Exchange-Traded Funds (ETFs)

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Introduction

Exchange-traded funds (ETFs) can be a valuable component for any investor's portfolio, from the most sophisticated institutional money managers to a novice investor who is just getting started. Some investors use ETFs as the sole focus of their portfolios, and are able to build a well-diversified portfolio with just a few ETFs. Others use ETFs to complement their existing portfolios, and rely on ETFs to implement sophisticated investment strategies. But, as with any other investment vehicle, in order to truly benefit from ETFs, investors have to understand and use them appropriately.

Understanding most ETFs is very straightforward. An ETF trades like a stock on a stock exchange and looks like a mutual fund. Its performance tracks an underlying index, which the ETF is designed to replicate. The difference in structure between ETFs and mutual funds explains part of different investing characteristics. The other differences are explained by the type of management

style. Because ETFs are designed to track an index, they are considered passively managed; most mutual funds are considered actively managed. (For more insight, read *Mutual Fund Or ETF: Which Is Right For You?* and *Active Vs. Passive Investing In ETFs*.)

From an investor's perspective, an investment in an index mutual fund and an ETF that tracks the same index would be equivalent investments. For example, the performance of the SPDR S&P 500 ETF and a low-cost index fund based on the S&P 500 would both be very close to the to the S&P 500 index in terms of performance.

Although index mutual funds are available to cover most of the major indexes, ETFs cover a broader range of indexes, providing more investing options to the ETF investor than the index mutual fund investor. (For more insight, read *ETFs Vs. Index Funds: Quantifying The Differences*.)

This tutorial provides a basic understanding of what an ETF is and how it might be used by an investor.

Background

Compared to mutual funds, ETFs are relatively new. The first U.S. ETFs were created by State Street Global Advisors with the launch of the S&P 500 depositary receipts, also know as SPDRs ("spiders"). Although the first ETFs tended to track broad market indexes, more recent ETFs have been developed to track sectors, fixed income, global investments, commodities and currencies. According to Morgan Stanley, by the end of 2007, there were 1,171 ETFs trading worldwide, with assets approaching $800 billion.

ETFs represent shares of ownership of a unit investment trust (UIT), which holds portfolios of stocks, bonds, currencies or commodities. ETFs are often compared the mutual funds:

- Like a mutual fund, an ETF is an investment structure that pools the assets of its investors and uses professional managers to invest the money to meet clearly identified objectives, such as current income or capital appreciation. And, like a mutual fund, it also has a prospectus. An ETF delivers a prospectus to the retail purchaser or provides investors a document known as a product description, which summarizes key information about the ETF.

- A mutual fund investor purchases or redeems directly from the fund, at the mutual fund's net asset value (NAV), which is calculated at the end of each trading day. An investor who buys an ETF purchases the shares on

a stock exchange in a process identical to the purchase or sale of any other listed stock. Although most mutual funds are actively managed a significant number of index funds are available. Although most ETFs are passively managed - designed to track specific indexes - a few actively managed ETFs have been introduced.

- The creation and redemption process for ETF shares is almost the exact opposite to that of mutual fund shares. When investing in mutual funds, investors send cash to the fund company, which then uses that cash to purchase securities and issue additional shares of the fund. When investors want to redeem their mutual fund shares, the shares are returned to the mutual fund company in exchange for cash. The creation of an ETF, however, does not involve cash. (For insight, see *An Inside Look At ETF Construction*.)

Creation

ETFs are security certificates that state the legal right of ownership over a portion of a basket of individual stock certificates. Creating an ETF in the U.S. first requires a fund manager to submit a detailed plan to the Securities and Exchange Commission (SEC). The plan describes a set of procedures and the composition of the ETF.

Typically, only the largest money management firms, with experience in indexing, can create and manage ETFs. These firms are in touch with major investors, pension funds and money managers throughout the world, which have the pool of stocks required for ETF creation. The firms also create demand by lining up customers, either institutional or retail, to buy a newly introduced ETF.

The creation of an ETF officially begins with an authorized participant, also referred to as a market maker or specialist. These are middlemen who assemble the appropriate basket of stocks, typically enough to purchase 10,000 to 50,000 shares of the ETF. The basket of shares is sent to a designated custodial bank, which in turn forwards the ETF shares to the market maker for safekeeping. The minimum basket size is called a creation unit.

Redemption

To redeem the shares, an authorized participant buys a large block of ETFs, forwards them to the custodial bank and receives an equivalent basket of individual stocks. These stocks can then be sold on a stock exchange although they are usually returned to the institution that loaned the shares.

In theory, an investor can dispose of an ETF in two ways:

- Redeem the ETF, by submitting the shares to the ETF fund in exchange for the underlying shares

- Sell the ETF on the secondary market

In practice, the individual investors will do the latter. Because of the limitations placed on the redemption of the ETFs shares, they can not be called mutual funds.

