



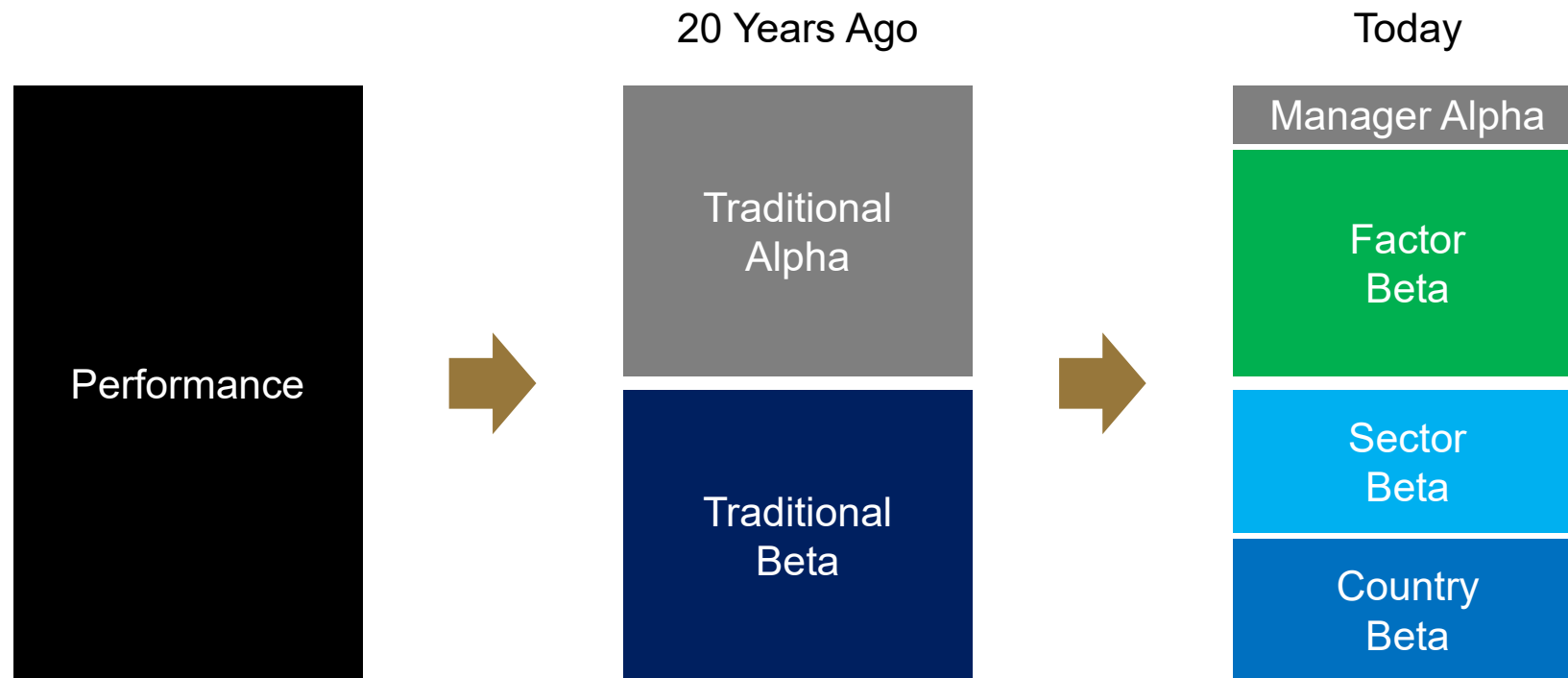
INVESTING

THE PAST, PRESENT, AND FUTURE

THE PAST

ALPHA VERSUS BETA

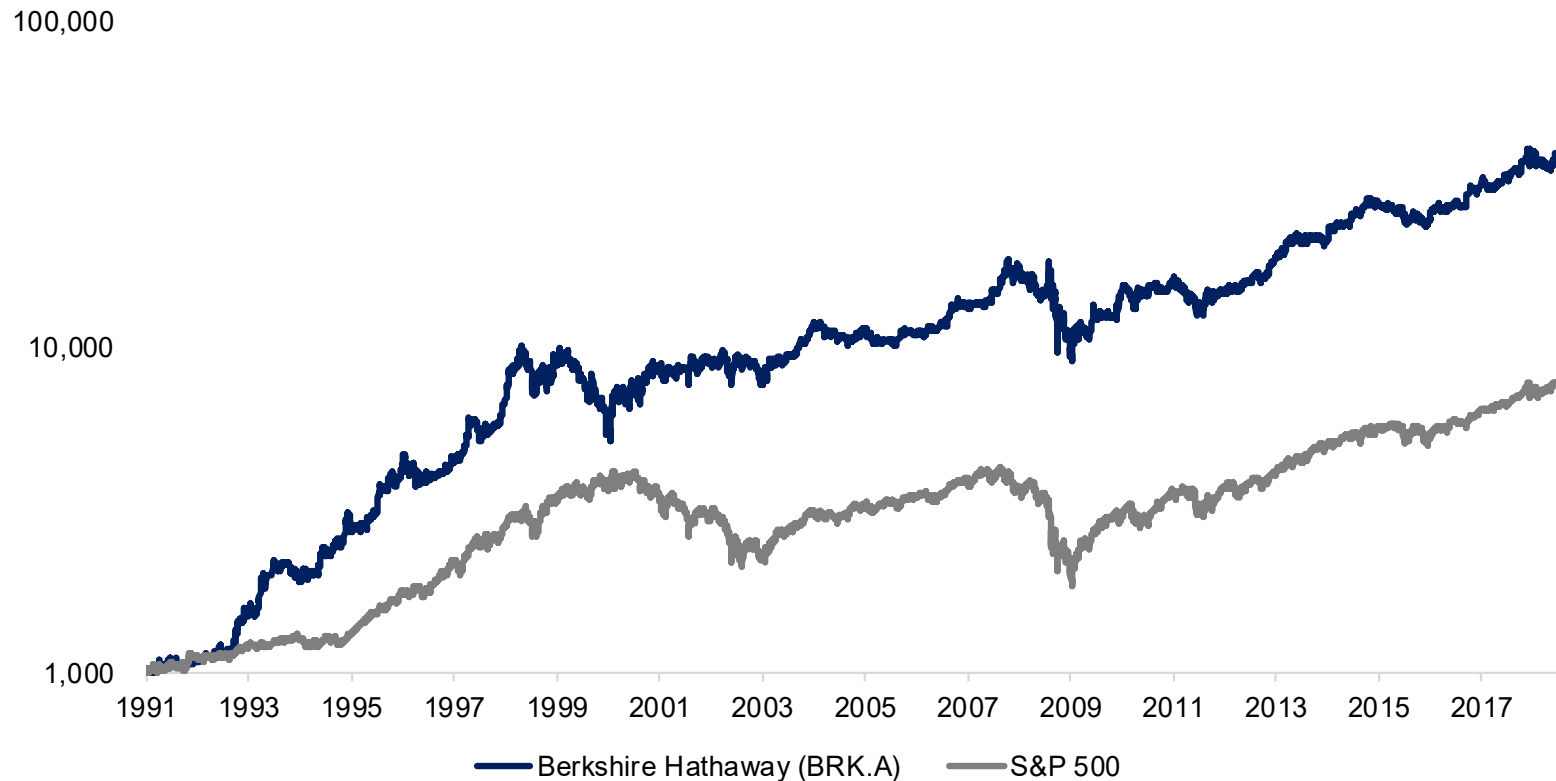
Alpha Is Shrinking Continuously as Data Improves



- Most alpha is explained by factor returns
- Pursuing alpha is like pursuing the Holy Grail

