

Interactive Brokers

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present:

Navigating the ETF Landscape

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Navigating the ETF Landscape

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August 9, 2017



iShares[®]
by BLACKROCK[®]

Agenda

What are Exchange Traded Funds (ETFs)

What is driving ETF usage

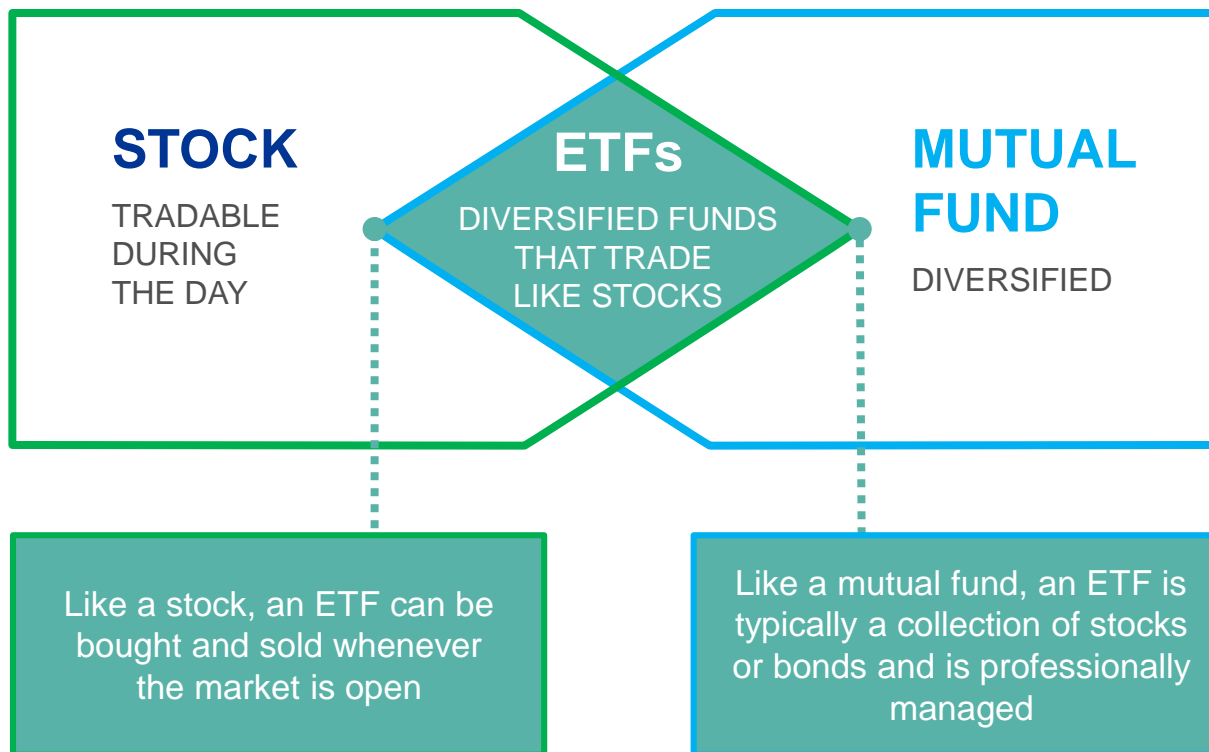
ETF trends and innovation

Framework for ETF selection



What are ETFs?

ETFs offer a **diversified, easy-to-use, low cost, and tax efficient** way to invest

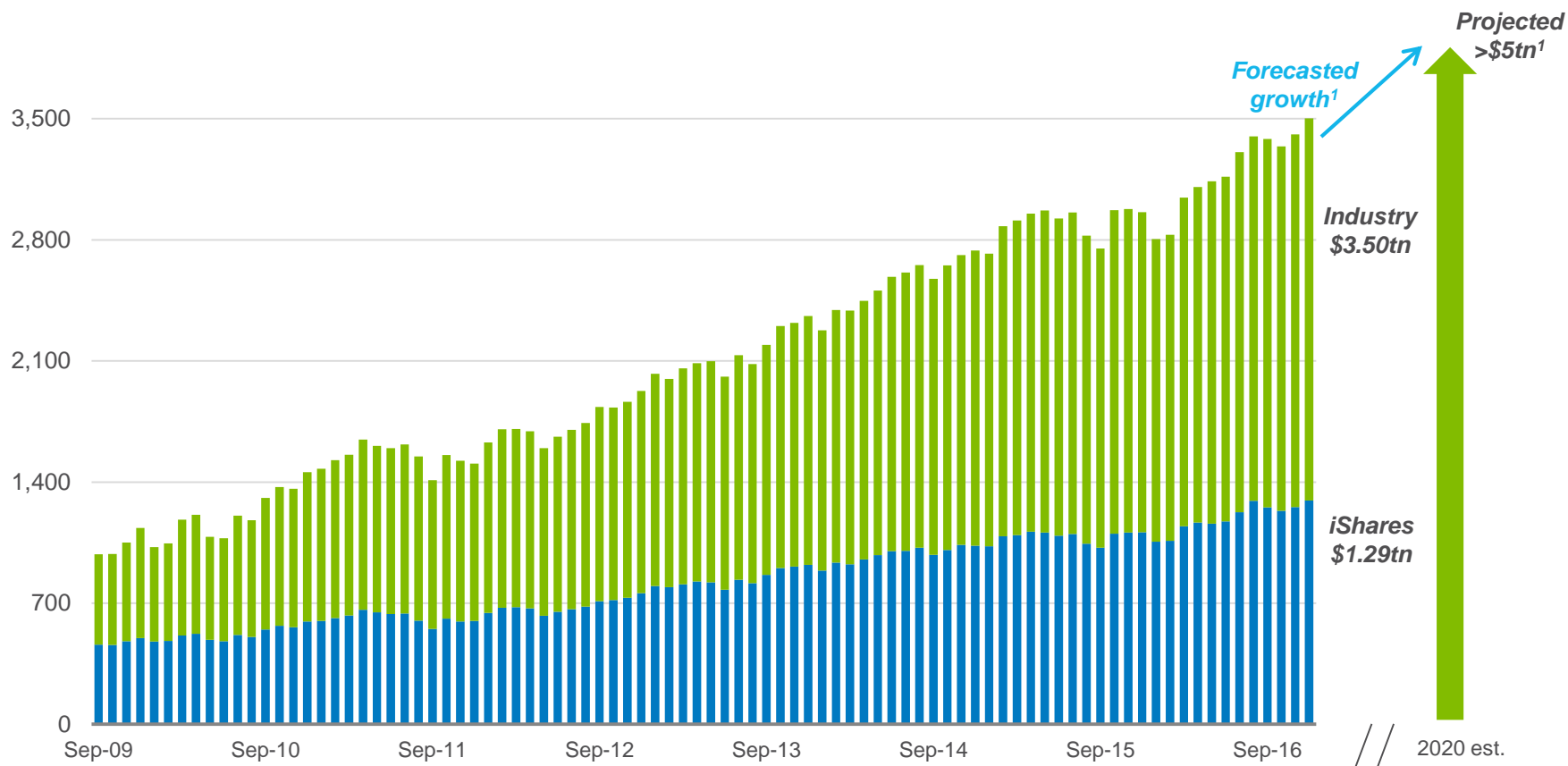


Transactions in shares of ETFs will result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders. For more information on the differences between traditional mutual funds and ETFs, see Appendix.

