

# Factor Investing by iShares

Smart Beta strategies for  
the core of your portfolio

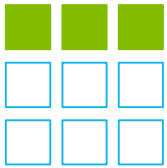
# Factor Investing

Ways to get started



## Factor investing

PURSUE DIFFERENTIATED OUTCOMES  
**Why factors?**



## Single Factors

SEEK OUTPERFORMANCE  
**“The New Style Box”**



## Multifactor

SEEK OUTPERFORMANCE  
**Total Market Core**



## Minimum Volatility

REDUCE VOLATILITY  
**Keep your clients invested**

# Active funds are under pressure

Underperformance. High fees. Capital gains distributions.

## Active equity mutual funds

**87%** underperformed their benchmark  
over the last fifteen years<sup>1</sup>

**0.88%** average expense ratio<sup>2</sup>

**78%** distributed capital gains in 2017<sup>3</sup>

**\$815  
billion**  
equity outflows  
past 3 years<sup>4</sup>

1 Source: SPIVA U.S. Scorecard as of 3/31/2019. "Active Equity Mutual Funds" comprised of equal weight composite of All Domestic Funds Category, Global Funds Category, International Funds Category, International Small-Cap Funds Category & Emerging Markets Funds Category. Actual number for All Domestic Funds underperforming their benchmark is 88.97%, for Global Funds is 83.16%, for International Funds is 89.83%, for International Small-Cap Funds is 75.86% and for Emerging Markets Funds is 96.15%. Past performance is not indicative of future results. 2 Source: Morningstar Direct as of 3/31/2019. Based on average U.S., Global, International & Emerging Market active manager fees. 3 Morningstar as of 3/31/2019, uses all U.S., Global, International & Emerging market active funds. **Past distributions are not indicative of future distributions.** 4 Source: Morningstar as of 3/31/2019. 3 year net flows for all active equity U.S. mutual funds.

# Data and technology are changing everything, including investing

## Innovators transform data into insights

1 billion hours ago, **humanity emerged**

1 billion seconds ago, **IBM released first PC**

**1 billion Google searches ago, was this morning**



**IN 60 SECONDS\***

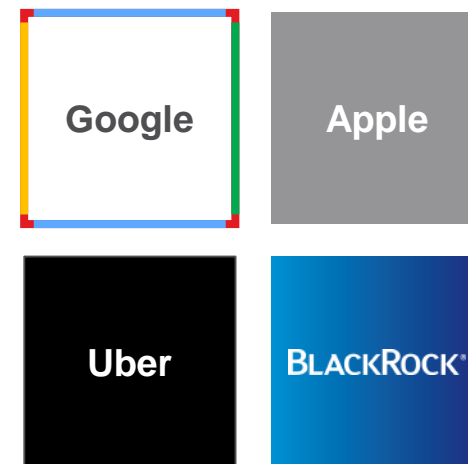
**159m**

E-mails  
are sent

**4.3m**

YouTube  
videos viewed

## When we need a better way, we innovate through technology



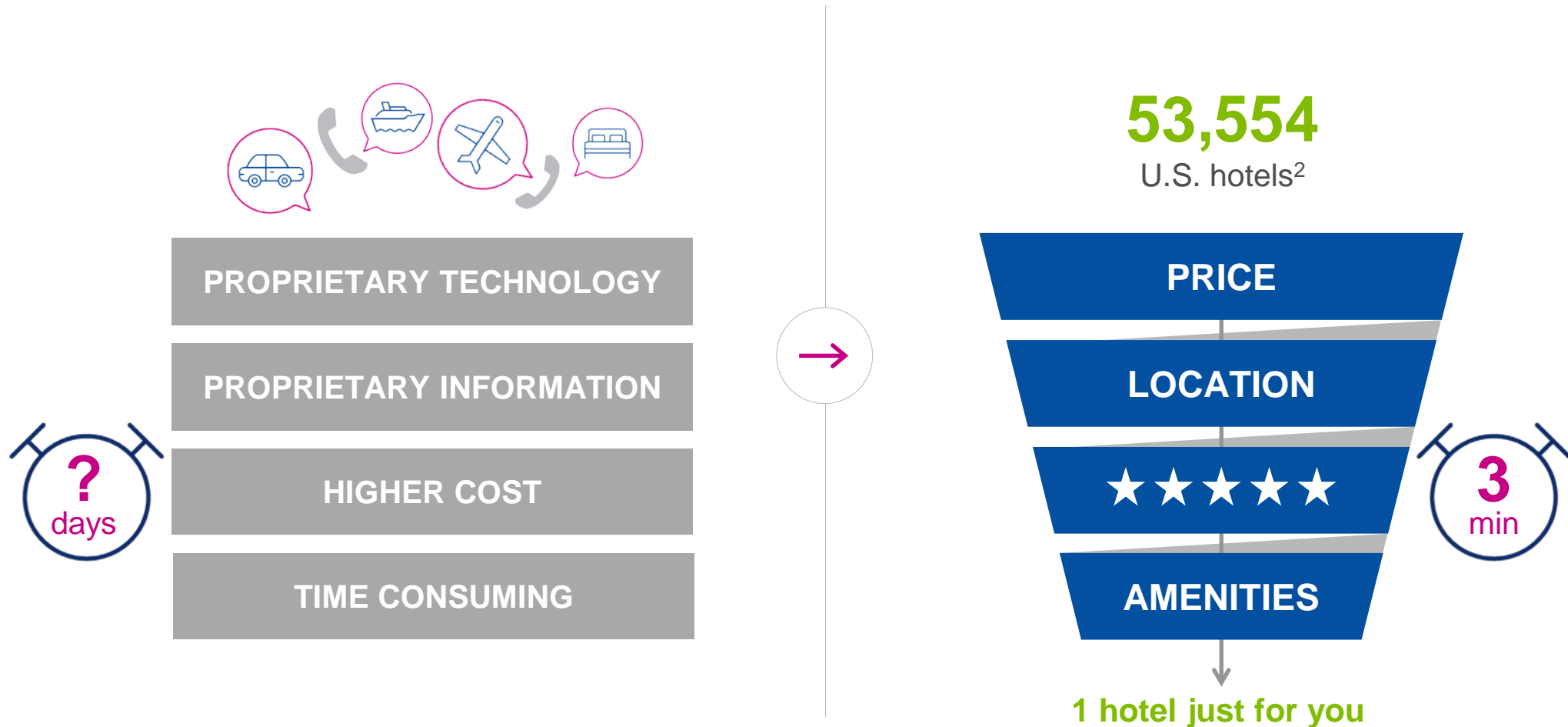
**Seeking outperformance at a lower cost**

(2013) Hal Varian, "Beyond Big Data".  
<http://people.ischool.berkeley.edu/~hal/Papers/2013/BeyondBigDataPaperFINAL.pdf>  
\*Internet live stats as of December 2017.

Companies shown for illustrative purposes only and should not be deemed an offer to sell or a solicitation of an offer to buy shares of any security.

