Goldman Sachs Asset Management

Strategic Advisory Solutions
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ETF Evolution: The Innovation of Exchange-Traded Funds

Executive Summary

Exchange-traded funds (ETFs) are investment funds traded on stock exchanges, much like stocks. An ETF holds assets such as stocks or bonds and trades at approximately the same price as the net asset value of its underlying assets over the course of the trading day.

- Low costs, relative tax efficiency,[1] and portfolio transparency are well-known drivers of the rise of ETFs in recent years—but innovation is another secret of the ETF market's growth
- Passive investing is no longer simply a mirror to the market—a range of more sophisticated strategies are now available
- The rising popularity of "smart beta" investing reflects the view that market-weight indexing[2] may fail to capture the full range of potential opportunities available in the marketplace—and that new strategies potentially can capture more of those opportunities

[1] Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this presentation.

[2] "Market weight indexing," which is sometimes also called "market capitalization" weighting, refers to strategies which apportion their investments according to individual securities' market values.

Exchange-traded funds (ETFs) are here to stay. Combining the tradability of stocks with many of the characteristics of diversified mutual funds, ETFs have increased assets under management by more than 25% a year for a decade—today managing more than $2 trillion in the US.[3] As these figures illustrate, more investors are taking advantage of the structure's low costs, tax efficiency, portfolio transparency, and intraday trading.

There is, however, another secret to the field's rapid growth: Innovation. ETFs today offer some of the most innovative investment strategies on the market—a fact which we believe is fundamental to their rapid growth.

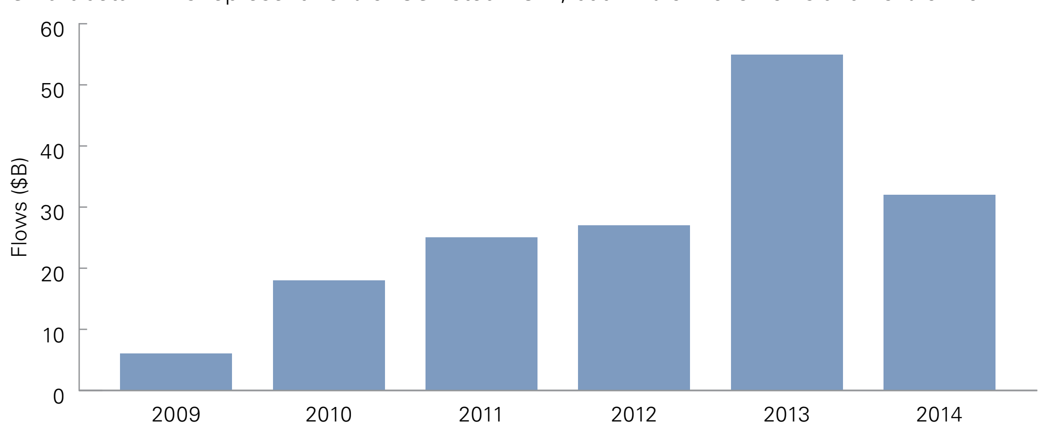
More than Mirroring the Market: How Passive Investing Has Changed

ETFs have been an important part of what is often termed the "democratization" of investment management—meaning the greater availability of once-exclusive investing techniques to a wider range of investors. ETFs today represent a vibrant and diverse array of investment strategies. Although the structure is often closely associated with passive, market-weight investing (meaning strategies which apportion their investments according to individual securities' market values), ETFs can offer more than these market-weight investment approaches.

The growing field of "smart beta" illustrates the trend. Sometimes called "strategic beta" or "fundamental indexing," these strategies are passively managed, but their results may differ versus market-weight indexing. That is because "smart beta" strategies shape the weighting of individual portfolio holdings differently than passive market-weight indexing.[4] It does this in pursuit of a specified investment goal or set of investment goals. Because of this differentiated approach, smart-beta strategies are often compared to active management.

What do smart-beta strategies look like?

Smart beta ETF's represent 20% of US-listed AUM, but 41% of 2013 flows and 25% of 2014 YTD



Source: Goldman Sachs Asset Management, based on Morningstar Strategic Beta classification; as of 12/31/14.

[3] US ETF industry assets under management figure as recorded by Bloomberg and Reuters, data as of 12/31/14. Diversification does not protect an investor from market risk and does not ensure a profit.

[4] There is no guarantee that these objectives will be met.

Low-volatility[5] investing and the pursuit of stocks exhibiting price momentum are two common "smart beta" goals, but many strategies pursue multiple goals. ETFs pursuing multiple goals are sometimes labeled "multi-factor." They may, for instance, seek out a combinations such as (1) value or low-priced stocks, (2) stocks which exhibit low volatility, (3) stocks which demonstrate strong momentum (meaning a security's tendency to show continued movement in a given direction, generally as measured by price), and (4) stocks which show a quality bias (meaning companies with strong balance sheets). Combining the pursuit of several goals is potentially one means of pursuing stronger risk-adjusted returns than market-weight indexing.

In a sign that investors see the benefits, assets under management in the US "smart beta" field have risen by a compound 33% rate over the last five years.[6] Today, close to one-fifth of US equity ETFs can be classified as "smart beta."[7]

Why do investors choose these strategies?
Besides features such as low costs and intraday liquidity, we believe that the pursuit of differentiated returns is a key consideration. Many investors believe that market-weight indexing fails to capture the full range of potential opportunities available in the marketplace—but that smart beta potentially can capture more of those opportunities.