WARREN BUFFETT'S BERKSHIRE HATHAWAY

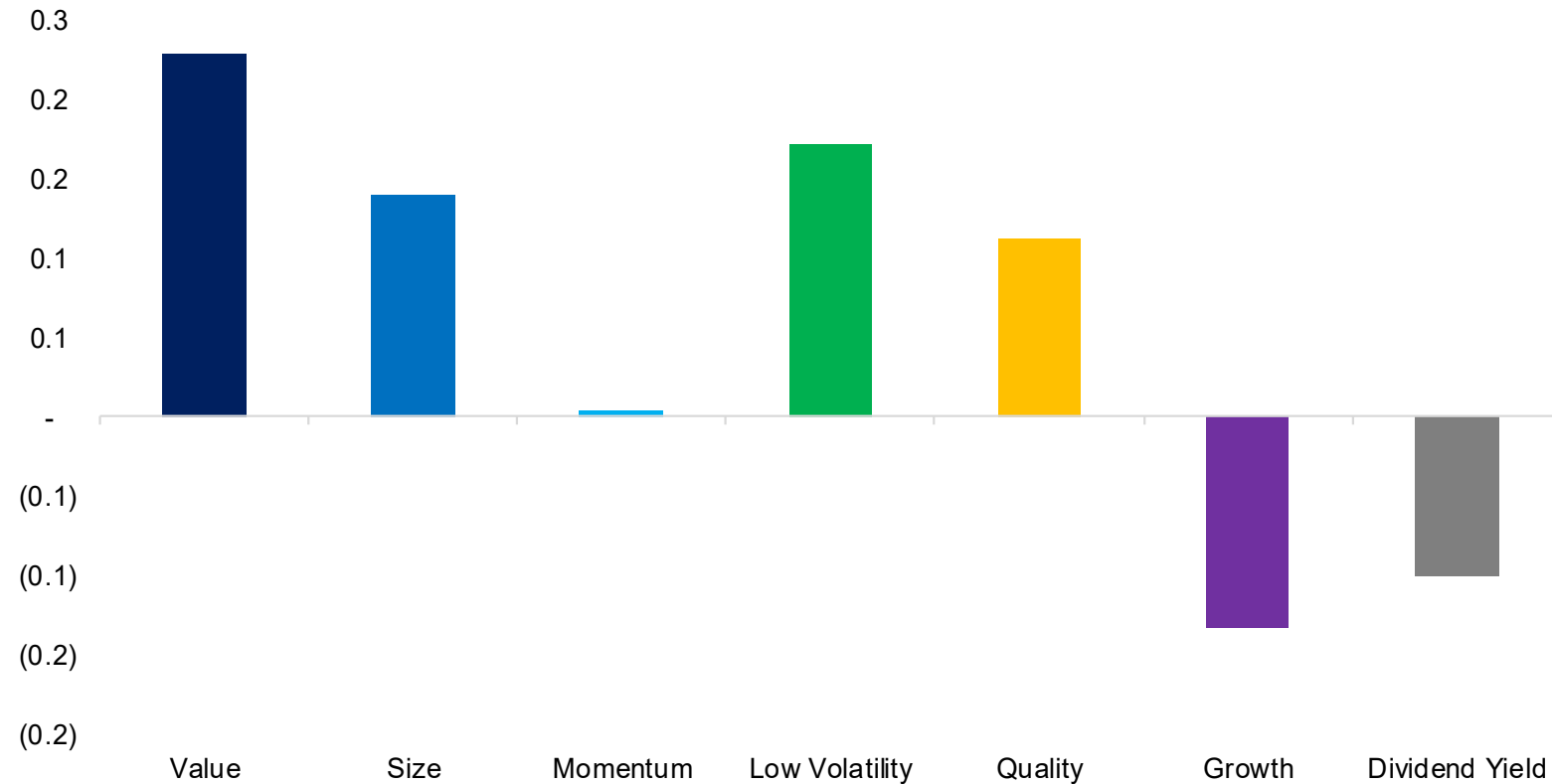
Berkshire Hathaway versus S&P 500



- Warren Buffet's Berkshire Hathaway has outperformed the S&P 500 significantly

WARREN BUFFETT'S BERKSHIRE HATHAWAY

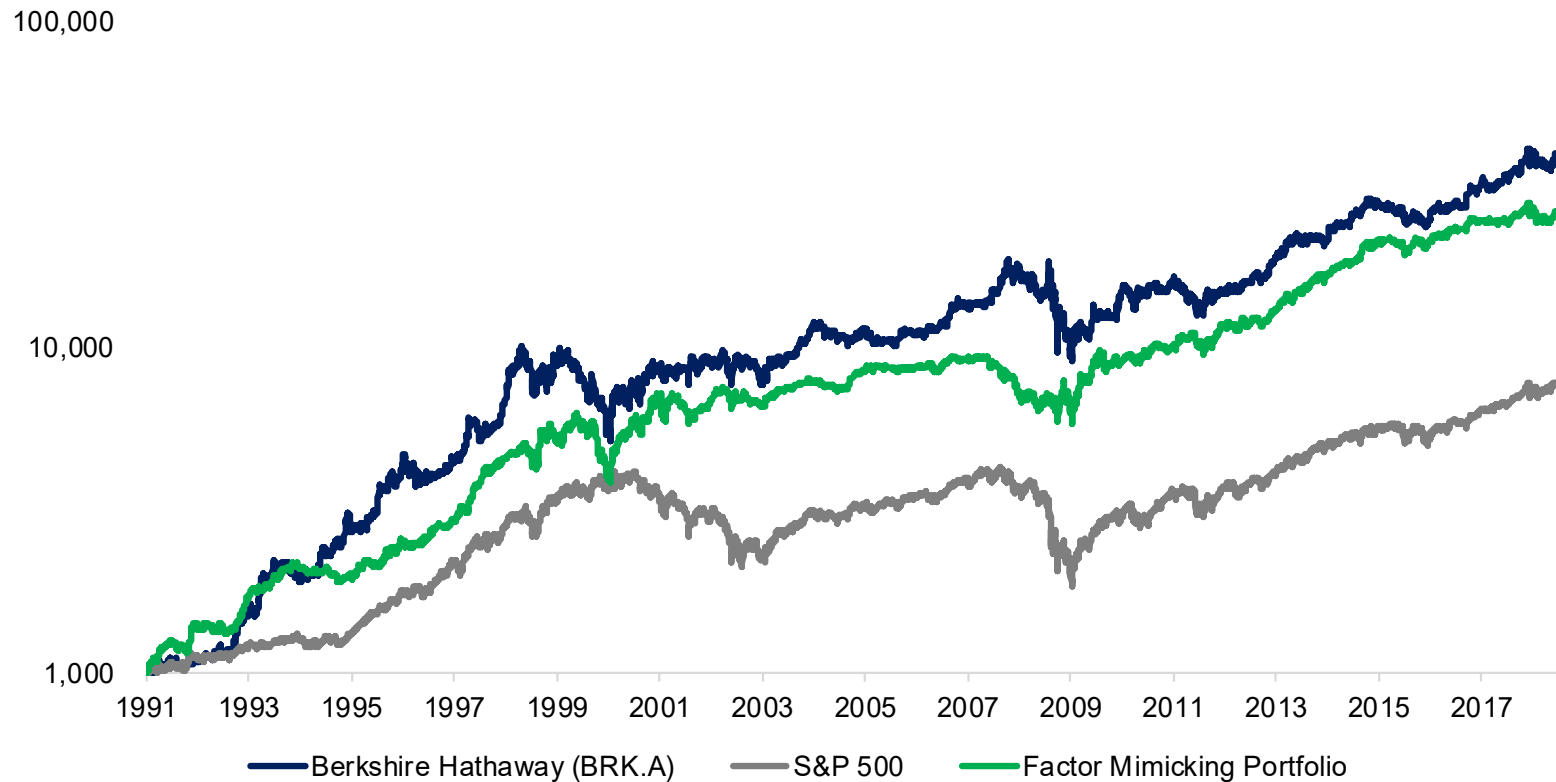
Factor Exposure Analysis (1991 – 2018)



