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ETF liquidation determinants

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ABSTRACT

The exchange-traded fund (ETF) market has dramatically increased in size and influence. With this growth, there has been an increase in the number of liquidations. We find that the decision to liquidate an ETF is primarily based on ETF characteristics; however, we observe additional considerations related to fund family and investment objective characteristics. Failures are more likely to occur when an ETF is small and when it is launched by a struggling family or into a struggling investment objective. We find fund, family, and market characteristics at the time of creation greatly impact an ETF's likelihood of survival. Furthermore, we observe few, but significant, differences between the decision to close an ETF and the decision to close an actively managed mutual fund. Whereas ETFs show relatively greater dependence on the well-being of their investment objective, mutual funds show a greater dependence on their fund specific performance.

1. Introduction

When State Street Global Advisors launched the first exchange-traded fund (ETF) to track the S&P 500 index in January 1993, it sparked the beginning of an important new type of investment. This newly created ETF allowed passive investors access to an inexpensive and liquid way to track an index. According to a 2015 survey by the *Journal of Financial Planning* and the Financial Planning Association, ETFs are the most popular investment vehicles recommended and used by financial advisors. With 81% of financial advisors favoring ETFs, their level of support has eclipsed that of mutual funds, individual stocks, and all other groups of investment vehicles included in the study.[1] The increasing support of ETFs by financial advisors is likewise shown amongst other investors, as Sherrill et al. (2017) document widespread ETF use among actively managed mutual fund portfolios and Agapova (2011) shows that ETFs provide a substitute for traditional index mutual funds.

Starting around 2006, we document a large increase in the number of available ETFs, the total amount of assets invested in the ETF market, and the growth of the ETF market relative to the mutual fund market (Fig. 1). The growth of ETFs is especially prominent in recent years with the number of living funds reaching 1629 and total net assets (TNA) nearing $2.8 trillion as of December 2016.[2] Even with the drastic increase in the number of ETFs, as well as the amount of money invested in them, not all funds experience success. In fact, 2012 saw a record 93 ETF liquidations, and 25.5% of all ETFs ever created have liquidated. Given the sharp increase in fund failures in recent years, the importance for both practitioners and academics to better understand the driving conditions leading to an ETF failure continues to grow.

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[1] The report can be found at: https://www.onefpa.org/business-success/documents/2015%20trends%20in%20investing%20survey%20report%20-%20fin.pdf.

[2] Growth is not limited to ETFs, but is found in all forms of indexing (Qin and Singal, 2015).

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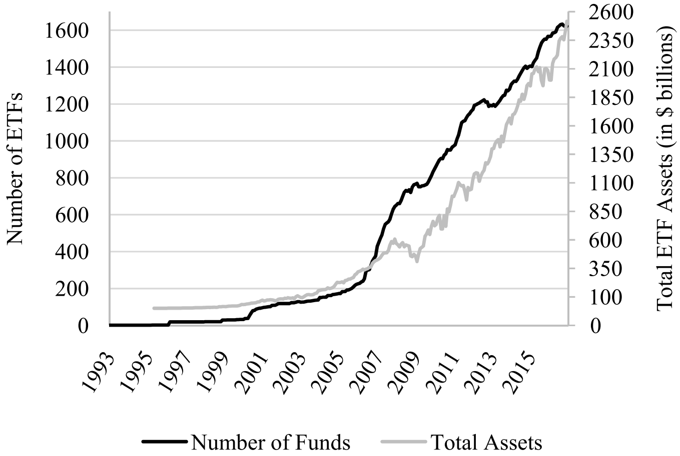

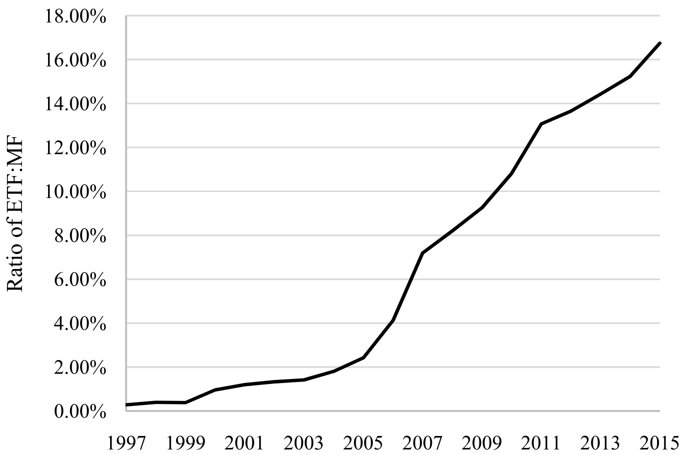

Fig. 1. Number and size of ETF and mutual fund markets. Panel A of this figure shows the total number of funds and the total assets invested in ETFs each month from January 1993 through December 2016. Panel B shows the ratio of the number of ETFs to the number of mutual funds between 1997 and 2015 as provided by the Investment Company Institute.

Though liquidating ETFs often maintain their full (or close to their full) portfolio holdings right up until the time of closure, concerns over liquidations are still wide-ranging.[3] ETFs boast improved tax efficiency compared to many mutual funds (Gastineau, 2004).[4] This is an attractive feature of ETFs, and it draws many tax conscious investors. Under normal circumstances, investors incur a capital gains tax liability when they sell fund shares (assuming the fund is held in a taxable account). The timing over this is something that investors have control over. However, when an ETF liquidates, investors face unexpected tax consequences. Additionally, an investor incurs search costs for new investments when an ETF liquidates. In a market with over 1500 ETFs to choose between, this can be a time-consuming task and can present challenges in finding a suitable substitute, especially if the ETF is used for hedging purposes. Furthermore, investors incur additional trading costs from purchasing the new investments.

To our knowledge, this is the first paper to study the determinants of ETF liquidations, although the mutual fund literature has several related studies on mutual funds. Brown and Goetzmann (1995) and Elton et al. (1996) find that mutual fund survival is less likely for funds with poor performance. However, it is not entirely clear that outperformance is required for a successful ETF, as large excess returns result from a failure to closely track an underlying index. While Clifford et al. (2014) provide evidence of return-chasing behavior among ETF investors, the lack of an active manager removes the motivation to find superior skill. In this regard, the flow to performance relationship documented in Ippolito (1992), Chevalier and Ellison (1997), and Sirri and Tufano (1998), is not as well-defined within the ETF market. Zhao (2005) looks at mutual fund mergers and liquidations and finds that

[3] For example, Elkhorn S&P 500 Capital Expenditures Portfolio ETF maintained their full portfolio of holdings from the announcement date through their final trading day, and Wisdom Tree International Hedged SmallCap Dividend Fund ETF liquidated just 5 of their 932 stock holdings between their liquidation announcement and their final trading day. Daily ETF holdings come from ETF Global.

[4] This is due to traditionally low turnover ratios for ETFs and their use of the Investment Company Act of 1940's provision allowing for "in kind" redemption. When an arbitrageur seeks to redeem shares of an ETF, the trustee distributes the underlying securities instead of cash. Since the trustee can choose to distribute shares with the highest capital gains, this allows ETFs to have lower capital gains distributions than mutual funds which do not take advantage of this redemption strategy.