CHAPTER 1

ETFs from Evolution to Revolution

Exchange-traded funds (ETFs) have emerged from their fledgling beginnings in 1993 to a full-blown revolution in the mutual fund industry. The number of ETF offerings is accelerating each year. Since 2004, the number of ETFs available for investment has doubled in number about every eighteen months. It is not possible to predict when the growth will slow. There are reasons to believe, however, that the total number of ETFs will double or triple again before any slowdown occurs. As more people understand the benefits of ETFs and invest in them, other investors want to know how these unique products might fit into their portfolios.

The best place to begin a study of ETFs is at the beginning. This chapter highlights the events that led to the creation of ETFs, and how the marketplace has evolved over the decades. The chapter takes us to a point in the evolution where we are today, and looks at where the industry is likely to go in the future.

ETFs Are a Growth Industry

At the end of 1993, there was only one ETF on the market, with assets of $464 million. By the end of 1997, there were still only two ETFs trading on U.S. exchanges, with assets totaling $6.2 billion. Then the idea started to catch on. ETF issuance began to accelerate as more investment companies entered the marketplace. There are more than 25 companies currently issuing ETFs, offering more than 700 choices in the United States, with a total market value exceeding $600 billion. Several hundred more offerings await SEC approval.

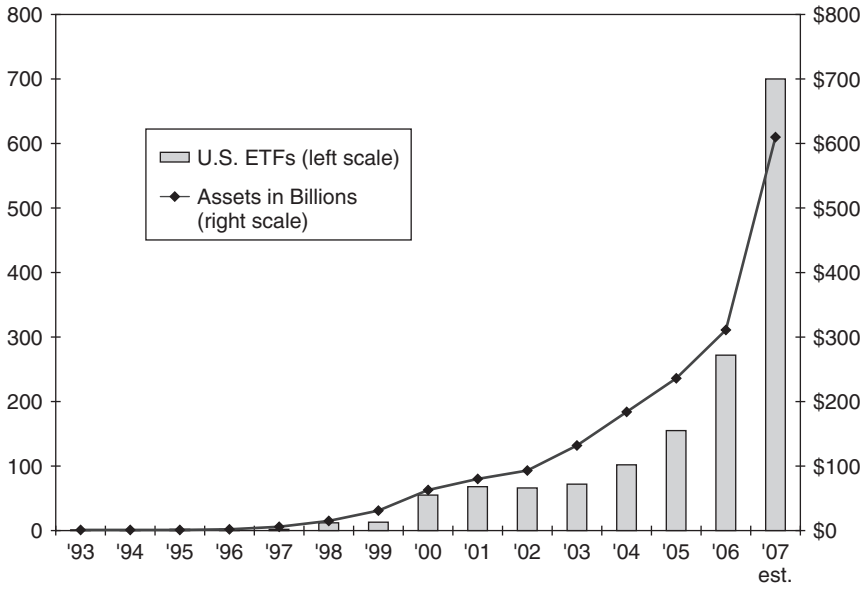

Figure 1.1 Growth of the U.S. ETF Marketplace

Source: Strategic Insight and Investment Company Institute

The acceleration in the growth of the ETF marketplace has been impressive, as is illustrated in Figure 1.1.

ETFs are the big growth story in the mutual fund industry. At the present time, more than 50 percent of all U.S.-traded ETFs have been on the market for less than two years, and the new product pipeline is filled to the brim as hundreds of new funds await SEC approval. New ETF companies are being created by venture capital firms looking to gain a foothold in the industry. A few of those new companies will stay independent, but most will be gobbled up by large mutual fund providers as they scramble to get into the business. Table 1.1 lists the major players in the market and their position in the industry.

Certainly there will be fund failures and fund mergers as the number of ETFs outstrips demand. There is a critical level of assets needed to make a fund profitable. That level of assets, however, tends to be lower than for other types of mutual funds because ETF operational expenses are lower (see Chapter 4). So far, the number of ETFs that have closed is surprisingly low.

Table 1.1 Major U.S. ETF Providers

Manager	Number of ETFs	Assets (Millions U.S. $)	Market Share
BGI & Barclays Capital	137	282,122	59%
SSGA	59	102,093	21%
Vanguard	32	32,257	7%
PowerShares	82	12,276	3%
Bank of NY	6	26,721	6%
ProShares	52	6,490	2%
Rydex	25	4,939	1%
WisdomTree	37	3,996	1%
Claymore	28	926	1%

Source: State Street Global Research, June 2007

A Short History of Mutual Funds

Understanding how ETFs evolved begins with a brief history of the mutual fund industry and the laws that govern it. Mutual funds are not a new investment. In fact, historians believe the idea is as old as the country itself. The first mutual fund originated in the Netherlands at the same time the United States was fighting for its independence from Great Britain.

