Applied Financial Economics ›
Volume 22, 2012 - Issue 9

Original Articles

Have leveraged and traditional ETFs impacted the volatility of real estate stock prices?

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Pages 709-722 | Published online: 01 Mar 2012

Cite this article https://doi.org/10.1080/09603107.2011.624080

Abstract

Exchange Traded Funds (ETFs), including the innovative leveraged (long and inverse) types, and the ever more creative traditional versions, are accelerating in popularity as preferred investment and trading vehicles. Real estate, a major investment sector, has been made more accessible through these tools. This study investigates if the introduction of real estate ETFs is impacting the volatility of their underlying real estate stocks. Tests conclude that the introduction of leveraged (long and inverse) and traditional real estate and real estate related ETFs, linked to the Dow Jones US Real Estate and Financial Indices and the leveraged (long and inverse) ETFs, benchmarked to the Russell 1000 Financial Services Index, significantly increased the volatility in their component real estate stock prices. The leveraged ETFs tied to the Dow Jones US Real Estate and Financial Indices caused the highest volatility, approximately tripling the

volatility in the underlying real estate securities. Traditional ETFs were second, causing slightly more than a 70% increase in volatility, while the leveraged ETFs linked to the Russell 1000 Financial Services Index, having induced a 50% increase in volatility, were third. The increased volatility could not be attributed to any other external event.

Keywords:

ETFs REITs volatility real estate

JEL Classification::

G10 G12 G13 G14

Notes

[1] See ProShares press release, http://www.proshares.com/resources/news/1830296.html.

[2] See ETF Database, http://etfdb.com/compare/volume/.

[3] While XLF, Financial Select Sector Standard & Poor's Depositary Receipts (SPDR), was the first ever financial ETF, inception date 16 December 1998, it contained no real estate stocks. IYF was the first financial ETF that contained real estate stocks.

[4] See Deville (2008) for a more detailed explanation of this creation/redemption process.

[5] See Deville (2008) for a more detailed explanation of empirical evidence pertaining to the efficient pricing of ETFs.

[6] Some financial market observers and academics, however, believe that ETF and other basket security derivative- trading attracts hedgers, speculators and arbitrageurs into the markets, hence releasing new information through transactions and ultimately, helping the cash market to become more liquid and operate more efficiently. For example, see Karpoff (1987).

[7] See Deville (2008) for a more detailed explanation of the history and evolution of ETFs.

[8] See the Federal Reserve Board Regulations, http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=22f04e11d03377527cd5eabe69b90053;rgn=div8;view=text;node=12%3A3.0.1.1.1.0.1.12;idno=12;cc=ecfr, which states 'The required margin for each security position held in a margin account shall be. . . 50 percent of the current market value of the security or the percentage set by the regulatory authority where the trade occurs, whichever is greater'.

[9] See ProShares press release, http://www.proshares.com/resources/news/1830296.html.

[10] See FINRA press release, http://www.finra.org/web/groups/industry/@ip/@reg/@notice/documents/notices/p119906.pdf.

[11] See SEC press release, http://www.sec.gov/news/press/2010/2010-45.htm.

[12] See Reuters 29 March 2010 news report 'Finra eyes new rules for ETF products', http://www.reuters.com/article/idUSTRE62S4H520100329.

[13] See US SEC press release, http://www.sec.gov/investor/pubs/leveragedetfs-alert.htm.

[14] See Deville (2008) for a more detailed explanation of the ETF, in-kind, tax free, creation/redemption process.

[15] 66 securities were identified as real estate companies on both the IYF and IYR. One company was eliminated from these 66 securities for lack of complete data over the sample period. The study period, for each data sample group, covers a total of 128 trading days, which constitutes a 3 month trading window, pre- and post-ETF group introduction. This is consistent with Lin and Chiang (2005) who justified a short sample period as best for minimizing the likelihood of other uncontrolled factors confounding the findings.

[16] 78 securities were identified as real estate companies on both the IYF and IYR. This entire sample, without eliminations, was employed in the test, since data was available on all 78 securities over the sample period.

[17] The Markov-switching regime accounts for the non-normality of the ETF benchmark indices by utilizing a mixture-of- normal approach. For more details, see Ammann and Verhofen (2006).

[18] It should be noted that algorithm is converged for 270 out of the 283 stocks (94.4%) examined in Groups 1 to 4.