investors underperformed the underlying products in which they invested. Interestingly, the underperformance gap for smart beta investors was bigger than that for non-smart beta mutual fund investors. For example, as shown in the chart below, within the Morningstar large cap growth category, the average return for smart beta investors was worse than the average return of the smart beta funds by 126 basis points over the past five years. During the same period, the average return for the non-smart beta investor was worse by only 75 basis points. We attribute the worse results for smart beta investors to increased performance chasing.

## Over the Past Five Years, the Gap Between Average Investor and Average Mutual Fund Returns was Worse for Smart Beta Index Fund Investors

**Average Investor vs. Average Fund***

Annualized Return Differences for the Five Years Ending 9/30/2017




*Source: Morningstar Direct, BAMCO, Inc.*

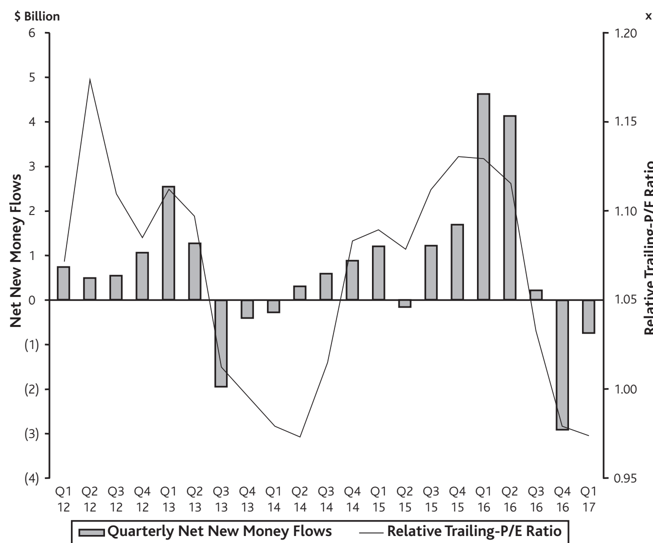
*Note: The analysis includes only equity mutual funds from Morningstar's US Category Group. ETFs are not included due to the lack of information about average investor returns for these products. Smart beta index funds represented about 28% of total smart beta assets as of 9/20/2017 and 22% of the flows into smart beta products over the past five years.*

* *Please see back of letter for Average Investor and Average Fund definitions.*

A 2017 publication by Empirical Research Partners[1] made a case-in-point with low volatility smart beta ETFs, a popular investor choice since the financial crisis. Low volatility strategies have grown their assets at an annualized rate of 150% since 2009, driven by both retail and institutional investors. The analysis showed that investors tended to flock to low volatility at times when valuations were high and to redeem when valuations were low. Such buy high sell low behavior has cost low volatility ETF investors about 150 basis points per year in relative performance for the period 2011 -2017.

## Low Volatility Smart Beta Investors Tend to Invest at the Wrong Times

**U.S. Low Volatility ETFs**
**Net New Money Flows and Relative Trailing-P/E Ratio***
2012 Through February 2017



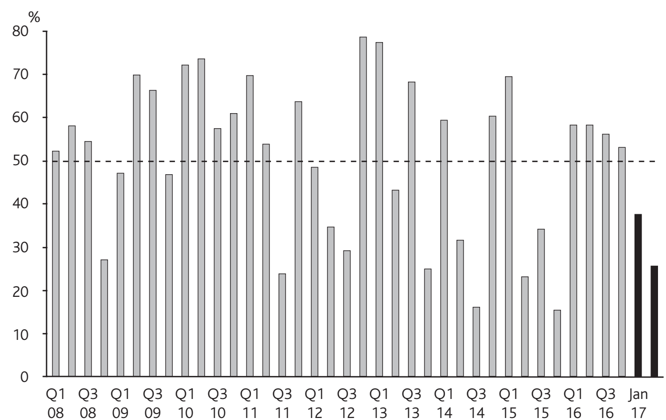

*Source: Empirical Research Partners.*

* *Trailing-P/E is based on aggregate holdings of iShares Edge MSCI MinVol USA ETF (USMU) and PowerShares S&P 500 Low Volatility ETF (SPVL) and is relative to the cap-weighted large-cap market*

According to Empirical Research Partners, low volatility is not an isolated example of investors' poor timing ability. As smart beta facilitates crowding into trending investments, we expect investor returns to deteriorate with its rising popularity. With less than 30% of smart beta products outperforming the S&P 500 Index in Q2 '17, the increase in flows into smart beta makes no rational sense to us. It validates our thesis that smart beta investors are performance chasers.

