

EYES WIDE SHUT: EXCHANGE TRADED FUNDS, INDEX ARBITRAGE, AND THE NEED FOR CHANGE

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I. *Introduction*

Exchange Traded Funds (“ETFs”) have become a staple among investment products. Currently, there are billions of dollars invested in ETFs and that number has been growing consistently since ETFs were first introduced on American stock exchanges in the early 1990s.² After their introduction, ETFs went through a period of difficulty as their creators fought to get Securities and Exchange Commission (the “Commission” or “SEC”) approval for the new investment vehicle and to find a place for them in the market.³ Today, ETFs are regulated primarily by the Investment Company Act of 1940 (the “Act”) and take on a variety of different legal structures.⁴

Currently, the overwhelmingly majority of ETFs are structured to track indices to determine their investment portfolios.⁵ These indices range from the very popular S&P 500 to lesser known indices like the Russell 1000, MSCI 300, or foreign indices.⁶ While ETFs are known for their good returns and tax efficiency, their primary strategy of tracking indexes is problematic.⁷ Indices, especially those well known and followed, suffer significant losses

¹ J.D., Boston University, 2008; B.S. University of San Francisco, 2005.

² James L. Novakoff, *Exchange Traded Funds: A White Paper* (Feb. 24, 2000),

http://www.indexfunds.com/PFarticles/20000224_etfwhite_adv_veh_JN.htm.

³ *Id.*

⁴ Disclosure Regarding Market Timing and Selective Disclosure of Portfolio Holdings, 68 Fed. Reg. 70402, 70408 (proposed Dec. 17, 2003) (to be codified at 17 C.F.R. pt. 239).

⁵ Peter N. Hall, *Bucking the Trend: The Unsupportability of Index Providers’ Imposition of Licensing Fees for Unlisted Trading of Exchange Traded Funds*, 57 VAND. L. REV. 1125, 1126 (2004).

⁶ See generally iShares, <http://www.ishares.com/home.htm> (last visited Apr. 15, 2008) (lists over 50 ETFs tracking different indexes).

⁷ Bill Mann, *The Age of the Exchange Traded Fund*, MOTLEY FOOL, July 21, 2000, <http://www.fool.com/news/foth/2000/foth000721.htm>.

due to arbitrage.⁸ When an index changes its stocks, it often announces in advance what changes will be made.⁹ An index's criteria for making those changes may be very objective and transparent, thus, allowing arbitragers to make easy predictions regarding the changes.¹⁰ The indices policies allow arbitrageurs to use that knowledge and purchase the stock early, thereby depriving investors in the index of significant gains.¹¹ This arbitrage can cost some of the more popular and well followed index funds hundreds of millions of dollars per year.¹² ETFs are popular with small and individual investors, so these investors suffer when there are losses.

The solution to index arbitrage is to change the policies and structure of indices.¹³ These changes could be undertaken voluntarily by the indices or implemented by SEC mandate. Some changes may be the formation of silent indexes that do not announce the changes to be made until after the change has already been effected.¹⁴ Other possible solutions include allowing less time between the preannouncement of changes and their actual implementation, and promulgating less clear criteria regarding what companies will be included in the index.¹⁵ Additionally, ETFs could switch to tracking less popular and less well known indices that are less likely to be subject to significant arbitrage.¹⁶

Furthermore, ETFs should also be required to provide full disclosure to investors about the harmful effects of index arbitrage. Full disclosure is necessary to give investors the ability to make wise investment decisions, and is consistent with the purpose of the

⁸ Honghui Chen et al., *Index Changes and Losses to Index Fund Investors*, 62 FIN. ANALYSIS J. 31, 34 (2006).

⁹ *Id.* at 31.

¹⁰ Chen, *supra* note 8, at 32.

¹¹ *Id.*

¹² *Id.* at 34-35

¹³ *See generally id.* at 31.

¹⁴ Gary L. Gastineau, *Silence is Golden: The Importance of Stealth in Pursuit of the Perfect Fund Index*, 4 J. INDEXES 5 (2002), available at <http://www.etfconsultants.com/Silence%20is%20Golden%20Journal%20of%20Indexes.pdf>.

¹⁵ Chen, *supra* note 8, at 44 (describing how altering the timing of preannouncement of changes and implementation, as well as having more ambiguous criteria can reduce the effect of arbitrage).

¹⁶ *Id.* at 43.

federal securities laws.¹⁷ As ETFs make full disclosure more investors may demand that ETFs track indices not subject to significant arbitrage loss. This demand will shift ETFs towards using these indices and, therefore, force all indices to make changes that prevent arbitrage loss.

I. What is an Exchange Traded Fund?

An ETF is a “derivative [security] that represent[s] ownership in funds, unit investment trusts, or depositary receipts with portfolios of securities designed to track the performance and dividends of specific securities indices.”¹⁸ ETFs track the performance of the securities indices by holding the same securities as the indices.¹⁹ ETF’s are valued throughout the trading day, as opposed to mutual funds whose valuation takes place at the end of the day.²⁰ The fund’s value must be determined throughout the day because ETF’s “trade rapidly in response to changes in the value of fund components and ‘changes in prices of options and futures contracts on the funds.’”²¹

The parties involved in an ETF include “the index provider, the ETF creator and issuer, the securities markets, and the individual investors.”²² Standard & Poors’ Index Services, an index provider, creates investable and benchmark indices.²³ The index provider groups together a sampling of representative companies that fit the criteria for the particular index.²⁴ An ETF can then benchmark and track that index, allowing investors also to track that index. For example, one of Standard and Poor’s indices is the S&P 500, which includes a representative sampling of 500 leading companies in the US market.²⁵ After the index provider creates an index, an ETF

¹⁷ See Elizabeth L. Deeley, *Note: Viatical Settlements Are Not Securities: Is It Law or Sympathy?*, 66 GEO. WASH. L. REV. 382, 388 (1998).

¹⁸ Hall, *supra* note 5, at 1126.

¹⁹ *Id.*

²⁰ *Id.* at 1126-27.

²¹ *Id.* at 1127 (quoting Exchange Act Release No. 34-45,246, 67 Fed. Reg. 1527, 1528 (Jan. 11, 2002)).

²² *Id.* at 1127-28.

²³ Standard & Poor’s Index Services, http://www2.standardandpoors.com/spf/pdf/media/FactSheet_Indices_012508.pdf (last visited Apr. 15, 2008).