Arbitrage
A important characteristic of an ETF is the opportunity for arbitrage. When the ETF price starts to deviate from the underlying net asset value (NAV) of the component stocks, participants can step in and take profit on the differences. If the ETF shares are trading at a discount to underlying securities (a price lower than the NAV), then arbitrageurs buy ETF shares on the open market. The arbitrageurs will then form creation units, redeem the creation units to the custodial bank, receive the underlying securities, and sell them for a profit. If the ETF shares are trading at a premium to the underlying securities (a price higher than the NAV), arbitrageurs will buy the underlying securities on the open market, redeem them for creation units, and then sell the ETF shares for a profit.

The actions of the arbitrageurs result in ETF prices that are kept very close to the NAV of the underlying securities. (For more insight, read *Arbitrage Squeezes Profit From Market Inefficiency*.)

Popular Families of ETFs

SPDRs
Standard & Poor's Depositary Receipts (SPDRs) are managed by State Street Global Advisors (SSgA). The most popular SPDR is the SPDR S&P 500 EDF (SPY), but State Street Global Advisors also has a series of ETFs that track the major S&P 500 sectors. They are called Select Sector SPDRs.

iShares
The iShares family of ETFs is branded and managed by Barclays Global Investors. According to Morgan Stanley, Barclays is the largest providers of ETFs in the world, providing a diverse offering of ETFs covering broad-based U.S., international, industry sectors, fixed income and commodities.

VIPERs
VIPERS ETFs are issued by Vanguard, better known for its diverse selection of index mutual funds. Vanguard Index Participation Receipts (VIPERs) offer a number of different ETFs, ranging form broad-based to industry sector as well as international and bond ETFs. (To learn more read, *What is the difference between iShares, VIPERS and spiders?*)

PowerShares

The PowerShares family of exchange traded funds is a relatively new provider of ETFs that offers equity ETFs representing broad market, industry sectors, and international indexes as well as fixed income, currency and commodities. The family, which offers the very popular QQQQ, or Nasdaq 100 ETF, also has a number of quantitatively based ETFs developed by using "dynamic indexing", which constantly searches for the best performing stocks within each index.

Features

The vast majority of ETFs are designed to track an index, so their performance is close to that of an index mutual fund, but they are not exact duplicates. A tracking error, or the difference between the returns of a fund and the returns of the index, can arise due to differences in composition, management fees, expenses, and handling of dividends. Let's take a look at some of these factors.

Buying and Selling ETFs Can Be Good for the Small Investor
ETFs enjoy continuous pricing; they can be bought and sold on a stock exchange throughout the trading day. Because ETFs trade like stocks, you can place orders just like with individual stocks - such as limit orders, good-until-canceled orders, stop loss orders etc. They can also be sold short. Traditional mutual funds are bought and redeemed based on their net asset values (NAV) at the end of the day. ETFs are bought and sold at the market prices on the exchanges, which resemble the underlying NAV but are independent of it. However, arbitrageurs will ensure that ETF prices are kept very close to the NAV of the underlying securities.

Although an investor can buy as few as one share of an ETF, most buy in board lots. Anything bought in less than a board lot will increase the cost to the investor. Anyone can buy any ETF no matter where in the world it trades. This provides a benefit over mutual funds, which generally can only be bought in the country in which they are registered.

Treatment of Dividends
An ETF typically pays out dividends received from the underlying stocks on a quarterly basis. However, the underlying stocks pay dividends throughout the quarter. Therefore, these funds can hold cash for various time periods throughout the quarter, even though the underlying benchmark index is not composed of cash. With dividend-paying ETFs, the cash ends up in your brokerage account instead, just like the dividend on a regular stock. If you want to reinvest that cash, you have to make another purchase.

Tax Efficiency
Because index ETFs are passively managed portfolios, they tend to offer greater tax benefits than regular mutual funds. They generate fewer capital gains due to

low turnover of the securities, and realize fewer capital gains than actively managed funds. An index ETFs only sells securities to reflect changes in its underlying index. Traditional mutual funds accumulate these unrealized capital gains liabilities as the portfolio's stocks increase in value. When the fund sells those stocks, it distributes the capital gains to its investors in proportion to their ownership. This selling results in greater taxes for mutual fund owners. (For related reading, see *How To Use ETFs In Your Portfolio*.)

Transparency
As mentioned, ETFs are designed to replicate the performance of their underlying index or commodity. Investors always know exactly what they are buying and can see exactly what constitutes the ETF. The fees are also clearly laid out. Because mutual funds only have to report their holdings twice a year, when you buy into a mutual fund, what you're getting may not be as clear.