Where it Began

The introduction of the mutual fund and the American Revolution had nothing to do with each other, except that after the Revolution, some of the money needed for U.S. reconstruction was financed by mutual fund investors from abroad. At that time, the United States was a fledgling emerging market, and foreign investors were speculating that the country would succeed. The idea is no different from U.S. investors today placing money in emerging countries that have just come through a political revolution.

A 2004 paper titled *The Origins of Mutual Funds* by K. Geert Rouwenhorst of the Yale School of Management documents the industry through the early 1900s. Rouwenhorst found that in 1774, a Dutch merchant and broker invited subscriptions from the public to form a pooled investment trust named Eendragt Maakt Magt, ''Unity Creates Strength.'' The creation of the trust followed a

financial crisis that occurred in that country during 1772 and 1773. It is common in the financial trade for innovation to follow financial crisis. We will later see how a financial crisis in the twentieth century lead to the innovation of ETFs in the United States.

Eendragt Maakt Magt was created to provide small investors with limited means to invest in profitable ventures and control risk through diversification. The trust was surprisingly transparent and well managed. The fund was composed of securities from Austria, Denmark, Germany, Spain, Sweden, Russia, and a variety of colonial plantations in Central and South America. More than one hundred different securities were regularly traded on the Amsterdam exchange, and at one time or another, most of those investments were part of the trust. Prices of the most liquid securities were made available to the general public in a biweekly publication. The publication also listed local real estate transactions, the announcements of dividends paid by securities traded on the Amsterdam exchange, and any new security offering.

The trust existed for nearly 120 years and still holds the record for the longest investment of its kind to have existed. The fund survived many financial and political crises, including a steep decline in the value of U.S. assets as that emerging market engaged in a costly civil war. The trust also passed through several management changes and a number of name changes. It was officially dissolved in 1893.

Eendragt Maakt Magt was not the only way for foreigners to invest in emerging markets. During the 1780s and 1790s more than thirty investment trusts emerged with a single objective: speculation on the future credit of the United States. Together with France and Spain, the Netherlands was one of the major financiers of the young United States.

Funds Come to the United States

Investment trusts were first introduced to U.S. investors during the 1890s. The Boston Personal Property Trust was formed in 1893 and was the first ''closed-end'' fund to trade on the U.S. stock market. The fund operated the same way today's closed-end funds work. The new fund offered shares to the public for a limited time, and then the offering was closed. Investors could not withdraw money from the fund, but they could sell shares on the stock exchange

and in private transactions. Investors thus had liquidity when they needed it.

Closed-end mutual funds raise cash for investment by selling a fixed number of fund shares. Then a fund manager invests the cash from the sale of shares in accordance with the fund's investment objective and policies. The shares are then listed on a physical stock exchange or trade in the over-the-counter market.

A closed-end fund does not need to liquidate securities to meet investor demands for cash or to purchase securities to invest the proceeds of investor purchases. Because the fund is not subject to the demands of investors for cash, the fund may invest in less liquid portfolio securities. For example, a closed-end fund can invest in securities traded in countries that do not have fully developed securities markets. Many closed-end funds used leverage to potentially boost returns (and always boost management fees). Leverage is still common in closed-end funds that trade on the markets today.

Like other publicly traded securities, the market price of closed-end fund shares fluctuates on the basis of supply and demand for the fund shares. The market price of a closed-end fund may not be the same as its underlying net asset value (NAV) because demand for the fund may be different from the demand for the underlying securities in the fund. By law, the fund company cannot make a market in its own fund, or issue or redeem shares when there is a difference in price between the shares and the underlying NAV. The premiums and discounts in price that occur in closed-end funds are a major disadvantage of that structure and held them back from becoming more popular.

Open-End Funds Introduced

The creation of the Alexander Fund in Philadelphia, Pennsylvania, in 1907, was an important step in the evolution toward an open-end mutual fund and solving the problem of price discrepancy in the closed-end structure. The Alexander Fund featured semiannual issues and allowed investors to make withdrawals directly from the fund at NAV prices. It was the first time a mutual fund had windows where old shares could be redeemed and new shares created at regular intervals.

The Massachusetts Investors Trust (MIT) became the first U.S. mutual fund with a modern open-end structure in 1924. MIT allowed

for the continuous issue and redemption of shares by the investment company at a price that is proportional to the NAV. Each day after the markets closed, open-end mutual fund companies computed the NAV of the underlying stocks, bonds, and cash in their fund, and determined a fair price per share. Investors received the NAV when they redeemed mutual fund shares. The NAV price was also quoted in newspapers on a regular basis.

The open-end method allows each fund company to create or redeem shares as needed to satisfy investor demand. Creation and redemption was done only once per day, at the end of the day, based on the fund's ending net asset value. The open-end structure quickly became the standard for mutual fund organization in the United States as State Street was quick to launch its open-end fund in the same year as MIT.

