

Factor Investing by iShares

Smart Beta strategies for the core of your portfolio

iShares
by BlackRock

MKTGM1019U-971493-1/33

Factor investing

Ways to get started

Factor investing

Pursue differentiated outcomes

Why factors?

Minimum Volatility

Reduce volatility

Keep your clients invested

Single Factors

Seek outperformance

“The New Style Box”

Multifactor

Seek outperformance

Total Market Core

Active funds are under pressure

Underperformance. High fees. Capital gains distributions. Investors are looking for a better way to construct portfolios that will give them competitive performance, while keeping costs low and providing tax efficiency.

Active equity mutual funds

87% underperformed their benchmark over the last fifteen years¹

0.88% average expense ratio²

78% distributed capital gains in 2018³

\$815 billion
equity outflows
past 3 years⁴

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 Source: 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.

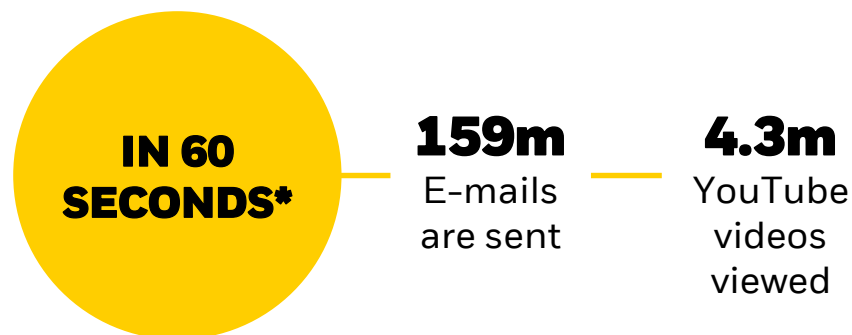
Data and technology are changing everything, including investing

Innovators transform data into insights

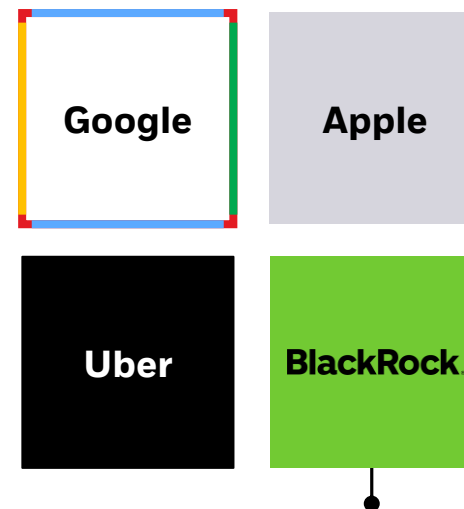
1 billion hours ago, **humanity emerged**

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

1 billion Google searches ago, was this morning



When we need a better way, we innovate through technology



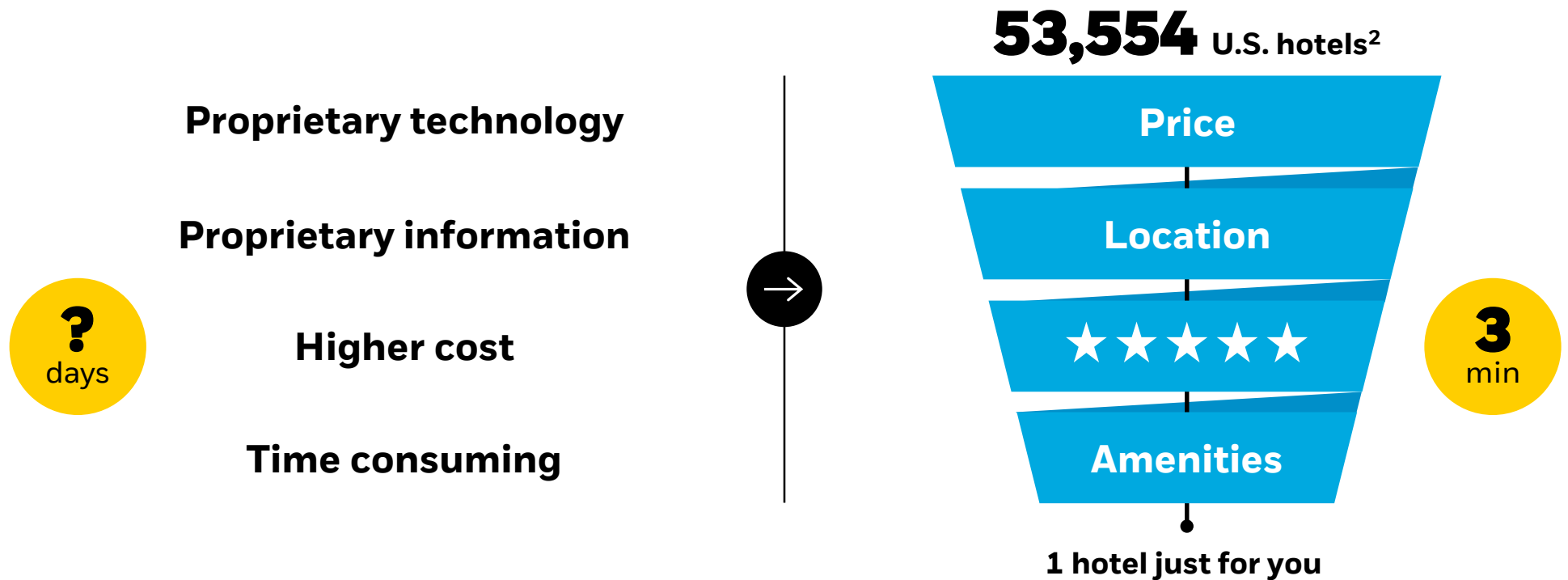
Seeking outperformance at a lower cost

(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

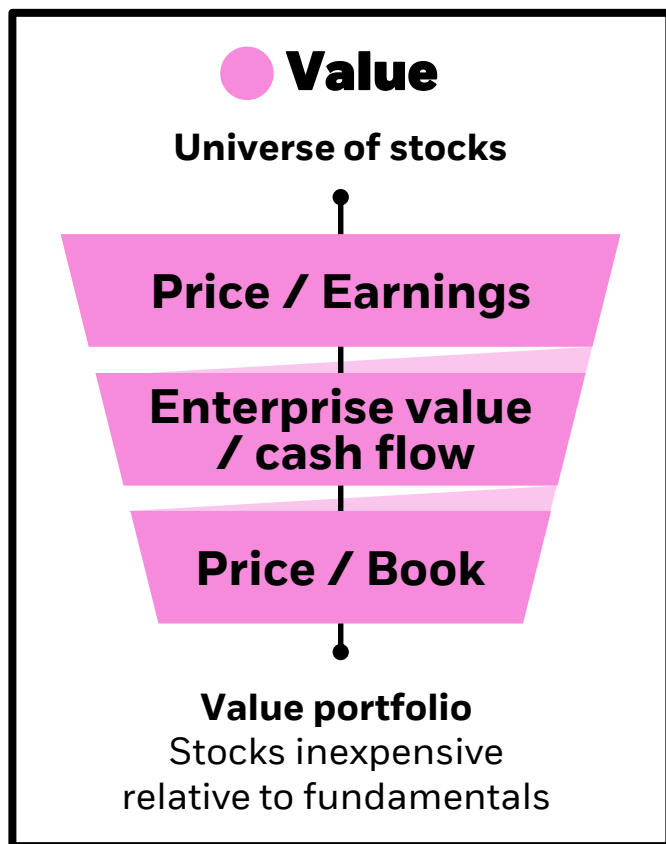
Travel agents depended on proprietary access to systems and information. The Web put that once exclusive technology into the hands of everyone – and now there are 44% fewer travel agents.¹



¹ Source: Motherboard, compares number of travel agents in 1990 to number of travel agents in 2014. ² 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

