



Chris Brightman, CFA

“What’s hot may change abruptly, but investors’ penchant for what’s hot is steady.”

KEY POINTS

1. It is well established that many investors tend to purchase “winning” stocks—those that have recently outperformed—and to shun “losers.”
2. ETF providers evidently take investors’ preference for winners into account by predominantly launching funds whose underlying indices are outperforming at the time they make new product decisions.
3. Strategies that produced excess returns over the prior three years generally behaved like an average investor’s portfolio after the ETFs were launched.

Chasing Performance with ETFs

Chris Brightman, CFA, Feifei Li, Ph.D., FRM, and Xi Liu, CFA

Adventurous people who love riding in the gondola of a hot-air balloon would naturally detest plummeting to earth. Similarly, many investors have a pronounced tendency to channel funds to managers, strategies, and stocks with superior short-term returns, while steering clear of those that have been on a losing streak.

Empirical studies have amply documented this widespread propensity to favor winners and shun losers, and behavioral economists have cogently explained it. As long as 30 years ago, De Bondt and Thaler (1985; 1987) demonstrated that investors’ partiality toward winners affects market prices. Grinblatt, Titman, and Wermers (1995), along with Wermers (1999), documented that mutual funds are, on average, trend chasers in their stock purchase decisions, and that the trend-chasing behavior is especially common among growth and aggressive-growth-oriented funds. Badrinath and Wahal (2002) found similar results for other types of institutional investors. As recently as this year, Hsu, Myers, and Whitby (2015) showed that, much to their detriment, investors repeatedly transfer assets from underperforming to outperforming mutual funds. This pattern of decision-making persists even though it clearly results in forgone gains or out-and-out losses in the long run (Jegadeesh and Titman, 1993).

What’s hot may change abruptly, but investors’ penchant for what’s hot is steady, because it is sustained by ingrained psychological forces and habitual cognitive biases. Hong and Stein (1999) provided a theoretical foundation in demonstrating that trend chasers underreact to fundamentals at first, and then overreact as their numbers grow. Early trend chasers profit from the initial underreaction; late trend chasers lose money. Some investors are overconfident about their ability to pick stocks or time the market, and in evaluating their own performance, they give most weight to decisions that have proven successful (Daniel, Hirshleifer, and Subrahmanyam, 1998). Others, presumably less self-assured and more in need of social validation, simply follow the emotional crowd, buying the popular stocks and selling the ones that are out of favor (Howard, 2014). Thus, numerous factors contribute to investors’ enduring preference for winners.