Investors paid a commission to buy shares of an open-end fund. That commission went to the salesperson selling the shares. During the 1920s, banks were the leading issuers of open-end funds and closed-end trusts. Tellers sold shares to depositors, and sometimes the bank would let the depositors borrow up to 100 percent of the money to buy shares. The liberal lending practices of banks ultimately lead to the demise of many small investors, and the introduction of the first Glass-Steagall Act. For nearly 75 years, banks have been precluded from selling stocks and mutual fund investments.

There continued to be innovation in the mutual fund industry during the Roaring Twenties. Scudder, Stevens and Clark launched the first no-load fund in 1928. A no-load fund has no commission. It is purchased and redeemed by the fund company at its NAV. 1928 also saw the launch of the Wellington Fund, which was the first mutual fund to include both stocks and bonds. Only stock funds existed before that time.

By 1929, there were 19 open-end mutual funds competing with nearly 700 closed-end funds in the United States. After the stock market crash, however, from 1929 to 1932, many highly leveraged closed-end fund investors were wiped out. The deep discounts to NAV at which closed-end funds were sold during the early years of the Depression caused dissent among investors, and that allowed open-end funds that redeemed at NAV to take center stage when the stock market recovered in the mid 1930s.

Government regulators also began to take notice of the antics in the mutual fund and trust industry. The creation of the

Securities and Exchange Commission (SEC) lead to the passage of the Securities Act of 1933 and the enactment of the Securities Exchange Act of 1934. These regulations put safeguards in place to protect investors. Companies issuing stocks had to submit regular financial statements. Mutual funds were required to register with the SEC and to provide disclosure in the form of a prospectus. A few years later, the Investment Company Act of 1940 put in place additional regulations that required more disclosures and sought to minimize conflicts of interest between fund issuers and the shareholders.

The Mutual Fund Industry Expands

Over the next few decades, the mutual fund industry continued to expand. During the 1950s, some 50 new funds were introduced. By 1954, the financial markets overcame their 1929 peak, and interest by a new generation of post–World War II investors emerged. The 1960s saw more investors coming into the marketplace as companies like Merrill Lynch, Pierce, Fenner, and Smith opened local offices on every street corner. Hundreds of new funds were established that attracted billions of dollars.

A bear market in 1969 cooled the public's appetite for stocks, and the reversal of fortune ended the industry's enthusiasm for issuing new funds. Money flowed out of mutual funds as quickly as investors could redeem their shares.

Crisis breeds innovation in the financial markets, and in the early 1970s, wise investors noticed that the performance of most mutual funds were lower than the return of the stock market. Investment costs became an important element of expected return. The concept of cost-cutting had an enormous impact on the direction of the mutual fund industry.

In 1971, Wells Fargo Bank established the first low-cost index fund, a concept that John Bogle would use in 1975 as a foundation on which to build the Vanguard Group. An index fund achieves the return of the stock market, minus a small amount for administrative costs.

The 1970s also saw the rise of the no-load fund. Several fund companies offered only no-load funds, and more traditional fund companies launched no-load alternatives to their existing load funds.

No-load funds and low-cost index funds, coupled with industry deregulation that in 1976 eliminated fixed commission rates at brokerage houses, saved investors billions of dollars annually. Lowering investor cost was a major contribution to the fund industry's turnaround later in the decade.

Boom-Bust

The 1980s and 1990s brought one of the longest bull markets in history. Interest in the stock market and mutual fund investing became a passion for many Americans. Many fund companies became household names, such as Fidelity and American Funds. Some mutual fund managers became public figures and icons in the industry as money poured into their funds.

The Munder NetNet Fund was an example of the boom. The fund was launched in 1995 to track the fledgling Internet industry. The fund manager was not an analyst or a money manager. He was the company's in-house technology installer. The guy was literally setting up workstations one day, and managing a portfolio the next day. There was not a lot of interest in the fund at the time because no one knew what the Internet was. But that did not last. By early 2000, the Munder NetNet Fund had over $12 billion in assets.

Just when it seemed that every barber and shoe store salesperson was a self-proclaimed expert on tech stocks, the bubble broke. Over a period of months, the technology market deflated to a mere fraction of its peak size as many once high-flying technology companies entered bankruptcy. Of course, Munder fired the manager of the NetNet Fund, as if the guy had anything to do with the bubble or the collapse.

The burst of the tech bubble in 2000 was followed by a string of mutual fund scandals that took the shine off the mutual fund industry's reputation. Shady trading patterns by fund managers and other behind-the-scenes dealings demonstrated that mutual fund companies were not always acting in their shareholders' best interests. It was clear that the fund companies were not the squeaky clean entities that they promoted themselves to be. What was needed was more transparency, more disclosure, and more accountability, all of which played right into the market for exchange-traded funds.