Fees and Commissions
One of the main features of ETFs are their low annual fees, especially when compared to traditional mutual funds. The passive nature of index investing, reduced marketing, and distribution and accounting expenses all contribute to the lower fees. However, individual investors must pay a brokerage commission to purchase and sell ETF shares; for those investors who trade frequently, this can significantly increase the cost of investing in ETFs. That said, with the advent of low-cost brokerage fees, small or frequent purchases of ETFs are becoming more cost efficient. (For more insight, read *3 Steps To A Profitable ETF Portfolio*.)

Options
A number of ETFs have options that can be traded. They can be used to create different investment strategies in conjunction with the underlying ETF. This allows ETF investors to make use of leverage in their portfolios. (For more insight, read *Dissecting Leveraged ETF Returns*.)

SPDR S&P 500 ETF

The first, and most popular, ETF in the U.S. is the SPDR S&P 500 ETF (AMEX:SPY). It tracks one of the most popular indexes in the world, the S&P 500 Index. It is managed by State Street Global Advisors, one of the largest mangers of ETFs in the world. (For more insight, read *S&P 500 ETFs: Market Weight Vs. Equal Weight*.)

SPDR S&P 500 ETF Objective
The objective of the SPY ETF is to duplicate as closely as possible, before expenses, the total return of the S&P 500 Index. As of 2008 almost, the S&P 500

Index had 525 million shares outstanding, with total net assets of just over $73 billion. SPY trades on the American Stock Exchange (AMEX) and is one of the most actively traded stocks, regularly trading more than 100 million shares per day and sometimes over 400 million shares per day.

Characteristic of S&P 500 Index

The S&P 500 is a market capitalization index of 500 of the largest companies in the U.S. According to Standard and Poor's, it represents about 75% of the market capitalization of the total U.S. equity market. It is considered to be a large cap index.

The index is composed of 10 main industrial sectors as determine by the Global Industrial Classification Standard (GICS).

Performance of SPDR S&P 500 ETF

Year	S&P 500 Index	SPY ETF
1 Year	-4.68%	-4.67%
3 Year	8.23%	8.16%
5 Year	10.62%	10.56%
10 Year	3.89%	3.78%

Annualized returns as of S&P 500 Index and SPY ETF as of April 30, 2008

The SPY ETF tracks the performance of the S&P 500 index very closely; most of the different between them is accounted for by SPY's expense ratio.

For many investors, the SPY represents a good core equity holding, in part because of its low cost (expense ratio). For example, at a closing price of $139.27 on May 21, 2008, 400 shares would have cost an investor $55,708.00 before commission. The expense ratio is .0945% which translates into an annual cost to the investor of about $53, based on the current amount invested. (For more on this, see *10 Reasons To Make ETFs The Core Of Your Portfolio*.)

An investor could buy the SPY as a core portfolio holding to provide exposure to the U.S. stock market. Alternatively, an investor could combine it with other ETFs such as a small cap ETF, value-based ETF, or sector ETF to further customize the exposure to U.S. stocks. An active trader could also use this ETF to actively trade because it is exceptionally liquid, making it easy to buy and sell with little cost.

Active Vs. Passive Investing

Although indexing (a passive investment strategy) has been used by institutional investors for many years, it is still relatively new for the typical individual investor. Because ETFs use predominately passive strategies, the first question any investor should consider is whether to take an active or passive approach to investing. (For more insight, see *Active Vs. Passive Investing In ETFs*.)

Rationale for Active Investing

The predominant investment strategy today is active investing, which attempts to outperform the market. The goal of active management is to beat a particular benchmark. The majority of mutual funds are actively managed.

Analyzing market trends, the economy and the company-specific factor, active managers are constantly searching out information and gathering insights to help them make their investment decisions. Many have their own complex security selection and trading systems to implement their investment ideas, all with the ultimate goal of outperforming the market. There are almost as many methods of active management as there are active managers. These methods can include fundamental analysis, technical analysis, quantitative analysis and macroeconomic analysis.

Active managers believe that because the markets are inefficient, anomalies and irregularities in the capital markets can be exploited by those with skill and insight. Prices react to information slowly enough to allow skillful investors to systematically outperform the market.

Rationale for Passive Investing

Passive management, or indexing, is an investment management approach based on investing in exactly the same securities, and in the same proportions, as an index such Dow Jones Industrial Average or the S&P 500. It is called passive because portfolio managers don't make decisions about which securities to buy and sell; the managers merely follow the same methodology of constructing a portfolio as the index uses. The managers' goal is to replicate the performance of an index as closely as possible. Passive managers invest in broad sectors of the market, called asset classes or indexes, and are willing to accept the average returns various asset classes produce. (For related reading, see *Is Your Portfolio Beating Its Benchmark?*)

Passive investors believe in the efficient market hypothesis (EMH), which states that market prices are always fair and quickly reflective of information. EMH followers believe that consistently outperforming the market for the professional and small investor alike is difficult. Therefore, passive managers do not try to beat the market, but only to match its performance. (For background reading, check out *What Is Market Efficiency?*)

Passive or Active Management – Which is the Best Approach?
A debate about the two approaches has been ongoing since the early 1970s. Supporting the passive management argument are the researchers from the nation's universities and privately funded research centers. Wall Street firms, banks, insurance companies and other companies that have a vested interest in the profits from active management support the other side of the argument.