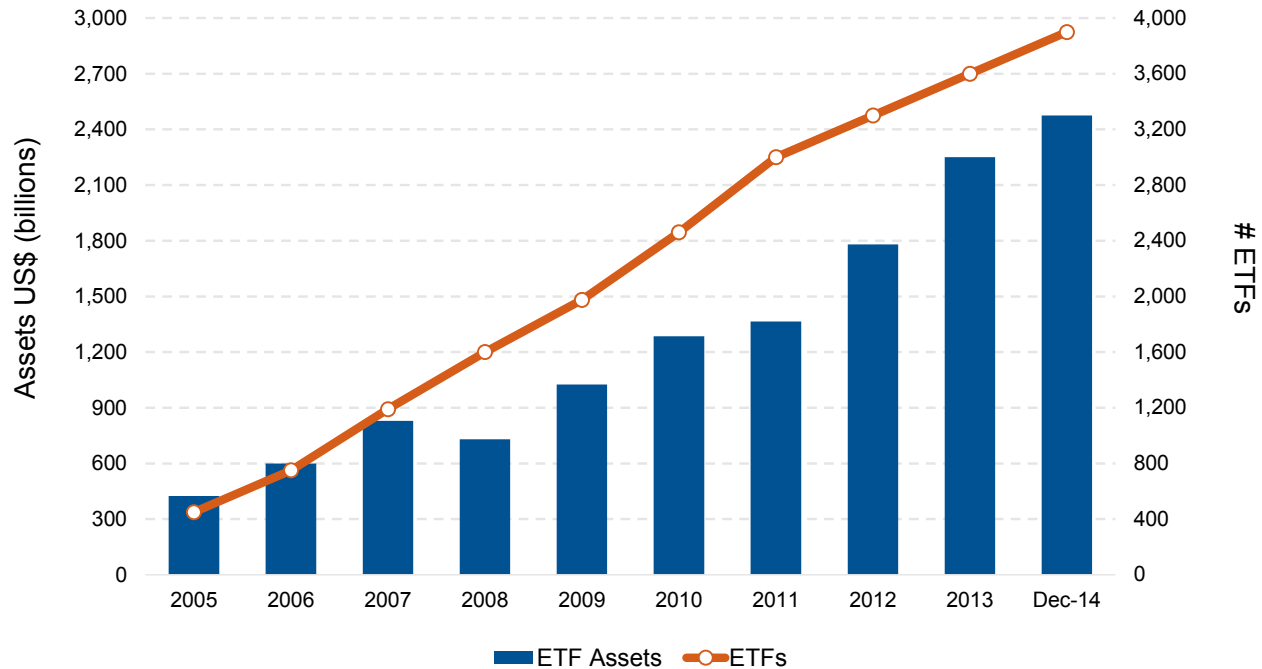
Over the last 10 years, investors have grown excited about exchange-traded funds (ETFs) as a market-valued vehicle, and, accordingly, providers have launched thousands of them. As **Figure 1** shows, ETFs have enjoyed phenomenal growth, with the number of funds expanding by an order of magnitude, and assets under management increasing more than sixfold through 2014.

Media Contacts

United States and Canada
Hewes Communications
+1 (212) 207-9450
hewesteam@hewescomm.com

Europe
JPES Partners (London)
+44 (0) 20 7520 7620
ra@jpespartners.com

Figure 1. Global ETF Growth (1993-2014)



Source: ETFGI.

How do ETF providers respond to investors' well-established preference for strong recent performance? Our empirical research supported the common-sense conclusion: Because they bring to market products that investors will want to purchase, ETF providers launch funds with hot strategies. But in the process, our research revealed a striking pattern of investment performance.

ETF-Launch Event Study

Our hypothesis is that the sponsors of ETFs, aware of investors' preference for recent winners, select only outperformers among the thousands of indices available for new fund launches. Evidence in support of this hypothesis would be significantly positive relative performance in the periods leading up to the decision point for index selection. In the interest of investor education, we also sought to determine how the

providers' actual index choices worked out after the ETFs came to market.

“Early trend chasers profit; late trend chasers lose money.”

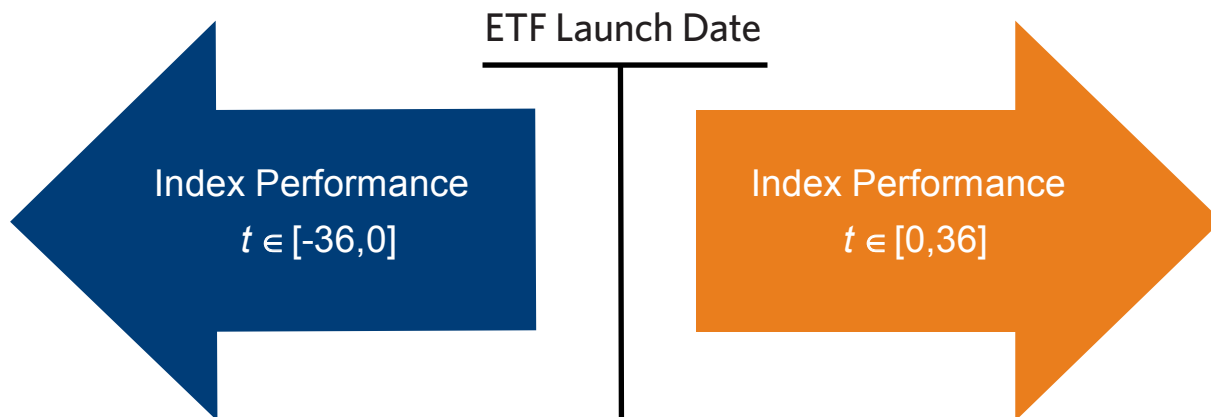
The event study is set up as follows (Figure 2): Using Bloomberg, we retrieve the long-only index-tracking ETFs that were launched in U.S. market from 1993 to 2014 and that have at least a three-year record. We then measure the performance of the underlying indices relative to the broad market, proxied by the Russell 3000 Index, over three-year periods before and after the launch dates.

