



MULTIFACTOR INVESTING

Seeking to build a
better index

EXCHANGE-TRADED FUNDS

John Hancock[®]
INVESTMENTS

Three things to know about factor-based investing

1 | It represents an important segment of the evolving strategic beta landscape

Factor-based investing seeks to identify and harness certain investment characteristics—such as size and momentum—that research has shown to drive performance over time. This style of investing has been one of the fastest-growing segments of the market in recent years as investors have increasingly sought to apply the insight of actively managed strategies to the passive investment universe.

2 | Single-factor strategies can come in and out of favor

Single-factor approaches can be a great way of amplifying a specific trait in a portfolio. But like any concentrated strategy, single-factor approaches also introduce a new source of risk into a portfolio that can come in and out of favor and that needs to be managed over time. Low volatility strategies, for example, may be useful in choppy markets, but they can hamper performance in bull markets.

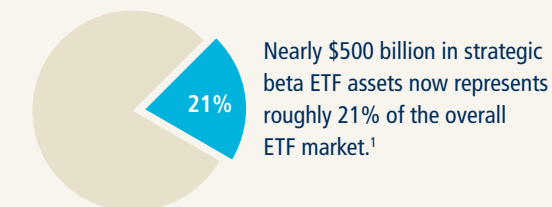
3 | Multifactor strategies seek a more enduring approach to performance

Multifactor strategies combine several factors into a single portfolio, helping to ensure that not all factors fall out of favor at the same time. This diversification can lower the fluctuation of returns over a market cycle while still seeking to outperform the market. It's also why many investors consider multifactor strategies for core portfolio positions and choose to augment those core holdings with smaller tactical or active approaches.

Consider this:

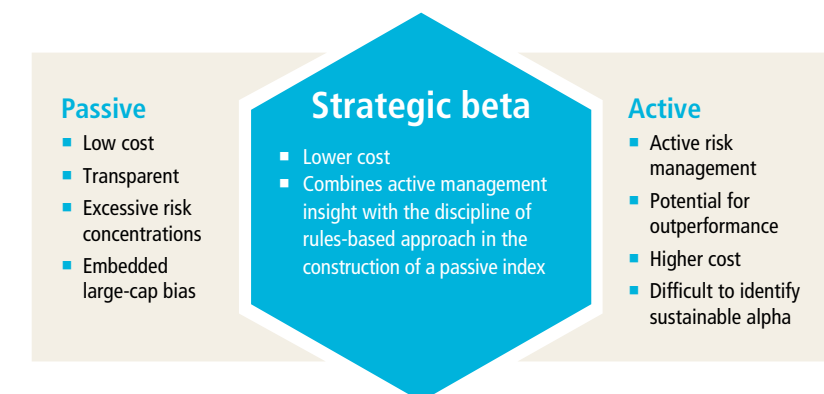
Strategic beta ETFs can be an attractive alternative to active and passive investments

The recent growth of strategic beta is in part a reflection of advisors' desire for investment solutions that offer inexpensive, diversified equity exposure with market-beating potential.



Leveraging the goals of active and passive management

Strategic beta investment strategies seek to improve on traditional market-capitalization-weighted indexes in order to achieve better returns or mitigate risk



For illustrative purposes only.

Individual factors can be volatile: there's no telling which will be the best performing from year to year²