²⁴ Hall, *supra* note 5, at 1126.

²⁵ Standard & Poor’s Index Services, http://www2.standardandpoors.com/spf/pdf/media/FactSheet_Indices_012508.pdf (last visited Apr. 15, 2008).

creator and issuer create an S&P 500 Index Fund ETF, which tracks the performance of the S&P 500.²⁶ Thus, ETF investors have all of their money in one device, which tracks all the companies represented in the S&P 500 index.²⁷

II. History of Exchange Traded Funds

In 1976, Professor Nils Hakansson published a paper titled "The Purchasing Power Fund: A New Kind of Financial Intermediary," discussing a theoretical "'Purchasing Power Fund' [that] envisioned a new financial instrument made up of 'Supershares' that provided payoffs only for a pre-specified level of market return" and whose underlying assets were index funds.²⁸ Ten years later, Leland, O'Brien, Rubenstein Associates (LOR), believing there was market for such a product, "wanted to create a so-called 'SuperTrust' based on Hakansson's 'Supershares' ideas."²⁹ The SEC had not previously authorized securities that could be both open-ended and exchange listed.³⁰

To accomplish the objective of creating a SuperTrust, LOR petitioned "the SEC to allow the creation of an ETF as the underlying security for the SuperTrust."³¹ LOR chose the S&P 500 as the SuperTrust's underlying index and named the financial product the "Index Trust SuperUnit."³² LOR petitioned the SEC in 1990 and within the same year "the SEC issued the Investment Company Act Release No. 17809," which allowed the creation of the SuperTrust.³³ This SEC order "granted exemptions from the rules regulating unit investment trusts and . . . investment companies" and "to the rules governing the way securities are sold and exchanged."³⁴

In 1993, the SuperTrust and the Index Trust SuperUnit were introduced as investment products.³⁵ However, "even LOR's

²⁶ Hall, *supra* note 5, at 1129-30.

²⁷ See Investopedia Staff, Introduction to Exchange Traded Funds, <http://www.investopedia.com/articles/01/082901.asp> (last visited Apr. 15, 2008).

²⁸ Novakoff, *supra* note 2.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

simplified version of Professor Hakansson's Purchasing Power Fund turned out to be too complex for the marketplace."³⁶ Demand for products like the SuperTrust was not strong and it was eventually terminated in 1996.³⁷ The creation of modern ETF's dates back to the early 1990s, when "Nathan Most, a product development specialist at the American Stock Exchange (Amex), wanted to create an investment fund that traded like a stock but was also a depository receipt for the shares in the fund."³⁸ To create this fund Amex "made use of the Securities and Exchange Commission's (SEC) 'SuperTrust Order' to request use of the first authorized stand-alone index based exchange traded fund (ETF)."³⁹ Soon after the first ETF, the S&P Depository Receipts Trust Series 1 (SPDR) was designed and introduced in 1993.⁴⁰ In contrast to "the Index Trust SuperUnit, the SPDR gained acceptance in the marketplace and became the first commercially successful ETF."⁴¹

Financial companies continued to push the boundaries and create new and innovative ETFs. Later in 1993, Morgan Stanley issued Optimized Portfolios as Listed Securities (OPALS) on the Luxembourg stock exchange.⁴² OPALS are ETFs that track one of the various Morgan Stanley Capital International (MSCI) indices.⁴³ In 1995, an SEC order authorized an ETF that tracked the S&P MidCap 400 Index similar to the S&P 500 SPDR.⁴⁴ In 1996, Morgan Stanley, Barclays Global Investments and the American Stock Exchange jointly released the World Equity Benchmark Shares (WEBS), which was structured as an SEC registered investment company as opposed to a Unit Investment Trust (UIT).⁴⁵ WEBS also provided tax benefits that previous ETFs did not.⁴⁶

³⁶ *Id.*

³⁷ *Id.*

³⁸ Hall, *supra* note 5, at 1129.

³⁹ *The History of Exchange Traded Funds*, ETFGUIDE.COM, <http://www.etfguide.com/exchangetradedfunds.htm>.

⁴⁰ Hall, *supra* note 5, at 1129; *see also id.* (describing the development of SPDRs).

⁴¹ Novakoff, *supra* note 2.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

Finally, “[i]n 1997, the SEC issued an Order covering the Diamonds ETF which is based on the Dow Jones Industrial Index.”⁴⁷ In 1999 the SEC allowed the creation of an ETF that tracked the NASDAQ-100.⁴⁸ ETFs have continued to flood the market ever since.⁴⁹ While ETFs only had “assets valued at \$464 million in 1993, the year they first started trading,” their assets quickly rose.⁵⁰ As their popularity among investors increased, the number of ETFs in 2006 jumped to 205 with their total assets valued at \$315 billion, “an increase of \$90 billion over the prior year.”⁵¹

III. ETFs: Start to Finish

A. Creation of an ETF

To create an ETF a sponsor must file a plan with the SEC.⁵² The sponsor then contracts with an authorized participant to obtain the underlying assets needed to create an ETF.⁵³ An authorized participant is usually an institutional investor or a specialist who⁵⁴ is also able to “create or redeem ETF shares.”⁵⁵ Many times the sponsor and the authorized participant are the same person.⁵⁶

The authorized participant forms creation units for the ETF from borrowed shares placed in a trust.⁵⁷ A creation unit is “[a] set of shares or securities that makes up one unit of a fund held by the

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ ETF Industry Continued Strong Growth in 2006, <http://seekingalpha.com/article/27228-etf-industry-continued-strong-growth-in-2006> (last visited Apr. 15, 2008).

⁵⁰ Jerry Markham, *Mutual Fund Scandals—A Comparative Analysis of the Role of Corporate Governance in the Regulation of Collective Investments*, 3 HASTINGS BUS. L.J. 67, 81 (2006).

⁵¹ *Id.*

⁵² Jim McWhinney, An Inside Look At ETF Construction, <http://www.investopedia.com/articles/mutualfund/05/062705.asp> (last visited Apr. 15, 2008).

⁵³ Authorized Participant, <http://www.investopedia.com/terms/a/authorized-participant.asp> (last visited Apr. 1, 2008).

⁵⁴ *Id.*

⁵⁵ McWhinney, *supra* note 52.