As shown in Figure 3, prior to the ETFs' launches, the underlying indices typically exhibit strong performance.

The average annualized excess return over the Russell 3000 Index is nearly 5 percentage points, and the cumulative outperformance over the three-year period reaches around 15 percent. More interestingly, if we roll the clock back by six months to the approximate time the business decision was made (represented by the estimated application date for SEC exemptive relief and registration approval),¹ we observe a local maximum of the outperformance where the strong upward trend peaks.

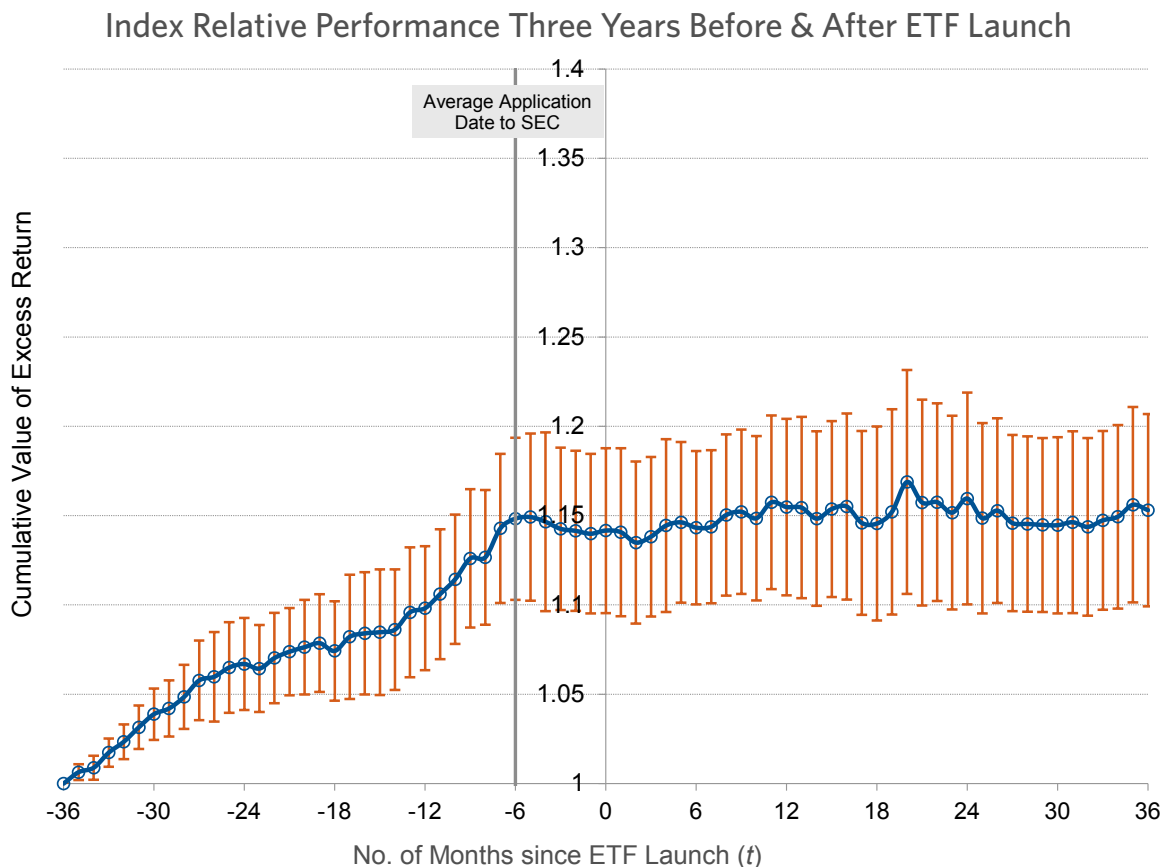
If index selections are made at the peak, then, by definition, disappointing subsequent performance is inevitable. Indeed, after the launch date, the superior performance evaporated. The strategies that did well in the prior three years behaved like an average investor's portfolio after being picked up by the ETF providers. Cumulative post-launch excess returns trace a flat line.