Minimum Volatility

Objective

A lower volatility core portfolio

Screens

Volatility of stocks
Correlations between stocks, sectors, countries

Momentum

Objective

Stocks on an upswing

Screens

Risk-adjusted price momentum

Size

Objective

Invest in smaller, more nimble companies

Screens

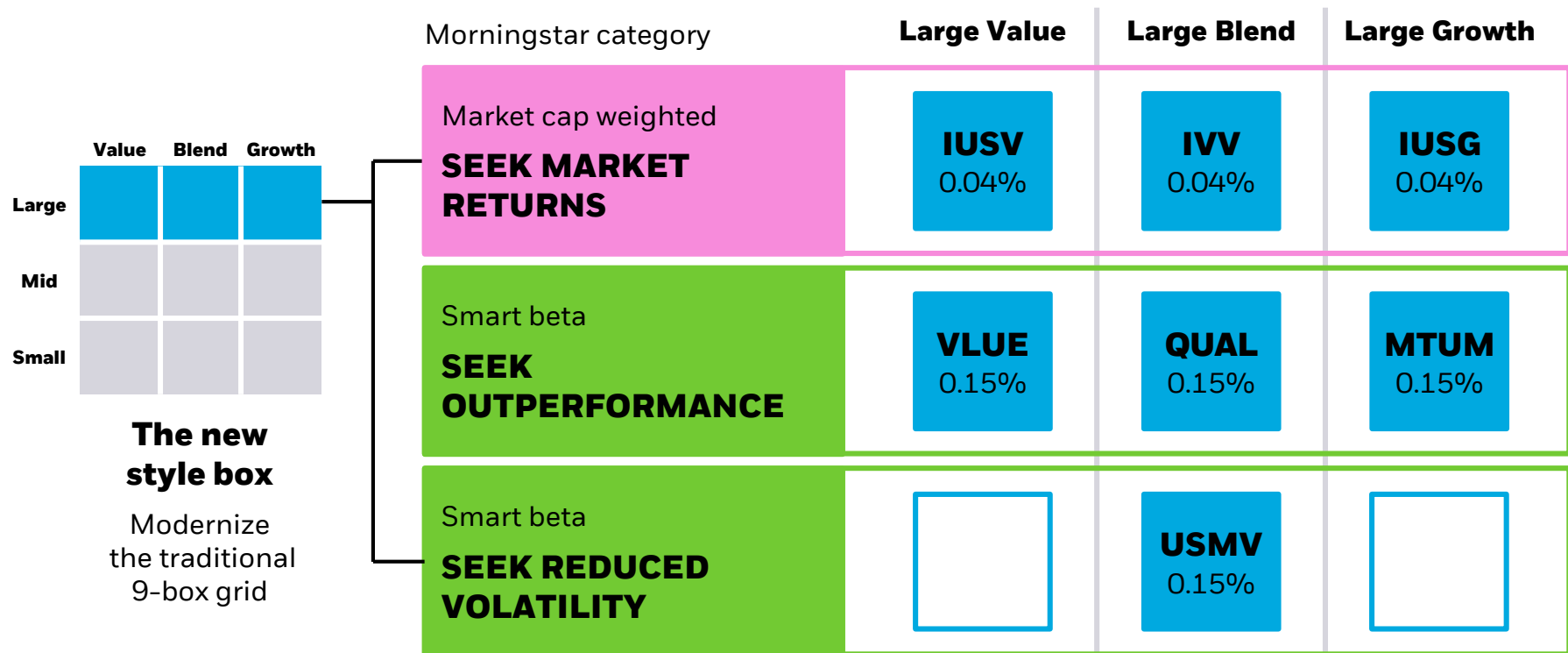
Market capitalization

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

How do you build portfolios?



Expense ratios are shown below ticker symbols.

How do you build portfolios?



Expand your horizons
Use factors around the globe

Morningstar category	U.S.	Int'l	EM
Market cap weighted SEEK MARKET RETURNS	ITOT 0.03%	IEFA 0.07%	IEMG 0.14%
Smart beta SEEK OUTPERFORMANCE	Large Value LRGF 0.20%	Foreign Large Blend INTF 0.30%	Diversified EM EMGF 0.45%
Smart beta SEEK REDUCED VOLATILITY	Large Value USMV 0.15%	Foreign Large Blend EFAV 0.20%	Diversified EM EEMV 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.

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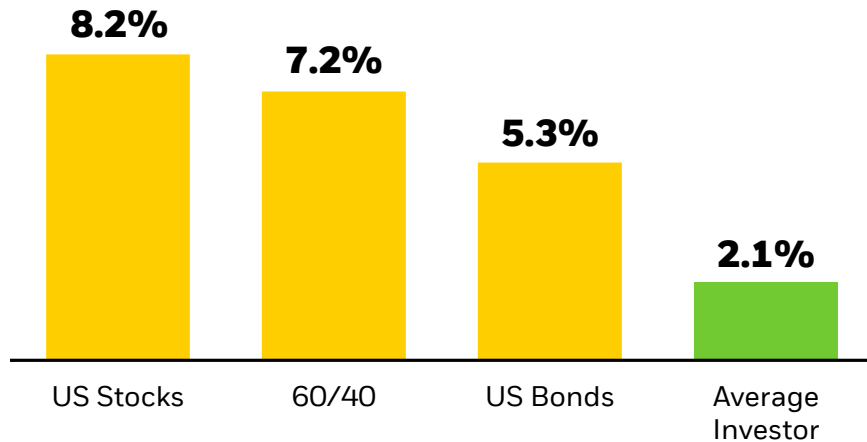
Total Market Core

Why minimum volatility makes sense

Behavioral reasons

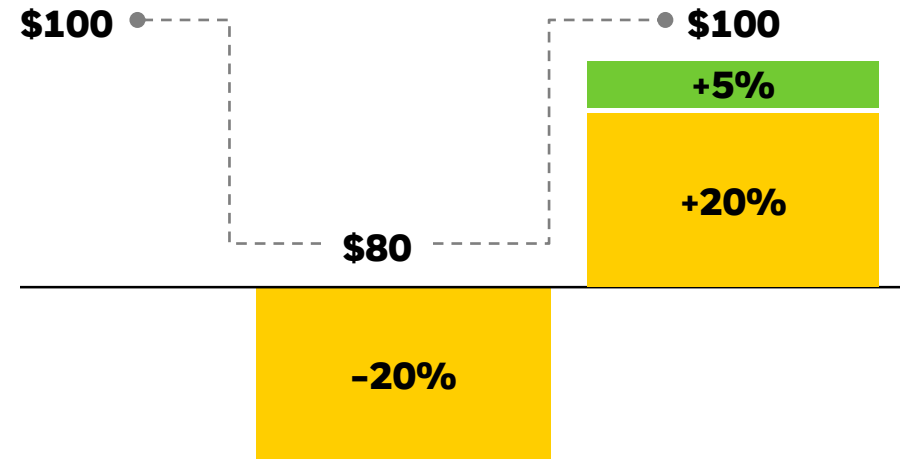
Volatility can drive poor decision making