Global ETF industry growth - A \$3 Trillion Industry

- ETF Industry assets have been growing every year since 2009
- Globally, ETFs assets have increased over 140% the last six years
- Project the global industry assets under management will more than double by 2020 to over \$5 trillion¹

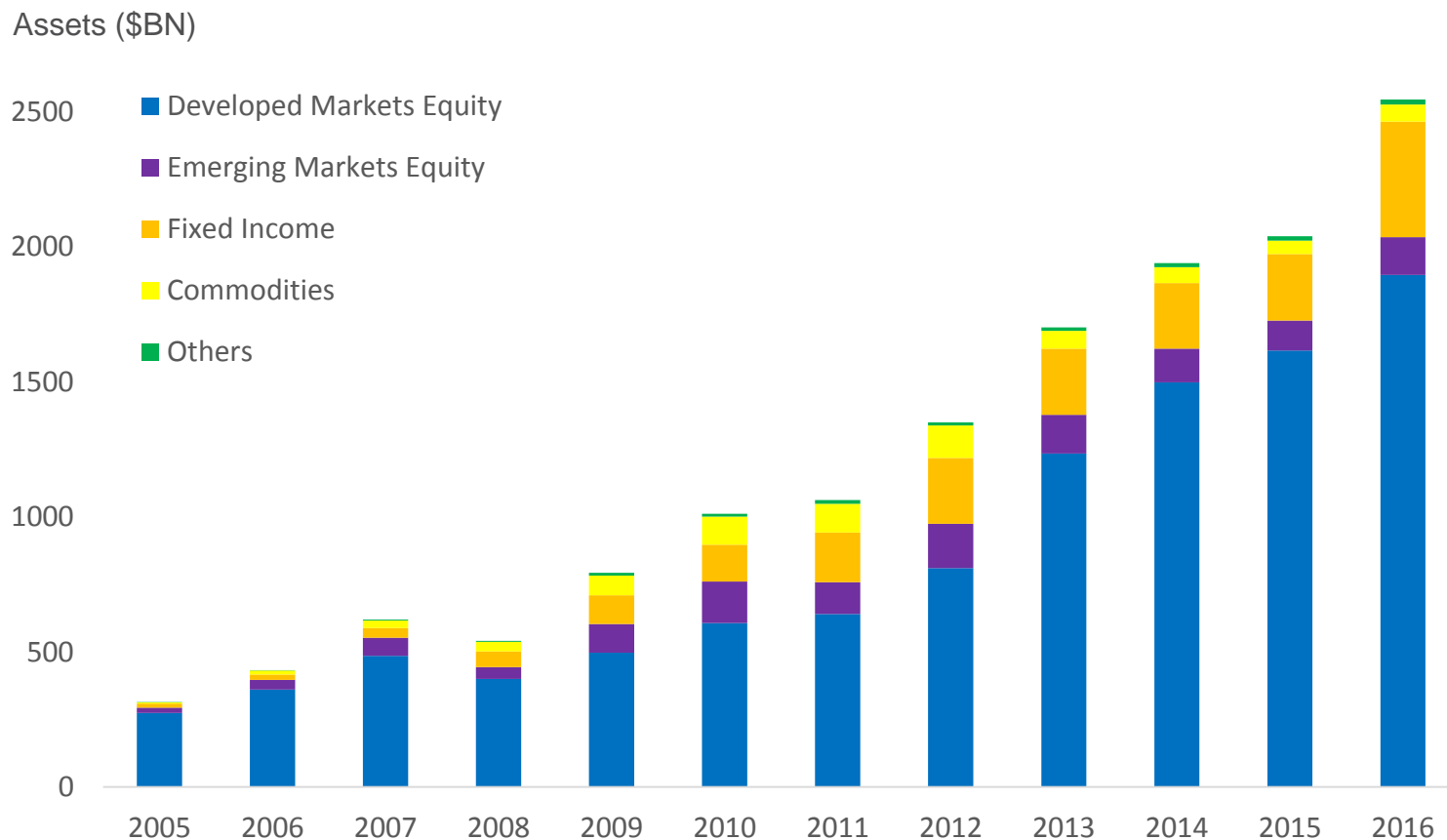
Global ETF assets under management



As of 12/31/16. Source: BlackRock and Bloomberg.

¹Source: PriceWaterhouseCoopers, *ETF 2020: Preparing for a new horizon*. Based on the projections of more than three out of four survey participants. January 2015.

Today's Exchange Traded Product (ETP) Composition: Breadth of Exposures is Increasing



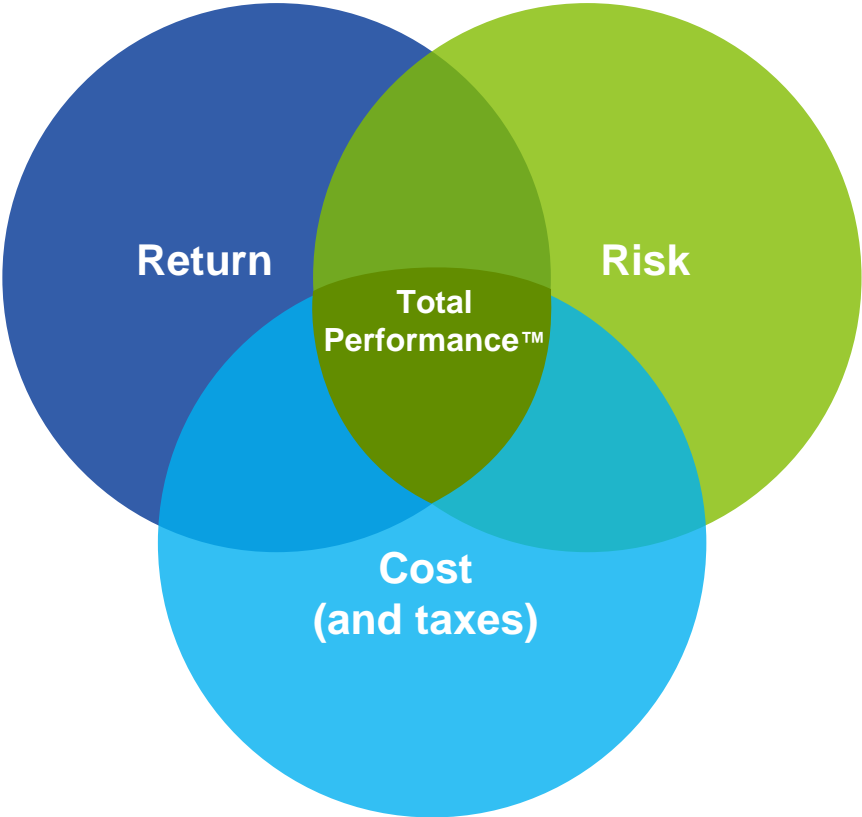
Source: BlackRock ETP Landscape. Data through December 2016
 Other includes Alternatives, Money Market, Currencies, and Asset Allocation

Why do investors use ETFs?

