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THE DEMOCRATIZATION OF INVESTING AND THE EVOLUTION OF ETFs

The democratization of investing and the evolution of ETFs

By [Tommi Johnsen, PhD](#) | October 2nd, 2023 | [Research Insights, Basilico and Johnsen, Academic Research Insight, ETF Investing](#)

The first ETFs emerged in 1993 and closely tracked broad-based indexes for a low fee. Since then, the competitive situation in the ETF industry today has differentiated itself by adding a new breed of ETFs that reflected specialization into popular investment themes. When the evolution of the ETF industry is compared to the evolution of mutual funds, the picture that emerges is different in two ways. First, ETFs were essentially passive products. They were never promoted on the basis of exceptional managerial skill as mutual funds were and continue to be. Second, the transparency of the ETF structure also precluded the industry's ability to promote high return or high yield characteristics without disclosing the full scope of

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What are the research questions?

1. What has been the trend in the competitive dynamics of the ETF market, to date?

What are the Academic Insights?

- A picture of the evolution of ETFs since 1993 is presented in Figure 1 below. The colors of the markers represent the degree of differentiation (least differentiation is blue, most differentiation is red). The sample consisted of all ETFs traded in the US equity market through December 2019. Over the period analyzed, fees declined across the board while product differentiation increased. The first products were passive ETFs designed to track broad-based indexes like the S&P500. Although fees were relatively low in the beginning, increasing competition led to even larger declines in fees over time and increasing differentiation.

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low tracking error predecessors. At the end of the observation period, specialized ETFs managed 18% of the industry's assets, yet they generated about 35% of the industry's fees. Overall, the competitive environment has evolved towards a definite focus on differentiated products while coexisting with broad-based ETFs. The authors argue in theory, that the two segments can coexist, where broad-based ETF products compete on price and specialized ETFs compete on quality. There is a notable difference in the sensitivity of demand flows to ETFs fees and past performance for broad-based (index and smart beta) ETFs. While investors in broad-based products were quite sensitive to fees and specialized (theme and sector) ETFs were sensitive to past performance and unrelated to fees. If however, the media exposure to the stock contained in an ETF portfolio, the fee sensitivity was mitigated to some extent.

- What makes specialized ETFs appeal to investors? Performance, both raw and risk-adjusted. However, the facts do not align with those expectations. The weighted risk-adjusted return for all specialized ETFs was a disappointing -3.2% annually, after fees. See Figure 2 just below. The negative performance can be attributed to specialized ETFs most recently launched with a gross return of -6% over the post-launch 5 years. However, the underperformance is not due to higher fees or transactions costs. Some comfort can be found in the absolute size of the specialized ETF market. As of 2019, it was approximately \$460 billion AUM. As a comparison broad-based ETFs were only slightly negative, although not significant.

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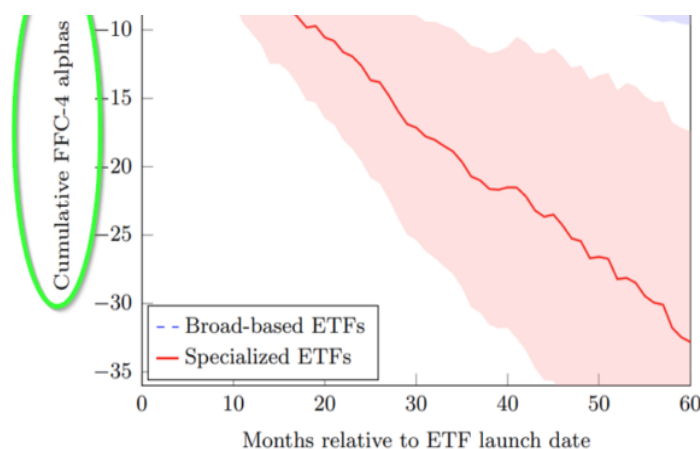


Figure 2

Performance of ETFs around launch

The figure shows the performance of ETFs after launch, split by categories of broad-based and specialized ETFs. The sample period is 2000 to 2019. For each ETF category, we form 60 calendar-time portfolios that track the returns of ETFs differing by their time since launch. Specifically, for each category, we form a portfolio containing ETFs that were launched 1 month before the portfolio formation month, a portfolio containing ETFs launched 2 months before the portfolio formation month, ..., a portfolio containing ETFs launched 60 months before the portfolio formation month. We value-weight the ETF returns using lagged ETF market capitalization and rebalance the portfolios after 1 month. Thus, we have 60 time series of portfolio returns per ETF category. Then, we estimate the Fama-French-Carhart four-factor model (FFC-4) alphas of the portfolios (Fama and French 1993; Carhart 1997). We then have 60 estimated FFC-4 alphas per ETF category. Each line is obtained by cumulating the 60 FFC-4 alphas for the portfolios of ETFs of different age, and the shaded areas represent 95% confidence intervals. Standard errors are calculated following the description in footnote 26.

The results are hypothetical results and are NOT an indicator of future results and do NOT represent returns that any investor actually attained. Indexes are unmanaged and do not reflect management or trading fees, and one cannot invest directly in an index.