Back to the Crash of 1987

On Black Monday, October 19, 1987, the Dow Jones Industrial Average (DJIA) fell by more than 20 percent in a single day. It was the second-largest one-day percentage decline in stock market history. The largest one-day decline occurred on December 12, 1914, when the DJIA fell 24 percent. But there is an explanation for the 1914 event. The New York Stock Exchange had been closed for six months since the outbreak of World War I, and many people were waiting to sell on the opening bell.

Unlike the 1914 crash, the 1987 decline seemed to start from nothing of importance. No major news or events occurred before the drop and the political situation in Washington was relatively benign. President Reagan was in his seventh year in office, and aside from the Soviet occupation of Afghanistan, no major conflicts were threatening world peace.

The most popular excuse for the 1987 crash was selling by program traders. Program trading is an automated buy/sell system based on computer tracking of market movements. The strategy involved instantaneous execution of orders in large blocks of stocks and futures. Some economists theorized the collapse was caused by program trading, while others argued that the programs had little to do with it. Either way, the strategy was the scapegoat that ended up taking most of the blame.

In the aftermath of Black Monday, it became clear that large institutional investors did not have the liquidity they needed to quickly hedge positions. Consequently, markets around the world were put on restricted trading. When stocks went down, the futures and options markets were closed temporarily, and if stocks went down more, the stock exchanges were closed.

The options and futures markets were included because liquidity can dry up quickly in those markets during a crisis, and that can drive equities lower. Closing those markets was the first circuit breaker to stop the cascade of stock selling. If that did not work, the regulators decided that stock exchanges should simply stop trading.

Circuit breakers were a knee-jerk reaction to the problem of limited liquidity in a crisis, but there was no quick or easy way to solve the problem. What was needed was a simple and reliable way to hedge a portfolio of stocks, using an exchange traded vehicle.

Closed-end funds trade on a stock exchange, but there was a problem using them to hedge against rapidly falling stock prices. The market price of a closed-end fund is determined by supply and demand for that fund, not the underlying NAV of the stocks in the fund. Consequently, the market price of a closed-end fund can become severely discounted to its NAV when the markets fall. Depending on the fund and the suddenness of the decline, the discount to NAV could become as high as 30 percent, and it could persist for a long time. Sellers using closed-end funds as a hedge against stock positions could be selling at a built-in loss.

The reason closed-end funds frequently can have a discount or premium is because the fund cannot issue more shares to new investors when the fund is at a premium, or redeem shares from selling investors when the fund is at a discount. Nor can closed-end fund companies self-deal in their own funds. Since the number of shares is basically fixed, there is no ability to arbitrage the difference between the fund price and the NAV. If there were such a mechanism, it would bring the market price of the closed-end fund in line with the underlying NAV, as traders arbitrage fund shares for stock shares and vice versa.

Closed-end fund discounts and premiums would disappear if arbitrage were allowed to occur. For example, if a fund were allowed to redeem closed-end shares when those shares are selling at a discount to NAV, the manager could simultaneously sell the underlying securities that make up the fund at current market prices and make a risk-free profit for remaining shareholders in the fund. Or, if the market price of the fund was selling at a premium to NAV, the manager could sell more closed-end fund shares on the open market while simultaneously buying the underlying securities that make up the fund at a lower market price, resulting in a profit from risk-free arbitrage.

If the SEC allowed arbitrage in closed-end funds, that would be a great vehicle for institutions to hedge their portfolio market risks. They could sell closed-end fund shares in a decline, knowing that the price of those shares would be trading close to their NAV. Closed-end funds were not to receive that exemption, however, from the SEC. Thus, an entirely new vehicle was needed for traders to hedge their positions.

The First Exchange-Traded Funds

In the wake of the market crash of 1987, and by request of the securities firm of Leland, O'Brien and Rubinstein (LOR), the U.S. Securities and Exchange Commission started reviewing and rewriting securities regulations to make way for a new type of exchange-traded vehicle. In 1990, the SEC issued the Investment Company Act Release No. 17809, which ultimately paved the way for the formation of mutual funds that allowed for share creation and redemption during the day.

Specifically, the Release No. 17809 granted LOR the right to create and file for a new security called a ''SuperTrust.'' The product was an index fund of sorts designed to give institutional investors the ability to buy or sell an entire basket of S&P 500 stocks in one trade on a stock exchange. The SuperTrust structure had the share creation and redemption characteristics of an open-end fund and the trading flexibility of a closed-end fund.

SuperUnits traded on an exchange just like a closed-end fund. But unlike closed-end funds, if SuperUnits started to sell at a discount to its NAV, institutional investors would arbitrage the situation and profit risk-free. They would purchase the underpriced SuperUnits on the open market and simultaneously sell the individual securities in the unit. They would then turn in SuperUnits to the fund manager and receive the underlying stocks. Those stocks would cover the short position in the stocks that were previously sold. This risk-free arbitrage trade locked in a small profit for the institutional investor.