⁵⁶ *Id.*

⁵⁷ *Id.*

trust that underlies an exchange-traded fund.”⁵⁸ A single creation unit is redeemable for a particular number of ETF shares.⁵⁹ Usually, an ETF creation unit contains 50,000 shares, but creation units can contain anywhere from 10,000 to 600,000 shares of stock.⁶⁰ The trust holding the shares then provides the authorized participant with the ETF shares.⁶¹ Since the authorized participant provides shares of stock to the trust and, in turn, the trust provides ETF shares, this is an “in-kind” trade with no tax consequences.⁶²

The ETF shares are then sold on the open market by the authorized participant.⁶³ As ETF shares are exchanged on the secondary market, the trust account continues to hold the shares used for the units’ creation.⁶⁴ Beyond the initial activity the trust fund only pays dividends to ETF shareholders and deals with the administration of the fund.⁶⁵ The creation units are not affected by the secondary market transactions.⁶⁶

After investors buy shares on the open market they can subsequently sell them in two ways. The secondary market is the first and most common way for investors to sell their shares.⁶⁷ The second way to sell ETF shares is to collect enough ETF shares to form a creation unit and exchange it for the individual shares of stock that the creation unit represented.⁶⁸ However, this option is primarily available to large institutional investors because of the significant number of shares required to form a creation unit.⁶⁹ When large investors utilize this option the trust account terminates the creation unit and the underlying shares are given to the investor.⁷⁰

⁵⁸ Creation Unit, <http://www.investopedia.com/terms/c/creationunit.asp> (last visited Apr. 15, 2008).

⁵⁹ *Id.*

⁶⁰ McWhinney, *supra* note 52.

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

B. The Investment Company Act of 1940 and the Legal Structure of ETFs

1. History and Development of the Investment Company Act of 1940

The Act emerged from the stock market crash of 1929 and the resulting Great Depression.⁷¹ Leading to the Act was a 1935 “SEC investigation, which discovered a number of abuses.”⁷² After the investigation, Congress created the Act in response to significant corruption and poor management of investment companies that had caused over one billion dollars in shareholder losses.⁷³ Congress focused on issues including fiduciary duties of fund managers and directors, self-dealing, embezzlement and providing false information to investors.⁷⁴ Accordingly, the Act imposed regulations restricting investment management companies in many ways, including asset valuation, configuration and governance, debt issuance, purchase and sale of their securities and affiliate transactions.⁷⁵

The preamble of the Act discussed the national interest in investment companies and the eight different ways that investors may be harmed.⁷⁶ One of the more notable and expansive declarations addresses the conflicts of interest apparent in a typical mutual fund complex:⁷⁷

[I]nvestors are adversely affected . . . when investment companies are organized, operated, managed, or their portfolio securities are selected, in the interest of directors, officers, investment advisors, depositors, or other affiliated persons thereof, in the interest of underwriters, brokers, or dealers, in the interest of special classes of their

⁷¹ Markham, *supra* note 50, at 75-6.

⁷² *Id.* at 76.

⁷³ H. Norman Knickle, *The Investment Company Act of 1940: SEC Enforcement and Private Actions*, 23 ANN. REV. BANKING & FIN. L. 777, 781 (2004).

⁷⁴ *Id.*

⁷⁵ Markham, *supra* note 50, at 76.

⁷⁶ Knickle, *supra* note 73, at 781.

⁷⁷ *Id.*

security holders, or in the interest of other investment companies or persons engaged in other lines of business, rather than in the interest of all classes of such companies' security holders[.]⁷⁸

A 1996 District Court opinion, interpreting Section 36 of the Act, discussed the problem of self dealing and Congress's intent when enacting the Investment Company Act.⁷⁹ The Court stated that the Act was created primarily to address the issue of self-dealing by fund advisors because those advisor's pecuniary interests often came into conflict with that of the fund shareholders.⁸⁰ To address this issue the Act required both structural changes, disclosure requirements and the use of independent directors to ensure that funds are acting in shareholders' the interests.⁸¹ Following these principles, the primary purposes of the Act include: "(i) requiring registration and disclosure; (ii) addressing the significant role of fund directors; and (iii) regulating conflicts of interest and fiduciary duties."⁸²

A major component of the Act focuses on investment companies' definition, classification and registration.⁸³ In determining whether a company is an investment company under the Act, a number of factors are considered, including whether the company primarily invests, reinvests or trades securities.⁸⁴ Section 8 requires that an investment company's registration statement provides general information and classifications.⁸⁵ Section 30 of the Act requires that intermittent financial statements are provided by the investment company to its shareholders and the SEC.⁸⁶ Furthermore, investment companies must provide the SEC with a yearly shareholder report and implement disclosure systems and procedures to guarantee the report's accuracy.⁸⁷ Importantly, under section 34(b) "material

⁷⁸ *Id.* at 782 (quoting 15 U.S.C. § 80a-1(b)(2) (2000)).

⁷⁹ Knickle, *supra* note 73, at 782.

⁸⁰ *Id.* (quoting *In re Nuveen Fund Litig.*, No. 94 C 360, 1996 U.S. Dist. LEXIS 8071, at *30-31 (N.D. Ill. June 5, 1996)).

⁸¹ *Id.*

⁸² Knickle, *supra* note 73, at 783.

⁸³ *Id.* at 783.

⁸⁴ *Id.* (quoting *SEC v. Fifth Ave. Coach Lines, Inc.*, 289 F. Supp. 3 (S.D.N.Y. 1968)).

⁸⁵ *Id.*

⁸⁶ *Id.* at 784.

⁸⁷ *Id.*

misstatements or omissions by any person and the failure to keep records required by section 31” can result in liability.⁸⁸

The Act regulates an investment company’s board of directors to address Congress’s trepidation regarding conflicted interests and the possibility of self-dealing.⁸⁹ Several sections of the Act address board composition and director tenure.⁹⁰ One significant aspect of that Act is that forty percent of the board must be disinterested and independent.⁹¹ Outside directors are also supposed to have a primary position in deciding whether fund agreements are in the shareholders’ best interests, determining the advisor’s ethics code, creating the 12b-1 plan and picking the outside counsel and accountants.⁹²

The Act provides regulations that govern director elections and prohibit the election of persons who have been convicted of crimes relating to their obligations as directors or have violated certain securities laws.⁹³ Section 15(c) of the Act requires that all available information regarding a contract between the fund and fund advisor be assessed by the directors before it can be approved.⁹⁴ Any of the directors’ conflicts of interest must be revealed to the independent directors so they can ensure that the fund’s transactions serve the shareholder’s best interests.⁹⁵

An additional breakthrough for the Act was the conflict of interest and fiduciary duty rules for investment companies.⁹⁶ Section 17, sometimes called the heart of the Act, disallows affiliates, investment advisors and investment companies from conducting transactions that might result in a violation of their fiduciary duty.⁹⁷ Specifically, “section 17(a) prohibits investment advisors or other affiliates of the investment company, or an affiliate of such person or entity from (i) selling or purchasing securities or any property from the investment company or (ii) borrowing money from the

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 785.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.* at 786.