Annualized returns (1996-2015)*



Math reasons**

Losing less can lead to winning more



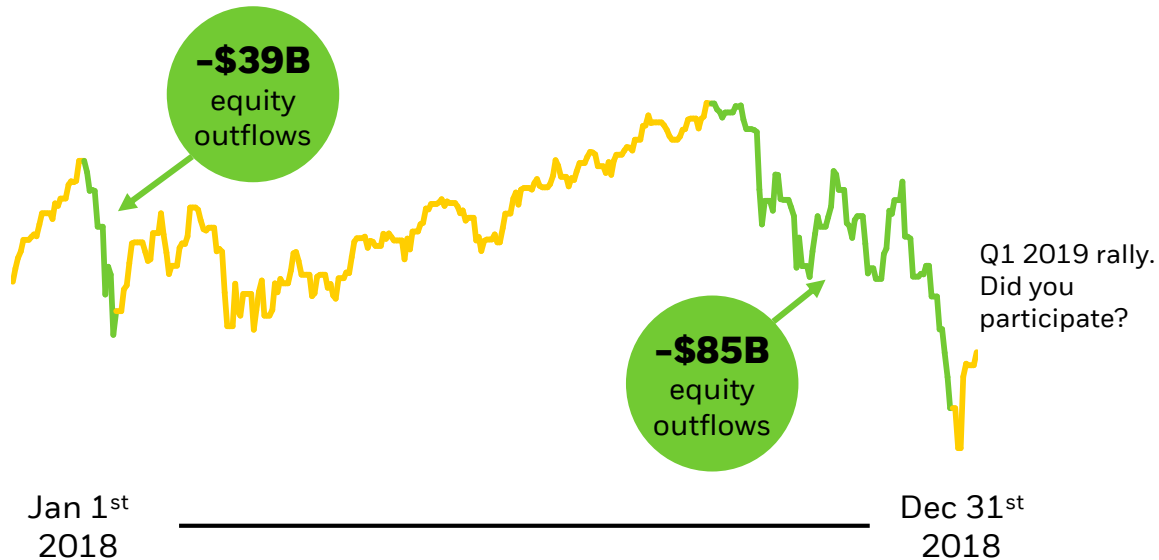
* Sources: BlackRock; Morningstar; Informa Investment Solutions; Dalbar. Returns based on performance between 1/1/1996-12/31/2015. Asset classes represented by the following indexes: US Stocks = S&P 500, 60/40 = balanced portfolio with 60% invested in the S&P 500 Index and 40% invested in the Bloomberg Barclays U.S. Aggregate Bond Index and rebalanced annually, US Bonds = Bloomberg Barclays U.S. Aggregate Bond Index, Average Investor = Dalbar's average asset allocation investor return, which uses data from the Investment Company Institute (ICI), Standard & Poor's and Barclays Index Products to compare mutual fund investor returns to an appropriate set of benchmarks. The study utilizes mutual fund sales, redemptions and exchanges each month as the measure of investor behavior. These behaviors reflect the "average investor." Based on this behavior, the analysis calculates the "average investor return" for various periods. **Index returns are for illustrative purposes only. Index performance returns do 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.** ** Source: Hypothetical example for illustrative purpose.

MINIMUM VOLATILITY – KEEP YOUR CLIENTS INVESTED

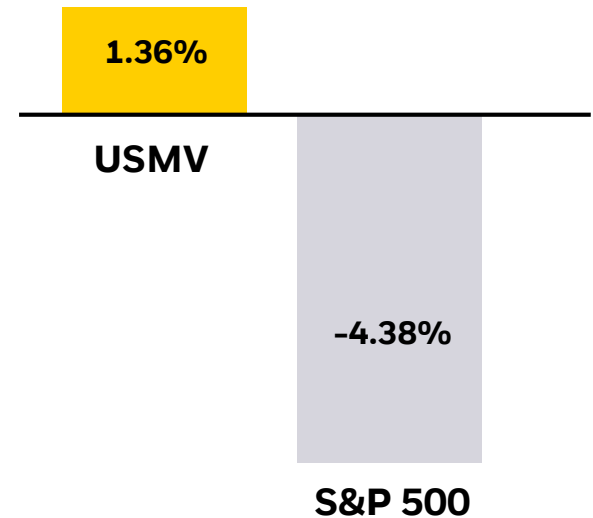
Keep your clients invested

2018: did your clients stay invested?

2018 returns for the S&P500 Index



2018 total return



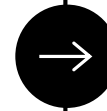
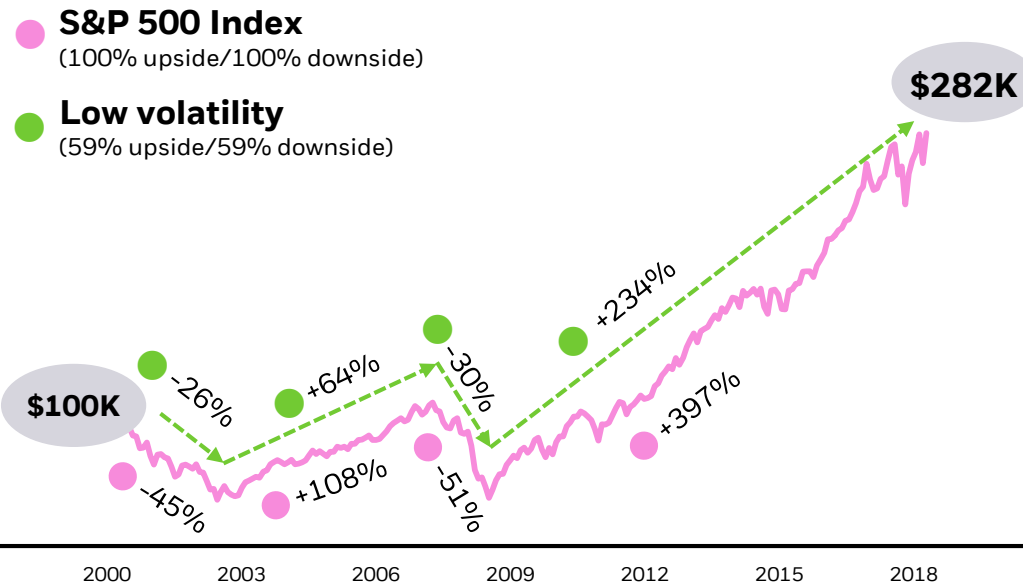
Source: Morningstar as of 12/31/2018. Performance data represents past performance and does not guarantee future results. Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance see www.iShares.com. For standardized performance and see how this fund performed against its benchmark, see slide titled Standardized Performance at the end of this presentation.. 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.

MINIMUM VOLATILITY – KEEP YOUR CLIENTS INVESTED

Losing less can lead to winning more

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

Growth of a hypothetical \$100k in the S&P 500 Index over the last two bear and bull markets



Scenario	
Upside/downside	Ending value
● S&P 500 Index 100%/100%	\$281K
● Low volatility¹ 59%/59%	\$282K

Other scenarios	
Upside/downside	Ending value
More up than down² 60%/50%	\$323K

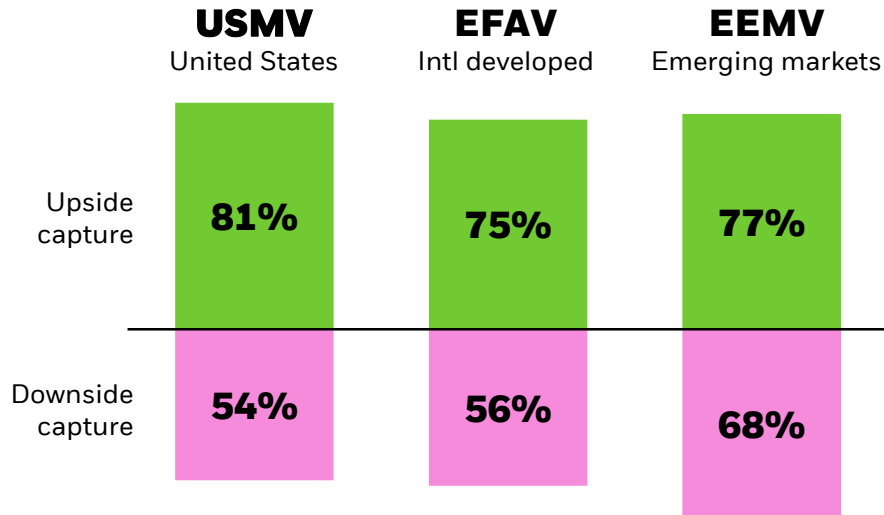
Source: Morningstar as of 8/31/00 - 6/30/19. **1 Source:** Hypothetical ending value if \$100k was invested in the S&P 500 index and captured 59% of the upside and downside over last two bear and bull market cycles. 59% upside/downside is used to demonstrate what symmetric capture ratio is needed to equal the same approximate ending value of the S&P 500 over the last two bull and bear market. This illustrates how an investor could have achieved similar growth of the S&P 500 without experiencing the higher volatility. **2 Source:** Hypothetical amount if \$100k was invested in the S&P500 index and captured 60% of the upside and 50% of the downside over the last two bear and bull markets. 60%/50% was chosen since it illustrates the importance of asymmetric (more up than down) upside/downside capture. **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.**