Although arbitrage sounds like a lot of work, it is actually quick, easy, and practically fully automated. The entire transaction can be accomplished in a few moments by running a computer program and making a phone call to a trading desk. A byproduct of the arbitrage was to neatly eliminate any discount and premium between the exchange-traded SuperUnit and its underlying securities.

LOR filed for their SuperTrust securities in 1990, and on November 5, 1992, the SEC completed their regulatory review. Long delays are common at the SEC when filing for any new security product. More on that point later.

The first SuperTrust was launched in December 1992 and had a maturity of three years. At that time, a new SuperTrust was to replace

the maturing units. Unfortunately for LOR, there was no second issue. Although the concept was a unique solution for institutional investors, one detriment to success was that SuperUnits had only institutional appeal. A large minimum investment size, the complexity of the product, and adverse tax rulings turned individual investors cold to the idea.

Where there is opportunity, there is innovation, and by the time SuperUnits hit the street, something better was already brewing. The American Stock Exchange took advantage of the Investment Company Act Release No. 17809 and petitioned the SEC to allow the creation of the first Standard & Poor's Depositary Receipts (SPDRs). The official name is SPDR Trust, Series 1, but they are better known as SPDRs S&P 500. State Street Global Advisors (SSGA) manages the fund, which began trading on the American Stock Exchange in January 1993.

The market value of SPDRs S&P 500 is kept very close to the underlying index through an arbitrage mechanism described earlier. Institutional investors have the opportunity to profit from a small mismatch in price between the market value of SPDRs S&P 500 and the stocks in the S&P 500 index. If one value is greater than the other, the expensive one is sold and the cheap one is bought. The arbitrage trade would be repeated over and over until the discrepancy between the ETF and its underlying value was so small that there is no profit left from arbitrage.

SPDRs S&P 500 was an immediate success. The fund brought in about $500 million in assets during the first year. One reason SPDRs succeeded where the SuperUnit failed is because individual investors could afford to buy them. Each unit trades at approximately one tenth the index value of the S&P 500 index. If the S&P 500 was quoted at 1600, the price of one SPDR unit is $160. That is a simple and elegant pricing structure that everyone understands, and at a price per unit that all investors can afford.

SPDRs also filled a big void in the brokerage industry. Stockbrokers needed a way to invest their clients' money in index funds because during the mid and late 1990s, their clients were transferring billions of dollars out of their firms to a low-cost Vanguard 500 Fund. SPDRs S&P 500 gave brokers an alternative to the Vanguard 500, which slowed the outflow of assets.

SPDRs S&P 500 are still the most popular ETF on the market today. Over $60 billion in assets are invested in the product.

Advances in ETF Structure

Morgan Stanley joined forces with Barclays Global Investors in 1996 to launch World Equity Benchmark Shares (WEBS) on the AMEX. The series of thirteen ETFs were benchmarked to different world equity markets ranging from Australia to Belgium.

The significant difference between SPDRs and WEBS is their structures. SPDRs are operated as a unit investment trust (UIT) while WEBS are organized as an investment company under the Investment Company Act of 1940. Under a UIT structure, SPDRs must replicate exactly the index they are designed to track. That means SPDRs S&P 500 must own all 500 of the S&P stocks in the appropriate weights. WEBS were organized as an investment company, and that gave the managers the flexibility to modify their holdings.

The investment company structure of WEBS allows fund managers the discretion to change their fund holdings as needed to work around difficult indexes that the funds were supposed to track. Some indexes are dominated by a few companies and cannot be replicated under UIT rules. In addition, many securities in broad stock and bond indexes are illiquid. Rather than buying all the securities in an index, a manager can sample the index using computer-driven optimization models. The ability to modify fund holdings under the investment company structure was an important innovation for the ETF market.

A second difference between a UIT structure and an investment company structure is the way company dividends paid into the fund are handled. Under the UIT structure, cash dividends paid by the underlying stocks are retained in a non-interest-bearing account until the end of the quarter and then distributed to shareholders as one lump sum. The investment company structure has more flexibility by allowing dividends to be reinvested in more stocks immediately after they are received by the fund. The investment company still pays quarterly dividends to shareholders like the UIT structure, but the reinvestment feature allows for a closer tracking to the indexes.

WEBS are responsible for other important innovations in ETFs. They made a specific advance in a method of arbitrage that acts to reduce the tax liability of individual investors holding WEB shares. SPDRs initially did not petition the SEC to use those tax-reducing strategies, but that has since been changed. The details of those tax benefits are discussed in Chapter 4. In another important market

change, WEBS were allowed to use the terms *index fund* and *ETF* together in their sales literature, a combination the SEC had not previously allowed with SPDRs.