## Smart Beta's Scorecard Has Been Deteriorating

**U.S. Smart Beta ETFs**
**Share Outperforming the S&P 500 Index Each Quarter***
2008 Through February 2017




*Source: Empirical Research Partners.*

* *Based on total returns.*

A broader finding by Empirical Research Partners showed that, on average, since 2010 stocks with high ETF flows in a given quarter have underperformed over the following year by nearly 100 basis points. This implies that ETF flows, recently driven by smart beta, result in certain market imbalances. Research Affiliates, a global leader in smart beta who also warned of the dangers of performance chasing with these products, reached a similar conclusion in their 2016 publication called *"How Can "Smart Beta" Go Horribly Wrong?"*

From Baron's perspective, such market imbalances create great long-term investment opportunities. We do not have spontaneous urges to invest in whatever is trending at the moment, nor do we intend to hold investments for short periods of time. We invest for the long term in companies that we believe have high growth prospects, solid fundamentals, strong managements, and attractive valuations. We evaluate our current and potential investments quantitatively and qualitatively in ways that cannot be emulated by a computer yet.

Often in recent years, we have seen significant disconnects between company stock prices and fundamentals. We believe that such disconnects are, in part, created or amplified by the rise in ETF popularity and performance chasing with ETF products, like smart beta. In our experience, disconnects between prices and fundamentals may persist over the short and sometimes medium term, but they tend to resolve over the long term.

[1] Rochester Cahan and Yu Bai (April 2017). "Passive Aggressive Behavior Part II: The ETF Scorecard", Empirical Research Partners.

# Letter from Linda

Companies with strong fundamentals tend to be rewarded by the market, and companies with poor characteristics tend to be penalized. Lately, we have seen this happen with some high-conviction holdings in our portfolios.

**CoStar Group, Inc.** is the leading provider of information and marketing services for commercial real estate. The company's proprietary database and R&D efforts have given it strong competitive advantages, while exceptional management has positioned it well to capture significant share in a vast addressable market. More recently, the company has been expanding its product offering and making strategic acquisitions to extend its reach. From 2013 to 2016, subscription revenues nearly doubled and total revenue grew 89%. Yet, CoStar's stock price grew only 2% over that time. Recognizing the high growth potential and strong fundamentals, we continued holding the stock and some of our Funds used the opportunity to build up their positions. Year to date to September 30, 2017, the stock is up 42%, and we expect to see it to grow much further before it truly reflects the value of CoStar's business.

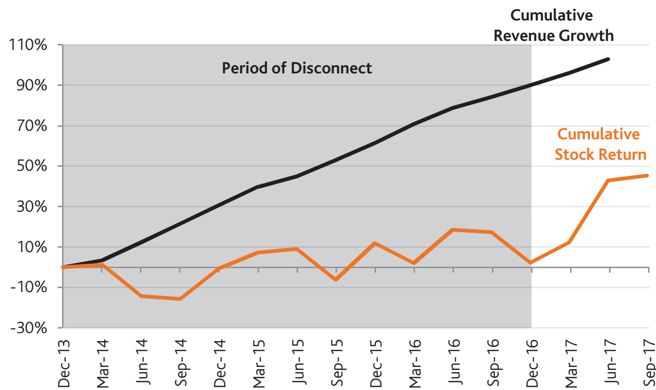
We have had a similar experience with our investment in **Tesla, Inc.**, a leading global developer and manufacturer of fully electric vehicles, solar products, and energy storage solutions. Over the past decade, Tesla has disrupted the auto industry by designing and producing high-quality electric vehicles.