Figure 2. Graphic Representation of the Event Study



Source: Research Affiliates, LLC.

Figure 3. Three-Year Cumulative Relative Index Performance Before and After ETF Launch



Source: Research Affiliates, LLC, using data from Bloomberg.

Panel Regression

From Figure 3, we can see that the indices' excess return differences seem to be economically significant before and after the ETF launch. Are they statistically significant as well? We perform a panel regression analysis to determine how much confidence we should place in our findings. The panel regression takes the form:

$$exRet_{i,t} = \beta_0 + \beta_1 \times D_{i,t} + \varepsilon_{i,t}$$

where $exRet_{i,t}$ is the excess return of the underlying index against the Russell 3000 Index, and $D_{i,t}$ is a dummy variable to identify whether the excess return dates from before or after ETF launch (e.g., $D_{i,t} = 1$ if the excess return is observed after ETF launch).

“If index selections are made at the peak, disappointing subsequent performance is inevitable.”

The regression results in **Table 1** indicate the average excess return is 35 bps per month prior to the launch and -4 bps per month after the launch. The difference is -39 bps, with a *t*-stat as high as -6.66. Thus, the statistical analysis strongly validates the conclusion that ETF issuers launch products that largely track past winners.

The excess returns to strategies that don't have a sound theoretical underpinning are likely to be random. And, given a

large enough sample of random returns, favorable performance can happen by chance. But it does not persist over time. This may partially explain why, on average, close-to-zero relative returns are observed after the ETF launch event.

In Closing

Stock market investors tend to favor strategies and stocks that have produced superior returns in the recent past. Our study supports the hypothesis that ETF providers take investors' preference for winners into account when making new product decisions. It also offers evidence that investors' performance-chasing behavior extends to their investments in ETFs. These results may help them make informed decisions—or at least ask good questions—about new ETFs.

Table 1. Panel Regression of Underlying Index Excess Post-Launch Returns

	Coefficient	t-Stat	P-Value
Intercept	0.35%	8.50	2.06E-17
After-Launch Dummy	-0.39%	-6.66	2.80E-11

Source: Research Affiliates, LLC, using data from Bloomberg.

Endnote

1. According to Conner (2011), it takes about six months to obtain the SEC's exemptive relief, a required step before an index-type ETF can be brought to market.

References

Badrinath, S.G., and Sunil Wahal. 2002. "Momentum Trading by Institutions." *Journal of Finance*, vol. 57, no. 6 (December):2449-2478.

Conner, Thomas W. 2011. *Fundamentals of Mutual Funds and Exchange-Traded Funds 2011: The Evolving Nature of Exchange-Traded Product Regulation*. New York: Practising Law Institute.

Daniel, Kent, David Hirshleifer, and Avanidhar Subrahmanyam. 1998. "Investor Psychology and Security Market Under- and Overreactions." *Journal of Finance*, vol. 53, no. 6 (December):1839-1885.

De Bondt, Werner F.M., and Richard Thaler. 1985. "Does the Stock Market Overreact?" *Journal of Finance*, vol. 40, no. 3 (July):793-805.