# Kayak: disrupting the travel industry

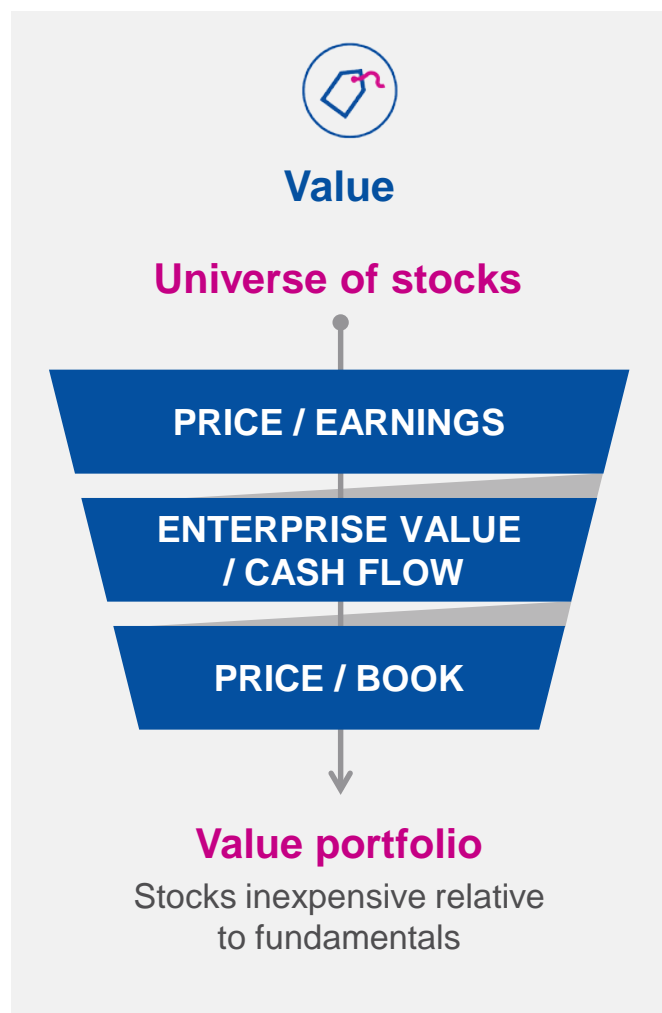
Travel agents depended on proprietary access to systems and information. The Web put that once exclusive technology into the hands of everyone – and now there are 44% fewer travel agents.<sup>1</sup>



<sup>1</sup> Source: Motherboard, compares number of travel agents in 1990 to number of travel agents in 2014. <sup>2</sup> Source: Business Travel News, as of 2015.

# Factors ETFs: low cost access for all

In the same way that Kayak.com provides access to the best hotel screens, factor investing provides everyday investors with security screens that active managers have used for generations... but at a fraction of the cost.



## Quality

### OBJECTIVE

Companies with healthy balance sheets

### SCREENS

ROE, Earnings consistency,  
Debt to equity



## Momentum

### OBJECTIVE

Stocks on an upswing

### SCREENS

Risk-adjusted price momentum



## Minimum Volatility

### OBJECTIVE

A lower volatility core portfolio

### SCREENS

Volatility of stocks  
Correlations between stocks,  
sectors, countries



## Size

### OBJECTIVE



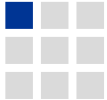







Invest in smaller,  
more nimble companies

### SCREENS

Market capitalization

# What are factors and why have they worked?

iShares Factor ETFs employ the same intuitive screens used by active managers for generations, but offer the low cost and tax efficiency of traditional ETFs.

|   | Factor  | Objective   | Screens   | Usage   |
|---|---|---|---|---|
| <br><b>Seek outperformance</b> |  <b>Value</b>                | Invests in stocks that are inexpensive relative to fundamentals     | <ul style="list-style-type: none"> <li>Price/forward earnings</li> <li>Price/book</li> <li>Enterprise value/cash flow</li> </ul>  |    |
|   |  <b>Quality</b>              | Invests in companies with healthy balance sheets                    | <ul style="list-style-type: none"> <li>Return on equity</li> <li>Earnings consistency</li> <li>Debt to equity</li> </ul>  |    |
|   |  <b>Momentum</b>           | Invests in stocks on an upswing                                     | <ul style="list-style-type: none"> <li>Risk-adjusted price momentum</li> </ul>  |  |
| <br><b>Reduce risk</b>       |  <b>Minimum Volatility</b> | Invests in stocks that have collectively exhibited lower volatility | <ul style="list-style-type: none"> <li>Measures volatility of each stock in the broad market index</li> <li>Analyze correlations between stocks, sectors and countries</li> </ul> |  |

## HOW DO YOU BUILD PORTFOLIOS?

**U.S. Style Box**

**Total Market Core**

*"The new style box"*

| Morningstar category   |   | Large Value          | Large Blend          | Large Growth         |
|--|---|----------------------|----------------------|----------------------|
| <div> <div>Value Blend Growth</div> <div> <div>Large</div> <div>Mid</div> <div>Small</div> </div> </div> <p><b>The new style box</b></p> <p>Modernize the traditional 9-box grid</p> | Market cap weighted<br><b>SEEK MARKET RETURNS</b> | <b>IUSV</b><br>0.04% | <b>IVV</b><br>0.04%  | <b>IUSG</b><br>0.04% |
|  | Smart beta<br><b>SEEK OUTPERFORMANCE</b>          | <b>VLUE</b><br>0.15% | <b>QUAL</b><br>0.15% | <b>MTUM</b><br>0.15% |
|  | Smart beta<br><b>SEEK REDUCED VOLATILITY</b>      |                      | <b>USMV</b><br>0.15% |                      |

*Expense ratios are shown below ticker symbols.*



## HOW DO YOU BUILD PORTFOLIOS?

**U.S. Style Box**

**Total Market Core**

*"The new style box"*



**Expand your horizons**

Use factors around the globe

| Morningstar category                              |  | Large Value                         | Large Blend                                  | Large Growth                            |
|---|--|-------------------------------------|--|---|
| Market cap weighted<br><b>SEEK MARKET RETURNS</b> |  | <b>ITOT</b><br>0.03%                | <b>IEFA</b><br>0.08%                         | <b>IEMG</b><br>0.14%                    |
| Smart beta<br><b>SEEK OUTPERFORMANCE</b>          |  | Large Value<br><b>LRGF</b><br>0.20% | Foreign Large Blend<br><b>INTF</b><br>0.30%  | Diversified EM<br><b>EMGF</b><br>0.45%* |
| Smart beta<br><b>SEEK REDUCED VOLATILITY</b>      |  | Large Value<br><b>USMV</b><br>0.15% | Foreign Large Blend<br><b>EFAV</b><br>0.20%* | Diversified EM<br><b>EEMV</b><br>0.25%* |

*Expense ratios are shown below ticker symbols.*

\*Net expense ratios shown for EMGF, EFAV and EEMV reflect contractual fee waivers in place until 12/31/21, 11/30/21, and 12/31/23, respectively. Gross expense ratios are 0.48%, 0.31%, and 0.67%, respectively.

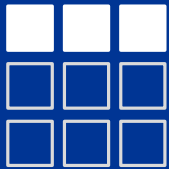
# Factor Investing

Ways to get started



**Factor investing**

PURSUE DIFFERENTIATED OUTCOMES  
**Why factors?**



**Single Factors**

SEEK OUTPERFORMANCE  
**“The New Style Box”**



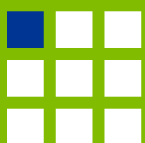
**Multifactor**

SEEK OUTPERFORMANCE  
**Total Market Core**



**Minimum  
Volatility**

REDUCE VOLATILITY  
**Keep your clients invested**



SINGLE FACTORS

# A new value for your style box

VLUE invests in stocks that are inexpensive relative to fundamentals.

iShares Edge MSCI USA  
Value Factor ETF

VLUE



Factor  
Value

Screens

Price/forward earnings

Price/book

Enterprise value/cash flow

## Strong performance

Outperformed **72%** of its peers on a  
5 year basis<sup>1</sup>

Fund is rated against 939 funds in the large cap value Morningstar category,  
based on total return.