Seek to outperform other investments

Performance vs. active funds

Expressing a view



Manage risk

Diversification

Tradability and flexibility

Knowing what you own

Keep more of what you earn

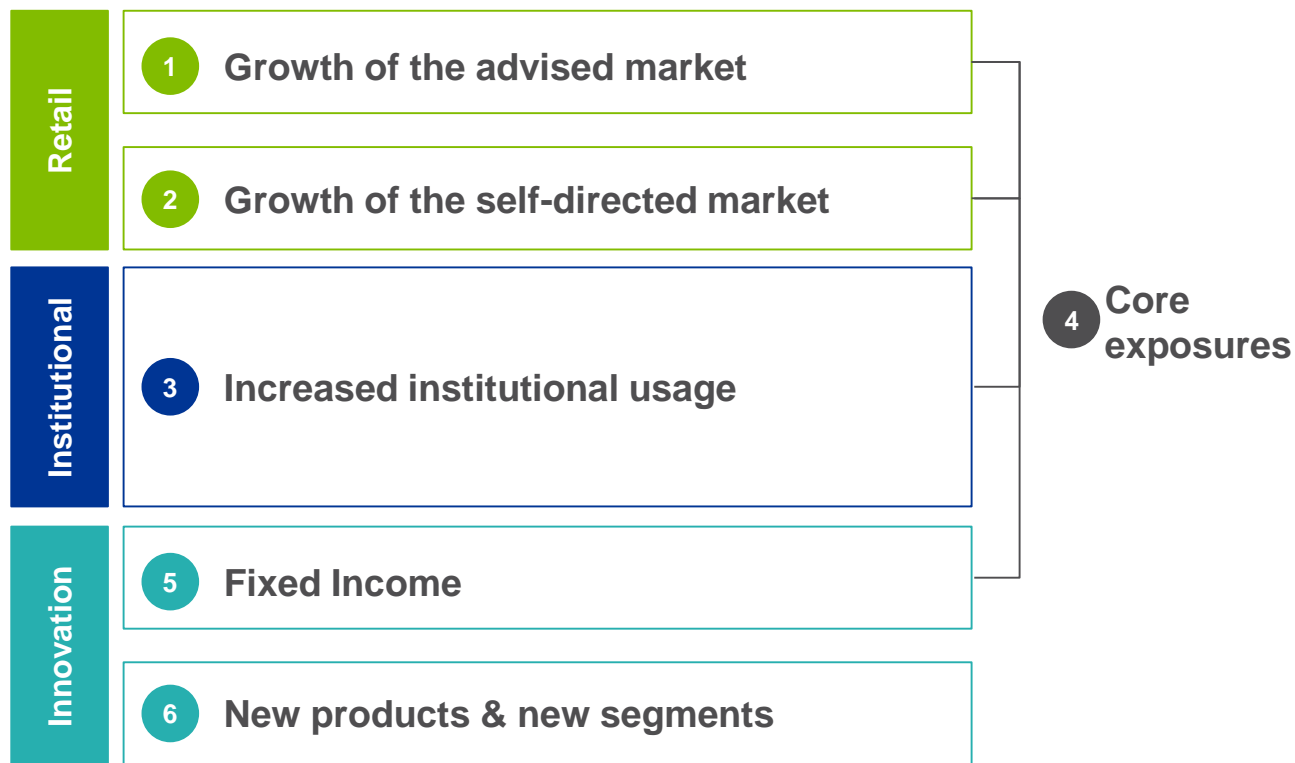
Cost effectiveness

Tax efficiency

Past performance does not guarantee future results. Diversification may not protect against market risk. Transactions in shares of ETFs will result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders.

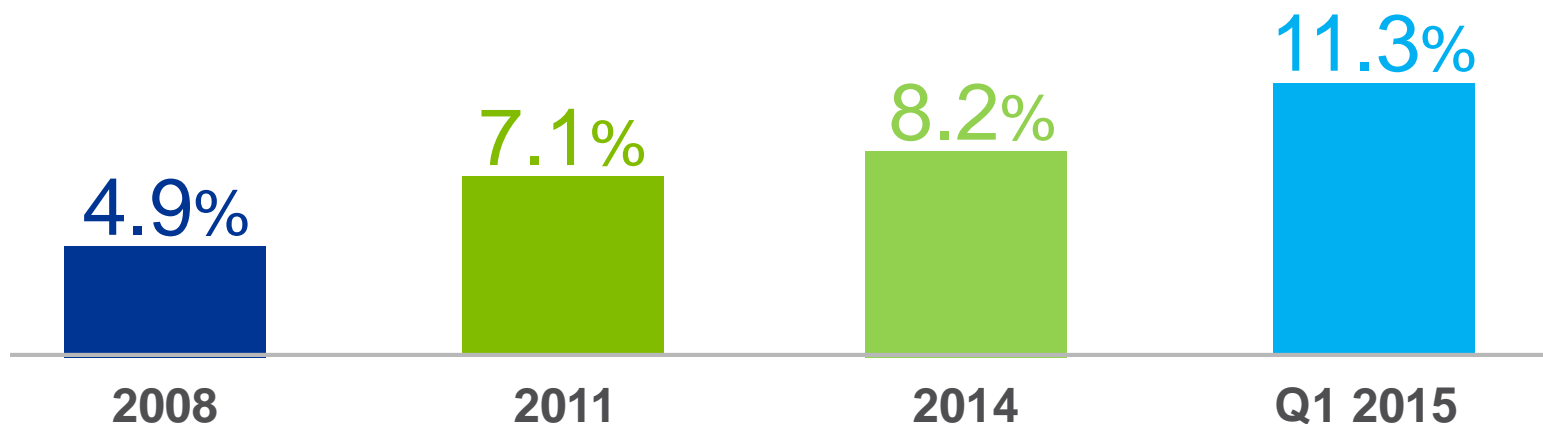
What is driving ETF usage

Six key drivers of U.S. ETF market growth



Advisors' usage of ETFs has increased over the last eight years

Advisors have increased the allocation of ETFs in their portfolio from 4.9% in 2008 to 11.3% in 2015