⁹⁷ *Id.*

investment company.”⁹⁸ Section 17 also “prohibits affiliates and affiliates of affiliates, from receiving compensation for the sale of investment company property” and section 17(d) “prohibits affiliates and affiliates of affiliates from effecting any transaction where the fund is a joint or joint and several participant in the venture.”⁹⁹

There are many sections of the Act that work to mitigate the potential for insider abuse. Section 36(b) of the Act requires that fiduciary duties be applied to an investment advisor’s fees.¹⁰⁰ Section 12(d) is an anti-pyramiding section that prevents transactions that would create significant conflicts of interest within an investment company.¹⁰¹ Additionally, investment companies are not allowed to acquire more than three percent of any other investment company.¹⁰² Also, under Section 13, only investment companies’ shareholder vote may change fundamental policies.¹⁰³

2. Legal Regulation of ETFs

ETFs operate under the regulatory structure of the Act.¹⁰⁴ As investment companies, ETFs are usually registered within the Act as unit investment trusts or open-end investment companies.¹⁰⁵ Additionally, some ETFs are structured as grantor trusts. Under the Act a unit investment trust (UIT) is an

investment company which (A) is organized under a trust indenture, contract of custodianship or agency, or similar instrument, (B) does not have a board of directors, and (C) issues only redeemable securities, each of which represents an undivided interest in a unit of specified securities; but does not include a voting trust.¹⁰⁶

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 787.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Disclosure Regarding Market Timing and Selective Disclosure of Portfolio Holdings, 68 Fed. Reg. 70402, at 70408 (proposed Dec. 17, 2003) (to be codified at 17 C.F.R. pt. 239).

¹⁰⁵ *Id.*

¹⁰⁶ 15 U.S.C. 80a-4(2) (2000).

An ETF structured this way “does not reinvest dividends in the fund but instead” pays them out via a quarterly cash distribution.¹⁰⁷ A fund of this nature needs comply with diversification rules and therefore holdings of the ETF may be slightly different than the securities represented in the benchmark index.¹⁰⁸ Usually, UITs issue securities (often called “units”) that the UIT is willing to purchase upon request back from the investor at the security’s net asset value.¹⁰⁹ However, ETFs structured as UITs generally only redeem bundles of large shares, such as 50,000 shares or more.¹¹⁰ These shares only trade on the secondary market.¹¹¹

ETF’s can also be structured as open-end companies. Under Section 5 of the Act an “[o]pen-end company” means a management company which is offering for sale or has outstanding any redeemable security of which it is the issuer.”¹¹² Open-end companies are further divided into “diversified” and “non-diversified” entities, although most ETF’s remain diversified.¹¹³ Investors usually purchase open-end funds’ shares from the funds, based on the shares’ net asset value, rather than on the secondary market.¹¹⁴ ETFs, however, differ from traditionally structured open-end companies because ETF shares must trade on secondary markets.¹¹⁵ Investors can only redeem ETF shares in large blocks,

¹⁰⁷ *The History of Exchange Traded Funds*, *supra* note 39.

¹⁰⁸ Ronald DoLegge, *The History of Exchange Traded Funds*, RESEARCH MAGAZINE GUIDE TO ETF INVESTING, 2006, at 14.

¹⁰⁹ Securities and Exchange Commission, *Unit Investment Trusts* (May 8, 2007) <http://www.sec.gov/answers/uit.htm>.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² 15 U.S.C. 80a-5(a)(1) (2000).

¹¹³ 15 U.S.C. 80a-5(b)(1) (2000) (“Diversified company” means a management company which meets the following requirements: At least 75 per centum of the value of its total assets is represented by cash and cash items (including receivables), Government securities, securities of other investment companies, and other securities for the purposes of this calculation limited in respect of any one issuer to an amount not greater in value than 5 per centum of the value of the total assets of such management company and to not more than 10 per centum of the outstanding voting securities of such issuer.”).

¹¹⁴ Securities and Exchange Commission, *Mutual Funds* (May 14, 2007), <http://www.sec.gov/answers/mutfund.htm> (describing a traditional characteristic of an open-end fund).

¹¹⁵ *Id.*

usually of 50,000 shares or more.¹¹⁶ An open-end fund also reinvests dividends on the date of receipt and pays them out via a quarterly cash distribution.¹¹⁷ Additionally, open-end ETFs may loan out securities and use derivatives.¹¹⁸

Finally, ETFs can also be organized as grantor trusts. A grantor trust is an unregistered security issued by a financial company.¹¹⁹ A grantor trust holds a group of securities and the trust provides investors with all of the dividends paid and the voting rights that accompany the underlying securities.¹²⁰ Grantor trusts, “unlike other ETFs, can be bought and redeemed for the underlying securities in relatively small batches of 100 shares.”¹²¹ Grantor trusts do not continually track an index over time and do not rebalance their assets because the trusts’ holdings remain fixed.¹²² Consequently, when events like mergers, acquisitions and bankruptcies take place the trust’s holdings become less diverse.¹²³ Grantor trusts are not common legal structure for ETFs.¹²⁴

3. Benefits of ETFs and Popularity Among investors

ETFs are popular because they are tax efficient, have low fees and provide significant diversification in one investment vehicle.¹²⁵ ETFs have low cost because the annual fees charged by many ETFs are between 0.1% and 0.65% and are often deducted

¹¹⁶ *Id.*

¹¹⁷ *The History of Exchange Traded Funds*, *supra* note 39 (describing the dividends of an open-end index fund).

¹¹⁸ *Id.*

¹¹⁹ Etfconnect Grantor Trust, <http://www.etfconnect.com/education/glossary.asp#g> (last visited Mar. 24, 2008) (“A legal structure that is a security, although not issued by a company that has been registered with the SEC under the Investment Company Act of 1940. Holding a grantor trust is substantially similar to holding a basket of securities. The trust passes along all the voting rights and dividends associated with the underlying securities.”).