The company has also made significant progress in battery technologies and production. In a very short period of time, Tesla has made incredible advancements and managed to deliver rapid growth. From the middle of 2015 until the end of 2016, the company improved and expanded its product line, which led to a 93% increase in vehicle deliveries and an 89% increase revenues. Despite such strong results, Tesla's stock declined by 20% over that period. However, year to date as of September 30, 2017 it has increased by 60%, perhaps because the market is finally beginning to recognize Tesla's progress and potential. With an enormous addressable market and creative, visionary management, we believe in Tesla's continued success.

## CoStar's Stock Performance Disconnect with Key Performance Indicators

**CoStar Group, Inc.**

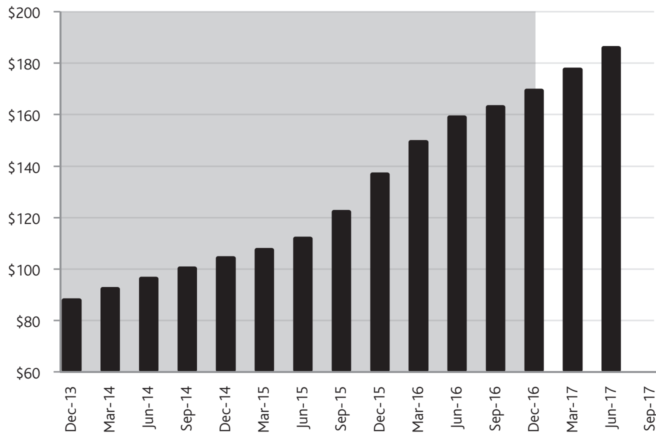
LTM* Revenue Growth vs. Stock Returns




*Source: FactSet, BAMCO, Inc.*

**CoStar Group, Inc.**

Quarterly Subscription Revenue (millions)