Each side can make a strong logical case to support their arguments, although in many cases, the support is due to different belief systems, much like opposing political parties. However, each approach has advantages and disadvantages that should be considered.

Active Management - Advantage/Disadvantage
The main advantage of active management is the possibility that the managers will be able to outperform the index due to their superior skills. They can make informed investment decisions based on their experiences, insights, knowledge and ability to identify opportunities that can translate into superior performance. If they believe the market might turn downward, active managers can take defensive measures by hedging or increasing their cash positions to reduce the impact on their portfolios.

A disadvantage is that active investing is more costly, resulting in higher fees and operating expenses. Having higher fees is a significant impediment to preventing a manager from consistently outperforming over the long term. Active managers, in an attempt to beat the market, tend to have a more concentrated portfolio with fewer securities. However, when active managers are wrong, they may very significantly under-perform the market. A manager's style could be out of favor with the market for a period of time, which could result in lagging performance.

Passive Management - Advantage/Disadvantage
The main advantage of passive investing is that it closely matches the performance of the index. Passive investing requires little decision-making by the manager. The manager tries to duplicate the chosen index, tracking it as efficiently as possible. This results in lower operating costs that are passed on to the investor in the form of lower fees.

A passively managed investment will never outperform the underlying index it is meant to track. The performance is dictated by the underlying index and the investor must be satisfied with the performance of that index. Managers are unable to take action if they believe the overall market will decline or they believe individual securities should be sold.

Index Funds Vs. ETFs

In much of the previous discussion comparing mutual funds to ETFs, the merits of actively managed mutual funds are compared to the passively managed ETFs. In some ways, it is like comparing apple to oranges. They have entirely different characteristics. If a passive approach is desired, an investor should then consider how best to implement it - by using index funds or exchange traded funds.

Index Funds and ETFs

Index funds have been available in the U.S. since the 1970s; ETFs were first traded in the U.S. in 1993. Although the number of index funds and ETFs are close, ETFs cover about five times as many indexes. Some of the newer ETFs track some indexes that are more appropriate for an ETF structure than for an index fund. Consequently, an investor might only be able to track an index by using ETFs because there are no index funds available that can track that same index

Costs

ETFs and index funds each offer advantages and disadvantages for managing the costs of the underlying assets. In some cases, the difference in fees might favor one over the other. Investors can buy no-load index funds without incurring any transaction costs. Investors buying ETFs will have to pay brokerage commissions.

Tax Efficiency

In nearly all cases, the structure of an ETF results in lower taxes versus the equivalent index fund. This is because the way in which ETFs are created and redeemed eliminates the need to sell securities. With index funds, securities are bought and sold, although with lower turnover than a typical actively managed fund. These transaction will trigger capital gains that have to be distributed to the unit holders. (To learn more, read *An Inside Look At ETF Construction*.)

Dividends

The nature of ETFs requires them to accumulate dividends or interest received from the underlying securities until it is distributed to shareholders at the end of each quarter. Index funds invest their dividends or interest income immediately. (For more insight, read *Advantages Of Exchange-Traded Funds*.)

Rebalancing

An investor with a portfolio of index funds or ETFs occasionally rebalances the portfolio, selling some of the positions and purchasing others. A portfolio containing ETFs incurs commissions by buying and selling the ETFs. Because the investor typically trades in board lots, getting the exact weightings of each ETF desired is practically impossible. This is especially true for small portfolios. With index funds, an investor can achieve exact asset allocation weightings

because the investor can purchase fractional units. No-load funds have no transaction costs. (For more on this topic, read *Rebalance Your Portfolio To Stay On Track*.)

Dollar-Cost Averaging
The technique of using ETFs for dollar-cost averaging - spending a fixed dollar amount at regular intervals on a portfolio - is generally impractical. The commission costs and the extra cost involved in buying odd-lot shares makes this strategy very expensive to implement. Mutual funds are a more suitable investment vehicle for dollar-cost averaging.

Liquidity
A lack of liquidity on some ETFs, resulting in an increase in the bid-ask spread, adds to the cost of trading ETFs. Also, the less popular ETFs are not likely to have the same arbitrage interest of other ETFs, resulting in a potentially larger difference between market prices and net asset value (NAV). Investors in index funds can always get the NAV at the end of the day.

Equity ETFs

The first ETF was developed to create diversified portfolios based on equity indexes. Because equities are a core asset class for investment portfolios, it is important for investors to understand the different choices available to ensure that the proper ETFs are deployed.