MINIMUM VOLATILITY – KEEP YOUR CLIENTS INVESTED

Market-like returns with less risk

Upside/downside capture

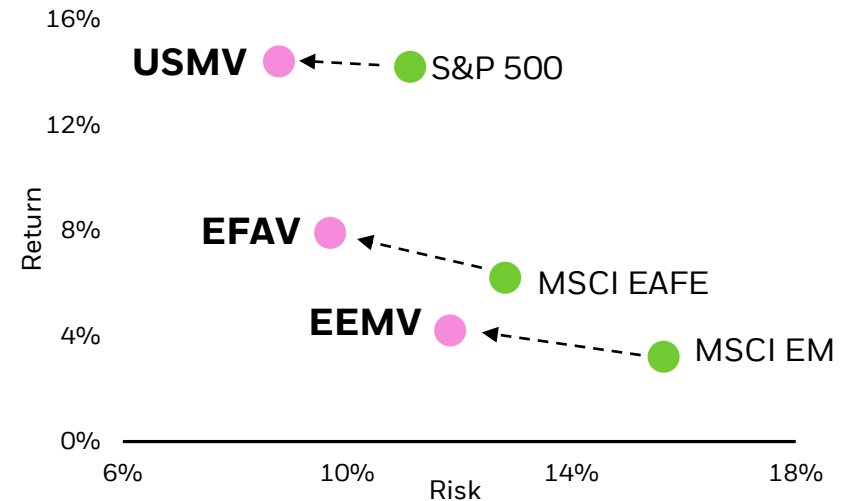
Since November 2011 inception



Source: Morningstar as of 6/30/2019. Based on fund and index returns from 11/1/11–6/30/19. Data compares USMV to S&P 500, EFAV to the MSCI EAFE and EEMV to the MSCI Emerging Markets Index.

Annualized risk/return

Since November 2011 inception



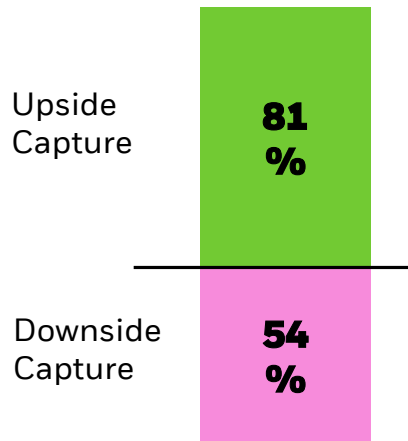
Source: Morningstar as of 6/30/2019. Based on performance between 11/1/11 – 6/30/19. Annualized risk represented by standard deviation which measures how dispersed returns are around the average. A higher standard deviation indicates that returns are spread out over a larger range of values and thus, more volatile.

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. For standardized performance, and to see how each of the funds performed against their benchmarks, please see the end of this document. Index returns are for illustrative purposes and do not represent actual iShares Fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index.

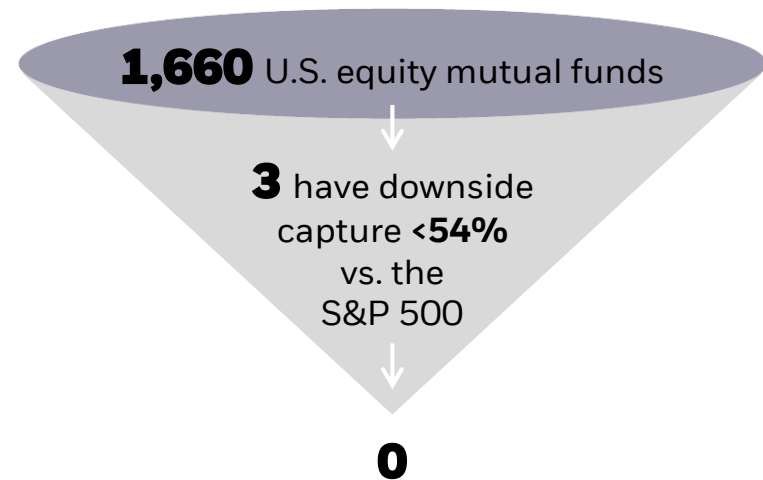
Market-like returns with less risk



iShares Edge MSCI
Min Vol USA ETF



How do other funds compare?



None of those 3 mutual funds have an upside capture **>81%** vs. the S&P 500

Source: BlackRock as of 6/30/19. Based on fund and index returns from 11/1/11 – 6/30/19. Data compares USMV to the S&P 500 Index.

MINIMUM VOLATILITY – KEEP YOUR CLIENTS INVESTED

Sector constrained – so you can use it in the core of your portfolio

USMV

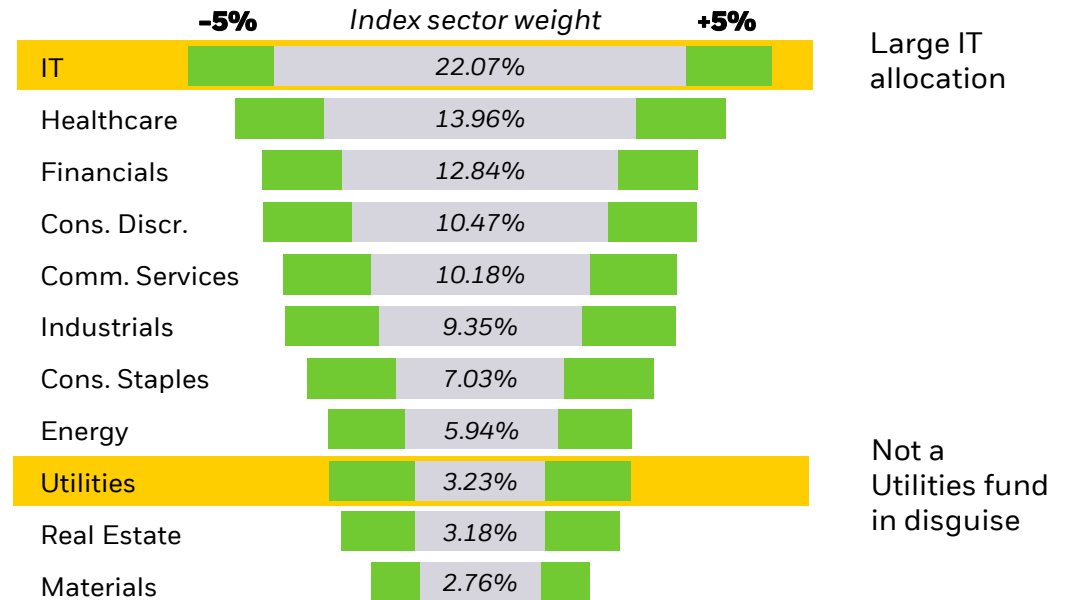
0.86 Correlation to the S&P 500

0.68 Beta to the S&P 500

Index methodology

- **Analyze volatility** of individual stocks in the MSCI USA Index
- **Analyze correlations** across stocks
- **Constrain sector weights +/- 5%** to the market index (MSCI USA)

Broad market sectors +/- 5%
Sector-constrained vs. the MSCI USA Index



Source: Morningstar as of 6/30/19. Correlations and betas from 11/1/11-6/30/19. 0.97 correlation to the MSCI USA Index, 0.73 beta to the MSCI USA Index. **Past performance is not indicative of future results. Holdings are subject to change.**

Factor investing

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Pursue differentiated outcomes

Why factors?