80%

of advisors use ETFs as part of a long-term investing strategy for their clients

75%

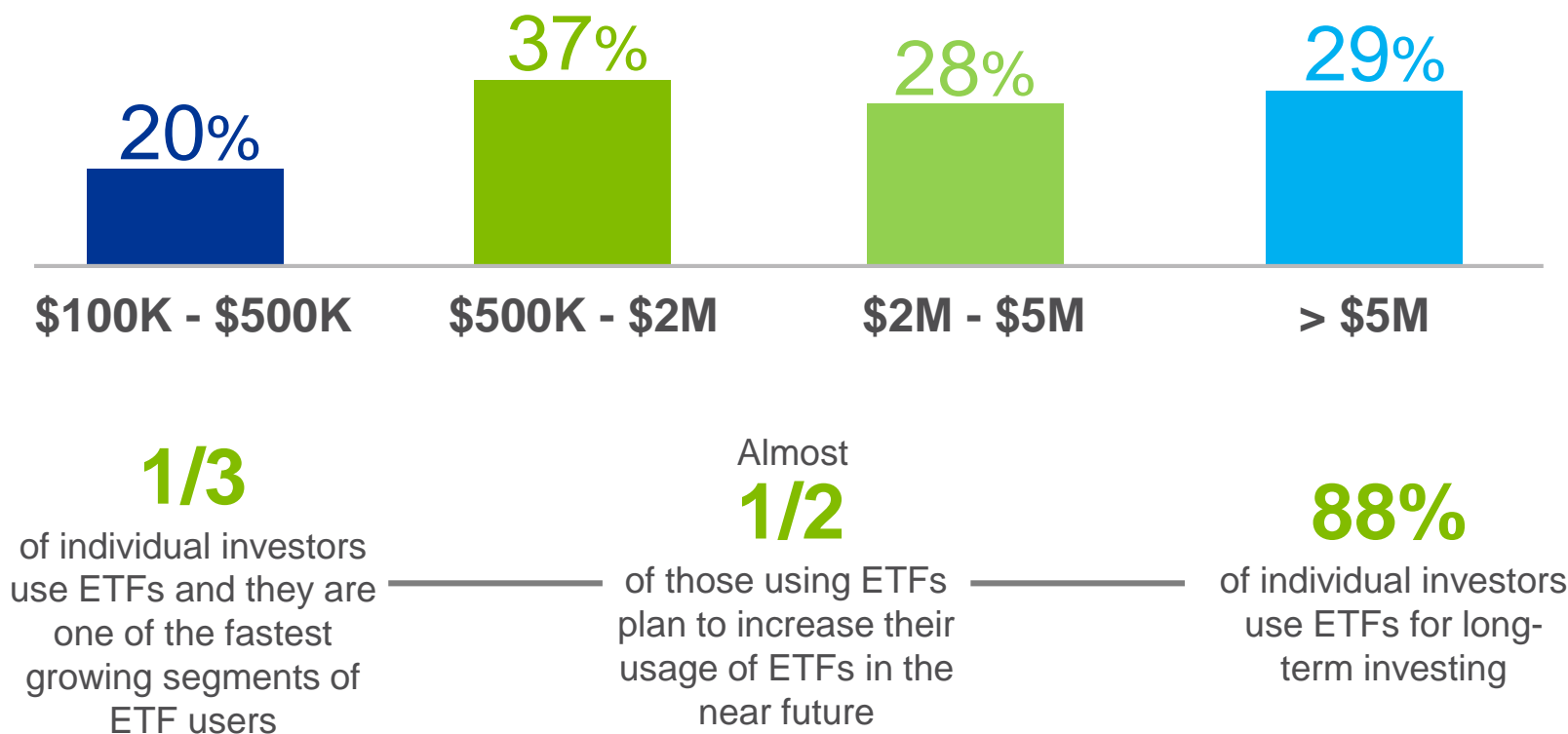
of advisors plan to increase their ETF allocation in the next three years

Advisors use ETFs for clients **across asset levels,** large and small

Source: Cerulli Associates: Exchange – Traded Funds Markets 2015; Fidelity and BlackRock study 2014.

Individual investors have increased their usage of ETFs

ETF ownership is highest with investors who have \$500K-\$2M to invest

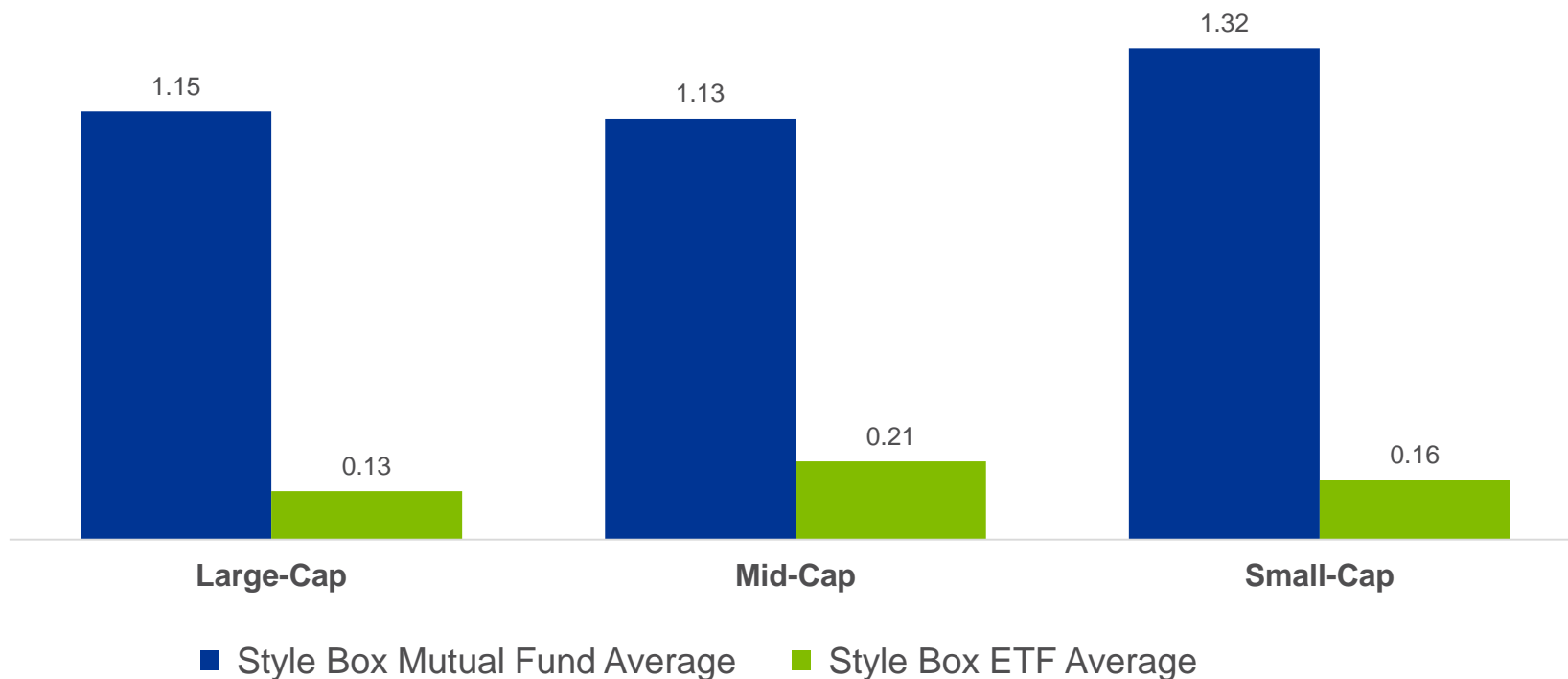


Source: Cerulli Associates: Exchange – Traded Funds Markets 2015; Fidelity and BlackRock Study July 2014; PwC Global ETF Survey, September 2014.