Broad-Based U.S. ETFs
U.S. total market and broad-based ETFs are designed to cover the whole U.S equity market. Although indexes like the Dow Jones Industrial Average or the S&P 500 are widely used, they represent only a subset of the overall market. For example, the S&P500 only covers about 75% of the U.S. market by market capitalization and it is dominated by large cap stocks.

Use of a total market ETF, therefore, allows a long-term investor to cover U.S. equities with a single ETF. Total and broad market ETFs tend to be inexpensive, with low expense ratios and fairly narrow bid-ask spreads. Because they are so broad, their volatility is generally less than that of a more focused equity ETF.

Examples of these broad-based indexes include:

- iShares Russell 3000 Index Fund (PSE:IWV)
- iShares Dow Jones U.S. Total Market Index Fund (PSE:IYY)
- SPDR DJ Wilshire Total Market ETF (AMEX:TMW)

All-World and All-World Ex-U.S.
An investor can now achieve global equity diversification by investing in one ETF. All world ETFs provide coverage on most of the stock exchanges in both developed and emerging markets. Versions of these ETF can represent the whole world including the U.S. (all-world) or excluding the U.S. stocks (all world ex-U.S.). For most U.S. investors who already own U.S. equities, an ETF that provides global coverage not including the U.S. is the preferred choice.

Examples of these ETFs include:

- iShares MSCI ACWI (All Country World Index) Index Fund ETF (Nasdaq:ACWI)
- SPDR S&P World ex-US ETF (AMEX:GWL)

Developed Versus Emerging Markets
Stocks in the developed world have considerably different characteristics than stocks in emerging countries, much like large cap stocks are different than small cap stocks. From a portfolio construction perspective, it makes sense to look at the following entities as three separate asset classes:

- Developed countries ex-U.S., such as iShares MSCI EAFE (Europe Australia , Far East) Index Fund (PSE:EFA)
- Emerging markets, such as iShares MSCI Emerging Markets Index Fund (PSE:EEM)
- U.S. equities

Sector ETFs
Sector ETFs allow investment in the stocks of different industrial sectors. Investors can use the sector ETFs either as building blocks for a portfolio or to make specific sector bets, like investing in energy or technology stocks. Building a portfolio with sector ETFs, versus a broad based ETF, can provide for more fine-tuning of a portfolio. Another advantage is rebalancing a portfolio on a regular basis. The process of selling those sectors that have outperformed and buying those that have underperformed - a sell high, buy low strategy - can improve performance. Using sector ETFs will allow you to avoid or minimize sectors that are over valued.

Sector ETFs tend to be more expensive than the broad-based ETFs. If an investor is building a portfolio using sector ETFs, the trading costs will be greater than buying a single, broad-market ETF. When using sector ETFs, it is best to not mix the different sector families.

Examples of two families of sectors, which are based on the traditional market capitalization indexes and their underlying sectors, are:

- Baclays iShares Dow Jones Sector ETFs
- State Street Global Advisors S&P Sector ETFs

Market Capitalization ETFs

One way of looking at stocks is based on their market capitalizations. Many experts divide the market into large cap, mid cap, and small cap stocks. Rather than buying a broad-based ETF, an investor can fine tune the strategy by buying three ETFs: a large cap, a mid cap and a small cap. This approach provides for greater customization opportunities than buying just one. An investor taking this approach should not mix the family of ETFs.

Examples of market cap ETFs include:

- iShares Russell 1000 Index Fund (PSE:IWB)
- iShares Russell 2000 Index Fund (PSE:IWM)
- SPDR DJ Wilshire Large Cap ETF (AMEX:ELR)
- SPDR DJ Wilshire Mid Cap ETF (AMEX:EMM)
- SPDR DJ Wilshire Small Cap ETF (AMEX:DSC)

Growth & Value ETFs List

Investors have the choice to buy ETFs based on whether the ETF consists of value stocks or growth stocks. In general, value stocks appear relatively inexpensive based on their current fundamentals. They typically have a combination of a low P/E ratio, low price to book value, and a high-dividend yield. Growth stocks appear more expensive on those measures because they are expected to show more growth of earnings, book value, and dividends in the future. An ETF provider that covers the entire market will categorize each stock as either value or growth, so a stocks can be in only one ETF. (For more insight, read *Venturing Into Early-Stage Growth Stocks* and *Stock-Picking Strategies: Value Investing*.)

Examples of broad-based growth and value ETFs include:

- iShares Russell 3000 Growth Index Fund (PSE:IWZ)
- iShares Russell 3000 Value Index Fund (PSE:IWW)
- iShares S&P 500 Growth Index Fund (PSE:IVW)
- iShares S&P 500 Value Index Fund (PSE:IVE)

Leveraged ETFs

Leveraged ETFs can offer exposure to broad U.S. market indexes but with greater volatility. So, if the S&P 500 rises by 1%, for example, the ProShares Ultra S&P500 ETF (AMEX:SSO) will rise by 2%. Similarly, if the S&P 500 falls by 1%, the same ETF will drop by 2%. Unlike a regular ETF, which buys stocks in the index, the leverage ETFs use options and futures. Because futures provide more leverage than is necessary, the extra cash is used to purchase bonds, which covers the expenses of the ETF, and to pay dividends to the owners of the ETF. (To learn more, read *Dissecting Leveraged ETF Returns* and *Rebound Quickly With Leveraged ETFs*.)