## Low cost

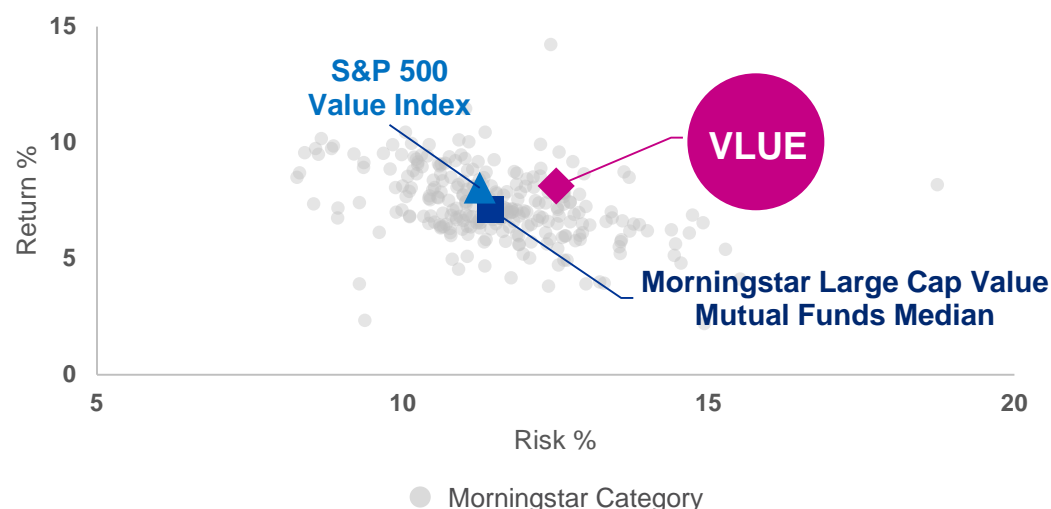
Expense ratio is **lower than 98%** of  
its active mutual fund peers<sup>2</sup>

## Tax efficient

VLUE has **never paid a capital  
gains distribution**<sup>3</sup>

## VLUE vs. Morningstar competitor mutual funds<sup>4</sup>

(4/1/2014 - 3/31/2019)



1 Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. 2 Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active large cap value mutual funds (Morningstar category). 3 Source: BlackRock as of 03/31/2019. Past distributions are not indicative of future distributions. 4 Source: Morningstar, 5 year performance for period ending 03/31/19. Universe includes the institutional share class of actively managed large cap value funds with 5 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.



SINGLE FACTORS

# A new blend for your style box

QUAL invests in companies with healthy balance sheets.

iShares Edge MSCI USA  
Quality Factor ETF

QUAL



Factor  
Quality

Screens

Return on equity

Earnings consistency

Debt to equity

## Strong performance

Outperformed **96%** of its peers on a  
5 year basis<sup>1</sup>

Fund is rated against 1,081 funds in the large cap blend Morningstar category,  
based on total return.

## Low cost

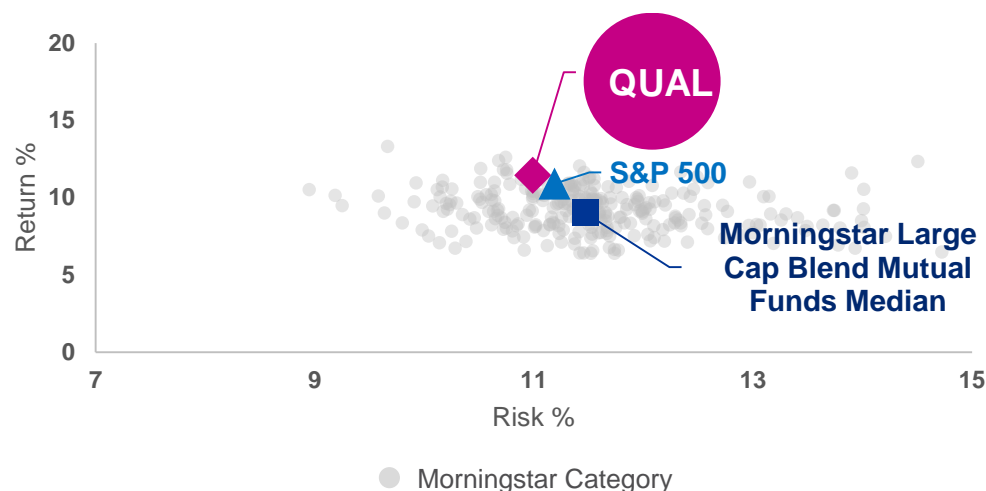
Expense ratio is **lower than 98%** of  
its active mutual fund peers<sup>2</sup>

## Tax efficient

QUAL has **never paid a capital  
gains distribution**<sup>3</sup>

## QUAL vs. Morningstar competitor mutual funds<sup>4</sup>

(4/1/2014 - 3/31/2019)



1 Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. 2 Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active large cap blend mutual funds (Morningstar category). 3 Source: BlackRock as of 03/31/2019. **Past distributions are not indicative of future distributions.** 4 Source: Morningstar, 5 year performance for period ending 03/31/19. Universe includes the institutional share class of actively managed large cap blend funds with 5 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.



SINGLE FACTORS

# A new growth for your style box

MTUM invests in stocks on an upswing.

iShares Edge MSCI USA  
Momentum Factor ETF

MTUM



Factor  
Momentum

Screens

Risk adjusted price momentum

## Strong performance

Outperformed **91%** of its peers on a  
5 year basis<sup>1</sup>

Fund is rated against 1,114 funds in the large cap growth Morningstar category,  
based on total return.

## Low cost

Expense ratio is **lower than 98%** of  
its active mutual fund peers<sup>2</sup>

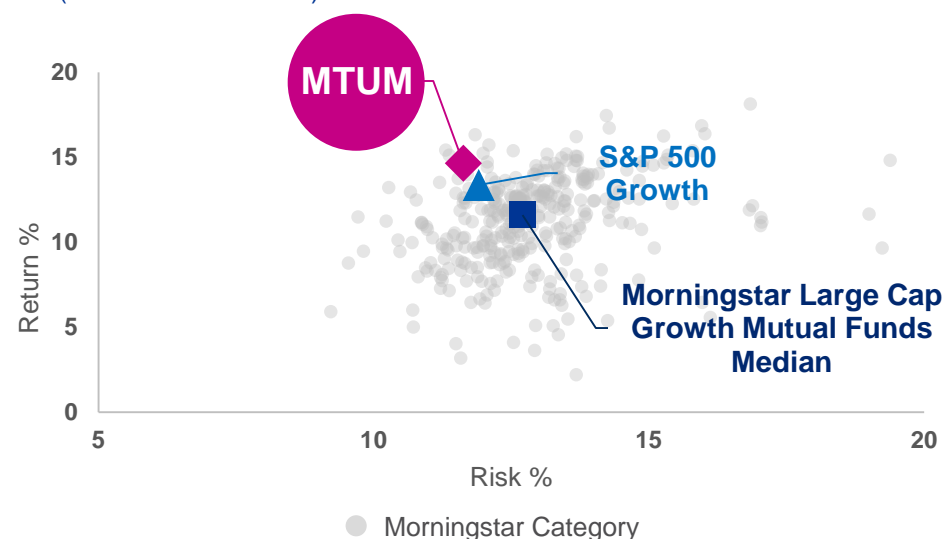
## Tax efficient

MTUM has **never paid a capital  
gains distribution**<sup>3</sup>

1 Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. 2 Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active large cap growth mutual funds (Morningstar category). 3 Source: BlackRock as of 03/31/2019. **Past distributions are not indicative of future distributions.** 4 Source: Morningstar, 5 year performance for period ending 03/31/19. Universe includes the institutional share class of actively managed large cap growth funds with 5 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.

## MTUM vs. Morningstar competitor mutual funds<sup>4</sup> (4/1/2014 - 3/31/2019)



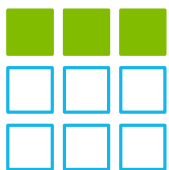
# Factor Investing

Ways to get started



**Factor investing**

PURSUE DIFFERENTIATED OUTCOMES  
**Why factors?**



**Single Factors**

SEEK OUTPERFORMANCE  
**“The New Style Box”**



**Multifactor**

SEEK OUTPERFORMANCE  
**Total Market Core**



**Minimum  
Volatility**

REDUCE VOLATILITY  
**Keep your clients invested**

## MULTIFACTOR

# Combining factors can reduce volatility of returns

Single factor strategies have low historical correlation, so combining them within Multifactor ETFs can deliver greater consistency of returns.