¹²⁰ *Id.*

¹²¹ *ETFs Not All From Same Mold*, FIN. ADVISOR MAG., May 22, 2006, http://www.fa-mag.com/news.php?id_content=4&idNews=641.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ Mann, *supra* note 7; *see also* Hall, *supra* note 5, at 1127 (explaining that ETFs are popular because they are low cost, diversified, and tax-efficient).

from the funds' dividends,¹²⁶ while many mutual funds often charge 1.25% or more in annual fees.¹²⁷ ETFs are also more tax efficient than actively managed mutual funds because the indices that the ETFs track are usually not constantly trading stocks.¹²⁸ Such ETFs are also usually well diversified because they track the performance of entire indices as opposed to only a certain subset of stocks.¹²⁹ This makes them attractive to passive investors who do not have the time or experience to purchase individual stocks.¹³⁰

4. Tracking Error Imbalances

ETFs are often criticized that they do not perfectly replicate the returns of the indices they track.¹³¹ While an ETF is tracking an index, the shares of the ETF might "trade at a 2% discount to the value of the shares of the companies contained" in the index.¹³² An imbalance is created between the net asset value of the ETF and the value of the companies contained in the index. This creates an opportunity for arbitrageurs to purchase or sell large blocks of ETF shares and exchange those shares for the underlying securities.¹³³ ETFs did not exist during any major stock market crash and, thus, the question remains whether "arbitrageurs [would] remain active enough in such volatile conditions to maintain balance between the ETFs and their NAVs."¹³⁴

The following example shows how arbitrage helps to maintain an ETF equilibrium. Assume that an ETF consists of two underlying securities: Security Y worth \$5 per share and Security Z worth \$5 per share.¹³⁵ Given the value of each underlying security it seems logical that the ETF share would trade at \$10.¹³⁶ However, the

¹²⁶ Mann, *supra* note 7.

¹²⁷ Walter Updegrave, *Get Cheap with Mutual Funds* (Nov. 1, 2007), <http://money.cnn.com/2007/10/31/pf/expert/expert.money.com/index.htm> (describing mutual fund annual fee charges).

¹²⁸ Mann, *supra* note 7.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ McWhinney, *supra* note 52 (describing an example to show how arbitrage maintains equilibrium in an ETF).

¹³⁶ *See id.*

ETF could be trading at \$10.10 or \$9.90 or another value not representative of the underlying shares.¹³⁷ Consequently, “investors buying shares of the ETF are paying more [or less] for the [ETF] shares than the underlying securities are worth.”¹³⁸

Arbitrageurs work to bring the ETF back into equilibrium by determining when the ETF shares do not accurately reflect the value of the underlying securities.¹³⁹ Arbitraders can profit by purchasing the securities underlying the ETF shares, exchanging those securities for creation units and then selling the ETF shares contained in the creation units.¹⁴⁰ This process can also take place when the underlying securities trade at higher prices than the shares of the ETF.¹⁴¹ To take advantage of this situation arbitraders purchase large blocks of ETF shares to form a creation unit and then exchange that creation unit for the underlying securities, which can be sold for a profit.¹⁴² These transactions by arbitrageurs work to rebalance the supply and demand for ETF shares so that they reflect the net asset value of the underlying securities.¹⁴³

C. Transparent Indices, Index Arbitrage and the Loss to Investors

As previously mentioned, most ETFs track a certain index, such as the S&P 500 or the Wilshire 5000. As the holdings of these indices change, so will the holdings of an exchange traded fund tracking the index. These changes can occur when the “status or ranking of a company changes because of such major corporate events as bankruptcy, liquidation, delisting, or merger” or “when a company ceases to meet the indexing firm’s criteria for inclusion in the index.”¹⁴⁴ To help managers align their portfolios with the indexes they track, many indices like the S&P 500 announce their changes before they become implemented.¹⁴⁵

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ Chen, *supra* note 8 at 31.

¹⁴⁵ *Id.*

One significant problem with announcing these changes before they are implemented is that it allows arbitrageurs to time the market.¹⁴⁶ Arbitrageurs know “the constraints placed on indexers vis-à-vis tracking error,” and “buy the stocks to be added to the index when the addition is announced with the expectation of selling the stocks to indexers at a higher price on the effective date.”¹⁴⁷ Moreover, after announcements are made regarding the index changes, arbitrageurs short sell securities that are expected to be deleted and repurchase them at a later date for lower prices¹⁴⁸ Arbitrageurs may also purchase stocks that have been deleted after their prices have dropped and hold them until the price increases.¹⁴⁹

The problem is that “arbitrage returns are realized at the expense of index fund investors” and investors are unaware of the index arbitrage problem or they may fail to appreciate its magnitude and consider it better than “the alternative of removing managerial constraints.”¹⁵⁰ Given that almost all ETFs are based on some sort of index this becomes a problem for ETF investors. Many ETF investors are not large institutional investors, but are individuals¹⁵¹ who do not know about this problem and who do not have the ability, resources or expertise to avoid being hurt by the losses caused by such arbitrage.

The S&P 500 and the Russell 2000 are two of the most popular indices and, not surprisingly, many ETFs track these indices. Studies show that changing the make-up of stocks held in these indices results in arbitrage, which creates a negative change in the returns of these indices.¹⁵² Changes in the indices occur for several different reasons. First, involuntary changes “occur when companies cease to exist publicly because of bankruptcies, liquidations, delistings, leveraged buyouts, or mergers.”¹⁵³ Second, a voluntary change occurs “when constituent companies do not meet the

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 32.

¹⁵¹ Michael Krause, *Why ETFs Are Soaring In Popularity Among Individual Investors*, SEEKING ALPHA, Apr. 3, 2007, <http://seekingalpha.com/article/31372-why-etfs-are-soaring-in-popularity-among-individual-investors>.

¹⁵² See generally Chen, *supra* note 8, at 31.