Leveraged ETFs can be used by active traders to play short-term market movements. They can also be used to increase the exposure to an index without having to borrow the money. They can also be purchased in retirement accounts, which may not allow margin lending. Leveraged ETFs tend to have higher expense ratios than standard index ETFs, even accounting for their increased exposure.

Examples of leveraged ETF include:

- ProShares Ultra QQQ ETF (AMEX:QLD)
- ProShares Ultra S&P500 ETF (AMEX:SSO)
- ProShares Ultra MidCap400 ETF (AMEX:MVV)

Quantitative ETFs

Quantitatively based ETFs use enhanced indexing to offer investors the potential to outperform a benchmark index. The objective is to quantitatively identify a subset of stocks from an index that are expected to outperform. Quantitative indexing uses predefined rules to rank stocks based on a number of different characteristics, which can include both fundamental and technical factors. The top-ranked stocks out of the fund universe are selected to form an index. The list includes a relatively small number of stocks that are rebalanced quarterly, reflecting a change in rankings. A fundamentally-weighted index is a type of quantitative indexing, using factors such as cash flow, revenue, and earnings to weight the stocks rather than market cap. (For related reading, check out *Enhanced Index Funds - Shiny Paper Or Sparkling Gift?*)

One issue with using a quantitative ETF is that you do not know the stocks it holds, which can make building a properly diversified portfolio more difficult. Also, the quarterly rebalancing results in a higher stock turnover, potentially higher trading costs, and lower tax efficiency.

Examples of quantitative based ETFs include:

- PowerShares Dynamic Market Portfolio (AMEX:PWC)

- First Trust Large Cap Core AlphaDEX Fund (AMEX:FEX)

Fixed-Income and Asset-Allocation ETFs

Although the first exchange-traded funds (ETFs) were developed for equities, ETF providers have branched out into bond ETFs and asset allocation ETFs, such as those that contain different asset classes.

Fixed Income ETFs
The bond market is not as liquid or transparent as the equity market. Also, unlike stocks, bonds do not trade on an exchange. Bond ETFs can be as liquid and transparent as stock ETFs and trade on a stock exchange.

In a stock ETF, the fund is generally composed of all the stocks in the index. This is not the case in most bond ETFs. The fund holds a fraction of the bonds that make up the underlying index. Bond prices are relatively straightforward - they are a function of the risk-free rate, the coupon, the quality of the bond and the years to maturity. Using those factors, the managers of a bond ETF use a sampling technique that allows them to closely duplicate the performance of the underlying bond index.

Bond ETFs pay out interest through a monthly dividend, while any capital gains are paid out through an annual dividend. For tax purposes, these dividends are treated as either interest income or capital gains.

Broad-Based Bond ETFs
As with a stock ETF, investors can buy a broad-based bond ETF containing a broad mix of both government and corporate bonds at different maturities. A broad-based bond ETF can form a core component of a bond portfolio. An example is the iShares Lehman Aggregate Bond Fund (PSE: AGG).

Yield Curve Bond ETFs
Some bond funds allow investors to buy Treasury bonds based on different maturities along the yield curve. The longer Treasury ETFs are good for speculating on changes in interest rates, while the short-term bond funds are a good place to park money that typically provides a better return than money market funds. (For more insight, read *Evaluating Bond Funds: Keeping It Simple*.)

Examples of yield curve bond ETFs include:

- iShares Lehman 1-3 Year Treasury Bond Fund (PSE:SHY)
- iShares Lehman 3-7 Year Treasury Bond Fund (PSE:IEI)

- iShares Lehman 7-10 Year Treasury Bond Fund (PSE:IEF)
- iShares Lehman 10-20 Year Treasury Bond Fund (PSE:TLH)
- iShares Lehman 20+ Year Treasury Bond Fund (PSE:TLT)

Inflation Protected Bond ETFs
Treasury inflation protected securities (TIPS) bonds pay interest equal to the Consumer Price Index plus a premium. They provide a hedge against inflation and are designed to outperform regular bonds when inflation expectation rises. Bond ETFs that provide protection against inflation own the TIPS. (For more insight, read *Treasury Inflation Protected Securities*.)

An example includes iShares Lehman TIPS Bond Fund (PSE:TIP).