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average return	Volatility (Standard deviation)	Risk-adjusted return (Sharpe Ratio)
Multifactor	-7.49%	44.39%	21.33%	15.28%	19.43%	11.56%	-31.10%	41.73%	27.76%	8.46%	19.18%	38.15%	15.85%	3.06%	18.66%	11.76%	12.52%	0.78%
Size	-15.90%	33.40%	18.00%	11.08%	18.29%	9.13%	-31.14%	32.17%	23.59%	8.46%	18.82%	36.60%	14.89%	2.69%	15.99%	10.25%	13.17%	0.58%
Value	-16.02%	29.99%	16.64%	9.21%	15.85%	5.89%	-31.37%	Russell 1000 Index 28.43%	Value 20.13%	Multifactor 6.31%	Multifactor 16.51%	Value 36.38%	Quality 13.33%	Quality 2.11%	Multifactor 13.07%	Value 8.65%	Multifactor 13.96%	Quality 0.56%
Volatility	-17.23%	Russell 1000 Index 29.89%	Volatility 11.77%	Value 8.35%	Russell 1000 Index 15.46%	Russell 1000 Index 5.77%	Momentum -36.66%	Quality 26.72%	Momentum 17.07%	Momentum 2.28%	Russell 1000 Index 16.42%	Momentum 33.58%	Russell 1000 Index 13.24%	Multifactor 2.00%	Russell 1000 Index 12.05%	Quality 8.09%	Momentum 13.97%	Value 0.53%
Momentum	-18.65%	Momentum 26.92%	Momentum 11.64%	Quality 7.54%	Momentum 14.59%	Value 3.92%	Value -36.74%	Value 24.90%	Russell 1000 Index 16.10%	Value 1.80%	Quality 16.09%	Russell 1000 Index 33.11%	Value 12.88%	Russell 1000 Index 0.92%	Volatility 11.56%	Momentum 7.14%	Russell 1000 Index 14.53%	Volatility 0.50%
Quality	-19.63%	Quality 24.21%	Russell 1000 Index 11.40%	Russell 1000 Index 6.27%	Quality 14.30%	Volatility 3.70%	Size -37.57%	Momentum 22.44%	Quality 14.55%	Russell 1000 Index 1.50%	Momentum 15.45%	Quality 31.66%	Momentum 12.65%	Size -2.26%	Quality 10.71%	Russell 1000 Index 7.00%	Value 15.58%	Momentum 0.47%