## U.S. factors calendar year fund returns (%)

| 2014              | 2015             | 2016             | 2017              | 2018              | Q1 2019           | Annual return<br>2014 – 2019 |
|-------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------------------|
| Min Vol<br>16.34  | Momentum<br>9.12 | Value<br>15.68   | Momentum<br>37.60 | Min Vol<br>1.36   | Quality<br>16.01  | Momentum<br>14.05            |
| Size<br>15.78     | Quality<br>5.56  | Size<br>13.32    | Quality<br>22.26  | Momentum<br>-1.77 | Size<br>15.25     | Min Vol<br>12.35             |
| Momentum<br>14.48 | Min Vol<br>5.50  | Min Vol<br>10.50 | Value<br>21.97    | Quality<br>-5.77  | Min Vol<br>12.69  | Quality<br>10.87             |
| Value<br>12.29    | Size<br>0.37     | Quality<br>9.18  | Min Vol<br>18.97  | Size<br>-6.51     | Momentum<br>12.59 | Size<br>10.47                |
| Quality<br>11.62  | Value<br>-3.54   | Momentum<br>4.89 | Size<br>18.88     | Value<br>-11.18   | Value<br>11.04    | Value<br>8.13                |

Source: Morningstar as of 03/31/19. Min Vol represented by the iShares Edge MSCI USA Min Vol ETF, Size represented by the iShares Edge MSCI USA Size Factor ETF, Momentum represented by the iShares Edge MSCI USA Momentum Factor ETF, Value represented by the iShares Edge MSCI USA Value Factor ETF, Quality represented by the iShares Edge MSCI USA Quality Factor ETF.

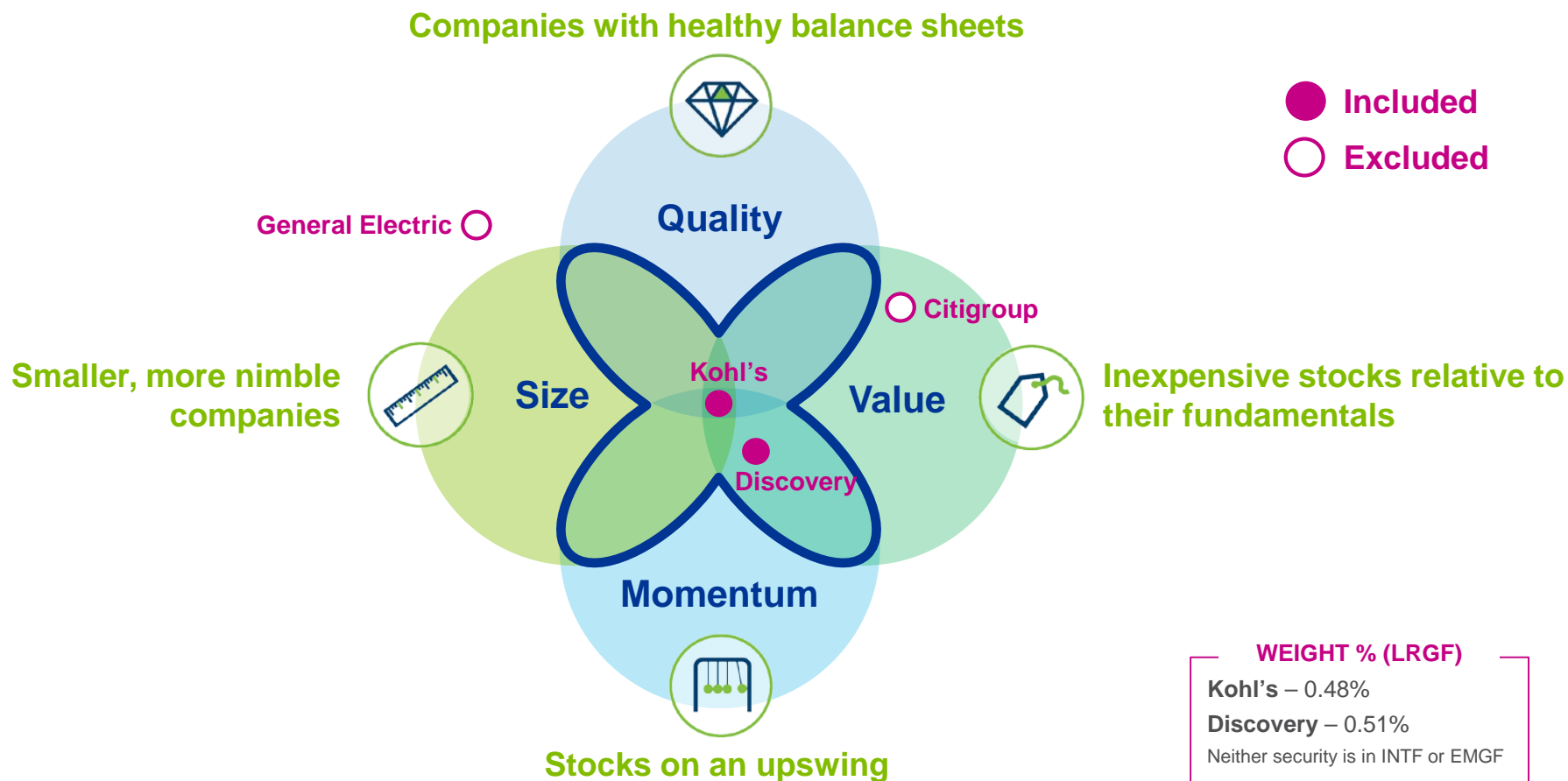
Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance, see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.



MULTIFACTOR

# iShares Multifactor ETFs

Multifactor strategies seek to invest in companies with multiple attractive characteristics. The funds employ sector and security constraints so you can use them in the core of your portfolio.



Source: BlackRock. For illustrative purposes only. There is no guarantee that any of these securities remain in or out of the indexes or funds. Holdings weights as of 3/31/2019 and are subject to change.





MULTIFACTOR

# A new core for your U.S. exposure

LRGF is a U.S. large cap core portfolio — for investors seeking the potential for outperformance vs. the broad market.

iShares Edge MSCI  
Multifactor USA ETF

LRGF



Value



Quality



Momentum



Size

## Strong performance

Outperformed 76% of its peers on a 3 year basis<sup>1</sup>

Fund is rated against 1,096 funds in the large cap value Morningstar category, based on total return.

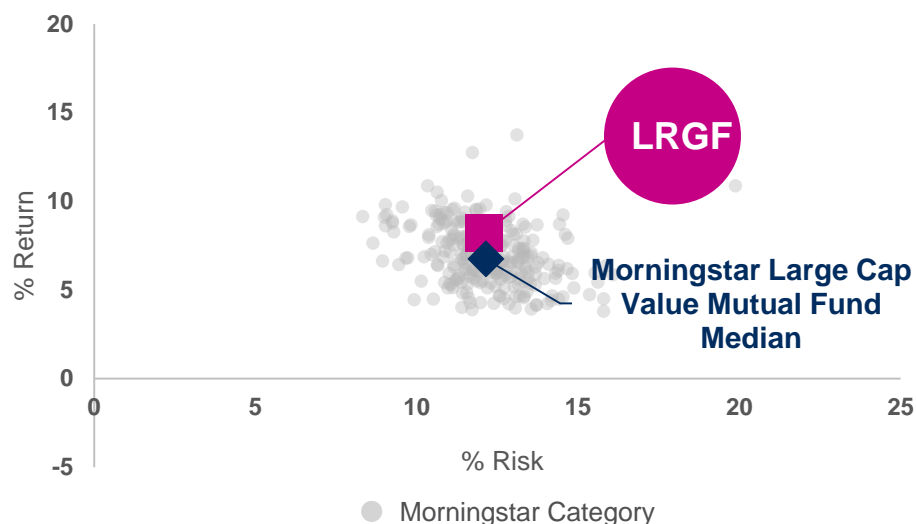
## Low cost

Expense ratio is **lower than 98%** of its active mutual fund peers<sup>2</sup>

## Tax efficient

LRGF has **never paid a capital gains distribution**<sup>3</sup>

## LRGF vs. Morningstar competitor mutual funds<sup>4</sup> (5/1/2015 - 3/31/2019)



<sup>1</sup> Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. <sup>2</sup> Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active large cap value mutual funds (Morningstar category). <sup>3</sup> Source: BlackRock as of 03/31/2019. **Past distributions are not indicative of future distributions.** <sup>4</sup> Source: Morningstar, 3 year performance for period ending 03/31/19. Universe includes the institutional share class of actively managed funds with 3 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.