Asset Allocation ETFs
Balanced mutual funds, or mutual funds that take a fund of funds approach, are common offerings for most mutual fund companies. However, ETFs that invest in different asset classes are relatively new. An ETF that contains investments in different asset classes allows an investor to buy one ETF and get a fully diversified portfolio.
Examples of asset allocation ETFs include: PowerShares Autonomic Balanced NFA Global Asset Portfolio (AMEX:PCA) PowerShares Autonomic Balanced Growth NFA Global Asset Portfolio (AMEX:PTO)

Target Date ETFs
Target date (or life-cycle) funds have become very popular funds for mutual fund companies, especially for companies targeting the defined contribution pension plan market. Recently, ETFs have been created with the same feature as the target date mutual funds. Target date funds are essentially balanced asset allocation funds with one additional feature - they become more conservative as they approach the target date. Funds will reduce risk by selling stocks and buying bonds as the target date approaches. (For more insight, read *The Pros And Cons Of Life-Cycle Funds*.)

While saving for retirement is the main reason investors buy target-date ETFs, the funds are designed for any savings goal that has a targeted end date. They were created for investors who do not want to manage their investments. An investor can simply buy one ETF for the targeted retirement date and not have to make any more decisions about that investment.

Examples of target date ETFs include:

- TDAX Independence 2010 ETF (PSE:TDD)
- TDAX Independence 2030 ETF (PSE:TDN)
- TDAX Independence 2040 ETF (PSE:TDV)

ETF Alternative Investments

Although fixed income and equity investments are the core of a diversified portfolio, the use of alternative asset classes can provide additional diversification. These alternative investments can also be used for trading or hedging existing positions. There are a number of different ETFs that allow investors to establish positions in currencies or commodities. Also, with the use of inverse ETFs, an investor can bet that the market will decline. (For related reading, see *Inverse ETFs Can Life A Falling Portfolio*.)

Currency ETFs

Currency ETFs are designed to track the movement of a currency in the exchange market. The underlying investments in a currency ETF will be either foreign cash deposits or futures contracts. ETFs based on futures will invest the excess cash in high-quality bonds, typically U.S. Treasury bonds. The management fee is deducted from the interest earned on the bonds. (To learn more, read *Profit From Forex With Currency ETFs* and *Currency ETFs Simplify Forex Trades*.)

Several choices of currency ETFs are available in the marketplace. An investor can purchase ETFs that track individual currencies such as the Swiss franc, the euro, the Japanese yen or a basket of currencies. However, currency ETFs should not be considered a long-term investment; investors who are looking to diversify their U.S. dollar assets are generally better off investing in foreign stock or bond ETFs. However, currency ETFs can help investors to hedge their exposure to foreign currencies.

Examples of currency ETFs include:

- PowerShares DB U.S. Dollar Bullish Fund (AMEX:UUP)
- PowerShares DB U.S. Dollar Bearish Fund (AMEX:UDN)

Commodity ETFs

Commodities are a separate asset class from stocks and bonds, so investing in commodity ETFs can provide extra diversification in a portfolio. Because they are hard assets, these ETFs can also provide protection against unexpected inflation. (For more insight, read *Commodities: The Portfolio Hedge*.)

Commodity ETFs can be divided in three types:

1. ETFs that track an individual commodity like gold, oil, or soybeans
2. ETFs that track a basket of different commodities
3. ETFs that invest in a group of companies that produce a commodity

Commodity ETFs either hold the actual commodity or purchase futures contracts. ETFs that use futures contracts have uninvested cash, which is used to purchase interest-bearing government bonds. The interest on the bonds is used to cover the expenses of the ETF and to pay dividends to the holders.

Examples of commodity ETFs include:

- iShares GSCI Commodity-Indexed Trust ETF (PSE:GSG)
- PowerShares DB Commodity Index Tracking Fund ETF (PSE:DBC)

Inverse ETFs and Leveraged Inverse ETFs

With the advent of inverse ETFs, investors can easily bet against the market. Inverse ETFs are designed to move in the opposite direction of their benchmarks. For example, if the S&P 500 rises by 1%, the inverse S&P 500 ETF should drop by 1% and vice versa. There are also leveraged inverse ETFs, which are designed to provide double the opposite performance of the underlying index, so, if the S&P 500 drops by 1%, a leveraged inverse S&P 500 ETF should increase by 2%. (For related reading, see *Dissecting Leveraged ETF Returns* and *Rebound Quickly With Leveraged ETFs*.)

An inverse ETF can either use short positions of the underlying stocks or futures. ETFs that use futures contracts can have the excess cash invested in bonds, which covers the expenses of the ETF and can pay dividends to the owners.

There are a number of reasons to use inverse ETFs. For example, while speculators can easily make a bearish bet on the market, for investors who have positions that they do not want to sell because of unrealized capital gains or illiquidity, this is not so easy. In this case, they can buy an inverse ETF as a hedge.