- Berkshire Hathaway has structural exposure to common equity factors
- Mirrors Warren Buffett's well-known preference for cheap, high-quality stocks

WARREN BUFFETT'S BERKSHIRE HATHAWAY

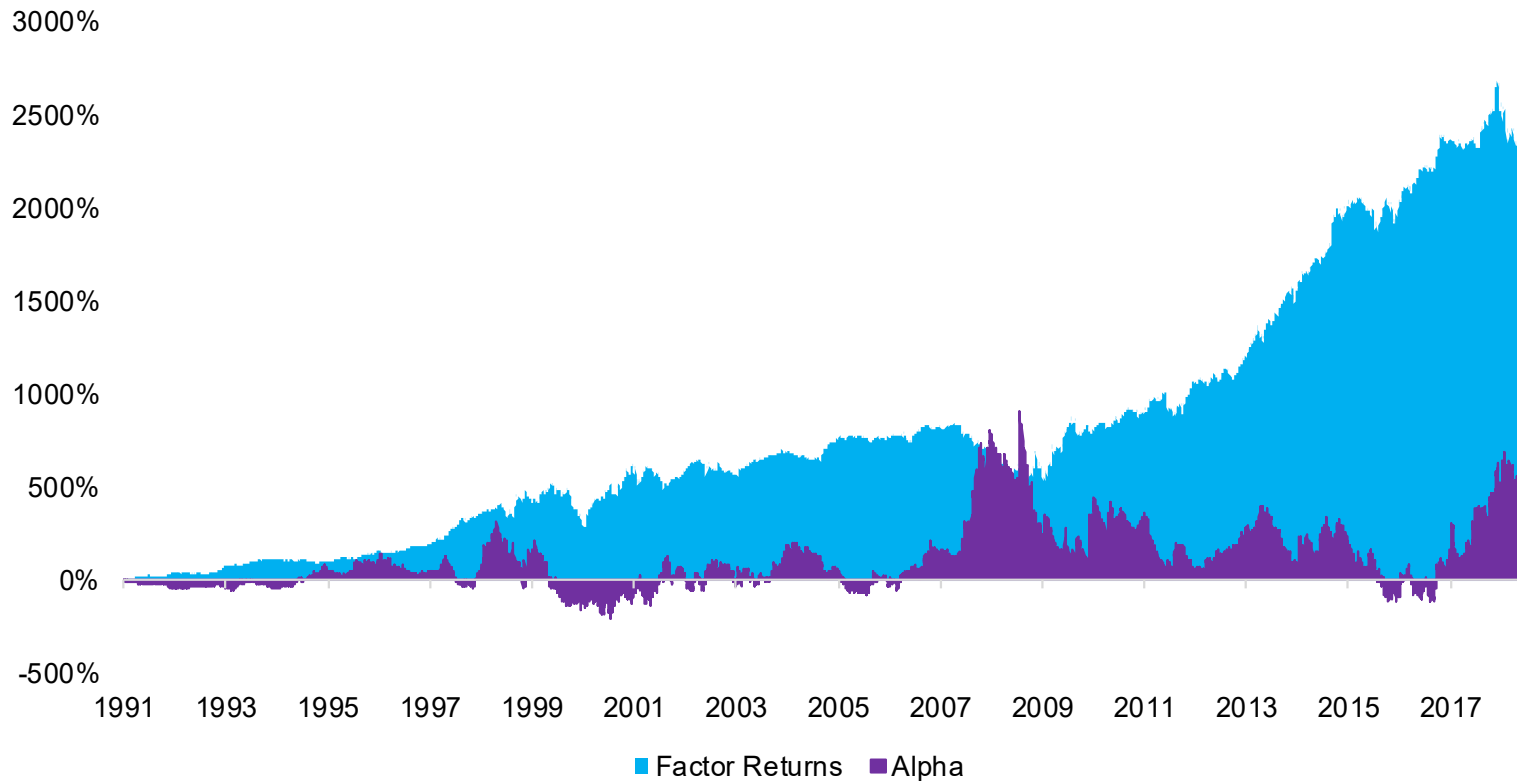
Replicating Berkshire Hathaway with Factors



- Given structural factor exposure, we can replicate Berkshire Hathaway via a factor mimicking portfolio

WARREN BUFFETT'S BERKSHIRE HATHAWAY

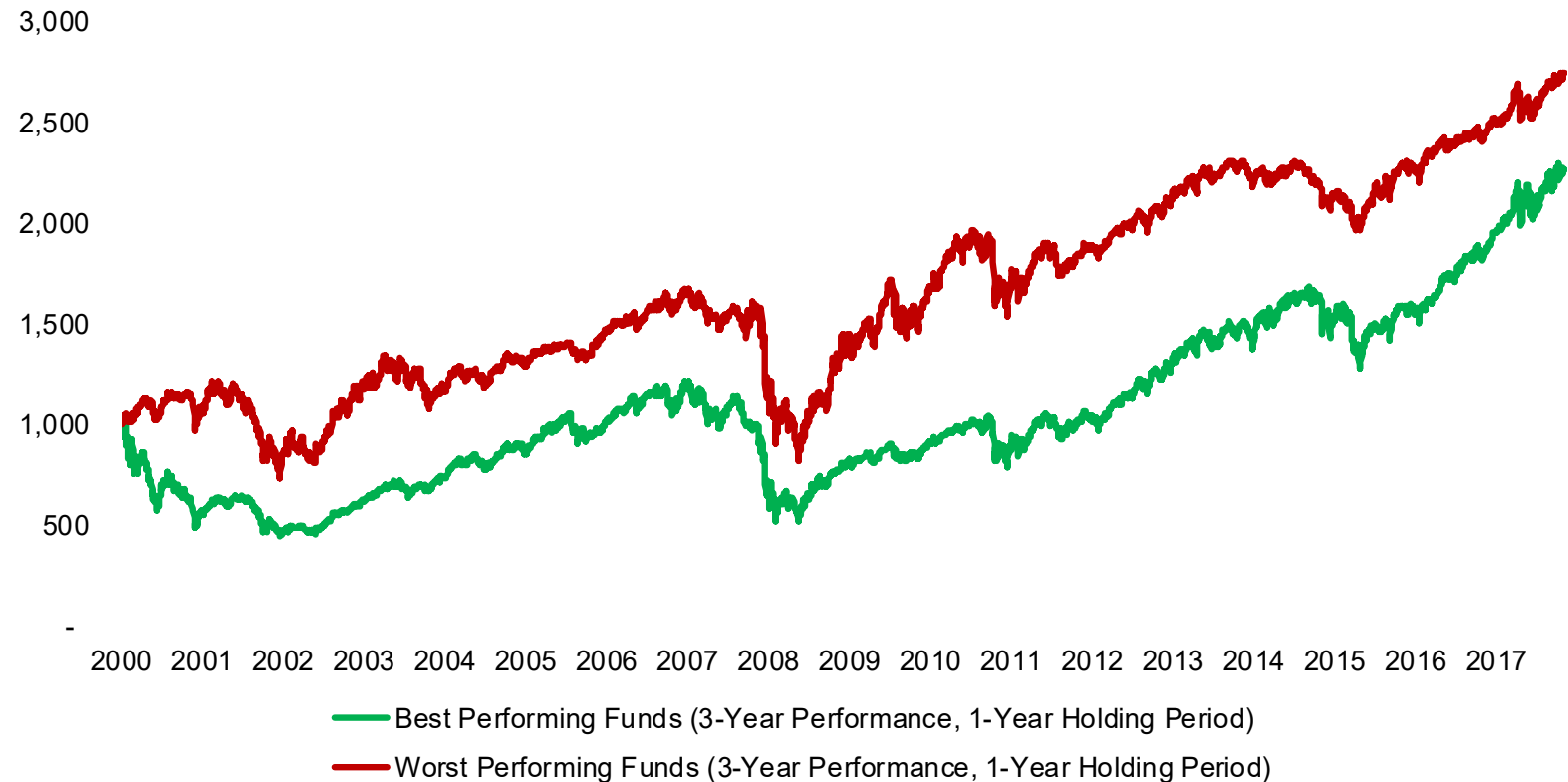
Outperforming by Harvesting Factor Returns