———. 1987. "Further Evidence On Investor Overreaction and Stock Market Seasonality." *Journal of Finance*, vol. 42, no. 3 (July):557-581.

Grinblatt, Mark, Sheridan Titman, and Russ Wermers. 1995. "Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior." *American Economic Review*, vol. 85, no. 5 (December):1088-1105.

Hong, Harrison, and Jeremy Stein. 1999. "A Unified Theory of Underreaction, Momentum Trading, and Overreaction in Asset Markets." *Journal of Finance*, vol. 54, no. 6 (December):2143-2184.

Howard, C. Thomas. 2014. *Behavioral Portfolio Management*. Petersfield, U.K.: Harriman House Ltd.

Hsu, Jason C., Brett W. Myers, and Ryan J. Whitby. 2015. "Timing Poorly: A Guide to Generating Poor Returns While Investing in Successful Strategies." *Journal of Portfolio Management* (forthcoming). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2560434.

Jegadeesh, Narasimhan, and Sheridan Titman. 1993. "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency." *Journal of Finance*, vol. 48, no. 1 (March):65-91.

Wermers, Russ. 1999. "Mutual Fund Herding and the Impact on Stock Prices." *Journal of Finance*, vol. 54, no. 2 (April):581-622.

Disclosures

The material contained in this document is for general information purposes only. It is not intended as an offer or a solicitation for the purchase and/or sale of any security, derivative, commodity, or financial instrument, nor is it advice or a recommendation to enter into any transaction. Research results relate only to a hypothetical model of past performance (i.e., a simulation) and not to an asset management product. No allowance has been made for trading costs or management fees, which would reduce investment performance. Actual results may differ. Index returns represent back-tested performance based on rules used in the creation of the index, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are not managed investment products and cannot be invested in directly. This material is based on information that is considered to be reliable, but Research Affiliates™ and its related entities (collectively “Research Affiliates”) make this information available on an “as is” basis without a duty to update, make warranties, express or implied, regarding the accuracy of the information contained herein. Research Affiliates is not responsible for any errors or omissions or for results obtained from the use of this information. Nothing contained in this material is intended to constitute legal, tax, securities, financial or investment advice, nor an opinion regarding the appropriateness of any investment. The information contained in this material should not be acted upon without obtaining advice from a licensed professional. Research Affiliates, LLC, is an investment adviser registered under the Investment Advisors Act of 1940 with the U.S. Securities and Exchange Commission (SEC). Our registration as an investment adviser does not imply a certain level of skill or training.

Investors should be aware of the risks associated with data sources and quantitative processes used in our investment management process. Errors may exist in data acquired from third party vendors, the construction of model portfolios, and in coding related to the index and portfolio construction process. While Research Affiliates takes steps to identify data and process errors so as to minimize the potential impact of such errors on index and portfolio performance, we cannot guarantee that such errors will not occur.

The trademarks Fundamental Index™, RAFI™, Research Affiliates Equity™, RAE™, and the Research Affiliates™ trademark and corporate name and all related logos are the exclusive intellectual property of Research Affiliates, LLC and in some cases are registered trademarks in the U.S. and other countries. Various features of the Fundamental Index™ methodology, including an accounting data-based non-capitalization data processing system and method for creating and weighting an index of securities, are protected by various patents, and patent-pending intellectual property of Research Affiliates, LLC. (See all applicable US Patents, Patent Publications, Patent Pending intellectual property and protected trademarks located at <http://www.researchaffiliates.com/Pages/legal.aspx#d>, which are fully incorporated herein.) Any use of these trademarks, logos, patented or patent pending methodologies without the prior written permission of Research Affiliates, LLC, is expressly prohibited. Research Affiliates, LLC, reserves the right to take any and all necessary action to preserve all of its rights, title, and interest in and to these marks, patents or pending patents.

The views and opinions expressed are those of the author and not necessarily those of Research Affiliates, LLC. The opinions are subject to change without notice.

©2015 Research Affiliates, LLC. All rights reserved.