ETF trends and innovation

Low Cost: Don't Overpay for Style Box Exposure

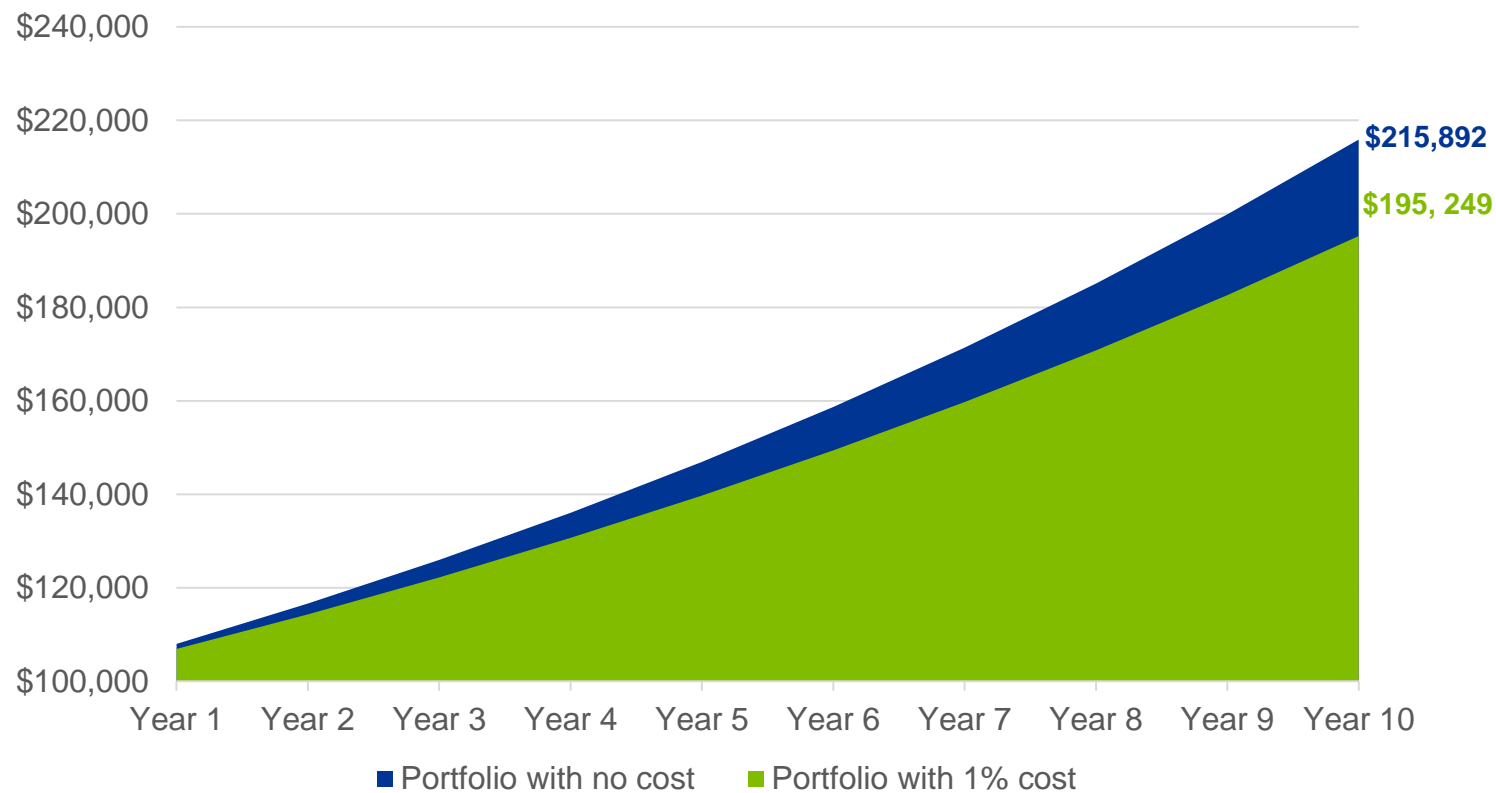
Average Mutual Fund Costs by Style Box Category vs. Average Style Box ETF Costs



Source: Morningstar as of 12/31/2016. Comparison is between the prospectus net expense ratio for the oldest share class of active U.S. mutual funds and the ETF, based on Morningstar categories. Past performance not indicative of future distributions.

Make every dollar count

With an additional 1% cost, 10% of your total investment potential would be lost to fees



Leverage low cost building blocks for core exposures

Competitive Performance



**iShares style box ETFs
have outperformed 90% of
mutual funds over the last
5 years***

Low Cost



**Managing for fund
expenses can greatly
enhance a portfolio's
long term returns**

Tax Efficient



**iShares ETFs are
carefully managed in
an effort to limit
capital gains
distributions**

Source: Morningstar, as 12/31/2016. Post-tax pre-liquidation comparison made between the 5 year returns at NAV of iShares S&P domestic equity style box funds and the oldest share class of active open-end mutual funds within Morningstar U.S. domestic equity style box categories available in the U.S. between 1/1/2012 and 12/31/2016 ("Active Style Box Funds"). Returns are calculated after taxes on distributions, including capital gains and dividends, assuming the highest federal tax rate for each type of distribution in effect at the time of the distribution. Overall figure is a weighted average of the percentage of funds that the iShares ETF outperformed in each style box, weighted based on the Active Style Box Fund assets in each style box. Performance may be different for other time periods. Style Box Funds are those categorized by Morningstar as U.S. Large Cap Growth / Blend / Value, U.S. Mid Cap Growth / Blend / Value or U.S. Small Cap Growth / Blend / Value. Past performance is no guarantee of future results.