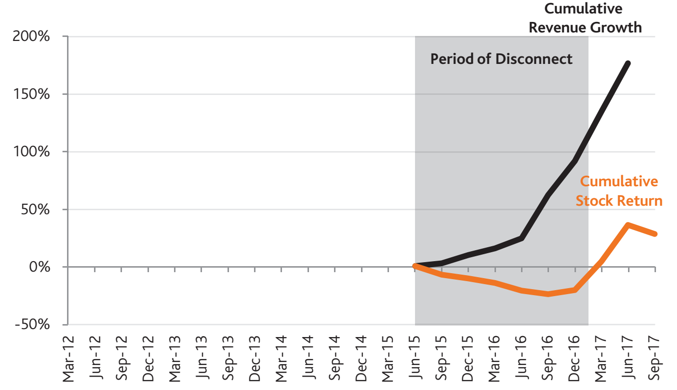

*Source: FactSet, BAMCO, Inc.*

* Last 12 months

## Tesla's Stock Performance Disconnect with Key Performance Indicators

**Tesla, Inc.**

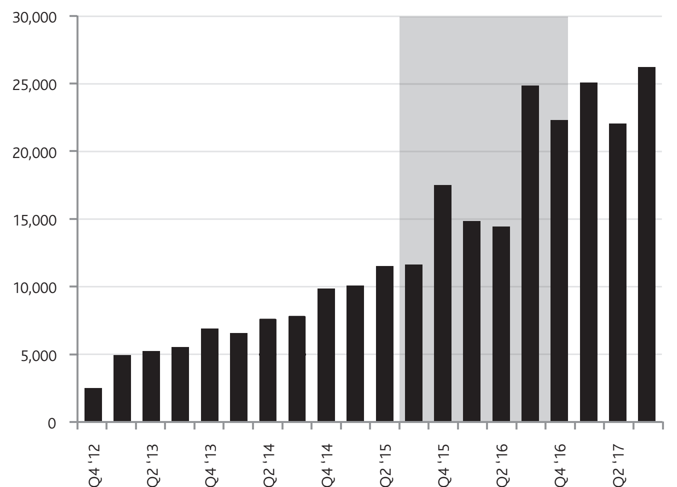
LTM* Revenue Growth vs. Stock Returns




*Source: FactSet, BAMCO, Inc.*

**Tesla, Inc.**

Quarterly Vehicle Deliveries



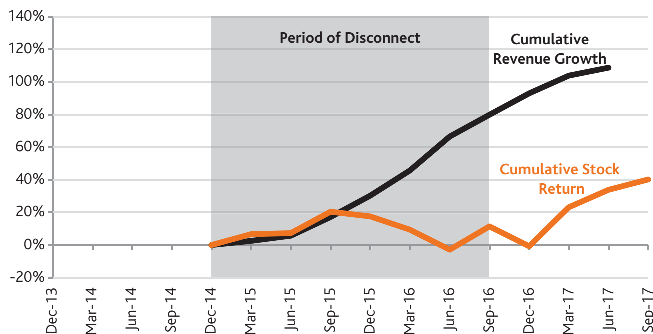

*Source: FactSet, BAMCO, Inc.*

**SS&C Technologies Holdings, Inc.** also has had a disconnection between its fundamentals and its stock returns. SS&C is a leading provider of mission-critical software products and services that allow financial service providers to automate and outsource business processes. Similar to CoStar and Tesla, the company has strong competitive advantages, in our view. SS&C's products offer critical functionality to users and carry high ROIs relative to internally developed software or paper-based processes. At the same time, they are deeply embedded in the clients' workflow and are extremely sticky. As a result, over 90% of SS&C's revenue is recurring. Considering the significant reforms in the financial sector after the 2008/09 crisis, and a $200 billion addressable market, we believe the opportunities for growth are material. Over the past few years, SS&C has grown its business both organically and through acquisitions and has generated free cash flow significantly in excess of its net income. From 2014 to 2016, both total and recurring revenues increased nearly 100%. Yet, over the same period, the stock declined by 1%, clearly not in proportion with fundamentals. Despite that, we have retained our conviction in SS&C, and we have seen some of that gap close lately. So far this year as of September 30, 2017, the stock has increased 41%, and we expect to see much bigger returns over the long term.

## SS&C's Stock Performance Disconnect with Key Performance Indicators

**SS&C Technologies Holdings, Inc.**

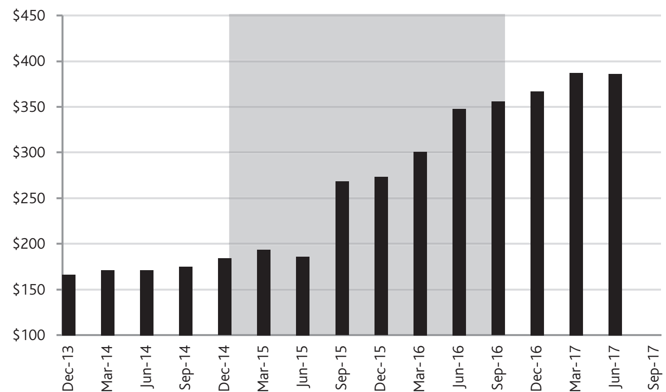
LTM* Revenue Growth vs. Stock Returns




*Source: FactSet, BAMCO, Inc.*

**SS&C Technologies Holdings, Inc.**

Quarterly Recurring Revenue (millions)




*Source: FactSet, BAMCO, Inc.*

While we cannot predict where the market is going or when the bull run will end, we are confident that the current market imbalances caused by performance chasers, smart-beta, and ETF investing are creating a significant long-term alpha opportunity. We believe we can successfully identify such imbalances and take advantage of them, although we don't exactly know when the market will recognize them. We are not trying to time our investments over short periods. In our opinion, there is only one way to invest in the stock market successfully – identify companies with strong fundamentals and stay invested for a long time.