¹⁵³ *Id.*

indexing firm's criteria for inclusion."¹⁵⁴ Each indexing company has different criteria for changing its indices. Currently, Standard & Poor's removes companies from its index if they fail to "represent its industry" or if the industry is no longer important to the U.S. economy.¹⁵⁵ Alternatively, Frank Russell Company deletes from its indices if the market capitalization rises or falls beyond a certain level, if the stock price changes dramatically or if the number of shares available for investment (float) decreases or increases beyond a predetermined level.¹⁵⁶

Inclusion in one of these popular indices requires a different set of criteria. For example, S&P considers four different factors.¹⁵⁷ The company must be sufficiently liquid, it "must not be concentrated in a single or few entities," the company should be lucrative and finally, it should play an important role in a major U.S. industry.¹⁵⁸ Generally, additions to the S&P 500 take place at the same time as deletions in order to keep the number of companies held at 500.¹⁵⁹ Alternatively, the Russell index funds only add and delete companies from the index once a year on the last Friday in June.¹⁶⁰ If a company ceases to exist before that time, another company is not added until June, and if a company fails to meet the criteria at a given time it is not removed from the index until June.¹⁶¹

Each index presents different opportunities for arbitrage because of the different way each selects and deletes stocks. The S&P 500's changes are fairly unsystematic and subjective, which thereby forces arbitrageurs to trade only between the time the changes in the index are announced and the day the changes are actually made.¹⁶² Since the S&P 500 might add or remove a company from the index based on performance or other factors that are not entirely predictable, arbitrageurs are less likely to guess or interpret through research which stocks will be deleted or added to the index and therefore must await the announcement. Arbitrageurs, however, have a better opportunity to determine when changes will be made in the

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

Russell 2000 since the factors used focus predominantly on the market capitalization of a company.¹⁶³ Moreover, arbitragers have more timing opportunities with small capitalization indices because there are more changes in them each year (25% of the companies in the Russell 2000 change annually, compared with only 5% of the companies in the S&P 500).¹⁶⁴

A study of returns based on changes in the S&P 500 selected 303 additions and deletions between 1989 and 2002, but excluded companies that were added or deleted because of a “significant contemporaneous event” or when the change happened due to an anticipated corporate event and for the deletion of foreign companies, which occurred because of a change in Standard & Poor’s policy.¹⁶⁵ The researchers focused on the abnormal returns for a given stock that was added or deleted to the index. When a stock was added, the “mean abnormal announcement-day return for an addition was 5.12 percent, but the added stock continued to appreciate between announcement and the actual change, accumulating a total abnormal return of 8.37 percent.”¹⁶⁶ When companies were deleted from the S&P 500, the loss after the change was made known was 8.48% and the decline continued as an additional 5.62% was lost between the date of announcement and the date the change was effected.¹⁶⁷ However, when a company was deleted, the ETF did not experience a remaining loss after sixty days, which means there was no or little long term effect, but in the short term the loss was 15.62%.¹⁶⁸

A study of the Russell 2000, between 1996 and 2002, indicated upward pressure on a stock before it was added to the index.¹⁶⁹ Specifically, between March and June when a stock was to

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* (“Our initial sample of S&P 500 changes consisted of 303 additions and 303 deletions for the October 1989-December 2002 period . . . First . . . we excluded companies whose addition to or deletion from the index was caused by a significant contemporaneous event or anticipated likely major corporate event (restructuring, bankruptcy, merger, etc.) based on an inspection of news reports over three months prior to the announcement. Second, we excluded the involuntary deletion of foreign companies in July 2002 as a result of a change in Standard & Poor’s Policy.”).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

be added to the Russell 2000 it increased 20%.¹⁷⁰ However stocks that were expected to be deleted dropped about 9% during those same months.¹⁷¹ Ultimately, the added companies lost 7% the month after the addition was effected.¹⁷² Another study focused solely on the month of June when the Russell 2000 index adds companies. The results showed that “added companies gained in June, as price pressure built in anticipation of buying by index funds upon reconstitution, and then lost in July and August, as the added companies returned to price levels based on their fundamentals” and similarly, stocks that were deleted declined the month of deletion, but gained during the following two months to reflect their fundamentals.¹⁷³

Arbitrage pressure on the stock caused significant losses to investors. To calculate this loss the researchers determined that “an average of 20 additions and 6 deletions occurred every year from 1989 through 2002 for the S&P 500.”¹⁷⁴ The research showed that “[i]n dollar terms, based on the \$1.1 trillion indexed to the S&P 500, the loss to index fund investors was” \$440 million.¹⁷⁵

The Russell 2000 experienced an average of 550 additions and 375 deletions per year.¹⁷⁶ The size of each company added to the index averaged \$369 million and the size of deleted companies averaged about \$415 million.¹⁷⁷ As calculated based on returns from July and August, the difference “was 3.12 percent for additions and 4.26 percent for deletions”¹⁷⁸ The research showed that index funds tracking the Russell 2000 lost 1.3% due to arbitrage.¹⁷⁹ This may not seem like a lot, but given that the Russell 2000 has \$43 billion indexed to it, the annual loss to investors was \$560 million.¹⁸⁰ Moreover, if all assets benchmarked to the index were taken into account, as opposed to only the passively indexed assets, the loss may be as high as \$3.43 billion.¹⁸¹

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.* at 34.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 35.

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

D. The Need for Change

Indices' transparency hurts investors. Arbitrageurs can predict additions and deletions to an index and, thus, cause losses to investors in the index.¹⁸² While institutional investors may be able to hedge against this loss, small and individual investors are losing millions of dollars. ETFs almost exclusively track indices. Additionally, ETFs are popular with institutional investors, like hedge funds, and with individual investors.¹⁸³ As previously mentioned, as of 2006, over \$315 billion are invested in ETFs and that number grows every year.¹⁸⁴ As more money is invested in index tracking ETFs, investors are likely to lose even more money due to arbitrageurs' exploitation of this transparency and flaws in index procedure. Analysts' diligence and hard work to determine bargains in the stock market should be accepted. However, using the procedural structure of an index to exploit future changes, and thereby deprive smaller and individual investors of hundreds of millions of dollars in profit should be stopped.

IV. Analysis

A. SEC Regulatory Changes Needed

Both the "the Securities Act of 1933 . . . and the Securities Exchange Act of 1934" were passed in response to the unethical conduct that was a factor in the 1929 stock market crash.¹⁸⁵ Congress intended for the Acts to encourage a system of full disclosure.¹⁸⁶ Specifically, these federal securities laws require full and precise disclosure of information that is deemed material so as to allow investors to make informed decisions about the merits or flaws of a particular investment.¹⁸⁷

Investors in ETFs that track indices have the right to know about the negative effects of arbitrage on their investment, and the money lost due to arbitrage. If the purpose of the federal securities

¹⁸² *See id.*

¹⁸³ Krause, *supra* note 151.