Russell 1000 Index	-21.65%	Volatility 20.59%	Quality 10.50%	Volatility 4.24%	Size 14.26%	Size 3.48%	Russell 1000 Index -37.60%	Volatility 17.85%	Volatility 11.83%	Size -1.17%	Volatility 13.25%	Volatility 29.61%	Size 11.32%	Value -3.34%	Momentum 7.94%	Volatility 6.97%	Size 17.19%	Russell 1000 Index 0.45%

¹ "The Number of Strategic-Beta ETPs Continues to Mushroom," Morningstar, Inc., 9/28/16.

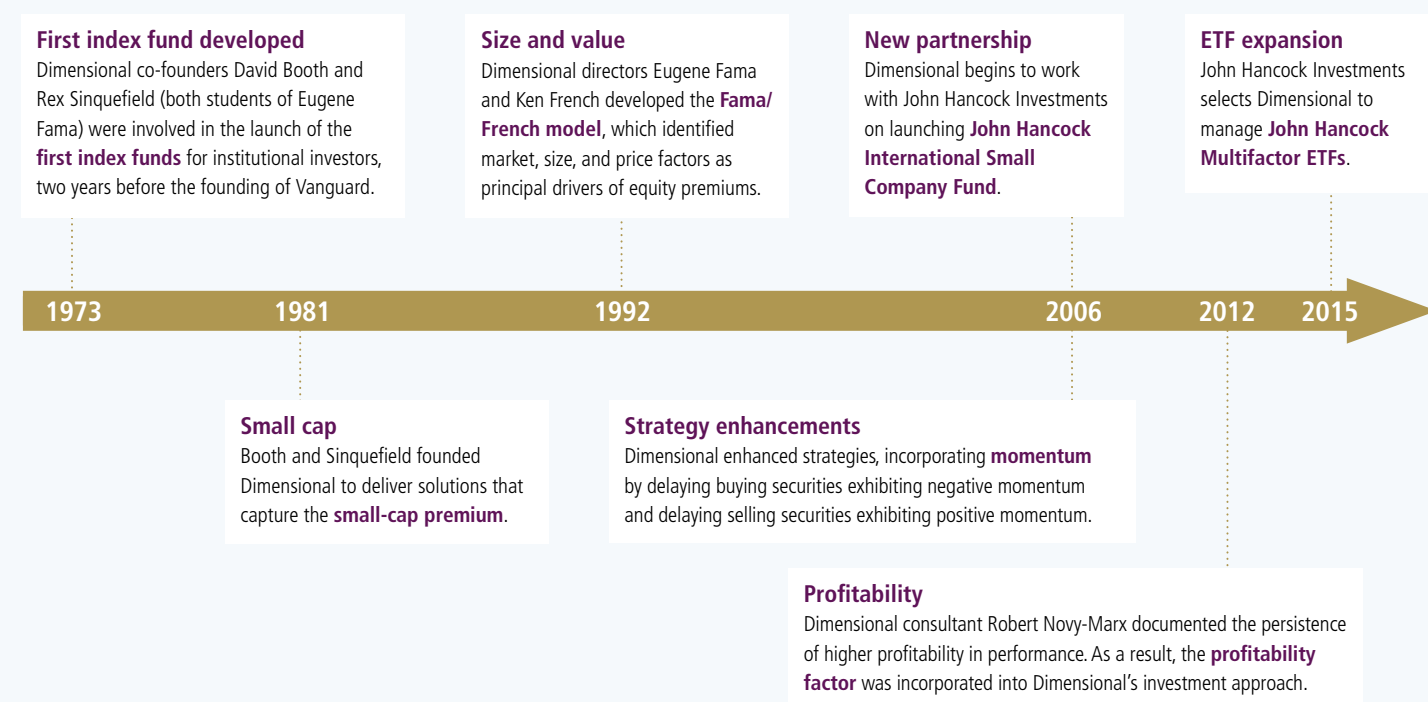
² Morningstar, as of 12/31/16. Callan chart is from 2002 to 2016. Size is represented by the Russell 1000 Size Factor Index, which tracks the performance of stocks displaying smaller-size characteristics. Value is represented by the Russell 1000 Value Factor Index, which tracks the performance of stocks displaying lower valuation characteristics. Volatility is represented by the Russell 1000 Volatility Factor Index, which tracks the performance of stocks displaying lower volatility characteristics. Quality is represented by the Russell 1000 Quality Factor Index, which tracks the performance of stocks displaying higher-quality characteristics. Momentum is represented by the Russell 1000 Momentum Factor Index, which tracks the performance of stocks displaying momentum characteristics. Multifactor is represented by the Russell 1000 Comprehensive Factor Index, which combines the performance of all five Russell 1000 factor indexes: size, value, quality, profitability, and price. Annual returns are based on calendar years. Indexes are unmanaged and do not take transaction costs or fees into consideration. It is not possible to invest directly in an index. Performance figures assume reinvestment of dividends and capital gains. This chart is for illustrative purposes only and does not represent the performance of any John Hancock fund. Past performance does not guarantee future results.