Similarly, in football, the best way to win games consistently is to stick to fundamentals and do them well. While an occasional trick play, such as an onside kick, a reverse, or a flea flicker may give an advantage for a down, it is hard to win games with only gimmicks. No NFL (or college) team has ever had a winning season without training, practicing, and executing football fundamentals.

Fundamental investing was once a mainstream approach, but lately investors have chosen other options. In a recent publication[3], Bank of America Merrill Lynch even called long-term fundamental investing the "most contrarian theme" right now. Popular or not, long-term fundamental investing, combined with skilled stock picking and balanced portfolio management, has been the driver of Baron's long-term success. We intend to stick with this approach.

Sincerely,

Linda S. Martinson
Chairman, President, and COO

* Last 12 months

[3] US Equity Strategy in Pictures (9/17/17), *"Where Aren't the Anomalies?"*

# Letter from Linda

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*Past performance is no guarantee of future results.*

*The discussion of market trends and companies throughout this report are not intended as advice to any person regarding the advisability of investing in any particular security. Some of our comments are based on current management expectations and are considered "forward-looking statements." Actual future results, however, may prove to be different from our expectations. Our views are a reflection of our best judgment at the time of the publication of this report and are subject to change any time based on market and other conditions, and we have no obligation to update them.*

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

Portfolio holdings as a percentage of net assets as of September 30, 2017 for securities mentioned are as follows: **CoStar Group, Inc.** – Baron Asset Fund (1.8%), Baron Growth Fund (4.3%), Baron Opportunity Fund (3.7%), Baron Partners Fund (11.8%*), Baron Focused Growth Fund (10.5%), Baron Real Estate Fund (1.9%); **Tesla, Inc.** – Baron Opportunity Fund (5.2%), Baron Partners Fund (15.2%*), Baron Fifth Avenue Growth Fund (1.0%), Baron Focused Growth Fund (16.1%), Baron Energy and Resources Fund (8.6%), Baron Global Advantage Fund (1.1%); **SS&C Technologies Holdings, Inc.** – Baron Asset Fund (1.2%), Baron Growth Fund (3.1%), Baron Opportunity Fund (2.1%).

*% of Long Positions.

Portfolio holdings may change over time. The Fund may not achieve its objectives. Current and future portfolio holdings are subject to risk.

Index performance is not fund performance; one cannot invest directly into an index.

Morningstar classifies funds as being large-cap, mid-cap, or small-cap based on the market capitalization of the fund's stock holdings; and as value, blend, or growth based on the value-growth orientation of the stock holdings. The nine possible combinations of these characteristics correspond to the nine components of the Morningstar Style Box shown in the charts on page 2.

**The Average Investor** is represented by the Morningstar® Investor Return™. The Morningstar® Investor Return™ (also known as dollar-weighted return) measures how the average investor fared in a fund over a period of time. Investor return incorporates the impact of cash inflows and outflows from purchases and sales and the growth in fund assets. In contrast to total returns, investor returns account for all cash flows into and out of the fund to measure how the average investor performed over time. Investor return is calculated in a similar manner as internal rate of return. Investor return measures the compound growth rate in the value of all dollars invested in the fund over the evaluation period. Investor return is the growth rate that will link the beginning total net assets plus all intermediate cash flows to the ending total net assets. The Average Investor return for each component of the Morningstar Style Box in the charts on page 2 was calculated using Morningstar's fractional weight methodology.

**The Average Fund** is represented by the average return of the funds within each component of the Morningstar Style Box, calculated using Morningstar's fractional weight methodology.

Definitions (provided by BAMCO, Inc.): **S&P 500 Index** measures the performance of 500 widely held large-cap U.S. companies.

**Alpha** measures the difference between a fund's actual returns and its expected performance, given its level of risk as measured by beta.

**Beta** measures a fund's sensitivity to market movements. The beta of the market is 1.00 by definition.

**Price/Earnings Ratio** (trailing 12-months) is a valuation ratio of a company's current share price compared to its actual earnings per share over the last twelve months.