One Solution, Many Innovations

ETFs are finding roles in a growing number of investment strategies. Global tactical asset allocation is one example. Global tactical asset allocation can be defined by the effort to seek improved risk-adjusted returns compared to passive investing through active adjustments to investment positions. ETFs have become an important tool in this innovative field because they can offer a variety of investment exposures, from broad markets to specific sectors and specialized investment strategies.

We believe that the variety of asset-class exposures which have been developed in ETFs is another illustration of the market's history of innovation. Although equity strategies drive the most popular ETFs and represent the asset class for the first ETFs originated, about one-quarter of the roughly $2tn US ETF market today consists of exposures other than equities—a testament to the range of investment strategies available as ETFs.[8]

In several cases, ETFs have been credited with opening investment exposures to a wider range of investors. Starting in 2004, ETFs brought tradable and liquid access to spot gold prices to the average investor, who previously might have traded futures contracts or owned physical gold in search of this exposure.

In other cases, ETFs were useful market-access tools for asset classes which historically had presented fewer investment options for many investors, such as high-yield bonds, when compared to widely accessible markets, such as large-cap US equities. We believe the evolution of ETF investment strategies also reflects the diversity of market participants.

[5] Volatility is defined as the tendency of a security to swing in price.

[6] The U.S. ETF market has expanded at a 26% compound 10-year annual growth rate. Source: Bloomberg, Reuters; as of 12/31/14.

[7] Smart beta includes ETFs that track non-market capitalization weighted indices and/or provide exposure other than the S&P 500. Sources: Goldman Sachs Asset Management, based on Morningstar Strategic Beta classification; data as of 12/31/14.

[8] Source: US ETF market assets under management as recorded by Bloomberg and Reuters, data as of 12/31/14.

One Market, Diverse Participants

Although ETFs are commonly associated with individual investors, the reality is that the ETF market has been diverse from the beginning. The earliest ETFs, developed in the 1990s, derived much of their initial trading volume not from individual investors but from hedge fund traders, many of whom adopted ETFs as low-cost market access tools and trading vehicles. This legacy continues today, with hedge funds and institutional investors remaining active participants in the market.

As evidence, today more than half (56%) of reported ETF holdings belong to institutional investors, with individuals and small institutions (i.e., those with AUM of less than $100mm) comprising the remaining 44%.[9]

The wide range of participants in the ETF market simply serves to underscore that the structure has proven itself adaptable to a wide range of investment needs.

The type of institutional investors active in the market range widely, from pension funds to government entities.

Sovereign wealth funds sometimes deploy ETFs for liquid access to a range of markets, from US equities to gold and other assets.

Traditional asset managers have also found uses for ETFs, for instance in managing cash or in carrying out asset allocation strategies.

Pensions and endowments sometimes use ETFs to transition portfolios, manage cash flows or hedge unwanted exposures. A growing number of insurance companies have also turned to ETFs to hedge variable annuities, manage investment exposures or find alternatives to the derivatives markets.

Another participant group of note is financial advisors, who are turning increasingly to ETFs for their low costs, relative tax efficiency and variety of strategies.

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ETFs: What the Future May Hold

As investors' needs have evolved, so, too, have ETFs. At Goldman Sachs Asset Management, we believe the future of ETFs can combine the low costs, intraday liquidity and tax efficiencies for which ETFs are known with a fuller range of investment strategies—strategies which we believe potentially can capture more of the opportunities presented by today's marketplace.

[9] Source: Goldman Sachs Asset Management analysis of LionShares data, as of January 26, 2015

Important Disclosures

Glossary

Market-weight indexing which is sometimes also called “market capitalization” weighting, refers to strategies which apportion their investments according to individual securities’ market values.

Momentum is defined as a security’s tendency to show continued movement in a given direction, generally as measured by price.

Low volatility refers to investment strategies which seek to own securities exhibiting relatively small price moves compared to a benchmark

Physical gold may refer to gold bars, coins or other tangible examples of gold bullion which can be held as investments.

Smart beta describes investment strategies shape the weighting of individual portfolio holdings differently than market-weight indexing in pursuit of a specified investment goal or set of investment goals.

Spot gold is the market price for gold at specified point in time.

A sovereign wealth fund is a state-owned investment fund.

Risk Considerations

Equity securities are more volatile than bonds and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies.

Bonds are subject to interest rate, price and credit risks. Prices tend to be inversely affected by changes in interest rates.

The **currency market** affords investors a substantial degree of leverage. This leverage presents the potential for substantial profits but also entails a high degree of risk including the risk that losses may be similarly substantial. Such transactions are considered suitable only for investors who are experienced in transactions of that kind. Currency fluctuations will also affect the value of an investment.

Derivatives may be more sensitive to changes in economic or market conditions than other types of investments; this could result in losses that significantly exceed the fund’s original investment.

Investments in **fixed income securities** are subject to the risks associated with debt securities generally, including credit, liquidity, interest rate, call and extension risk.

Investments in **foreign securities** entail special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets.

An investment in **real estate securities** is subject to greater price volatility and the special risks associated with direct ownership of real estate.

Investments in **commodities** may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity.

Emerging markets securities may be less liquid and more volatile and are subject to a number of additional risks, including, but not limited to, currency fluctuations and political instability.

High-yield, lower-rated securities involve greater price volatility and present greater credit risks than higher-rated fixed income securities.

Income from **municipal securities** is generally free from federal and state taxes for residents of the issuing state. While the interest income is tax-free, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT).

Investments in **master limited partnerships** (“MLPs”) are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner’s right to force sales at undesirable times or prices.

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