¹⁸⁴ Markham, *supra* note 50, at 80.

¹⁸⁵ Deeley, *supra* note 17, at 388.

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

laws is to provide full disclosure, such disclosure should include information about how arbitrage contributes to pecuniary losses by the index tracked. Each ETF (or the indices themselves) should undertake analysis to determine how arbitrage affects the index tracked and what effect arbitrage has on an individual's investment in the ETF. This analysis would include how much money the index lost due to arbitrage and how much money it lost on a specific investment. To show the consequences on an individual level, the ETF might show the amount lost on a \$10,000 investment.

Full disclosure will not only ensure that ETFs are regulated like other securities, but it might also work to move investors towards ETFs that are not negatively affected by arbitrage. An SEC order requiring this disclosure would be necessary to adequately protect individual investors. The ETF industry, and particularly the index industry, might object to such an order because they will have to incur additional costs when performing the analysis and, such disclosure would expose the current significant shortcomings of these indices. An SEC order requiring full disclosure about the effects of arbitrage would be the start of a longer process to change the way indices are structured and to alleviate the effects of index arbitrage on ETFs.

B. SEC Mandate for Silent Index Funds

One way to stop or minimize the effect that arbitrage has on index funds, is to make all index funds Silent. The key characteristic of a Silent Index is that additions or deletions in the index "are not made public until after its fund has had an opportunity to act on the index changes, i.e., to change the composition of the fund portfolio."¹⁸⁸ Moreover, Silent Indexes are designed to be used by only one ETF or mutual fund.¹⁸⁹ Additionally, a Silent Index is not meant to be a benchmark index, or to underlie multiple funds and it is not meant for derivative trading.¹⁹⁰ Therefore, while ETFs should be encouraged to track Silent Indexes, they will not entirely replace the role of benchmark indices like the S&P 500.

¹⁸⁸ Gastineau, *supra* note 14, at 5.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

One of the primary benefits of a Silent Index fund is that it does not incur unnecessary transaction costs.¹⁹¹ This is in contrast to benchmark indices that have multiple licensees who along with arbitrageurs predict the changes to the index in advance and profit from that knowledge while imposing losses on the funds tracking the index.¹⁹² As previously discussed, these benchmark indices lose hundreds of millions of dollars due to arbitrage and consequently are “often forced to buy high and sell low during the blizzard of rebalancing and related speculation.”¹⁹³ Silent Indexes can prevent arbitrage if they are not tracked by multiple funds.¹⁹⁴

One problem with a Silent fund is that it “will be less well known than similar benchmark indexes and, consequently, it may have a fund marketing penalty associated with it.”¹⁹⁵ The penalty may not be significant because popular benchmark indices lose so much due to index arbitrage that Silent Indexes will likely receive better returns than benchmark indices over the long term.¹⁹⁶ Additionally, as more investors become acquainted with Silent index funds and their benefits over popular benchmark indices, the funds will not need to advertise as significantly to increase investment in the tracking ETFs. Thus, marketing costs will decrease over time as the Silent funds become well-known.

ETFs’ use of Silent indices will decrease transactions costs and prevent investors from losing millions of dollars. The Silent index fund will prevent arbitrageurs from predicting the changes to an index or exploiting the knowledge gained from the announcement of changes. This prevention will ensure the integrity of ETFs and will protect small investors who do not have the expertise, resources, or ability to profit from this sort of arbitrage. Silent Index funds may not replace benchmark funds, but they are a necessary step towards protecting investors and preventing unfairness in the stock market.

ETF managers may not be willing to shift their funds from following widely known and arbitrated indices. Thus, the SEC may

¹⁹¹ *Id.* (“The Silent Index Fund is superior to any index fund based on a benchmark index because benchmark index funds incur unnecessary transaction costs.”).

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* at 6 (describing a fund marketing penalty as the costs associated with marketing a new and unknown fund.”).

¹⁹⁶ *Id.*

need to take actions to implement the use of Silent Index funds. The SEC may issue an order that new ETFs follow Silent Index funds so as to decrease the number of investors negatively affected by arbitrage. This order would likely require a long SEC comment period before the order could be executed. The order might prevent individual investors from investing in ETFs that are significantly affected by arbitrage, but would still allow institutional investors to invest in non-Silent index funds. Institutional investors likely have both the resources and expertise to alleviate or prevent the negative effects of index arbitrage.

Older ETFs could be grandfathered and allowed to continue to track non-Silent arbitrated indices. This system would create a two-tiered structure that provides two types of ETFs. One tier would provide ETFs that track Silent Indices. A second tier would provide older ETFs, which track indices that suffer significant losses from index arbitrage (although there might be an exodus from these older ETFs in favor of those that track Silent Indexes). While an SEC order requiring Silent funds may be necessary to ensure implementation, it may do more harm than good because an order will limit investors' options. Consequently, this SEC order should be the last option in the attempt to implement Silent indices.

C. Opaque Criteria

Currently, almost all major benchmark funds announce some criteria for including stocks in the fund. This criterion is necessary to inform the investor what the fund will contain. However, by announcing easily identifiable and quantifiable criteria, it allows arbitrageurs to predict changes to the index and front-run those changes. To protect small investors better from the losses caused by arbitrage, ETFs should track indexes that use opaque standards for making changes that are not easily predicted by arbitrageurs.¹⁹⁷ While there should be some set standards for making changes so that investors have a general idea about what stocks will be added or deleted from the index, the standards need not be so specific that they can be predicted by an investor who can then front-run the change to the index.