- Warren Buffet created little alpha, but is highly skilled at harvesting factor returns
- Berkshire Hathaway can be viewed as a multi-factor portfolio with an excellent fund manager

CHASING MUTUAL FUND PERFORMANCE

Momentum in US Mutual Funds Based on 3-Year Performance



- Chasing the best performing mutual funds is not a recipe for success
- Alpha is difficult to identify and tends not to be consistent

THE PAST

Key Take-Aways



- Performance attribution has improved due to better data



- Most alpha can be explained by factor exposure



- Even if alpha is found, it tends not to be consistent

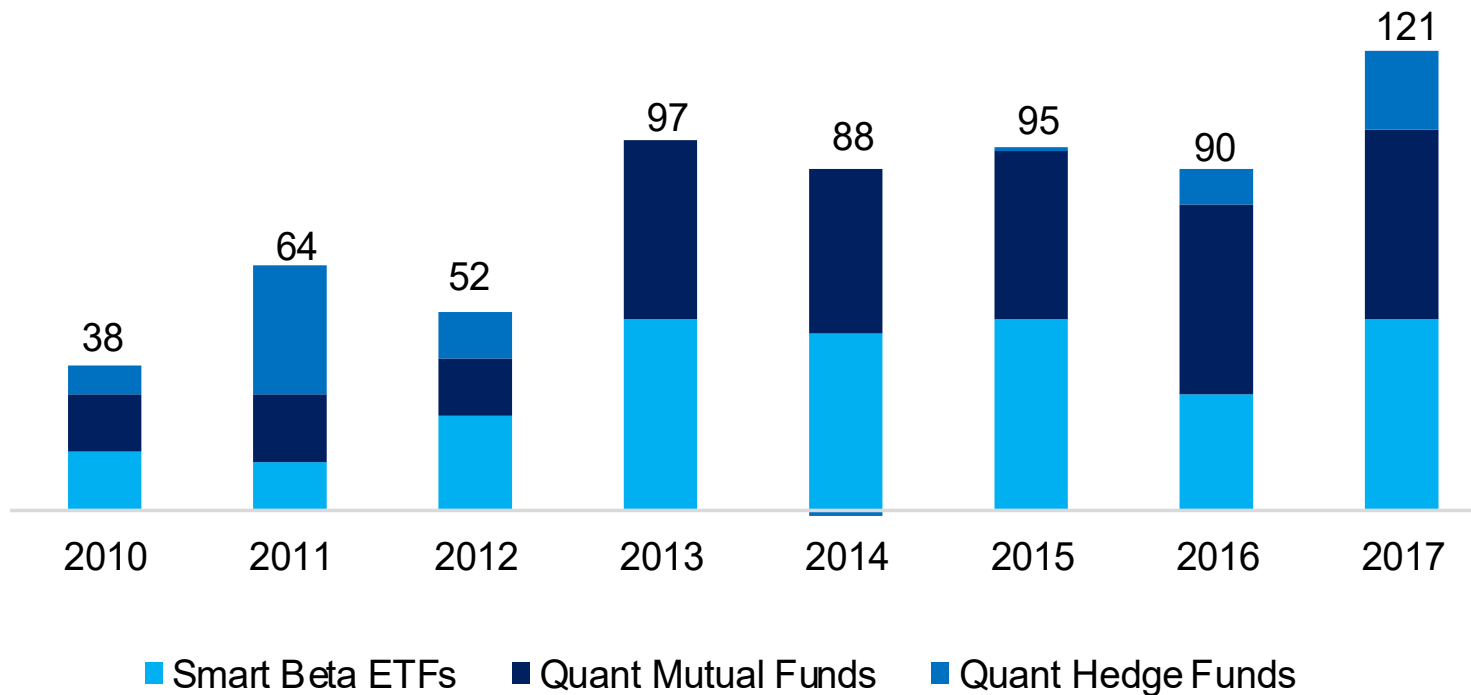


- Investors should focus on efficiently harvesting factor returns

THE PRESENT

THE RISE OF FACTOR INVESTING

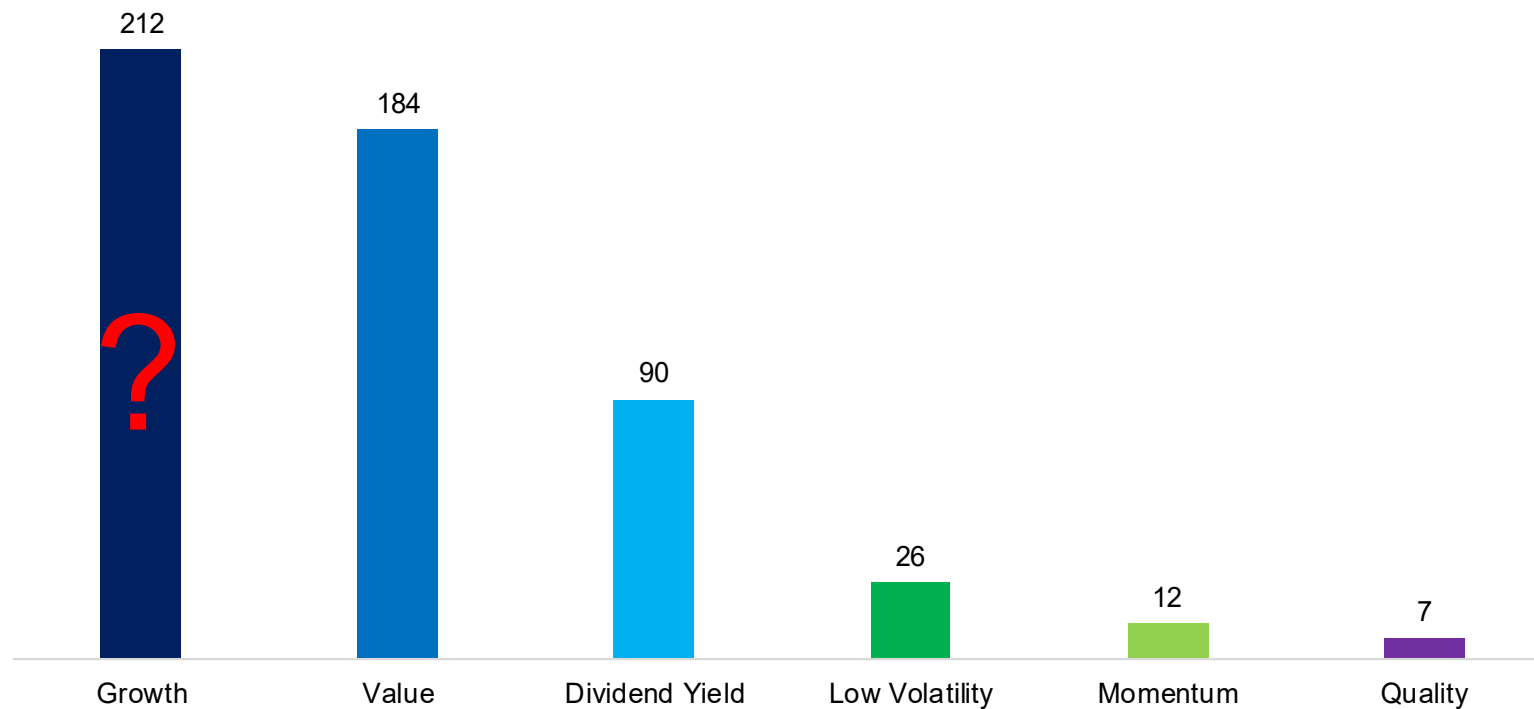
Inflows into Factor-Focused Investment Products (\$ billions)