ETFs for core exposures

With ETFs, investors can build a low-cost portfolio with broad exposures across stocks and bonds:

U.S. Equities

S&P 500

S&P
Mid-Cap

S&P
Small-
Cap

Dividends

U.S.
High
Dividends

U.S.
Dividend
Growth

International Equities

MSCI
Developed
Markets

MSCI
Emerging
Markets

Bonds

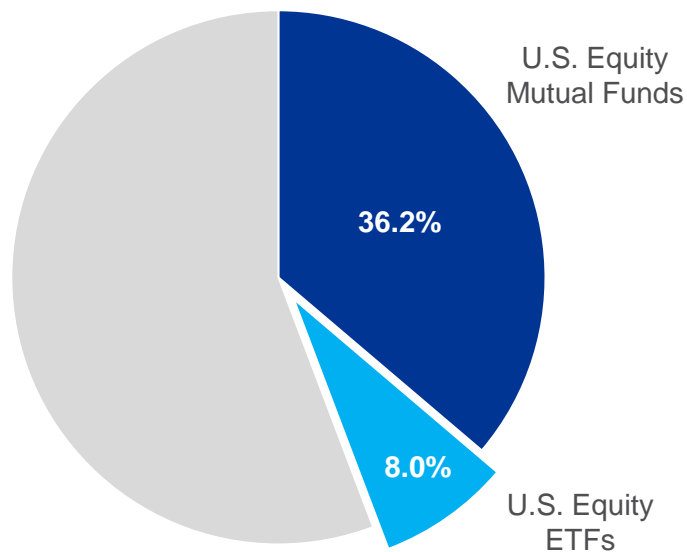
U.S.
Investment
Grade

U.S. Total
Bond
Market

Fixed income market penetration is still very low

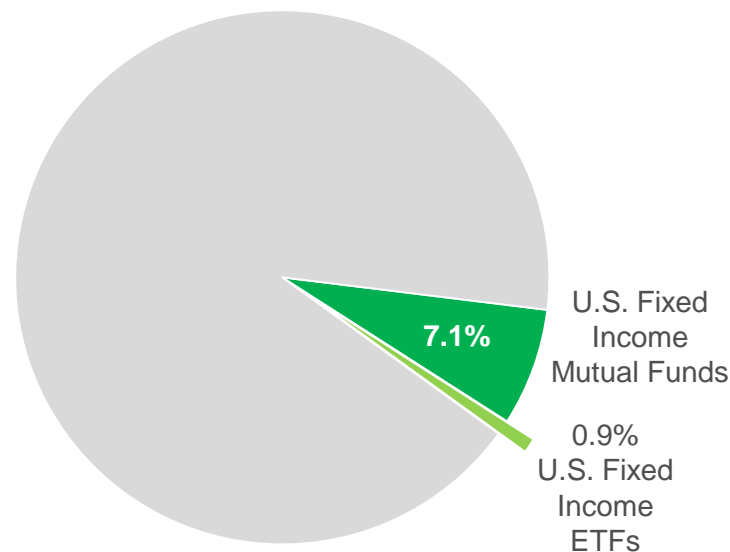
- The U.S. fixed income market is 1.90x the size of the equity market
- However, fixed income ETF penetration is only one-ninth of the level of equity ETF penetration

Total US equity market = \$25.2T



While US equity ETFs are 8.0% of total US equities...

Total US fixed income market = \$47.8T



...US fixed income ETFs are 0.9% of the total market

Source: BlackRock, Bloomberg, Morningstar, as of 12/31/16.

Fixed income ETF trading volume

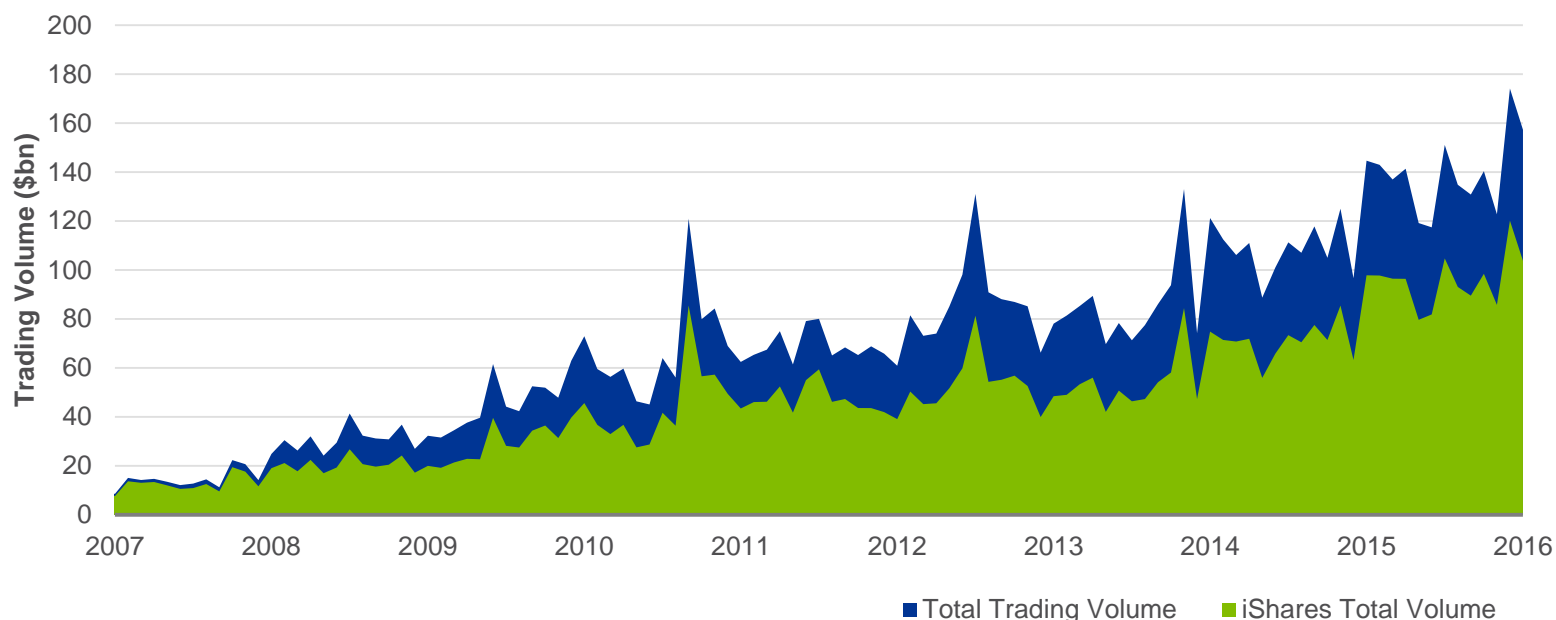
Liquidity is like oxygen: You don't notice it until it's gone.

- Credit crisis of 2008 placed a premium on liquid investments and liquid investment vehicles.
- Since 2008, fixed income ETFs trading volume has grown at 29% CAGR (Compound Annual Growth Rate).

Provider support for liquidity

- Tight bid / ask spreads in conjunction with deep, liquid markets can benefit investors. During the financial crisis of 2008, trading volume grew 194% as fixed income ETFs were used as a liquid, transparent pricing mechanism to estimate the value of the underlying securities.