Alpha measures a manager's incremental return that cannot be attributed to market movements.

A time-tested approach from Dimensional Fund Advisors, a leader in multifactor investing

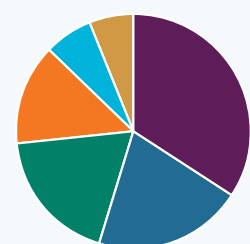
John Hancock Investments has been working with Dimensional Fund Advisors for nearly a decade. Dimensional's systematic approach to investing is backed by insight gained from decades of academic research and experience implementing rules-based strategies in competitive markets. Today, the company is one of the most well-respected managers of factor-based investment portfolios in the industry.

Dimensional Fund Advisors has been a leader in the development and evolution of systematic, rules-based investing



Dimensional Fund Advisors at a glance

Dimensional investment strategies



U.S. equities	35%
Fixed income	21
Non-U.S. developed equities	19
Emerging-market equities	14
Global equity	7
Other	6



- Founded in 1981
- \$518 billion in global assets under management
- 8th largest fund family by AUM²
- Clients in more than 45 countries
- Twelve offices in eight countries; portfolio management and trading on four continents
- Over 1,000 employees

All data is as of 6/30/17.

² Morningstar, as of 6/30/17.

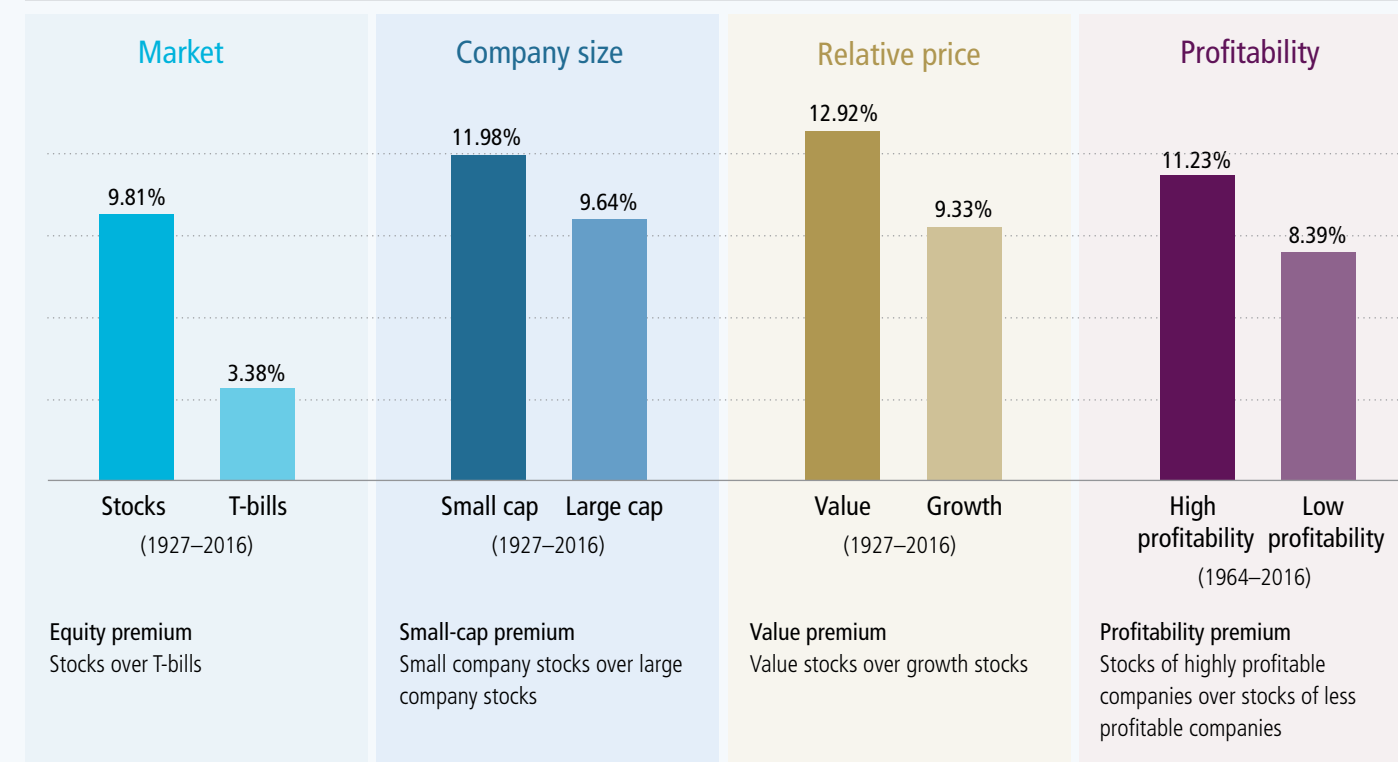
Numbers may not equal 100% due to rounding.

Investing involves risks, including the potential loss of principal. Small-cap securities are subject to greater volatility than those in other asset categories. Profitability is a measure of current profitability, based on information from individual companies' income statements. Relative price is the price of a security as it compares with another.

Isolating the factors that drive higher expected returns

A landmark 1992 study by University of Chicago Professor Eugene Fama and Dartmouth College Professor Kenneth French argued that, based on history, focusing on smaller stocks and those with lower relative prices³ may improve a portfolio's expected return.⁴ Subsequent research conducted by University of Rochester Professor Robert Novy-Marx identified profitability⁵ as another factor that enhances expected returns.⁶ Today, Dimensional offers investment solutions built on the idea that combining specific factors, borne out by years of rigorous research, can produce better outcomes for investors over the long term.

A multifactor approach: stocks characterized by smaller capitalizations, lower relative valuations, and higher profitability have outperformed over time



To be considered a true factor, a premium must be:

Sensible	Persistent across time periods	Pervasive across markets	Robust in the data	Cost-effective, to capture in a diversified portfolio
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³ Relative price as measured by the price-to-book ratio; value stocks are those with lower price-to-book ratios. ⁴ "The Cross-Section of Expected Stock Returns," Eugene F. Fama, Kenneth R. French, *Journal of Finance*, June 1992. ⁵ Profitability is a measure of current profitability, based on information from individual companies' income statements. ⁶ Robert Novy-Marx provides consulting services to Dimensional Fund Advisors LP.

Source: John Hancock Investments, Morningstar/Ibbotson, Professor Kenneth R. French, mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html, 2016. Professor French's study on premiums examines the most reliable long-term data available, which dates back to 1927 for market, company size, and relative price and to 1964 for profitability metrics. This data does not portray results of indexes. Past performance does not guarantee future results.