For example, “[b]ecause the criteria for changes to the Russell indices (and some other indices) are specified unam-

¹⁹⁷ Chen, *supra* note 8, at 44.

biguously, arbitrageurs can easily and accurately predict changes.”¹⁹⁸ Whereas, the subjective factors that the S&P 500 considers for changes to the index helps to prevent arbitragers from accurately predicting the additions or deletions.¹⁹⁹ Indices should use varied criteria to make changes to continue to have both disclosure to investors about companies included in the fund, and to prevent front-running the index changes. The varied criteria might include a limited amount of more predictable criteria such as market capitalization, but this would be supplemented by more oblique requirements such as being a “market leader” or having an “innovative product line.” Thus, investors would know that only mid-capitalization companies would be included in the fund. Of those mid-capitalization companies, there would be a variety chosen based on factors other than specific market capitalization. ETFs and their investors will be well served by tracking indices that “[i]ntroduc[e] limited subjectivity into the selection process [that] would reduce predictability and the turnover associated with index changes every year.”²⁰⁰

D. Limit Time between Announcing and Implementing Changes

Indexes generally announce in advance the changes they plan to make.²⁰¹ Preannouncement of changes allows arbitrageurs to front-run the changes and purchase the stock early, thereby causing significant loss to investors. Indices state that this preannouncement is needed “to ‘ease order imbalances’ that are likely to result from large transactions initiated by indexers.”²⁰² At present, there may be no full solution to this issue.²⁰³ However, indices should make the

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ *Id.* at 31.

²⁰² *Id.* at 44; see Trading-Glossary, Significant Order Imbalance, <http://www.trading-glossary.com/s0252.asp> (last visited Apr. 1, 2008) (defining an order imbalance as a large number of buy or sell orders for a stock that cause an abnormally wide spread between bid and offer prices, and often causes the exchange to halt the sale of the stock until significant balance has been reestablished.).

²⁰³ Chen, *supra* note 8, at 44.

preannouncements as close as possible to the actual changes in the index.²⁰⁴

Given that most markets are at least semi-efficient, stock arbitrageurs will still likely pick up and exploit preannouncement information. Therefore, indices should begin working on a solution to the problem posed by order imbalances. The solution may be to work with specialists to ensure there is not a wide spread between offer and buy prices, and that trading is not halted on a heavily traded stock. ETFs should veer away from tracking indexes that allow significant lag time between the preannouncement and the occurrence of changes because such indices only hurt investors.

Like other solutions to index arbitrage, index creators may not be receptive to changing their long standing policies that have led to arbitrage. Therefore, the SEC may need to require a more standard procedure for index change announcements so as to minimize opportunities for arbitrage. Preferably, an SEC order would set a limit as to how early the changes may be announced or would prohibit preannouncement by indexes. A prohibition on preannouncement would force indexes to work with specialists and to solve the problem posed by order imbalances. Additionally, the SEC could help to alleviate any barriers there may be in resolving the issue of order imbalances.

E. Greater Focus on Smaller and Unpopular Indices

While there will always be a demand for large popular indices, ETFs should focus on tracking smaller or less popular indices.²⁰⁵ For smaller and unpopular indexes, “the demand created by indexers does not have a significant impact on prices.”²⁰⁶ The particular benefit regarding these indices is that they avoid the significant index arbitrage loss that more popular benchmark indices suffer.²⁰⁷ ETFs tracking these indices will receive better returns for their investors because they will not suffer significant losses from arbitrage.

The problem with this solution is that as these ETFs and indexes produce better returns they will become more popular and

²⁰⁴ *Id.*

²⁰⁵ *Id.* at 43 (listing an open but rarely used index as a suggestion for improving index construction).

²⁰⁶ *Id.*

²⁰⁷ *Id.*

more subject to arbitrage.²⁰⁸ This means that the ETF managers must switch to another less popular index, thereby incurring transaction costs and tax penalties, or they must accept the losses caused by arbitrage.²⁰⁹ While coordination among different ETF managers would be difficult, the best way to prevent increasing popularity among indexes is to limit the number of ETFs that track the index. This limitation will quell the interest of arbitrageurs while still allowing some ETFs to track a particular index.

F. The Demands of ETFs and the Inducement of Change

Investors will likely move their investments into ETFs that do not suffer such negative consequences as more solutions to the problem of index arbitrage become available and full disclosure is made to investors about arbitrage losses. As investors look for ETFs that track indices which do not suffer from arbitrage, more indices will begin to realize the need to implement changes. Investors' demand will be the most efficient way to induce change among current index practices. The demand will also force the SEC to efficiently consider and approve the needed changes. It is likely that initially the SEC will need to require some of the changes that will help limit index arbitrage

V. Conclusion

Full disclosure and fair investing in the stock market are very important. ETFs are extremely popular investment vehicles with investment in them totaling hundreds of billions of dollars.²¹⁰ ETFs primarily track a certain stock index. However, inherent problems in the indices' structure allow arbitrageurs to exploit them.²¹¹ As ETFs grow in popularity it is essential that they invest in index funds that are less likely to be subject to arbitrage. It is also essential that ETFs use their influence in the market to encourage indices to make changes to their structures to avoid such arbitrage. Finally, the SEC must also take a proactive role in requiring the implementation of changes that will decrease the possibility of index arbitrage.

²⁰⁸ *Id.*

²⁰⁹ *Id.* at 43-4.

²¹⁰ Novakoff, *supra* note 2.

²¹¹ *See generally* Chen, *supra* note 8.

Indices and the SEC should take a variety of steps to prevent losses due to arbitrage. One solution may be to create silent indexes,²¹² which do not publicly announce the index's changes until they have already been implemented. Another solution may be to change the criterion under which changes are made by the index.²¹³ Indexes should make the criteria for changes more opaque in order to prevent accurate predictions by arbitrageurs.²¹⁴ Additionally, if changes by indexes are to be announced in advance they should be announced as close as possible to the actual change so as to limit the time that arbitrageurs have to front-run the change.²¹⁵ As an alternative to changes in the structure of the index, ETFs could also look to track less popular and less well known indices.²¹⁶

In addition to the changes in indexes, ETFs should be required to provide greater disclosure about the harm arbitrage causes to investors in indexes. Full disclosure leading to fairness in investing is one of the primary purposes and goals of the federal securities laws.²¹⁷ Therefore, ETFs should be required to publish in their prospectuses the effects of arbitrage on the indices they track and on the individual investor. This disclosure will give investors the opportunity to shift their investments away from ETFs that track indices significantly affected by arbitrage. This shift in demand for indices that minimize the effects of arbitrage will force ETFs to track these indices that best protect investors. Furthermore, such a strategy ensures fairness in the market.

²¹² Gastineau, *supra* note 14, at 5.

²¹³ Chen, *supra* note 8, at 44.

²¹⁴ *See id.*

²¹⁵ *Id.*

²¹⁶ *Id.* at 43.

²¹⁷ Deeley, *supra* note 17, at 388.