The SEC approved the registration of Diamonds (symbol: DIA) in 1997, an SSGA-managed ETF benchmarked to the Dow Jones Industrial Average (DJIA). Diamonds incorporate the tax benefits of WEBS even though it was filed as a unit investment trust. The name recognition of the Dow Jones Industrial Average made DIA attractive to many individual investors. It was easy to invest in and easy to follow. Literally every newspaper, radio station, and television news program reports the performance of the Dow. That has driven DIA to the position of the fifth-largest ETF on the market with nearly $3 billion in assets and two million shares traded daily.

State Street changed ETF structures in 1998 when they filed for industry sector SPDRs. The firm opted to organize Sector SPDRs as an investment company to give the new funds all the tax benefits and dividend reinvestment benefits of an investment company. The nine ETFs are benchmarked to nine S&P 500 sectors, and only stocks included in the S&P 500 are included. The sectors are materials, health care, consumer staples, consumer discretionary, energy, financial, industrial, technology, and utilities (see Chapter 12 for more information).

The most popular ETF among individual investors in the later 1990s was a NASDAQ-100 index-tracking stock with the original symbol of QQQ. The fund was renamed PowerShares QQQ in 2007 and now has the symbol QQQQ. The security has the nickname Cubes. The heavy weighting in technology and communications stocks made the security an ideal speculative investment during the technology and communications boom of the late 1990s. Cubes was an immediate hit with brokers and the public. It was the first ETF that many individual investors bought.

After the tech bust in 2000, Cubes fell out of favor with individual investors and with it ETF investing lapsed into obscurity in the minds of the public. That did not stop the innovation, however. The ETF market was rapidly evolving, and between 2000 and 2003, many new products were introduced and new ETF companies were established.

Vanguard Weighs in with VIPERs. Vanguard introduced its first ETF in 2001 and called the product Vanguard Index Participation Equity Receipts (VIPERs). Up until this point, all ETFs were

stand-alone funds. Vanguard made VIPERs a share class to its existing mutual fund. It was the first time an ETF and an open-end fund were linked.

The difference between Vanguard's open-end Total Stock Market Index Fund and the new VIPERs share class is that the ETF trades during the day when the stock market is open and the open-end fund shares trade after the market is closed. Another difference is the settlement time of the trade. Open-end shares settle the next day whereas VIPER shares settle in three days. That created some accounting challenges for Vanguard that they have managed to work around.

In January 2002, Vanguard launched its second ETF offering, the Vanguard Extend Market VIPERs. This fund tracks the performance of the Wilshire 4500 Index, which includes all stocks except those in the S&P 500.

During 2006, Vanguard dropped the VIPERs name from all their ETFs and now refers to those shares as simple ETFs. At the beginning of 2007, Vanguard launched fixed income ETFs that are share classes of the existing open-end fixed income index funds. When the decision was made to launch fixed income funds, the word VIPERs no longer fit. Recall the E in VIPER stood for ''equity.''

No other mutual fund has launched an ETF share class in an existing index fund. Perhaps the reason why is that it would have to pay Vanguard a royalty on the product because Vanguard owns a patent on the structure. Perhaps some mutual fund companies will license the structure when actively managed ETFs become commonplace.

Cheaper by the Dozen. Another interesting event took place in May 2000 that was to become a trend in the ETF marketplace. Barclays Global Investors (BGI) launched 50 new iShares ETF products in one day. The funds covered a wide variety of U.S., international, and global stock benchmarks.

BGI's multifund launch was the start of quantity over quality in the ETF industry. Many flood-the-market ETF launches have since occurred from several fund companies. Rydex broke the record in 2006 by filing for nearly 100 new funds on a single day. The flood-the-market model is designed to get as much product on the street as possible as quickly as possible and let the chips fall as they may. Many of us in the industry describe the process as throwing Jell-O against a wall and seeing how much sticks. As of this writing,

the quantity-over-quality model is still alive and well as over 300 new funds await SEC approval.

The Quants Have Their Day. In 2002, PowerShares was founded by former Nuveen Investments sales and marketing executive H. Bruce Bond. His idea was to use quantitative indexes as benchmarks for ETFs.

Quantitative methods are designed to find securities that are believed to have superior performance potential. The strategies use sophisticated *black box* methods to analyze and rank securities from greatest potential to least potential. The highest-ranked securities are optimized to find the best combination that has the highest probability of beating the market.

The engine used in the first PowerShares ETF is called Intellidex methodology. The system uses 25 selection criteria broken into four main groups: risk factors, momentum, fundamental growth, and stock valuations. The methodology was initially developed by Bond and fine-tuned by Robert Tull and others at the American Stock Exchange (AMEX) at the time. The indexes are maintained by the AMEX to satisfy the SEC requirement for separation of index provider and fund manager.

Bond's timing was perfect. The ETF industry was ripe for the next evolution and quantitative offerings were it. PowerShare funds attracted more than $1 billion in assets by 2006, and the company's successes lead to a several-hundred-million dollar buyout by Amvescap, PLC.