- Close to \$1 trillion invested in smart beta strategies
- ETFs create significant cost pressure for active fund managers

SMART BETA – UNUSUAL INVESTOR BEHAVIOUR

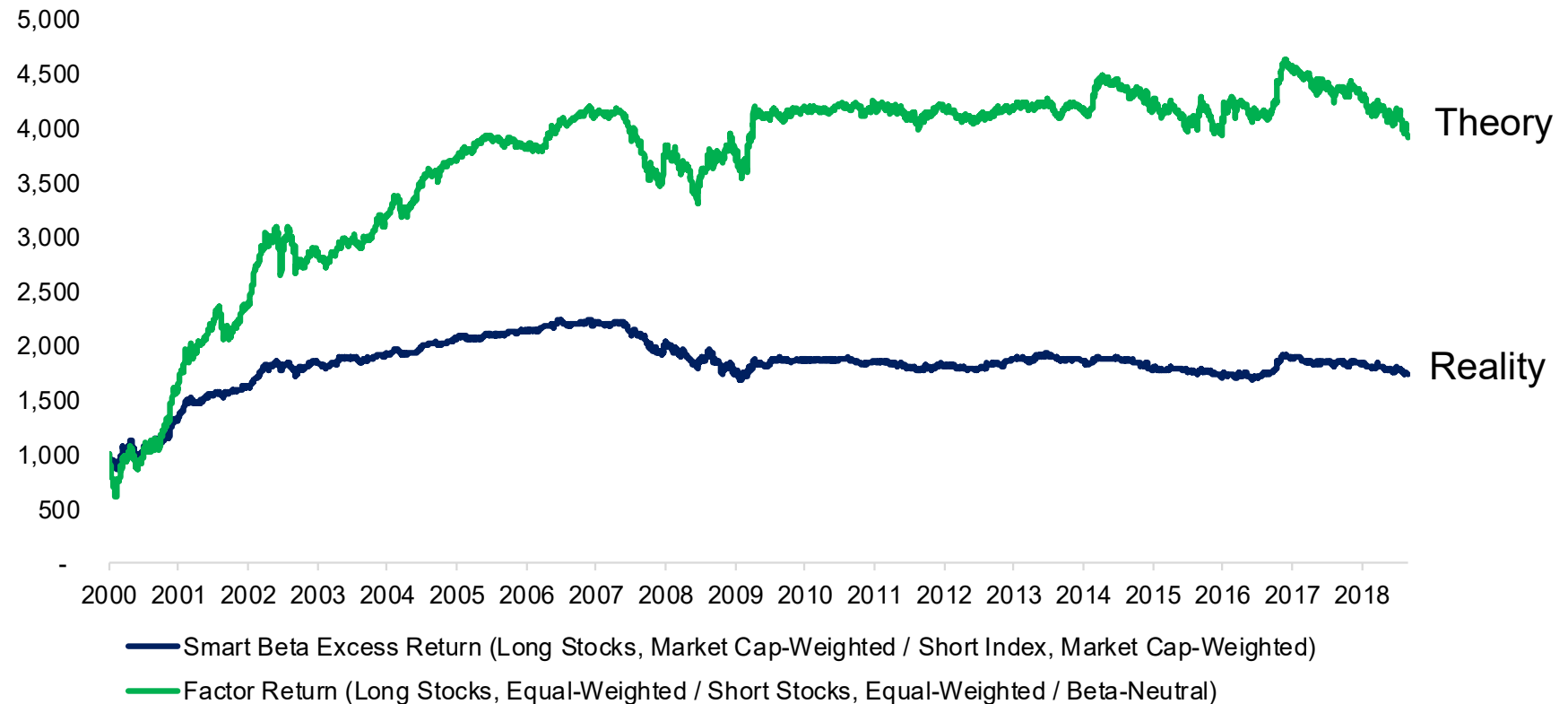
Smart Beta ETFs – Assets Under Management (\$ billion)



- Smart beta is based on factor investing research
- There is no academic support for the Growth factor – why do investors allocate to it?

SMART BETA VERSUS FACTOR INVESTING

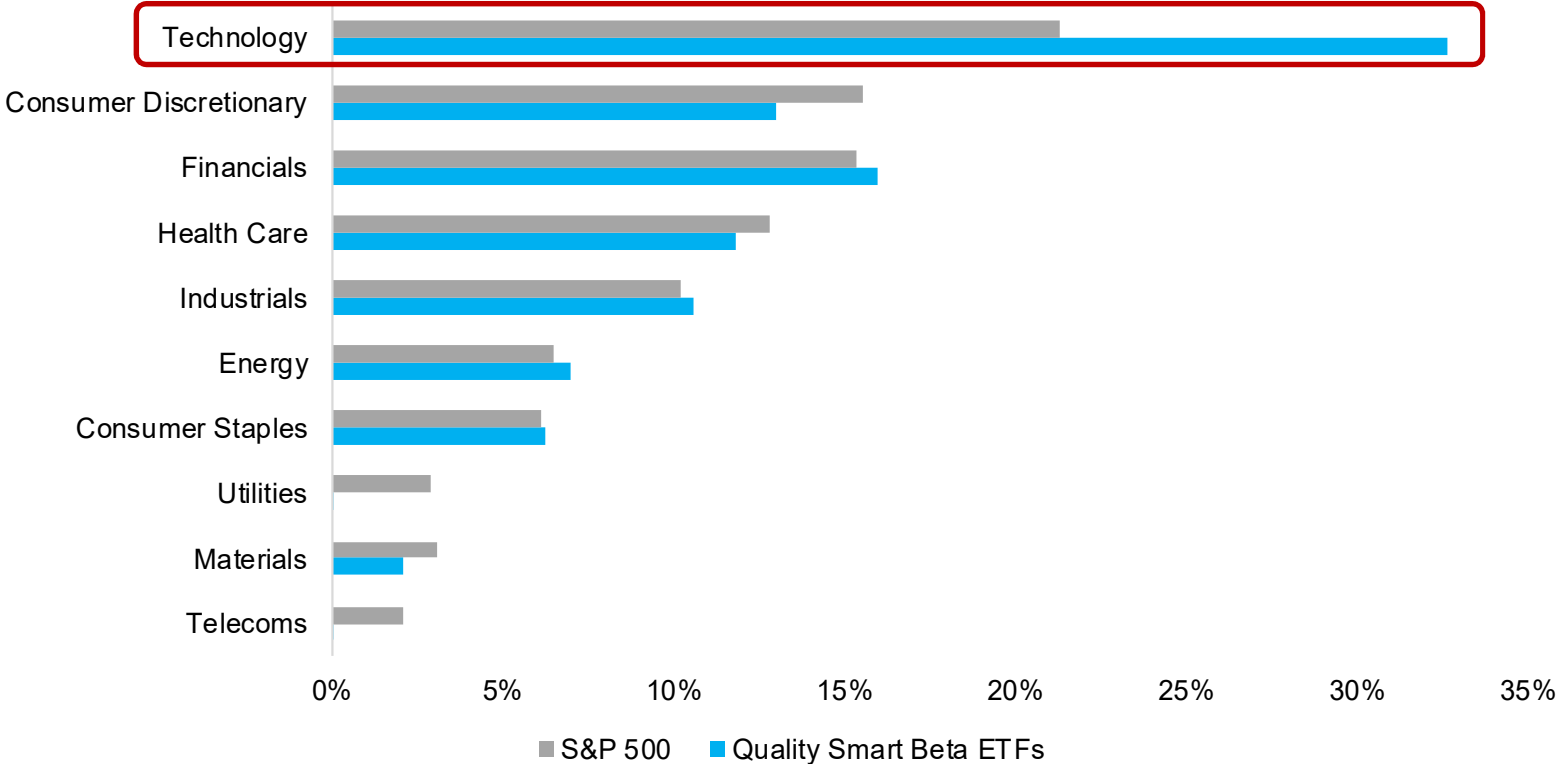
Value Factor in the US - Theory versus Reality



- Significant difference between factor returns and smart beta excess returns
 - Explained by theoretical versus practical portfolio construction

DOWNSIDE PROTECTION VIA SMART BETA?