Minimum Volatility

Reduce volatility

Keep your clients invested

Single Factors

Seek outperformance

“The New Style Box”

Multifactor

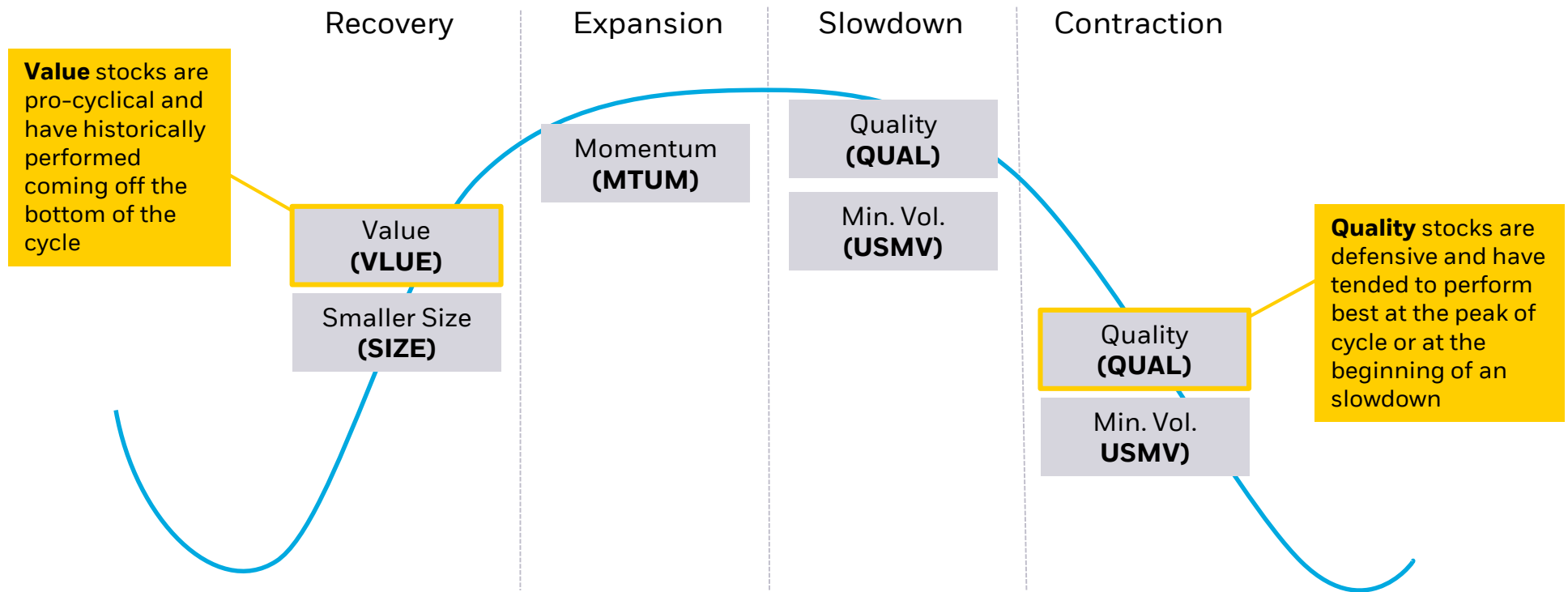
Seek outperformance

Total Market Core

Factors are cyclical

Factors perform differently depending on the stage in the economic cycle, and ultimately allow investors to express a view on the market.

The four stages of an economic cycle



SINGLE FACTORS

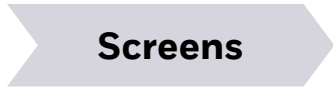
A new value for your style box

iShares Edge
MSCI USA Value
Factor ETF



VLUE invests in stocks that are inexpensive relative to fundamentals.

Factor
Value



Price/forward earnings

Price/book

Enterprise value/cash flow

Competitive performance

Outperformed 64% of its peers on a 5 year basis¹

Fund is rated against 946 funds in the large cap value Morningstar category, based on total return.

Low cost

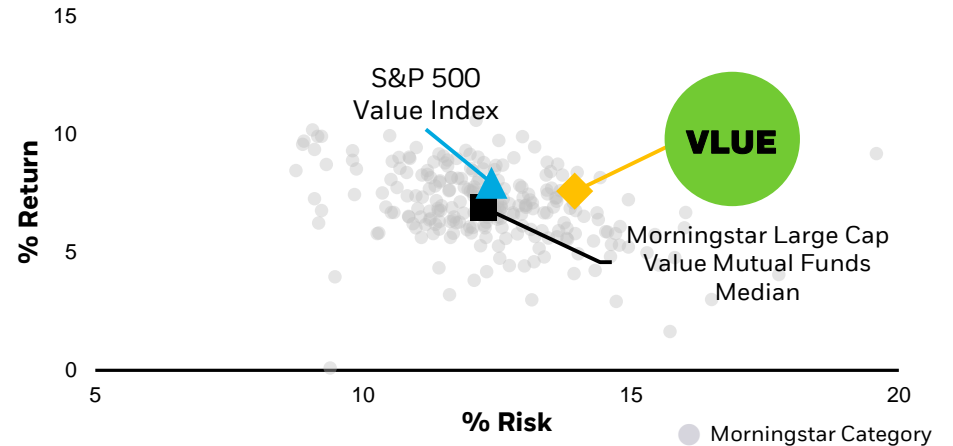
Expense ratio is **lower than 97%** of its active mutual fund peers²

Tax efficient

VLUE has **never paid a capital gains distribution**³

VLUE vs. Morningstar competitor mutual funds⁴

(7/1/2014 - 6/30/2019)



¹ Source: Morningstar as of 06/30/19. 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 06/30/19, based on average prospectus net expense ratios for active large cap value mutual funds (Morningstar category). ³ Source: BlackRock as of 06/30/2019. Past distributions are not indicative of future distributions. ⁴ Source: Morningstar, 5 year performance for period ending 06/30/19. 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. For standardized performance, see the end of this document.

SINGLE FACTORS

A new blend for your style box

iShares Edge
MSCI USA Quality
Factor ETF



QUAL invests in companies with healthy balance sheets.



Competitive performance

Outperformed 96% of its peers on a 5 year basis¹
Fund is rated against 1,056 funds in the large cap blend Morningstar category, based on total return.

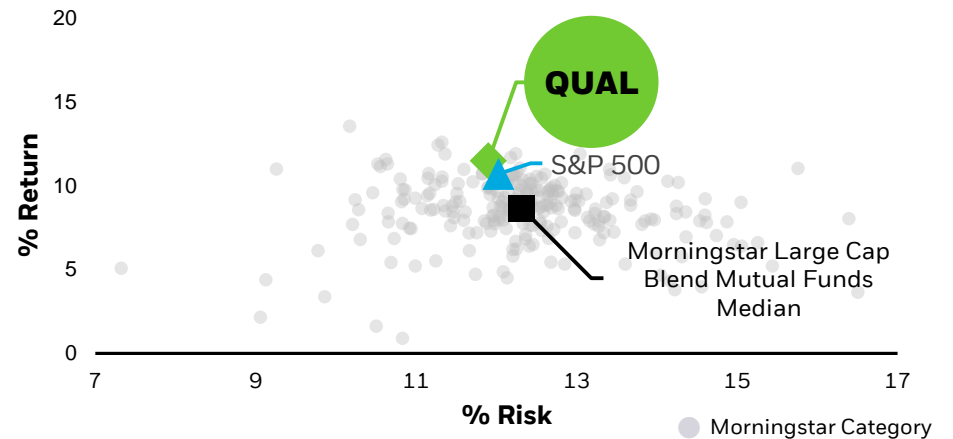
Low cost

Expense ratio is **lower than 98%** of its active mutual fund peers²

Tax efficient

QUAL has **never paid a capital gains distribution**³

QUAL vs. Morningstar competitor mutual funds⁴ (7/1/2014 - 6/30/2019)



¹ Source: Morningstar as of 06/30/19. 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 06/30/19, based on average prospectus net expense ratios for active large cap blend mutual funds (Morningstar category). ³ Source: BlackRock as of 06/30/2019. Past distributions are not indicative of future distributions. ⁴ Source: Morningstar, 5 year performance for period ending 06/30/19. 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.

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SINGLE FACTORS

A new growth for your style box

iShares Edge
MSCI USA
Momentum
Factor ETF



MTUM invests in stocks on an upswing.