What seemed like an incredibly high price paid for PowerShares caused mutual fund providers and asset managers who were not in the ETF industry to step back and rethink their future. Something had changed. The ETF industry was evolving at a faster pace that many realized. In retrospect, Amvescap probably got a very good deal when it bought PowerShares. Traditional mutual fund companies that were not in the ETF market were going to fall behind, and that has created an opportunity for new ETF companies with innovative ideas to grab market share.

Alternative Funds Debut. Commodities markets have been in existence for centuries. There are price indexes on commodity products going back thousands of years. Occasionally, there is a surge in

commodities prices that last a few years. When those spikes occur, it draws a lot of investor attention.

The mid 2000s was a boom time in commodity prices. The price of oil skyrocketed to over $70 per barrel in the summer of 2006, while gold flirted with $700 per ounce. The boom drew instant interest from individual and institutional investors, and that pushed ETF companies into action. New funds were launched that tracked the price of oil, gold, and silver. In addition, a number of ETFs were launched that tracked various commodities indexes such as the S&P GSCI (formally the Goldman Sachs Commodities Index) and the Dow Jones AIG Commodities Index.

Currency funds were introduced with the launch of Rydex CurrencyShares ETFs in 2005. The Euro Currency Trust (symbol: FXE) was designed to rise in value when the Euro strengthens in relation to the U.S. dollar and fall when the Euro weakens. Additional currency market ETFs were added by Rydex in 2006 and 2007. Barclays Bank joined the currency party with the launch of its iPath ETNs, which is an innovative product that converts ordinary income into long-term capital gains.

Figure 1.2 illustrates the number of new ETFs launched each year since SPDRs' inception in 1993. The ETF issuance boom has accelerated every year since 2002, with tremendous growth occurring in 2007. As of mid 2007 there were nearly 400 new funds in SEC registration.

There is no reason to believe the number of ETFs launched will abate for several years, especially with the introduction of actively managed ETFs (see Chapter 5). Morningstar reports that there are over 6,000 distinct open-end mutual fund portfolios on the market and several of those portfolios have multiple share classes. If the open-end marketplace is any indication of where ETFs are heading, there are many years of rapid growth ahead for this industry.

The Future of ETFs

The ETF market is moving at such speeds that today's unique innovations will likely be overshadowed by tomorrow's new and bold idea. The opportunity for new ETFs is limited only by the imagination and ingenuity of the minds of those who create them. Here are some categories for growth:

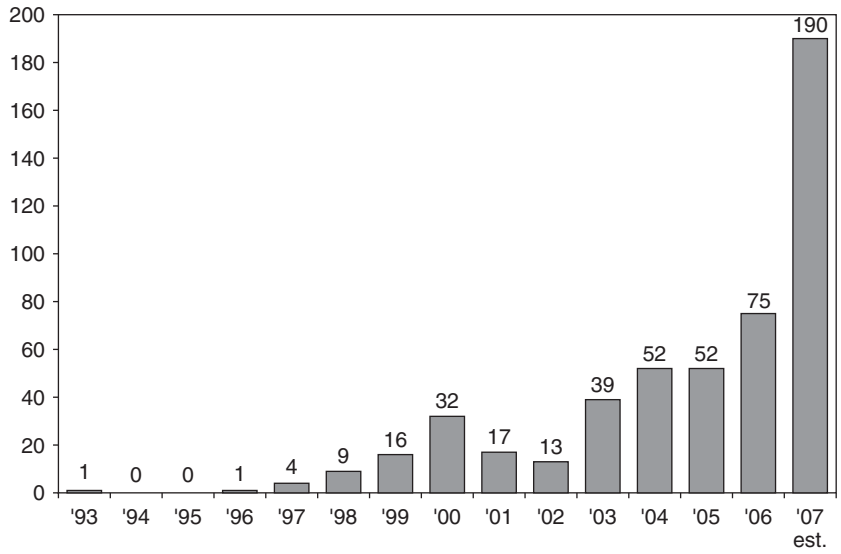

Figure 1.2 New ETFs Launched by Year

Source: Strategic Insight and Investment Company Institute

- Inexpensive hedge fund ETFs could be an era of opportunity for fund providers. Hedge fund investing is a hot topic in the news today, and the opportunities for investment are moving downstream toward individual investors. Academics have already simulated the returns of sophisticated hedge fund strategies, using widely traded derivatives such as futures and options. Those are the tools ETF companies can use to create synthetic hedge fund strategies for the masses.
- Are you buying or selling a home? Home price ETFs that track the housing market may be coming soon. There are already indexes that track housing markets, and derivatives that trade on that data. The indexes are divided into geographical regions and home types, such as condominiums in Miami and single family homes in Phoenix. ETFs benchmarked to these indexes would allow you to hedge against a rise in the price of your future home, or protect home equity from decline in the event of a housing slowdown.
- Worried about your job and making that mortgage payment? Or are you betting against others making their payment?