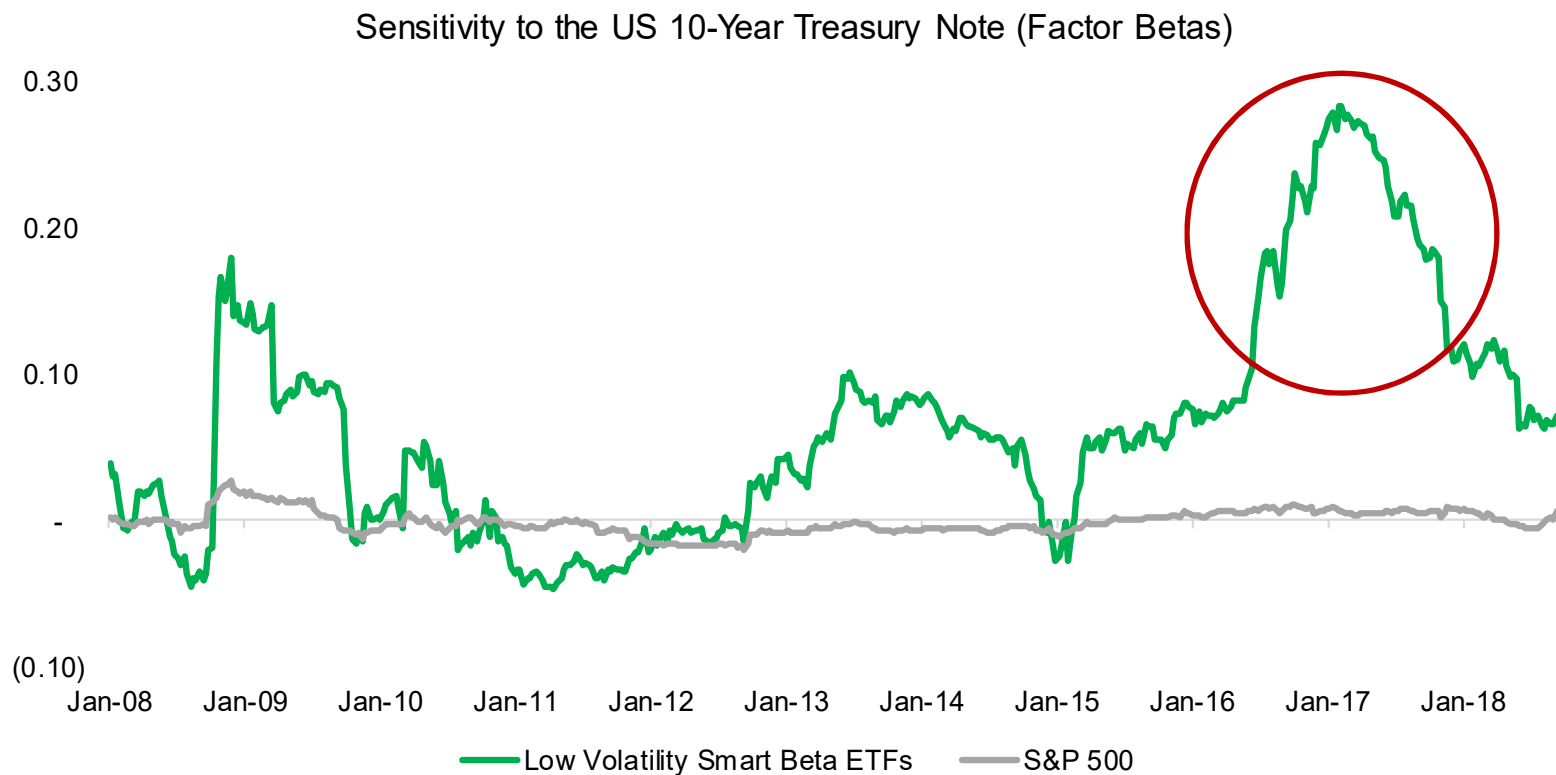
Quality Smart Beta ETFs – Breakdown by Sectors



- Quality is a bet on Technology stocks as these have low leverage and are highly profitable
 - Quality smart beta ETFs will unlikely outperform when Tech stocks crash

DOWNSIDE PROTECTION VIA SMART BETA?

Sensitivity to the US 10-Year Treasury Note (Factor Betas)



- The Low Volatility strategy has frequently exposure to interest rates due to sector exposure
 - Limited downside protection if equity and bond markets correct simultaneously

THE PRESENT

Key Take-Aways



- ETFs put pressure on active managers to reduce fees



- Smart beta strategies provide cheap exposure to factors



- But smart beta ETFs are not a panacea



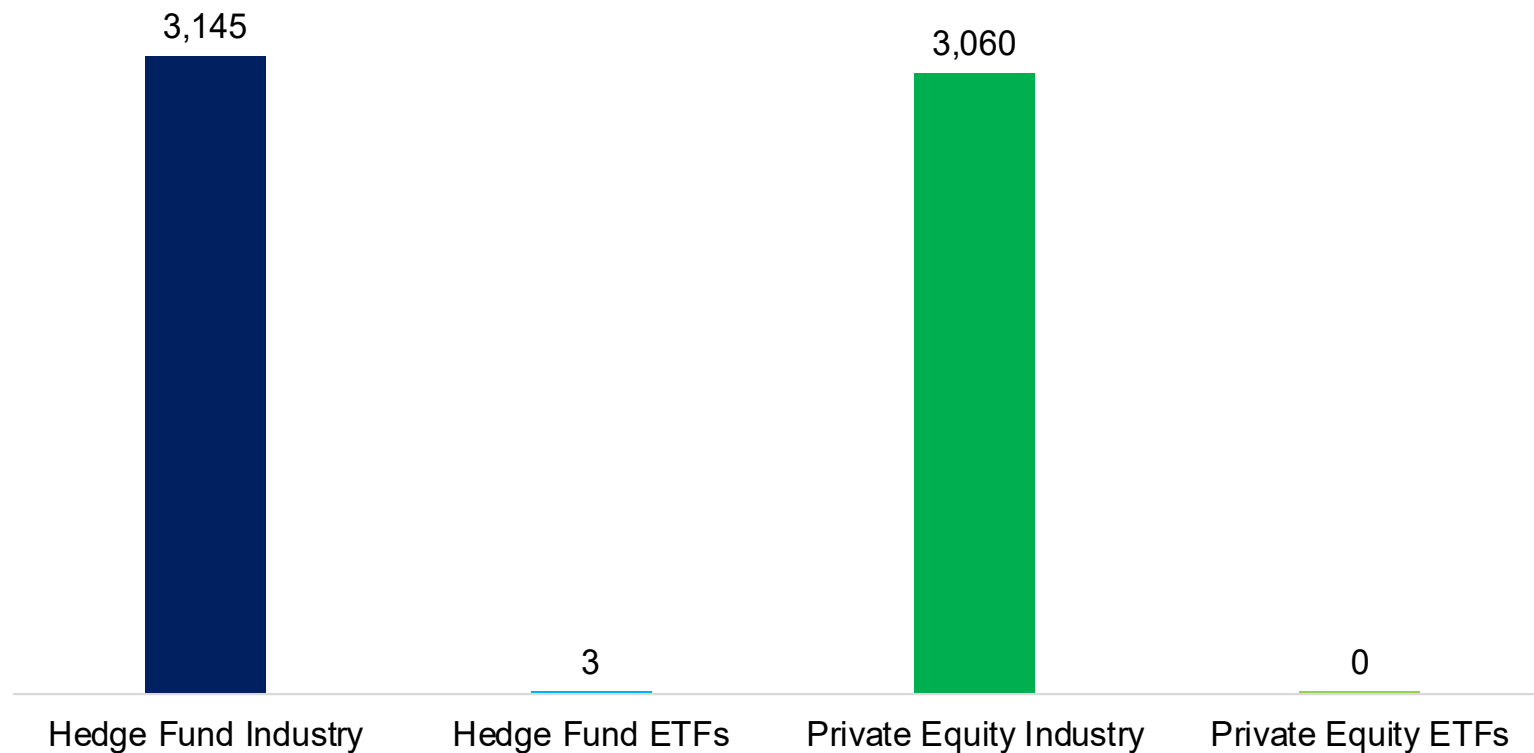
- Further product innovation is required, especially ETFs that offer alternative strategies