Competitive performance

Outperformed 93% of its peers on a 5 year basis¹

Fund is rated against 1,094 funds in the large cap growth Morningstar category, based on total return.

Low cost

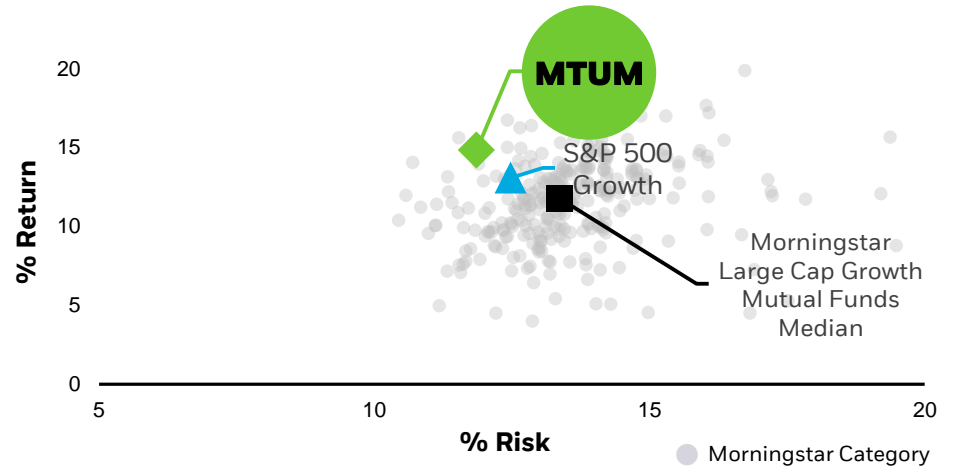
Expense ratio is **lower than 97%** of its active mutual fund peers²

Tax efficient

MTUM has **never paid a capital gains distribution**³

MTUM vs. Morningstar competitor mutual funds⁴

(7/1/2014 - 6/30/2019)



¹ Source: Morningstar as of 06/30/19. 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 06/30/19, based on average prospectus net expense ratios for active large cap growth mutual funds (Morningstar category). ³ Source: BlackRock as of 06/30/2019. Past distributions are not indicative of future distributions. ⁴ Source: Morningstar, 5 year performance for period ending 06/30/19. 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.

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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 2014 – 2019
Min Vol 16.34	Momentum 9.12	Value 15.68	Momentum 37.60	Min Vol 1.36	Quality 6.16	Momentum 14.61
Size 15.78	Quality 5.56	Size 13.32	Quality 22.26	Momentum -1.77	Size 5.56	Min Vol 12.86
Momentum 14.48	Min Vol 5.50	Min Vol 10.50	Value 21.97	Quality -5.77	Min Vol 3.88	Quality 11.11
Value 12.29	Size 0.37	Quality 9.18	Min Vol 18.97	Size -6.51	Momentum 3.85	Size 10.74
Quality 11.62	Value -3.54	Momentum 4.89	Size 18.88	Value -11.18	Value 2.35	Value 8.20

Source: Morningstar as of 06/30/19. 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.

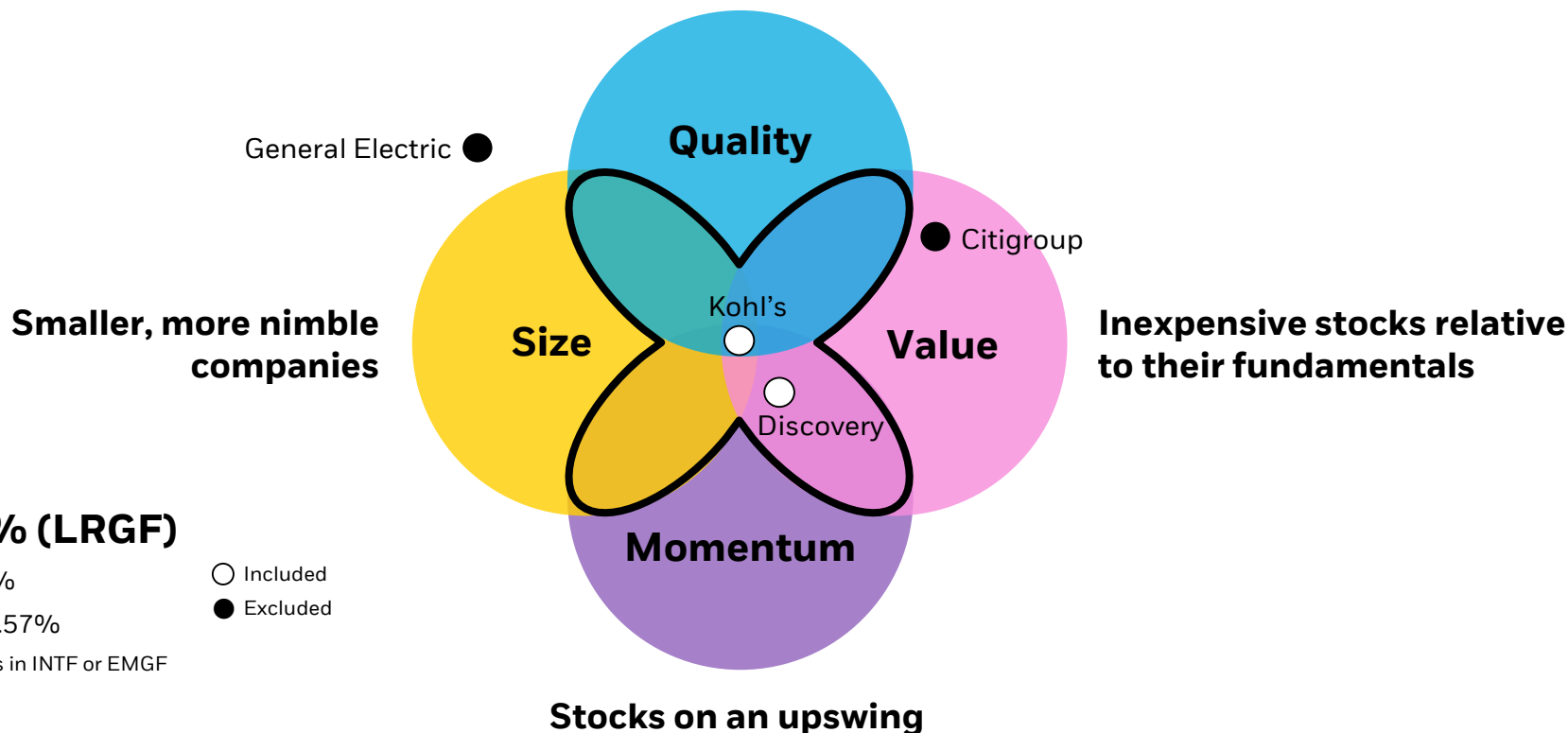
Investment return and principal value will fluctuate with market conditions and may be lower or higher when you sell your shares. Current performance may differ from the performance shown. For most recent month-end performance, see www.iShares.com. For standardized performance, see the end of this document.

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.

Companies with healthy balance sheets



Weight % (LRGF)

Kohl's – 0.33%

Discovery – 0.57%

Neither security is in INTF or EMGF

- Included
- Excluded

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

iShares Edge MSCI
Multifactor USA ETF

LRGF

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

● **Value** ● **Quality** ● **Momentum** ● **Size**

Competitive performance

Outperformed 75% of its peers on a 3 year basis¹

Fund is rated against 1,091 funds in the large cap value Morningstar category, based on total return.