MULTIFACTOR

# A new core for your Int'l exposure

iShares Edge MSCI  
Multifactor Intl ETF

INTF



Value



Quality



Momentum



Size

## Strong performance

Outperformed 90% of its peers on a 3 year basis<sup>1</sup>

Fund is rated against 644 funds in the foreign large blend Morningstar category, based on total return.

## Low cost

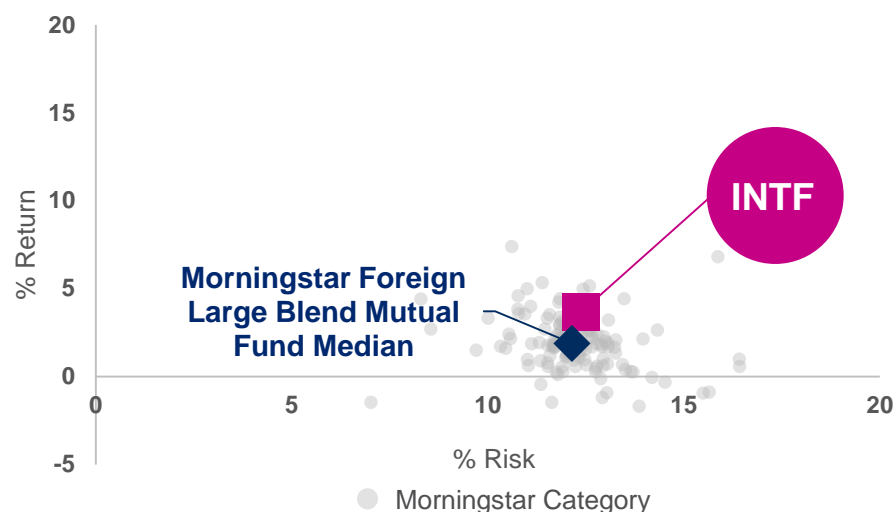
Expense ratio is **lower than 98%** of its active mutual fund peers<sup>2</sup>

## Tax efficient

INTF has **never paid a capital gains distribution**<sup>3</sup>

## INTF vs. Morningstar competitor mutual funds<sup>4</sup>

(5/1/2015 - 3/31/2019)



1 Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. 2 Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active foreign large blend mutual funds (Morningstar category). 3 Source: BlackRock as of 03/31/2019. Past distributions are not indicative of future distributions. 4 Source: Morningstar, 3 year performance for period ending 03/31/19. Universe includes the institutional share class of actively managed foreign large blend funds with 3 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.



MULTIFACTOR

# A new core for your EM exposure

EMGF is an emerging market core allocation for investors seeking the potential for outperformance with the low cost and tax efficiency of traditional ETFs.

iShares Edge MSCI Multifactor  
Emerging Markets ETF

EMGF



Value



Quality



Momentum



Size

## Strong performance

Outperformed 50% of its peers since inception<sup>1</sup>

Fund is rated against 707 funds in the diversified emerging markets Morningstar category, based on total return.

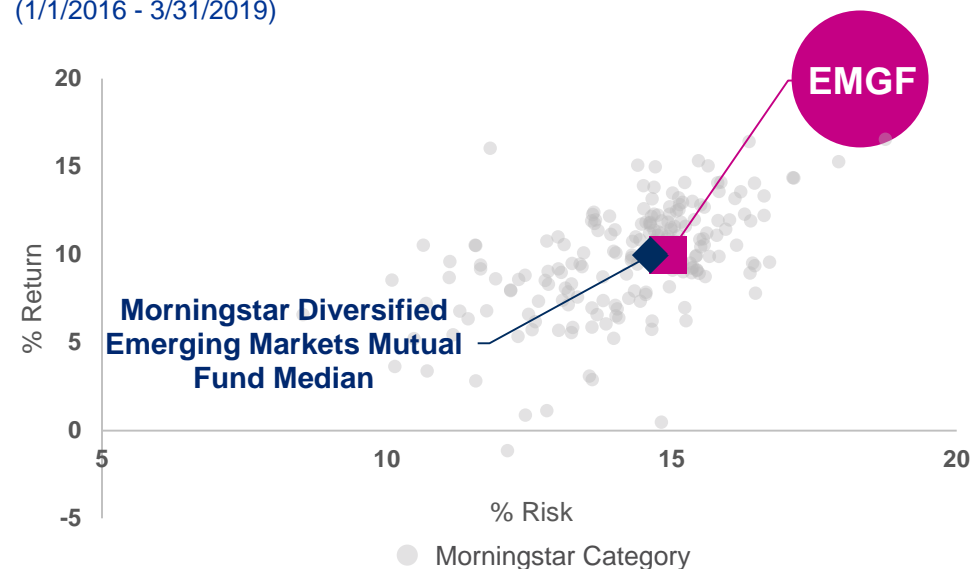
## Low cost

Expense ratio is **lower than 98%** of its active mutual fund peers<sup>2</sup>

## Tax efficient

EMGF has **never paid a capital gains distribution**<sup>3</sup>

## EMGF vs. Morningstar competitor mutual funds<sup>4</sup> (1/1/2016 - 3/31/2019)



<sup>1</sup> Source: Morningstar as of 03/31/19. Comparison universe is ETFs and mutual funds in the Morningstar category. For more information on Morningstar Rankings, please see the end of this document. <sup>2</sup> Source: BlackRock as of 03/31/19, based on average prospectus net expense ratios for active diversified emerging markets mutual funds (Morningstar category). <sup>3</sup> Source: BlackRock as of 12/31/2019. **Past distributions are not indicative of future distributions.** <sup>4</sup> Source: Morningstar, 3 year performance for period ending 03/30/19. Universe includes the institutional share class of active diversified emerging markets funds with 3 years of performance. Risk, represented by standard deviation, measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile. For more information on the differences between ETFs and mutual funds, see the end of this document.

Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see [www.iShares.com](http://www.iShares.com). For standardized performance, see the end of this document.