Perhaps we will see mortgage default ETFs based on increased home mortgage defaults or a decrease in defaults.

- Scared about college tuition increases? Maybe ETFs will be available to hedge tuition increases and allow you to lock in junior's college costs. What about grocery ETFs for those who believe the price of food will increase, or drug ETFs to bet on the price of pills? How about Social Security or Medicare ETFs to hedge a cut in benefits? The sky could be the limit with airfare ETFs to hedge the future price of airline tickets.

Some of these ideas may seem far-fetched, but they are possible. If there is demand, money management fees can be made. The only four factors needed for ETF creation are: a market index to use as a benchmark, liquid and marketable underlying securities that make up the ETF, successful passage of the idea through SEC registration, and market participants.

The biggest delay is SEC approval of new products. Many times existing regulations need to be changed to accommodate the idea, and that can take many months. Table 1.2 lists the time in registration for three different ETF structures. SPDRs took the SEC 28 months to approve. After the regulators studied the concept and approved it, follow-on ETFs using the UIT format were approved much faster. Things get easier once the SEC understands. Details on the three structures are listed in Table 1.2.

Why does it take the government so long to approve a new fund? It is the SEC's responsibility to protect the investing public from unscrupulous investment practices. That is why every new security must operate according to certain standards and meet certain levels of disclosure. It takes regulators time to learn about new products, and they are very thorough. In addition, the SEC asks for input from other governmental departments that might be affected.

The Future for Actively Managed ETFs. As of 2007, only a couple of dozen investment firms have launched products into the ETF marketplace. But I predict many more companies will join the race in the next few years, especially when the SEC allows full-fledged actively managed ETFs.

Actively managed ETFs do not follow an index. Instead, funds are invested in an actively managed portfolio of securities that is subjectively chosen by a fund manager. Active management is

Table 1.2 SEC Review Times for New ETF Structures

Product	Symbols	Structure	Year Filed	Months in Registration Review
SPDRs S&P 500	SPY	UIT	1990	28
Diamonds	DIA	UIT	1997	6
NASDAQ-100 Tracking Stock*	QQQQ	UIT	1998	6
Country Baskets (WEBS)**	Various	1940s Act	1994	19
Barclays iShares	Various	1940s Act	1999	12
Vanguard ETFs	Various	1940s Act	2000	6
streetTRACKS Gold	GLD	1933 Act	2003	18
iShare GSCI Commodities	GSG	1933 Act	2005	13

*Now PowerShares QQQ
**Now iShares
Source: SEC Filings

practiced by a majority of mutual fund companies and accounts for 90 percent of all open-end mutual funds on the market.

Many open-end companies spent many years and many dollars persuading their clients not to use index funds. So it would be close to heresy for many of those active management firms to launch ETF products benchmarked to index funds. But I suspect those active firms are anxiously awaiting an SEC-approved active ETF structure.

While the industry is eager to launch actively managed ETFs, the SEC has been very slow to approve the structure. The regulators expressed doubts about how the products would handle important issues like holdings disclosure and pricing.

Under current law, the index used as a benchmark for ETF management must disclose to the public the securities holdings and their weightings in the index while active open-end mutual fund holdings are only disclosed periodically, usually several weeks or months later. Using an ETF structure for active management means securities would be disclosed daily, and that might be a big disadvantage for actively managed ETFs because the manager's trading strategies would be completely exposed and could be exploited by other market participants.

Nonetheless, some firms have filed for actively managed ETFs that are transparent, in that they showed their holdings in real time. Those firms contend to offer full transparency of the fund's

holdings on a daily basis, despite the disadvantage of exposing its strategy. Chapter 5 provides more information on the budding actively managed ETF marketplace.

Summary

Exchange-traded funds (ETFs) are a revolutionary investment product that is taking Wall Street and Main Street by storm. Part stock and part traditional open-end mutual fund, ETF investors buy ETF shares on a stock exchange and receive a proportionate share of a professionally managed portfolio.

Each ETF is managed differently and each in accordance with the benchmark it follows. Like stocks, ETFs offer investors the flexibility to buy and sell shares during the day anytime the exchanges are open. Like open-end mutual funds, ETFs offer broad security diversification in a professionally managed account.

The ETF marketplace is evolving, even though the growth in the number of ETFs has been unprecedented in the last few years. Each year, the structure and depth of the offerings expand. There are now over 500 ETFs traded in the United States with a total value rapidly approaching $1 trillion in assets. It is my belief that there will be more than 1,000 ETFs on the U.S. market by 2010, and perhaps more than half of all mutual funds will be exchange traded by 2020. The ETF marketplace is an exciting industry, and the revolution is just beginning.