THE FUTURE

FUTURE OF THE ETF INDUSTRY?

Hedge Funds and Private Equity: Assets Under Management (\$ billions)



- Very few ETFs that focus on offering hedge fund or private equity strategies
 - Despite strong investors demand for alternatives

REPLICATING HEDGE FUNDS

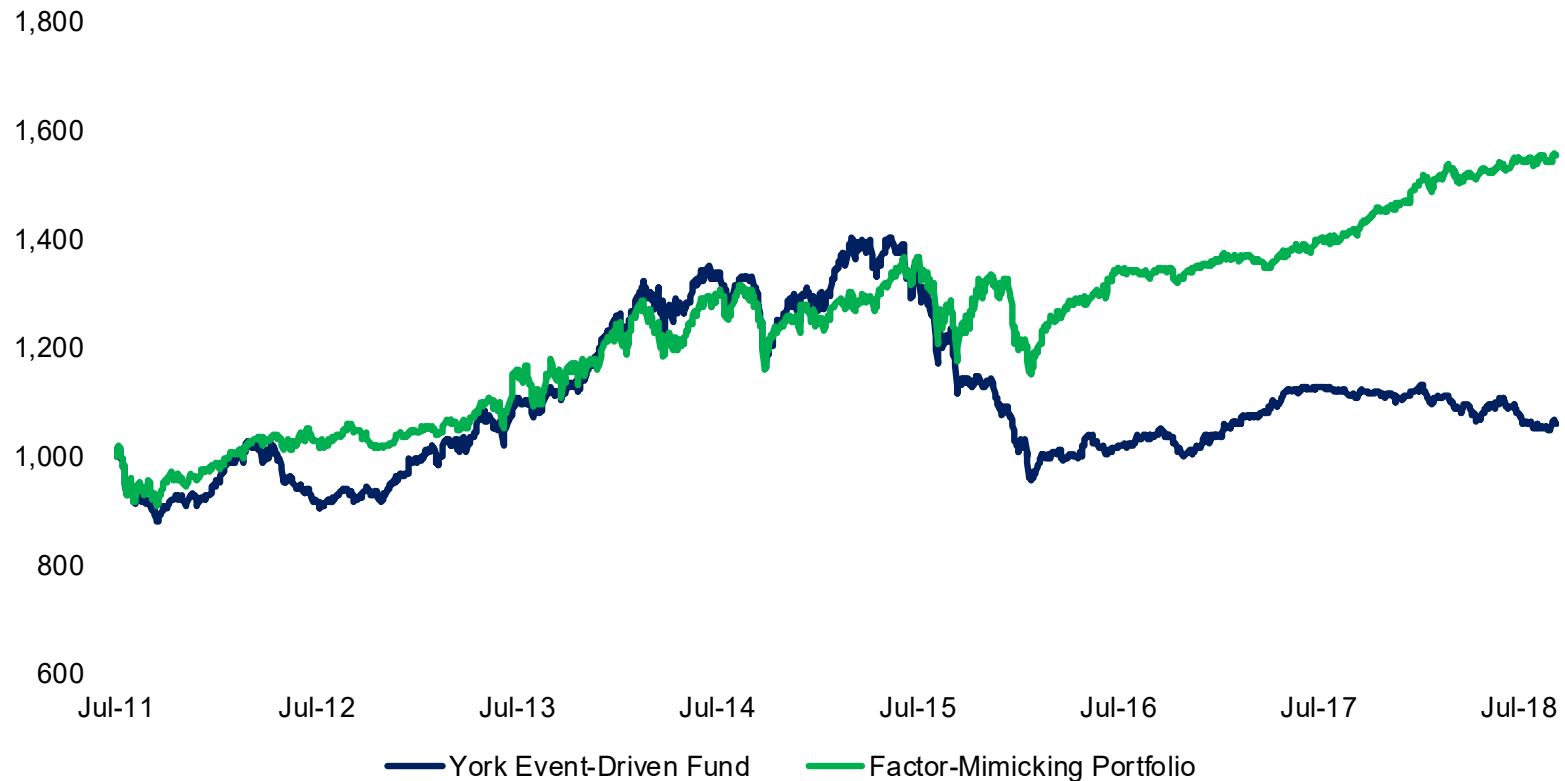
Marshall Wace TOPS UCITS Fund



- Marshall Wace is a multi-billion market-neutral hedge fund betting on analyst recommendations
- Has structural factor exposures (Momentum & Low Volatility) and can be replicated cheaply