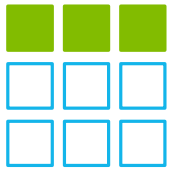
# Factor Investing

Ways to get started



**Factor investing**

PURSUE DIFFERENTIATED OUTCOMES  
**Why factors?**



**Single Factors**

SEEK OUTPERFORMANCE  
**“The New Style Box”**



**Multifactor**

SEEK OUTPERFORMANCE  
**Total Market Core**



**Minimum  
Volatility**

REDUCE VOLATILITY  
**Keep your clients invested**

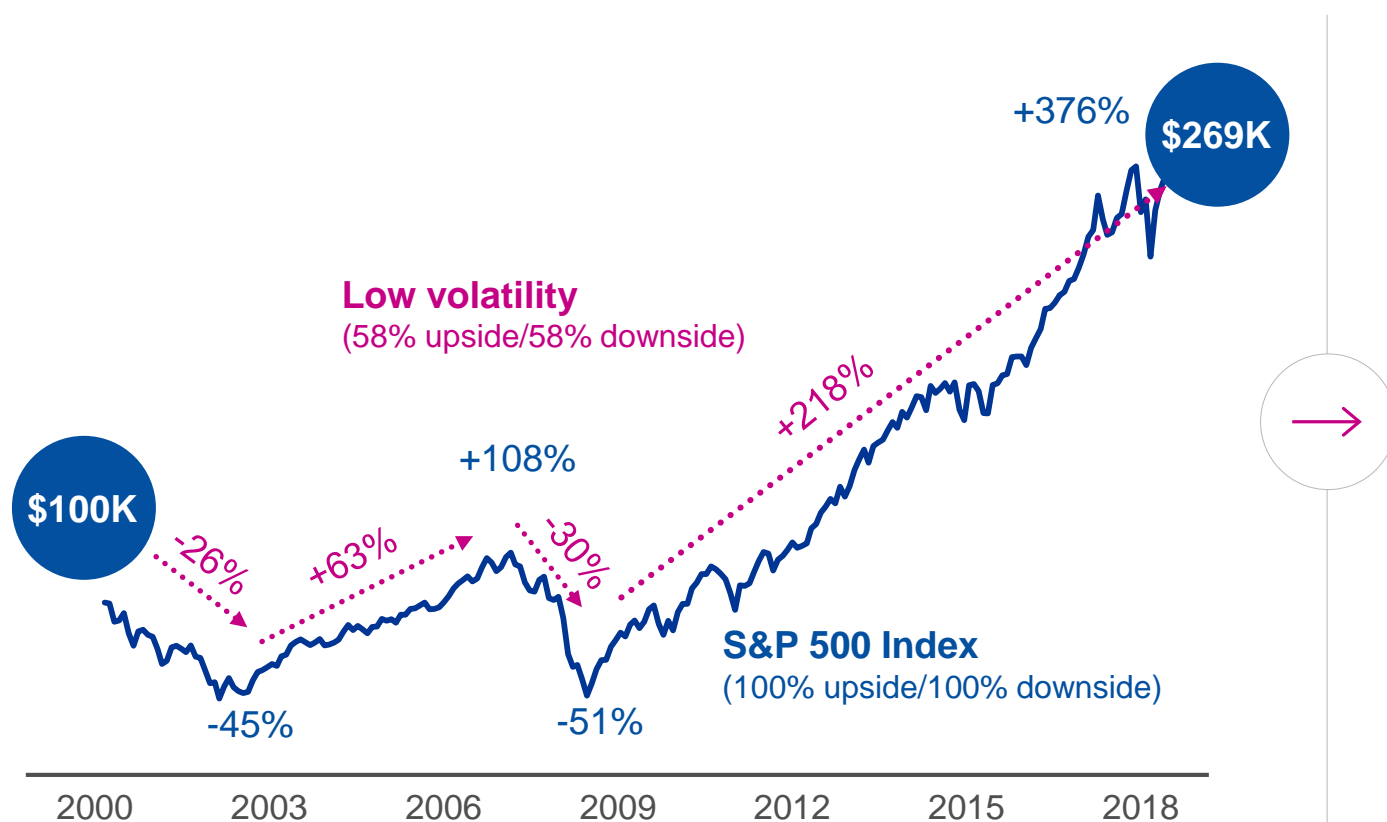


MINIMUM VOLATILITY

# Losing less can lead to winning more

Asymmetric upside/downside capture can lead to a better outcome.

Growth of a hypothetical \$100k over the last two bear and bull markets for U.S. stocks



| Scenario                   |              |
|----------------------------|--------------|
| Upside/downside            | Ending value |
| S&P 500 Index<br>100%/100% | \$269K       |
| Low volatility<br>58%/58%  | \$271K       |

| Other scenarios                 |              |
|---------------------------------|--------------|
| Upside/downside                 | Ending value |
| Avg. mutual fund*<br>95%/101%   | \$247K       |
| More up<br>than down<br>60%/50% | \$311K       |

Source: Morningstar as of 8/31/00 – 3/31/18. Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. **Past performance does not guarantee future results.**

\* Average mutual funds include all equity funds for all Morningstar categories.

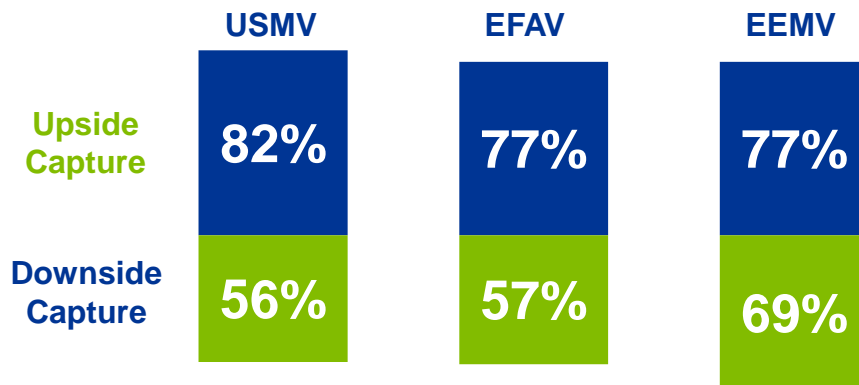


MINIMUM VOLATILITY

# Minimum Volatility ETFs have delivered market-like returns with less risk

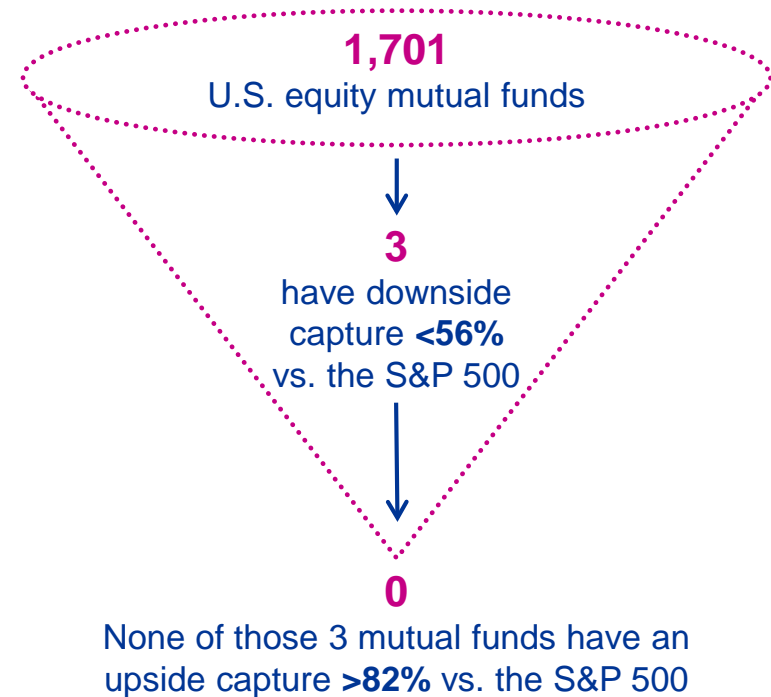
## Upside/downside capture

Since November 2011



Source: BlackRock as of 3/31/18. Based on fund and index returns from 11/1/11 – 3/31/19. Data compares USMV to the S&P 500 Index, EFAV to the MSCI EAFE Index and EEMV to the MSCI Emerging Markets Index.