Fixed income ETF trading volume
(total monthly)



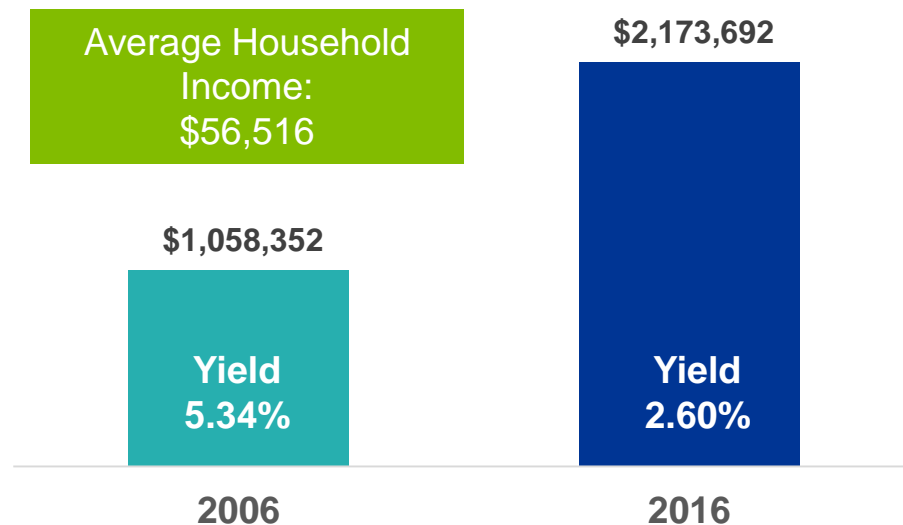
Source: BlackRock and Bloomberg as of 12/31/2016. There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.

Why do investors need income? Wealth Decumulation Phase

Pre-Retirement Checklist

With lower bond yields, it takes twice the portfolio balance to generate the average household's yearly income of \$56,516, as compared to 10 years ago.

- ✓ How much income do you need in retirement?
 - Essential Expenses
 - Discretionary Expenses
- ✓ What are your sources of income?
 - Social Security
 - Pension
 - 401(k) / 403(b)
 - Annuities
 - Other savings
- ✓ What is your income gap?
 - How much more savings to you need?
 - Can you invest differently?



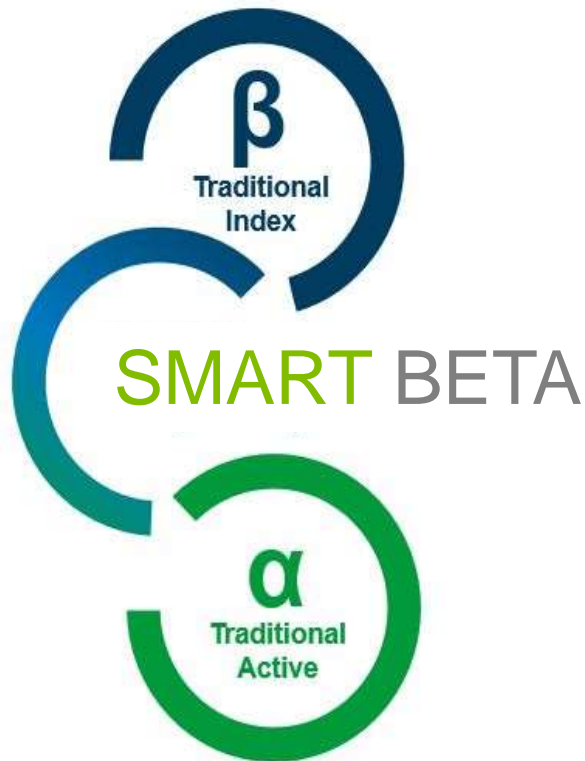
Source: Morningstar, BlackRock, as of December 2016. Household income represented by median U.S. household in 2015 in nominal terms. Past performance and income does not guarantee future results. Yield is represented by the Bloomberg Barclays U.S. Aggregate Index yield to worst as of 12/30/06 and as of 12/30/16. You cannot directly invest in an index. For illustrative purposes only.

Diversify Sources of Income

- ✓ **Dividend Paying Equities** - Stocks that may pay dividends or have a history of growing their dividends*
- ✓ **Corporate Bonds** – bonds issued by corporations, tend to pay higher yields than government bonds to compensate investors for credit risk
- ✓ **Municipal Bonds** – issued by state or local municipalities, income is exempt from Federal income tax and might be exempt from state and local taxes
- ✓ **Preferred Stocks** – class of ownership in a corporation that has a higher claim on its assets and earnings than common stock
- ✓ **Real Estate Investment Trusts (REITs)** – trust or company that owns or operates real estate investments

*There are risks involved with dividend yield investing strategies, such as the company not paying a dividend or the dividend being far less than what is anticipated, as well as, market risk, price volatility, liquidity risk, risk of default, and risk of loss.

Smart Beta – A Different Approach to Investing



Smart Beta strategies sit at the intersection of active and index investing, incorporating elements of both.

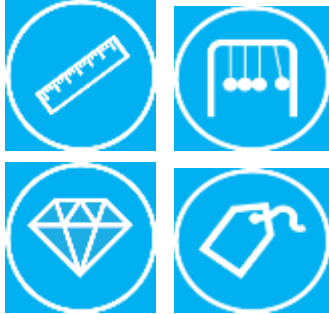
- Generally low cost and transparent like index strategies*
- Can be a source of incremental return or a way to manage risk like traditional active funds
- Can potentially help achieve a desired outcome such as dampening the impact of market volatility or pursuing higher income

*Smart beta ETFs have an added element of transparency in that holdings are disclosed daily, unlike active mutual funds that typically display holdings only quarterly.

But What if Investors Are Looking for More?