Low cost

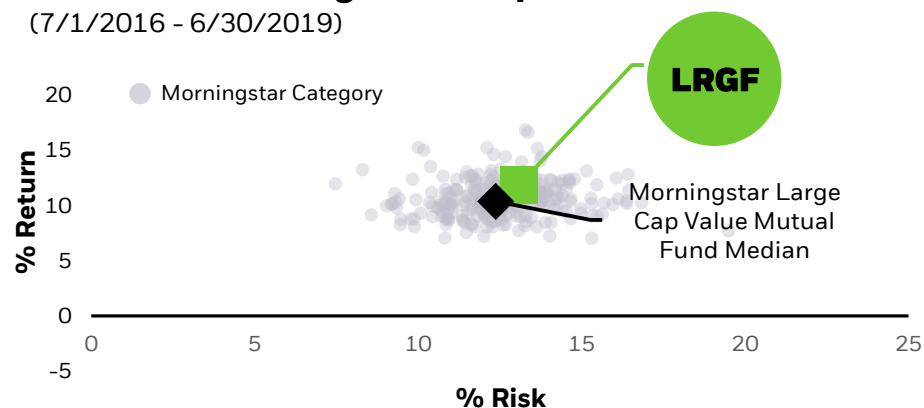
Expense ratio is **lower than 98%** of its active mutual fund peers²

Tax efficient

LRGF has **never paid a capital gains distribution**³

LRGF vs. Morningstar competitor mutual funds⁴

(7/1/2016 - 6/30/2019)



¹ Source: Morningstar as of 06/30/19. 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 06/30/19, based on average prospectus net expense ratios for active large cap value mutual funds (Morningstar category). ³ Source: BlackRock as of 06/30/2019. Past distributions are not indicative of future distributions. ⁴ Source: Morningstar, 3 year performance for period ending 06/30/19. 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. 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

INTF is an international core allocation— for investors seeking the potential for outperformance with the low cost and tax efficiency of traditional ETFs.

● **Value** ● **Quality** ● **Momentum** ● **Size**

Competitive performance

Outperformed 85% of its peers on a 3 year basis¹

Fund is rated against 601 funds in the foreign large blend Morningstar category, based on total return.

Low cost

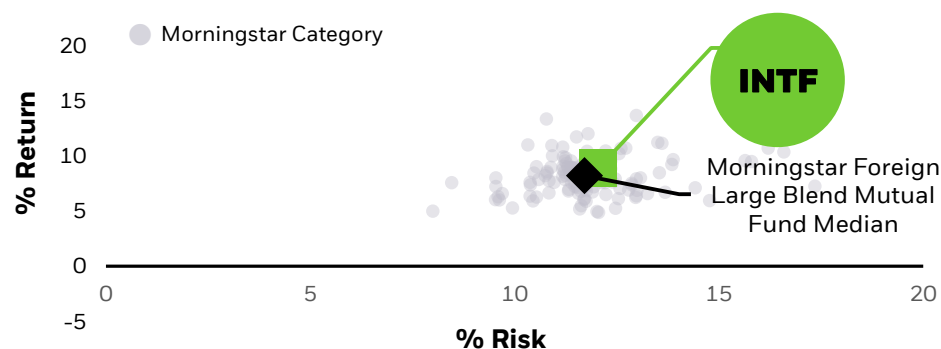
Expense ratio is **lower than 97%** of its active mutual fund peers²

Tax efficient

INTF has **never paid a capital gains distribution**³

INTF vs. Morningstar competitor mutual funds⁴

(7/1/2016 - 6/30/2019)



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MULTIFACTOR

A new core for your EM exposure

iShares Edge MSCI
Multifactor Markets ETF

EMGF

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

● Value ● Quality ● Momentum ● Size

Competitive performance

Outperformed over 1/3rd of its peers on a 3 year basis¹

Fund is rated against 710 funds in the diversified emerging markets Morningstar category, based on total return.

Low cost

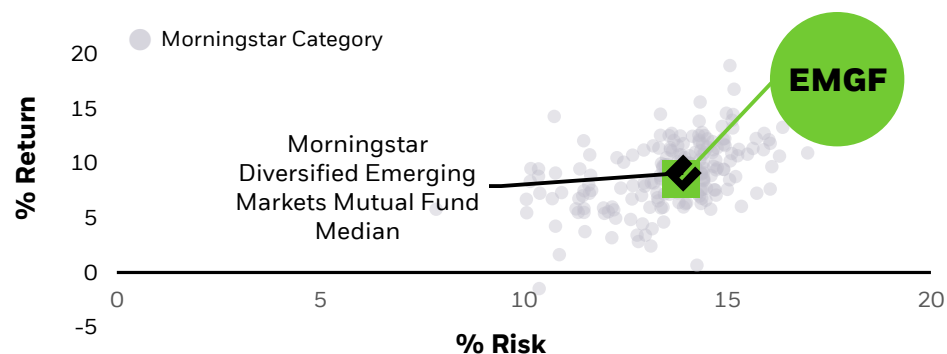
Expense ratio is **lower than 98%** of its active mutual fund peers²

Tax efficient

EMGF has **never paid a capital gains distribution**³

EMFG vs. Morningstar competitor mutual funds⁴

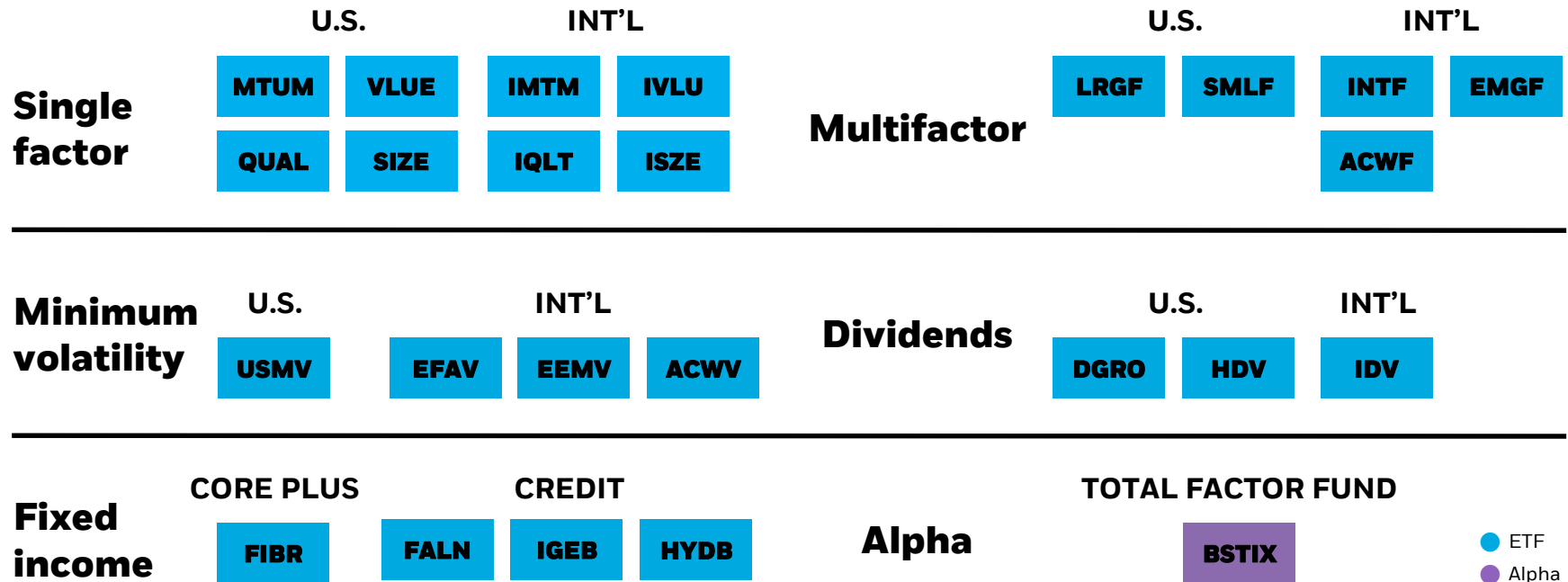
(7/1/2016 - 6/30/2019)



¹ Source: Morningstar as of 06/30/19. 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 06/30/19, based on average prospectus net expense ratios for active diversified emerging markets mutual funds (Morningstar category). ³ Source: BlackRock as of 06/30/2019. Past distributions are not indicative of future distributions. ⁴ Source: Morningstar, 3 year performance for period ending 06/30/19. 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. For standardized performance, see the end of this document.**

BlackRock's factor platform

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



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

*Source: BlackRock as of 6/31/2019.