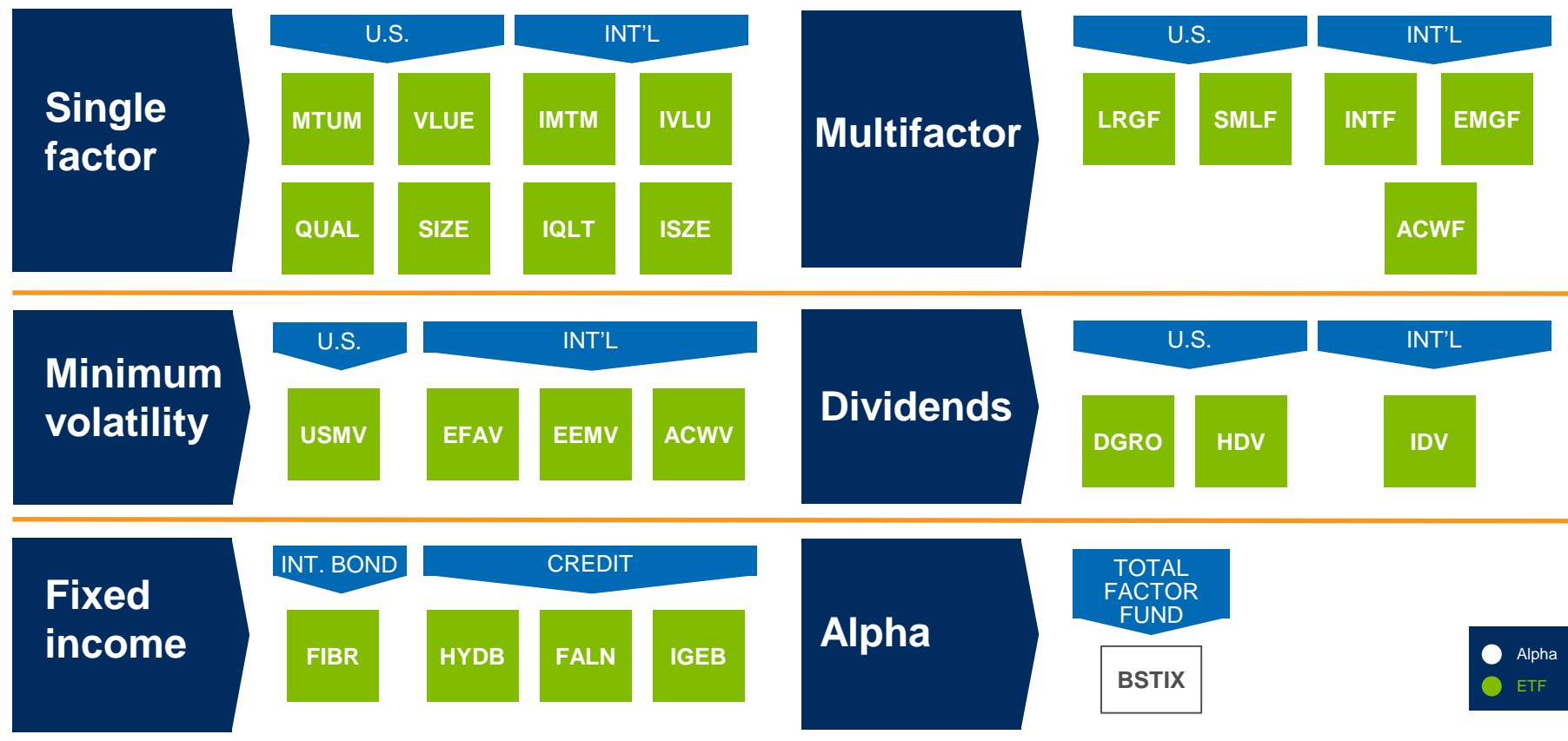
## So how do other investments compare to USMV?



Source: BlackRock as of 03/31/19. Mutual Fund universe based on the oldest share class in the "U.S. Equity" Morningstar category inception before 11/1/2011. **Past performance does not guarantee future results.** For standardized performance, and to see how these funds performed against their benchmarks, please see Appendix.

# BlackRock's factor platform

Seek your desired outcome with our full suite of alpha and index factor strategies.



Blackrock manages over **\$209B** in factor-based strategies across equity, fixed income, and alternatives.\*

\*Source: BlackRock as of 12/31/2018.

# A Factor approach to Fixed Income

Just like equities, factors are a major driver of returns in fixed income. A factor approach to core bond investing can help seek outperformance with an improved risk/return profile compared to both index and active strategies.



**Balanced Risk**

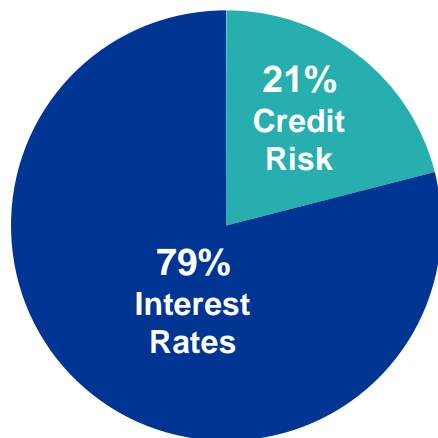
**Process**

**Balance Rate &  
Credit Risk**

**Diversify Across Credit  
Sectors**

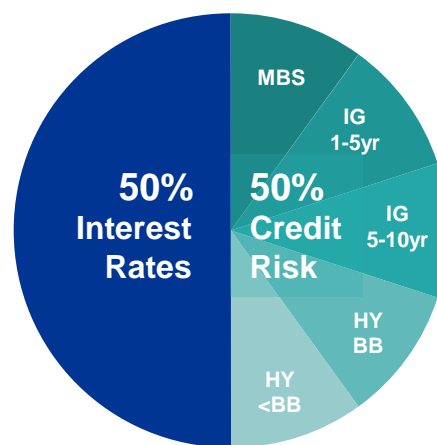
**Balancing factor exposures in core bonds has resulted in...**

**Bloomberg Barclays  
U.S. Aggregate Bond Index**  
(Factor contribution)

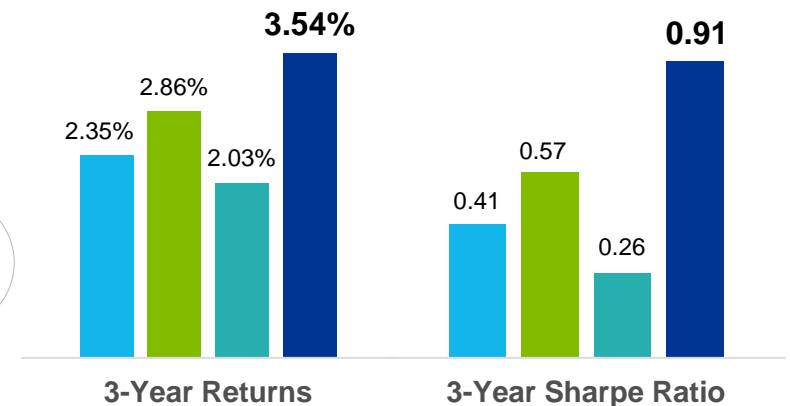


**VS**

**Bloomberg Barclays U.S.  
Fixed Income Balanced Risk Index**  
(Factor contribution)



**...Outperformance with less risk**



- Intermediate Term Bond Category – Average
- Intermediate Term Bond Category – Top Quartile
- Bloomberg Barclays U.S. Aggregate Bond Index
- Bloomberg Barclays U.S. Fixed Income Balanced Risk Index**

Source: Morningstar, as of 03/31/19. "Intermediate-Term Bond Category – Average" represented by the average NAV returns of the Morningstar U.S. Intermediate-Term Bond Fund Category. "Intermediate-Term Bond Category – Top Quartile" represented by the 25<sup>th</sup> percentile ranked NAV returns of the Morningstar U.S. Intermediate-Term Bond Fund Category. The category includes 885 ETFs and mutual funds. Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Performance data represents past performance and does not guarantee future results.