I Want Less Risk



I Want More Return

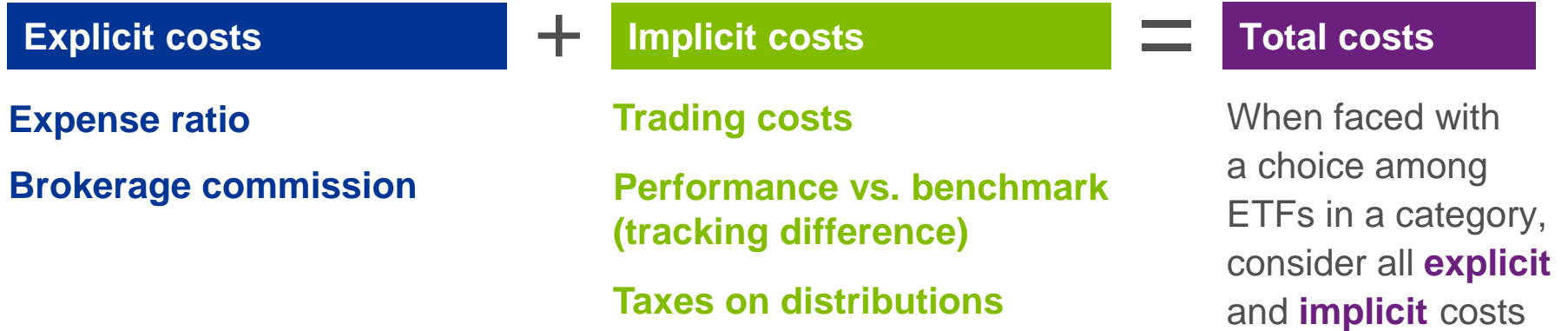


Framework for ETF selection

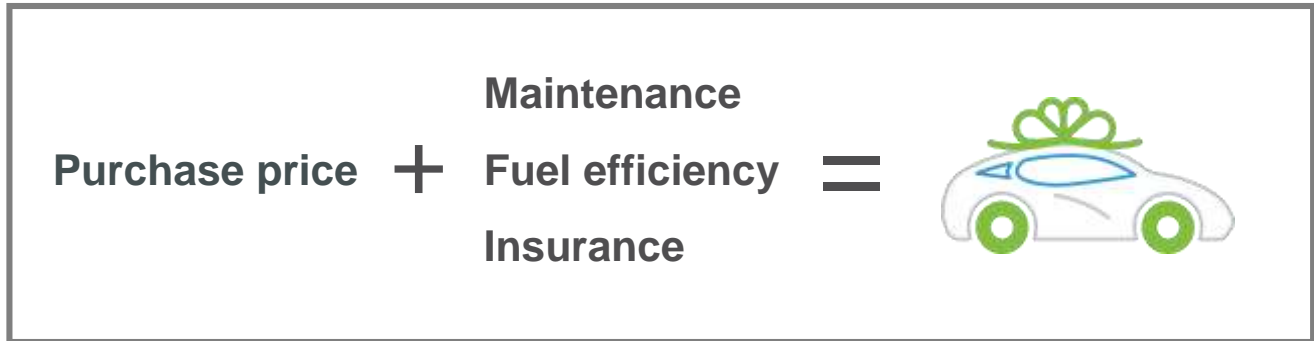
A framework for selecting efficient market exposure

Manager	How well do you know your manager / provider?
Exposure	What's inside your fund?
Structure	What are the implications of structure?
Liquidity	Can you trade when you need to?
Costs	What does it cost?

Expense ratio is only one part of the total cost of ownership



Costs to consider:

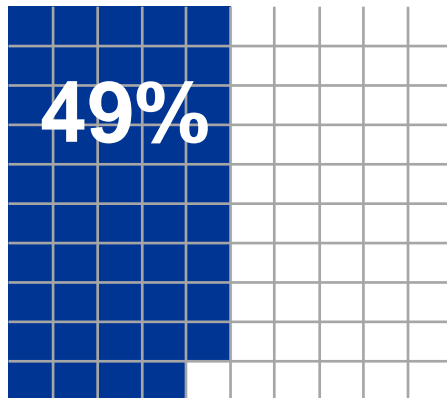


Explicit costs are predetermined based on the ETF's fees and brokerage firm's commission schedule. Implicit costs may vary based on market events and trading volume. Implicit costs may change continuously based on current market conditions.

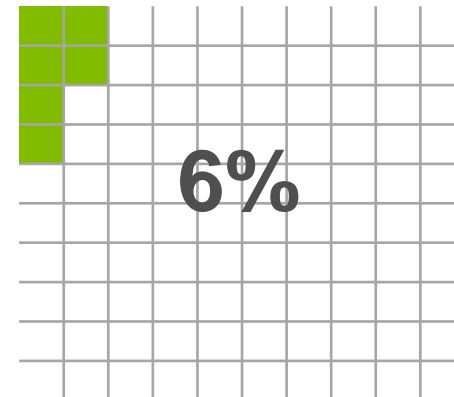
The ETF difference

Percentage of funds that paid capital gains in 2016

Mutual Funds*



ETFs



* Represented by the oldest share class of each Open-End Mutual Fund available in the United States.

Sources: Morningstar as of 12/31/16. **Past distributions are not indicative of future distributions.**

Transactions in shares of ETFs will result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders.

In summary



ETFs are funds that trade like a stock, which can be bought and sold whenever the market is open

ETFs are a diversified, low cost, and tax efficient way to invest



iShares[®]
by BLACKROCK[®]

Six Drivers of ETF Growth and Usage:

- ▶ Growth of the advised market
- ▶ Growth of the self-directed market
- ▶ Increased institutional usage
- ▶ Core exposures
- ▶ Fixed Income
- ▶ New products & new segments

The iShares difference

- ▶ Largest ETF provider in the world¹
- ▶ 800+ ETFs listed globally²
- ▶ Over \$1 trillion in assets²

1. Source: Based on number of ETFs, AUM and market share. Source: BlackRock as of 12/31/2016.
2. Based on 804 ETFs and \$1.29 trillion in assets under management globally as of 12/31/16.

iShares ETFs and Mutual Funds: Key differences

Criteria	iShares ETFs	Active Mutual Funds
Performance goal	Track a benchmark	Outperform a benchmark
Management	Passive	Active
Performance risks	<ul style="list-style-type: none"> • Performance may differ from benchmark • Holdings not altered during rising/falling markets 	<ul style="list-style-type: none"> • May not meet performance goal • May underperform due to manager's holdings selection
Buying/selling shares	Intraday on exchanges	Once per day via fund company
Price to buy/sell	Current market price, which may differ from NAV	End-of-day NAV
Fees	Expense ratio + transaction/ brokerage costs	Expense ratio + any sales loads/redemption fees
Tax impact* of buying/selling	Shareholders only impacted by their own action	Shareholders may be impacted by all other shareholders' actions
Holdings disclosure	Daily	Typically quarterly

* Both vehicles are obliged to distribute capital gains to all shareholders.

Important Information Regarding iShares® ETFs and BlackRock Mutual Funds

Carefully consider the Funds' investment objectives, risk factors, and charges and expenses before investing. This and other information can be found in the Funds' prospectuses or, if available, the summary prospectuses which may be obtained by visiting www.iShares.com or www.blackrock.com. Read the prospectus carefully before investing.

Investing involves risk, including possible loss of principal.

Fixed income risks include interest-rate and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. Non-investment-grade debt securities (high-yield/junk bonds) may be subject to greater market fluctuations, risk of default or loss of income and principal than higher-rated securities. There may be less information on the financial condition of municipal issuers than for public corporations. The market for municipal bonds may be less liquid than for taxable bonds. Some investors may be subject to federal or state income taxes or the Alternative Minimum Tax (AMT). Capital gains distributions, if any, are taxable.

There can be no assurance that performance will be enhanced or risk will be reduced for funds that seek to provide exposure to certain quantitative investment characteristics ("factors"). Exposure to such investment factors may detract from performance in some market environments, perhaps for extended periods. In such circumstances, a fund may seek to maintain exposure to the targeted investment factors and not adjust to target different factors, which could result in losses. The iShares Minimum Volatility ETFs may experience more than minimum volatility as there is no guarantee that the underlying index's strategy of seeking to lower volatility will be successful.

Real estate investment trusts ("REITs") are subject to changes in economic conditions, credit risk and interest rate fluctuations. Investment in a fund of funds is subject to the risks and expenses of the underlying funds.

Transactions in shares of ETFs will result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders.

Diversification and asset allocation may not protect against market risk or loss of principal. The strategies discussed are strictly for illustrative and educational purposes and are not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. There is no guarantee that any strategies discussed will be effective.

Shares of ETFs are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Brokerage commissions will reduce returns.

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