Why does it matter?

The implications of the competitive landscape for ETFs are mixed. On one hand, they have truly democratized investing. Investors now have access to the benefits of financial markets in one instrument that provides diversification at very low fees. Recently advertised fees on broad-based [bond funds](#) have fallen to 3bps. On the other hand, ETF providers have been able to satisfy investor demand for increasingly specialized products

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The most important chart from the paper

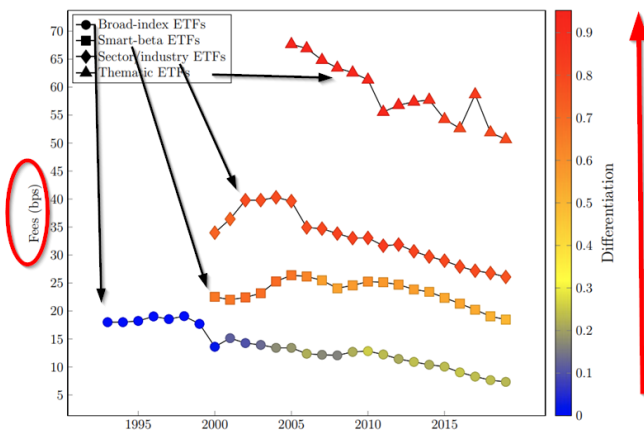


Figure 1

The evolution of the ETF species

The figure shows the average annual fees and the degree of product differentiation per ETF category weighted by their assets under management (AUM): broad-index ETFs, smart-beta ETFs, sector/industry ETFs, and thematic ETFs. The sample period is from 1993 to 2019. The y-axis shows average fees, and the colors of the markers represent the average degree of product differentiation, computed as one minus the cosine similarity between the ETF portfolio weights and the weights of the aggregate portfolio of all ETFs that exist in the market at that point in time. Section 2 provides information about the classification of ETFs.

The results are hypothetical results and are NOT an indicator of future results and do NOT represent returns that any investor actually attained. Indexes are unmanaged and do not reflect management or trading fees, and one cannot invest directly in an index.

Abstract

The interplay between investors' demand and providers' incentives has shaped the evolution of

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1000. Surprisingly, over their first 3 years, specialized ETFs lose about 30% (risk-adjusted). This underperformance cannot be explained by high fees or hedging demand. Rather, it is driven by the overvaluation of the underlying stocks at the time of the launch. Our results are consistent with providers catering to investors' extrapolative beliefs by issuing specialized ETFs that track attention-grabbing themes.

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I freely concede that the ETF is the greatest marketing innovation of the 21st century. But is the ETF a great innovation that serves investors? I strongly doubt it. In my experience...I have learnt to beware of investment "products," especially when they are "new" and even more when they are "hot."

—John Jack Bogle, Financial Times, March 15, 2015

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at the University of Denver. She has worked extensively as a consultant and investment advisor in the areas of quantitative methods and portfolio construction. She taught at the graduate and undergraduate level and published research in several areas: capital markets, portfolio management and performance analysis, financial applications of econometrics, and the analysis of equity securities. Her publications have appeared in numerous peer-reviewed journals.

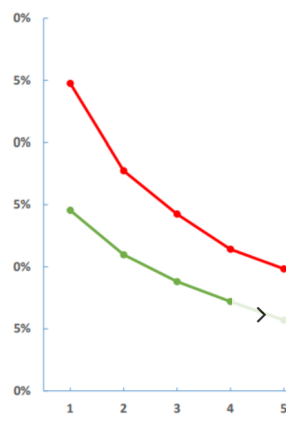
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Table III. Characteristics of pump-and-dump manipulations

This table reports statistics describing the characteristics of the sample of 355 pump-and-dump manipulations. Pump duration, return, and volume statistics are calculated from the start of a pump (the release of the pump signal) to its peak. A "pump-day" refers to a day on which there is at least one manipulation. Manipulators' percentage profit from a pump is calculated as the percentage difference between the volume-weighted average price during the pump (from start to peak) and the volume-weighted average price in the 2 h preceding the release of the pump signal. Manipulators' dollar profit is calculated as their percentage profit multiplied by the pre-pump volume (volume in the 2 h preceding the release of the pump signal). The sample consists of 355 manipulations on two exchanges (Binance and Yobit) between December 2017 and June 2018.

Variable		Mean	Standard deviation	Median
Pump duration (minutes)	→	8.07	21.27	1.54
Pump return (%)	→	65.47	84.44	34.75
< Pump return (number of standard deviations of the coin's daily returns)		4.01	5.27	2.01
Pump volume (% of pump-day volume)		38.77	24.22	39.22
Pump-day volume (% of the coin's average daily volume)	→	1,351	1,978	628
Manipulators' profit (%)	→	49.02	47.72	39.36
Manipulators' profit (\$ thousands)		16.77	85.94	0.17

Figure 2: Geometric Means of Month and Non-Green Portfolios across Hol



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