A Factor Approach to Fixed Income

Just like equities, factors have been 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.

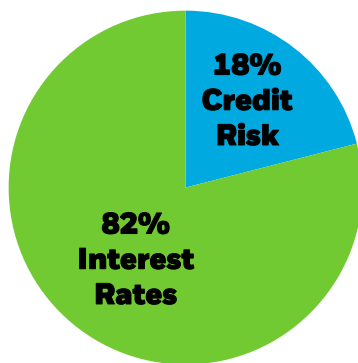
Balanced Risk

Process

Balance Rate & Credit Risk

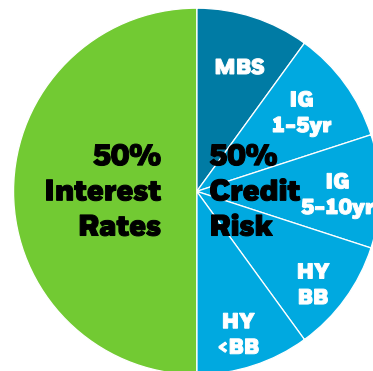
Diversify Across Credit Sectors

Balancing factor exposures in core bonds has resulted in¹...



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

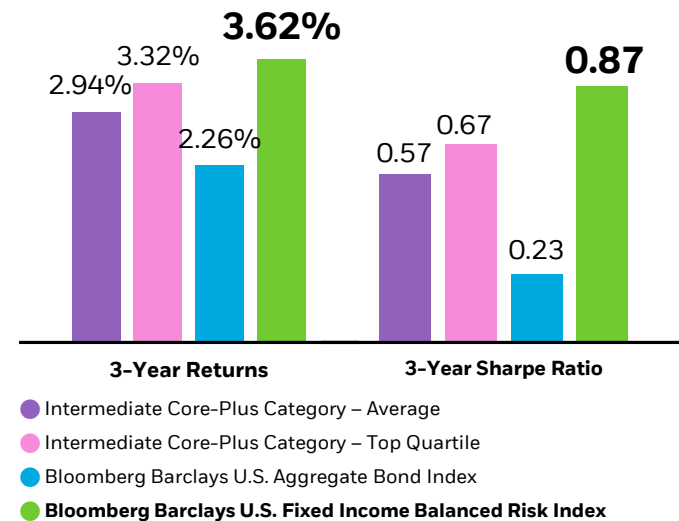
VS



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



...Outperformance with less risk²



1. Source: Factor contribution of the Bloomberg Barclays U.S. Aggregate Bond Index based on analysis by BlackRock Solutions, as of 6/30/2019. Factor contribution of the Bloomberg Barclays U.S. Fixed Income Balanced Risk Index based on the target allocation as stated in the index methodology by Bloomberg Barclays Indices, as 6/30/2019. 2. Source: Morningstar, as of 06/30/19. "Intermediate Core-Plus Bond Category – Average" represented by the average NAV returns of the Morningstar U.S. Intermediate Core-Plus Bond Fund Category. "Intermediate Core-Plus Bond Category – Top Quartile" represented by the 25th percentile ranked NAV returns of the Morningstar U.S. Intermediate Core-Plus Bond Category. The category includes 644 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
Management	Active	Passive
Performance goal	Outperform a benchmark and/or deliver outcome	Track a benchmark
Buying / selling shares	Once per day via fund company	Intraday on exchanges
Price to buy / sell	End-of-day NAV, less fees	Current market price, which may differ from NAV
Fees	Expense ratio + any sales loads / redemption fees	Expense ratio + transaction / brokerage costs
Tax impact¹ of buyers / sellers	Shareholders may be impacted by all other shareholders' actions	Shareholders only impacted by their own action
Holdings disclosure	Typically monthly	Daily
Benefits	<ul style="list-style-type: none"> • Opportunity to outperform the index • Potential to limiting the downside • Buy/sell decisions based on research 	<ul style="list-style-type: none"> • Exposure to market index • Generally lower fees • Typically more tax efficient
Trade-offs	<ul style="list-style-type: none"> • Potential to underperform index • Generally higher fees • Typically less tax efficient 	<ul style="list-style-type: none"> • Does not seek to outperform index • Participate in all of index downside • Buy / sell decisions based on index, not research

¹ Both vehicles are obliged to distribute capital gains to all shareholders.

Appendix: Standardized performance as of 06/30/19

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%	11.74%	11.66%	11.48%	11.46%	--	--	12.61%	12.60%
iShares Edge MSCI USA Value Factor ETF (VLUE)	4/16/2013	0.15%	1.00%	1.02%	7.57%	7.55%	--	--	10.48%	10.48%
iShares Edge MSCI USA Momentum Factor ETF (MTUM)	4/16/2013	0.15%	9.75%	9.68%	14.85%	14.84%	--	--	15.81%	15.80%
iShares Edge MSCI USA Size Factor ETF (SIZE)	4/16/2013	0.15%	10.65%	10.57%	10.07%	10.05%	--	--	12.02%	12.01%
iShares Edge MSCI Min Vol USA ETF (USMV)	10/18/2011	0.15%	18.56%	18.50%	12.91%	12.90%	--	--	14.58%	14.57%
iShares Edge MSCI Multifactor USFA ETF (LRGF)	4/28/2015	0.20%	2.49%	2.42%	--	--	--	--	7.87%	7.86%
iShares Edge MSCI Multifactor Intl ETF (INTF)	4/28/2015	0.30%	-2.18%	-2.00%	--	--	--	--	3.78%	3.79%
iShares Edge MSCI Multifactor Emerging Markets ETF (EMGF)	12/08/2015	0.48%	-6.25%	-5.80%	--	--	--	--	8.64%	8.74%
iShares Edge MSCI Min Vol EAFE ETF (EFAV)	10/18/2011	0.31%	4.97%	5.26%	5.30%	5.26%	--	--	8.14%	8.14%
iShares Edge MSCI Min Vol Emerging Markets ETF (EEMV)	10/18/2011	0.67%	3.82%	4.43%	2.03%	2.10%	--	--	4.93%	4.94%
MSCI USA Minimum Volatility Index	--	--	18.80%	--	13.10%	--	15.48%	--	14.77%	--
MSCI EAFE Minimum Volatility (USD) Index	--	--	4.99%	--	5.35%	--	--	--	8.20%	--
MSCI Emerging Markets Minimum Volatility Index	--	--	3.99%	--	2.24%	--	--	--	5.16%	--

Fees as of Current Prospectus. All Other Data as of 06/30/19.

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 or 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.

Important information on Morningstar Rankings

Source: Morningstar, as of 6/30/19. Comparison universe is ETFs and mutual funds in the respective Morningstar Categories. Rankings based on total return.

In reference to slide 11: VLUE outperformed 11% of its peers on a 1 year basis, ranked against 1,224 funds in the Morningstar Large Cap Value Category.

In reference to slide 9: QUAL Outperformed 83% of its peers on a 1 year basis, ranked against 1,395 funds in the Morningstar Large Cap Blend Category.

In reference to slide 10: MTUM Outperformed 47% of its peers on a 1 year basis, ranked against 1,376 funds in the Morningstar Large Cap Growth Category.

In reference to slide 14: LRGF Outperformed 23% of its peers on a 1 year basis, ranked against 1,224 funds in the Morningstar Large Cap Value Category.

In reference to slide 15: INTF Outperformed 23% of its peers on a 1 year basis, ranked against 711 funds in the Morningstar Foreign Large Blend Category.

In reference to slide 16: EMGF Outperformed 5% of its peers on a 1 year basis, ranked against 832 funds in the Morningstar Diversified Emerging Markets Category.

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 or www.blackrock.com. Read the prospectus carefully before investing. Investing involves risk, including possible loss of principal.

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. Certain traditional mutual funds can also be tax efficient.

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.

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