A premium represents the excess return that securities with particular characteristics have historically generated. The chart above shows historical geometric mean performance for different groupings of stocks within the broad equity universe. This universe, or market, includes stocks listed on the NYSE, AMEX, and NASDAQ exchanges. The research does not portray results of indexes. T-bill data is from Morningstar/Ibbotson. In order to assess returns of stocks with different characteristics, researchers Eugene Fama and Kenneth French grouped stocks according to size, relative price, and profitability. For groupings based on company size, stocks were ranked by market capitalization, where small cap represents stocks of companies in the bottom 30% of the universe and large cap represents stocks of companies in the top 30% of the universe. For groupings based on relative price, stocks were ranked by book-to-market equity ratios, where value represents stocks of companies in the top 30% of the universe and growth represents stocks of companies in the bottom 30% of the universe. For groupings based on profitability, stocks were ranked by operating profitability (annual revenues minus the cost of goods sold, interest expense, and selling, general, and administrative expenses, divided by book equity), where high profitability represents stocks of companies in the top 30% of the universe and low profitability represents stocks of companies in the bottom 30% of the universe. Drs. Fama and French are directors of and provide consulting services to Dimensional Fund Advisors LP. Diversification does not guarantee a profit or eliminate the risk of a loss. Selection of other periods may produce different results, including losses. Past performance does not guarantee future results.

An index approach designed to pursue higher expected returns while minimizing unnecessary costs

Market exposure: capturing broad exposure to avoid trying to outguess the market

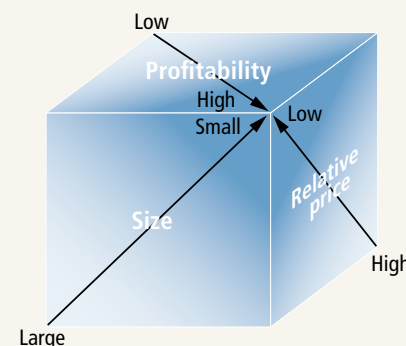
The first step in constructing each index is to identify the securities eligible for inclusion. For all indexes, the universe of the 1,000 largest U.S. stocks is ranked, from biggest to smallest. Certain illiquid securities or securities with multiple share classes may be excluded from consideration; after this initial screen, the indexes each define their target segment of the universe, resulting in a broad range of stocks per index—750 for the large-cap index, 600 for the mid-cap index, and between 40 and 175 for each of the sector indexes.



Example shown is for John Hancock Dimensional Large Cap Index. Hold range could include up to 800 securities.⁷

Portfolio structure: emphasizing premiums associated with higher expected returns

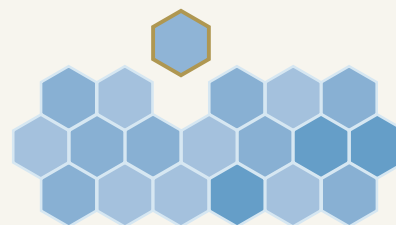
Once the target portfolio is identified, weightings are assigned to each security to be included. While the large-cap index, for example, will hold roughly 750 stocks, the weights of those securities may vary from market-cap-weighted indexes. That's because academic research suggests that certain factors—smaller capitalization, lower relative price, and higher profitability⁴—are linked to higher expected returns, so the securities in the index are weighted to place greater emphasis on stocks that exhibit those characteristics.



Implementation: maintaining focus on an asset class while minimizing unnecessary trading costs

Each of the indexes is reconstituted—or rebalanced—twice a year. The indexes use a feature called memory to help mitigate trading costs. If a security was included in an index before reconstitution and if keeping it in the index does not meaningfully change the overall characteristics of the index, that security will continue to be held and any change in weighting is minimized. The goal is to avoid making trades that do not meaningfully improve the expected return and risk profile of the overall portfolio.

Index memory helps minimize unwarranted trading costs



⁷ John Hancock Dimensional Large Cap Index is a rules-based index of large-cap U.S. stocks that have been selected based on sources of expected returns. Securities eligible for inclusion in the index are classified according to their market capitalization, as defined by free-float market cap; relative price, as defined by price/book; and profitability, as defined by operating income over book, and are weighted accordingly in favor of smaller, less expensive, more profitable companies. The index is reconstituted and rebalanced on a semiannual basis. Index performance assumes reinvestment of dividends and, unless otherwise indicated, does not reflect the management fees, operating expenses, transaction costs, and other expenses that apply to an ETF. It is not possible to invest directly in an index. Past performance does not guarantee future results.

John Hancock Multifactor ETFs

We offer a range of John Hancock Multifactor ETFs with indexes designed by Dimensional Fund Advisors, a company regarded as one of the pioneers in strategic beta investing. Combining multiple factors may better enable a portfolio to smooth out the variability of returns and improve the likelihood of outperformance across different types of markets.