In fact, many investors prefer to use inverse ETFs instead of selling short the index. Inverse ETFs can be purchased in tax-deferred accounts, but shorting stocks is not allowed because in theory, it exposes the investor to unlimited losses. However, the most an investor in an inverse ETF can lose is the entire value of the inverse ETF.

Examples of inverse ETF include:

- ProShares Short QQQ ETF (AMEX:PSQ)
- ProShares Short S&P500 ETF (AMEX:SH)

Examples of leveraged inverse ETFs include:

- ProShares UltraShort QQQ ETF (AMEX:QID)
- ProShares UltraShort S&P500 ETF (AMEX:SDS)

ETF Investment Strategies

ETFs provide considerable flexibility in implementing various investment strategies or building investment portfolios. Strategies range from very simple, such as diversifying an existing portfolio, to sophisticated hedging strategies.

Core Holding
An investor can consider using a few ETFs as core portfolio holdings. A low-cost diversified portfolio can easily be constructed with a few ETFs to cover the major equity asset classes and the fixed-income market. From that starting point, the investor can customize a portfolio with additional securities, mutual funds or other ETFs. (To learn more, read *10 Reasons To Make ETFs The Core Of Your Portfolio*.)

Asset Allocation
With ETFs, building a portfolio for any asset allocation strategy is easy. It is even possible to buy an ETF that is already diversified across different asset classes.

An investor can take a passive approach to asset allocation by rebalancing the portfolio only to ensure it returns back to the long-term or strategic asset mix. Alternatively, the investor can take an active role in asset allocation, by tactically rebalancing the portfolio, overweighting those asset classes that are expected to outperform in the shorter term and underweighting the others. (For more on strategies, read *Asset Allocation Strategies*.)

Diversification
ETFs allow the investor not only to diversify across all the major asset classes, such as U.S. equity , foreign equity and fixed income, but also to diversify into investments that have a low correlation to the major asset classes. This includes areas like commodities, real estate, emerging markets, small cap stocks, and others. (For more insight, read *Introduction To Diversification*.)

Hedging
The use of ETFs allows for a variety of hedging strategies. Investors who want to hedge against a drop in the market can purchase inverse ETFs or leveraged inverse ETFs, which rise when the market falls. An investor concerned about inflation can hedge it by investing in commodities or inflation-protected bond

ETFs. Investors that have investments out side the U.S. can hedge their foreign currency exposure with currency ETFs. Of course, investors can short an appropriate ETF that can hedge against a very specific stock market exposure. Many ETFs have options that can be used for other hedging strategies, either separately or in conjunction with the underlying ETF. (To learn more, check out *A Beginner's Guide To Hedging*.)

Cash Management
ETFs can be used to "equitize" cash, allowing investors an easy way to put their money in the stock market until a long-term investment decision is made. In this way, investors can ensure they do not miss out on price rises or forego income while their money is parked temporarily.

Tax-Loss Harvesting
Tax-loss harvesting is a strategy of realizing capital losses in a taxable account, and then redeploying the sale proceeds among similar investments, leaving the investor's portfolio largely unchanged. The wash-sale rule prevents an investor from selling a security at a loss and then immediately repurchasing it by disallowing the purchase of "substantially identical" securities within 30 days of a sale. With the availability of a wide variety of ETFs, buying an ETF that is very similar to the fund or stock being sold is easy. The end result is a portfolio that closely resembles the one before the capital losses were realized without invoking the wash-sale rule. (For more on this strategy, see *Selling Losing Securities For A Tax Advantage*.)

Completion Strategies
An investor might want to quickly gain exposure to specific sectors, styles or asset classes without having to obtain the prerequisite expertise in these areas. As an example, an investor who has no expertise in emerging markets can buy an ETF based on an emerging market index. Using ETFs allows an investor to easily fill the "holes" in his or her portfolio.

Portfolio Transitions
Many investors move portfolio assets between different advisors, managers or funds. In the transition period, the assets might be allowed to sit idle in cash. ETFs allow investors to keep their assets invested rather than having them dormant.

Conclusion

Although the first exchange-traded funds (ETFs) were designed to track broad market stock indexes, since that time, ETFs have been developed to track industrial sectors, investment styles, fixed income, global investments, commodities and currencies. ETFs are now available to replicate just about any index available. All that is required is that there is enough investor interest to

make the ETF profitable.

An ETF trades like a stock on a stock exchange. However, like a mutual fund, the ETF has a structure that pools the assets of its investors and uses professional money managers to invest the money. Unlike most mutual funds, which are actively managed, most ETFs are passively managed. An ETF most resembles an index fund that tracks the same index and its performance should closely mirror the index it tracks.

An investor who wants to buy ETFs has a myriad of options to choose from in equities, foreign stocks, fixed income and alternative investment. There are also many different strategies the investor can employ when using ETFs. Like other investments, it is important for the investor to evaluate the different options to ensure the right ETF is chosen for the job.