# Appendix: ETFs and traditional mutual funds- know the differences

| Criteria  | Mutual funds  | ETFs   |
|---|---|--|
| <b>Management</b>                                 | Active  | Passive  |
| <b>Performance goal</b>                           | Outperform a benchmark and/or deliver outcome   | Track a benchmark  |
| <b>Buying / selling shares</b>                    | Once per day via fund company   | Intraday on exchanges  |
| <b>Price to buy / sell</b>                        | End-of-day NAV, less fees   | Current market price, which may differ from NAV  |
| <b>Fees</b>                                       | Expense ratio + any sales loads / redemption fees   | Expense ratio + transaction / brokerage costs  |
| <b>Tax impact<sup>1</sup> of buyers / sellers</b> | Shareholders may be impacted by all other shareholders' actions   | Shareholders only impacted by their own action   |
| <b>Holdings disclosure</b>                        | Typically monthly   | Daily  |
| <b>Benefits</b>                                   | <ul style="list-style-type: none"> <li>• Opportunity to outperform the index</li> <li>• Potential to limiting the downside</li> <li>• Buy/sell decisions based on research</li> </ul> | <ul style="list-style-type: none"> <li>• Exposure to market index</li> <li>• Generally lower fees</li> <li>• Typically more tax efficient</li> </ul>   |
| <b>Trade-offs</b>                                 | <ul style="list-style-type: none"> <li>• Potential to underperform index</li> <li>• Generally higher fees</li> <li>• Typically less tax efficient</li> </ul>                          | <ul style="list-style-type: none"> <li>• Does not seek to outperform index</li> <li>• Participate in all of index downside</li> <li>• Buy / sell decisions based on index, not research</li> </ul> |

<sup>1</sup> Both vehicles are obliged to distribute capital gains to all shareholders.

## Appendix: Standardized performance as of 03/31/19

| Fund Name   | Fund Inception Date | Gross Expense Ratio | 1-Year Returns |           | 5-Year Returns |           | 10-Year Returns |           | Since Inception |           |
|---|---------------------|---------------------|----------------|-----------|----------------|-----------|-----------------|-----------|-----------------|-----------|
|   |                     |                     | NAV            | Mkt Price | NAV            | Mkt Price | NAV             | Mkt Price | NAV             | Mkt Price |
| iShares Edge MSCI USA Quality Factor ETF (QUAL)           | 7/16/2013           | 0.15%               | 9.01%          | 9.02%     | 11.44%         | 11.44%    | --              | --        | 12.45%          | 12.45%    |
| iShares Edge MSCI USA Value Factor ETF (VLUE)             | 4/16/2013           | 0.15%               | -0.01%         | -0.05%    | 8.12%          | 8.12%     | --              | --        | 10.51%          | 10.51%    |
| iShares Edge MSCI USA Momentum Factor ETF (MTUM)          | 4/16/2013           | 0.15%               | 7.64%          | 7.34%     | 14.64%         | 14.63%    | --              | --        | 15.36%          | 15.35%    |
| iShares Edge MSCI Min Vol USA ETF (USMV)                  | 10/18/2011          | 0.15%               | 15.52%         | 15.54%    | 12.55%         | 12.55%    | --              | --        | 14.27%          | 14.27%    |
| iShares Edge MSCI Multifactor USFA ETF (LRGF)             | 4/28/2015           | 0.20%               | 1.46%          | 1.46%     | --             | --        | --              | --        | 7.61%           | 7.61%     |
| iShares Edge MSCI Multifactor Intl ETF (INTF)             | 4/28/2015           | 0.30%               | -6.35%         | -6.63%    | --             | --        | --              | --        | 3.49%           | 3.56%     |
| iShares Edge MSCI Multifactor Emerging Markets ETF (EMGF) | 12/08/2015          | 0.48%               | -13.44%        | -14.40%   | --             | --        | --              | --        | 9.41%           | 9.52%     |
| iShares Edge MSCI Min Vol EAFE ETF (EFAV)                 | 10/18/2011          | 0.31%               | 1.28%          | 0.82%     | 5.96%          | 5.98%     | --              | --        | 8.00%           | 8.02%     |
| iShares Edge MSCI Min Vol Emerging Markets ETF (EEMV)     | 10/18/2011          | 0.67%               | -1.86%         | -2.50%    | 3.18%          | 3.28%     | --              | --        | 5.03%           | 5.06%     |
| MSCI USA Minimum Volatility Index                         | --                  | --                  | 15.69%         | --        | 12.73%         | --        | 16.29%          | --        | 14.45%          | --        |
| MSCI EAFE Minimum Volatility (USD) Index                  | --                  | --                  | 1.39%          | --        | 6.03%          | --        | --              | --        | 8.09%           | --        |
| MSCI Emerging Markets Minimum Volatility Index            | --                  | --                  | -1.54%         | --        | 3.40%          | --        | --              | --        | 5.28%           | --        |

Fees as of Current Prospectus. All Other Data as of 03/31/19.

The performance quoted represents past performance of specific funds and does not guarantee future results for such funds. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting [www.iShares.com](http://www.iShares.com) or [www.blackrock.com](http://www.blackrock.com). Shares of iShares Funds are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Brokerage commissions will reduce returns. Market returns are based upon the midpoint of the bid/ask spread at 4:00 p.m. eastern time (when NAV is normally determined for most iShares Funds), and do not represent the returns you would receive if you traded shares at other times. Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.

MKTGM0519U-836176-26/28

# Important information on Morningstar Ratings

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure (excluding any applicable sales charges) that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Total return represents changes to the NAV and accounts for distributions from the funds (excluding any applicable sales charges).

In reference to slide 11: VLUE outperformed 12% of its peers on a 1 year basis. Fund is rated against 1,229 large cap value Morningstar category ETF and mutual funds based on total return.

In reference to slide 9: QUAL Outperformed 67% of its peers on a 1 year basis. Fund is rated against 1,412 large cap blend Morningstar category ETF and mutual funds based on total return.

In reference to slide 10: MTUM Outperformed 23% of its peers on a 1 year basis. Fund is rated against 1,397 large cap growth Morningstar category ETF and mutual funds based on total return.

In reference to slide 14: LRGF Outperformed 23% of its peers on a 1 year basis. Fund is rated against 1,229 large cap value Morningstar category ETF and mutual funds based on total return.

In reference to slide 15: INTF Outperformed 32% of its peers on a 1 year basis. Fund is rated against 753 foreign large blend Morningstar category ETF and mutual funds based on total return.

In reference to slide 16: EMGF Outperformed 16% of its peers on a 1 year basis. Fund is rated against 833 diversified emerging markets Morningstar category ETF and mutual funds based on total return.

# Important information regarding iShares ETFs

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](http://www.iShares.com) or [www.blackrock.com](http://www.blackrock.com). Read the prospectus carefully before investing. Investing involves risk, including possible loss of principal.

The creation/redemption mechanism of ETFs helps insulate shareholders from transaction costs and capital gains created by other shareholders. Additionally, with iShares ETFs, one shareholder's actions do not create capital gains distributions for other shareholders. 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. Certain traditional mutual funds can also be tax efficient.

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.

International investing involves risks, including risks related to foreign currency, limited liquidity, less government regulation and the possibility of substantial volatility due to adverse political, economic or other developments. These risks often are heightened for investments in emerging/developing markets and in concentrations of single countries.

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.

Investment comparisons are for illustrative purposes only. To better understand the similarities and differences between investments, including investment objectives, risks, fees and expenses, it is important to read the products' prospectuses.

The Funds are distributed by BlackRock Investments, LLC (together with its affiliates, "BlackRock").

The iShares Funds are not sponsored, endorsed, issued, sold or promoted by MSCI Inc., nor does this company make any representation regarding the advisability of investing in the Funds. BlackRock is not affiliated with MSCI Inc.

©2019 BlackRock. All rights reserved. **iSHARES** and **BLACKROCK** are registered trademarks of BlackRock. All other marks are the property of their respective owners.