	ETF ticker	Gross expense ratio (%)	Net expense ratio (what you pay) ⁸ (%)	Tracking index	Total return index ticker
John Hancock Multifactor Large Cap ETF	JHML	0.93	0.35	John Hancock Dimensional Large Cap Index	JHMLT
John Hancock Multifactor Mid Cap ETF	JHMM	1.11	0.45	John Hancock Dimensional Mid Cap Index	JHMMT
John Hancock Multifactor Developed International ETF	JHMD	0.68	0.45	John Hancock Dimensional Multifactor Developed International Index	JHMDT
John Hancock Multifactor Consumer Discretionary ETF	JHMC	1.27	0.50	John Hancock Dimensional Consumer Discretionary Index	JHDMCT
John Hancock Multifactor Consumer Staples ETF	JHMS	0.65	0.50	John Hancock Dimensional Consumer Staples Index	JHDMST
John Hancock Multifactor Energy ETF	JHME	0.62	0.50	John Hancock Dimensional Energy Index	JHDMET
John Hancock Multifactor Financials ETF	JHMF	1.19	0.50	John Hancock Dimensional Financials Index	JHDMFT
John Hancock Multifactor Healthcare ETF	JHMH	1.23	0.50	John Hancock Dimensional Healthcare Index	JHDMHT
John Hancock Multifactor Industrials ETF	JHMI	0.67	0.50	John Hancock Dimensional Industrials Index	JHDMIT
John Hancock Multifactor Materials ETF	JHMA	0.69	0.50	John Hancock Dimensional Materials Index	JHDMAT
John Hancock Multifactor Technology ETF	JHMT	1.18	0.50	John Hancock Dimensional Technology Index	JHDMTT
John Hancock Multifactor Utilities ETF	JHMU	0.69	0.50	John Hancock Dimensional Utilities Index	JHDMUT

Ask your advisor

Ask your financial advisor how strategic beta ETFs can help you better position your portfolio for the long term.

Data is as of 6/30/17.

⁸ "Net expense ratio (what you pay)" represents the effect of a fee waiver and/or expense reimbursement, contractual through 8/31/18 for John Hancock Multifactor Developed International ETF, and through 8/31/17 for all other funds, and is subject to change.

The intraday net asset value (iNAV) is a symbol representing estimated fair value based on the most recent intraday price of underlying assets.

Investing involves risks, including the potential loss of principal. There is no guarantee that a fund's investment strategies will be successful. Large company stocks could fall out of favor. The stock prices of midsize and small companies can change more frequently and dramatically than those of large companies, and value stocks may decline in price. A portfolio concentrated in one industry or sector or that holds a limited number of securities may fluctuate more than a diversified portfolio. Shares may trade at a premium or discount to their NAV in the secondary market, and a fund's holdings and returns may deviate from those of its index. These variations may be greater when markets are volatile or subject to unusual conditions. Errors in the construction or calculation of a fund's index may occur from time to time. Please see the funds' prospectuses for additional risks. This material is not intended to be, nor shall it be interpreted or construed as, a recommendation or providing advice, impartial or otherwise. John Hancock Investments and its representatives and affiliates may receive compensation derived from the sale of and/or from any investment made in its products and services.

John Hancock Multifactor ETF shares are bought and sold at market price (not NAV), and are not individually redeemed from the fund. Brokerage commissions will reduce returns.

John Hancock Investments

A trusted brand

John Hancock Investments is a premier asset manager representing one of America's most trusted brands, with a heritage of financial stewardship dating back to 1862. Helping our shareholders pursue their financial goals is at the core of everything we do. It's why we support the role of professional financial advice and operate with the highest standards of conduct and integrity.

A better way to invest

We serve investors globally through a unique multimanager approach: We search the world to find proven portfolio teams with specialized expertise for every strategy we offer, then we apply robust investment oversight to ensure they continue to meet our uncompromising standards and serve the best interests of our shareholders.

Results for investors

Our unique approach to asset management enables us to provide a diverse set of investments backed by some of the world's best managers, along with strong risk-adjusted returns across asset classes.

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Request a prospectus or summary prospectus from your financial advisor, by visiting jhinvestments.com/etf, or by calling us at 800-225-5291. The prospectus includes investment objectives, risks, fees, expenses, and other information that you should consider carefully before investing.

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