REPLICATING HEDGE FUNDS

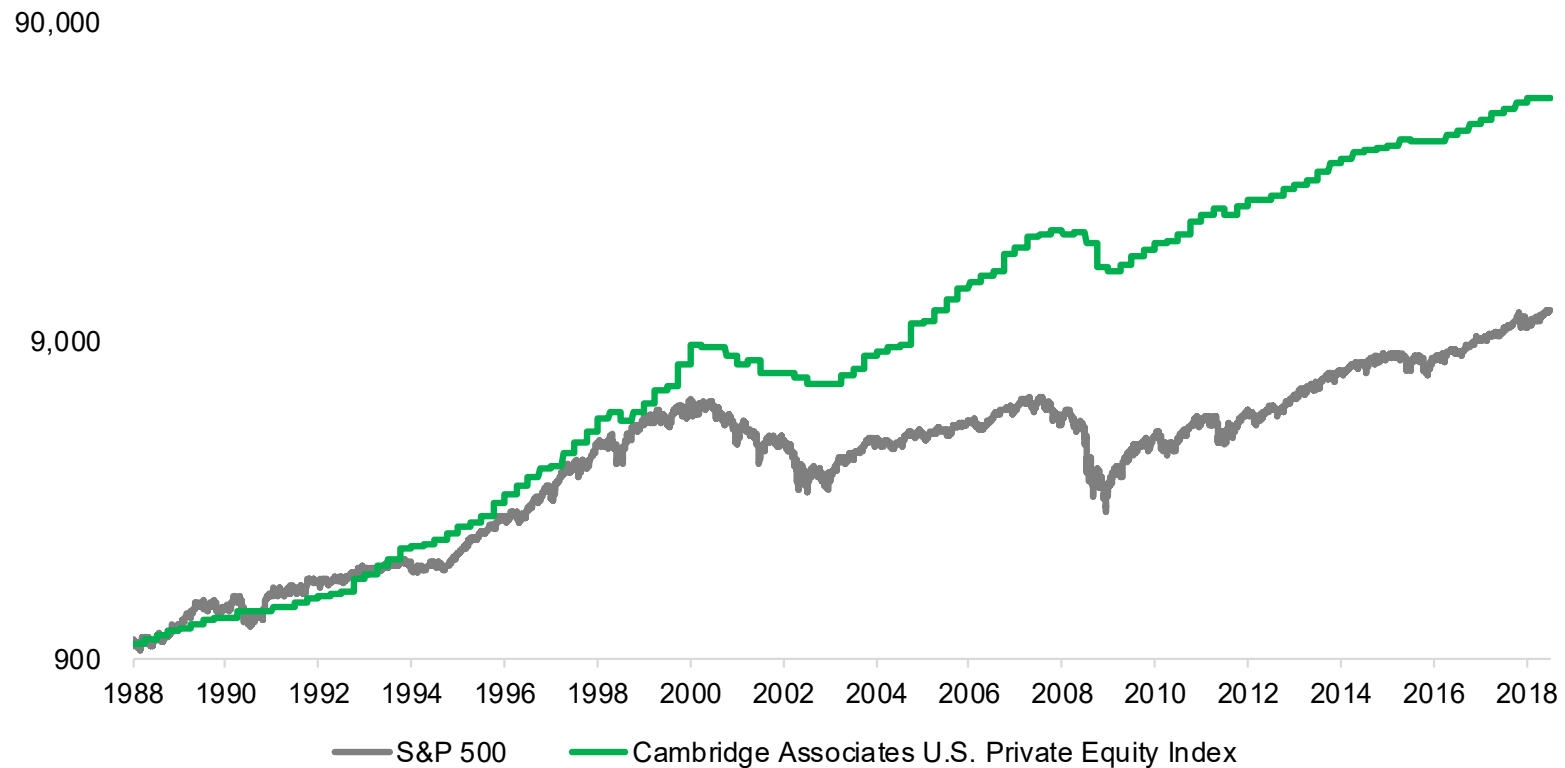
York Event-Driven UCITS Fund



- York is a large US hedge fund speculating on events with a highly concentrated stock portfolio
- Majority of returns are explained by factor exposure, not alpha

REPLICATING PRIVATE EQUITY

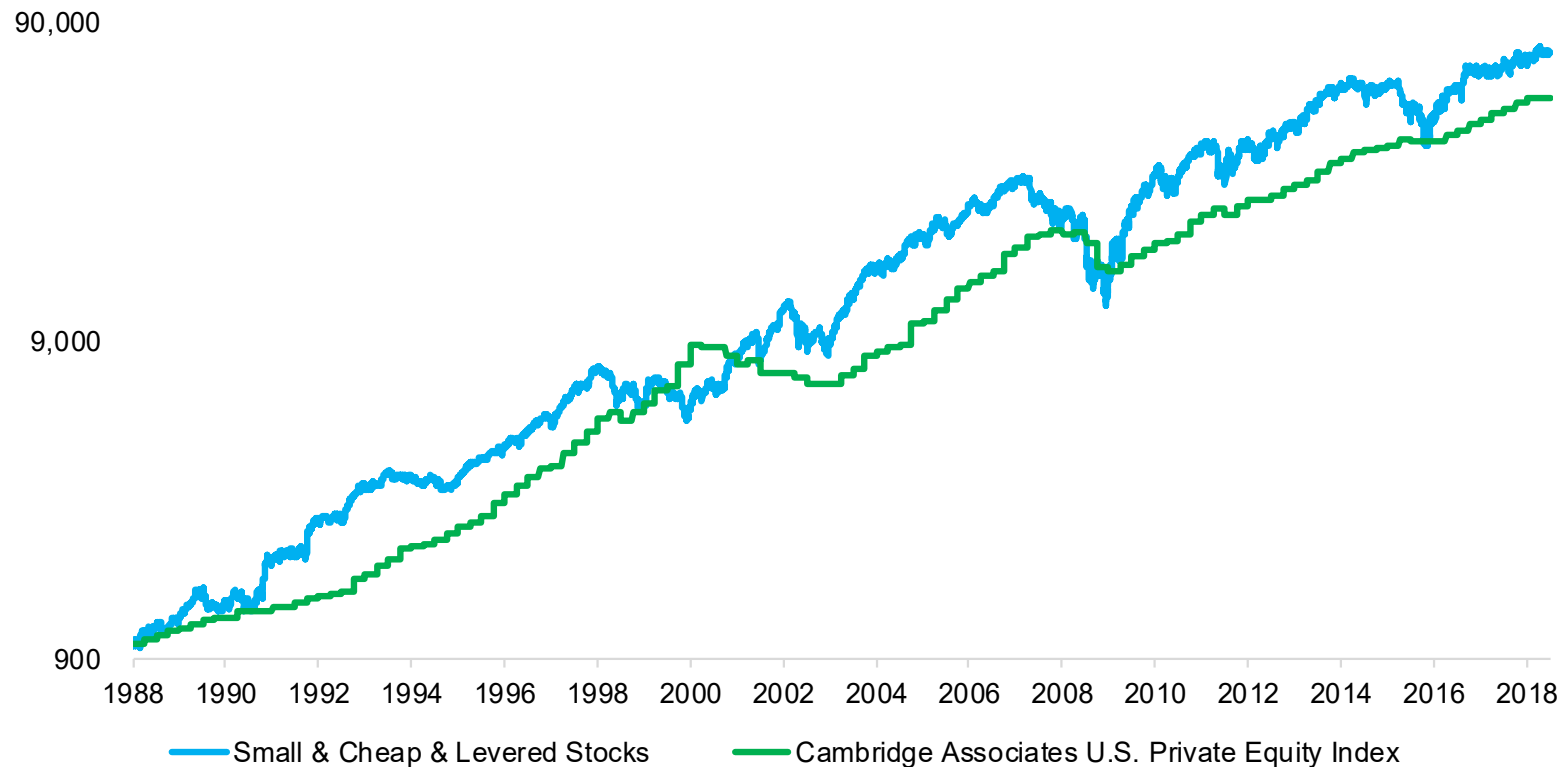
US Private Equity Returns versus S&P 500



- US Private Equity has outperformed the S&P 500 significantly since 1988

REPLICATING PRIVATE EQUITY

Liquid Private Equity Alternatives



- Private equity targets historically were small and cheap companies that could be levered
 - Private equity returns can be replicated efficiently with public equities

THE FUTURE

Key Take-Aways

- Data and technology allow to create more innovative investment products
- Hedge funds and private equity strategies can be offered via low-cost and transparent ETFs
- Requires ongoing investor education
- Leads to simpler, cheaper - better - investment portfolios


FOLLOW OUR RESEARCH!




CONTACT DETAILS & DISCLAIMER

Contact Details

Subscribe to our research:
www.factorresearch.com/research

Follow us on Twitter:
 @FactorResearch

Follow us on LinkedIn:
 <https://uk.linkedin.com/company/factorresearch>

www.factorresearch.com

Email: info@factorresearch.com

Tel: +44 20 7193 4044

FactorResearch is a trading name of Jackdaw Capital Management Limited, which is authorized and regulated by the FCA.

Disclaimer

By reading this report, you agree to the following terms and conditions and other applicable law. If you do not agree to be bound by these terms and conditions, please do not use this report. We reserve the right to make changes to this report and these conditions at any time.

Terms

- The information and material provided in this report is “as is” and FactorResearch expressly disclaims all warranties of any kind whether express or implied including the warranties of merchantability and fitness for a particular purpose.
- Neither FactorResearch nor any of its affiliates, directors, employees or other representatives will be liable for damages arising out of or in connection with the use of this report. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property and claims of third parties.
- Any use you make of the information provided in this report is at your own risk.

Copyright

This report may not be copied or disseminated without written permission.

Recipients

This report is intended for professional clients and not for retail investors.