

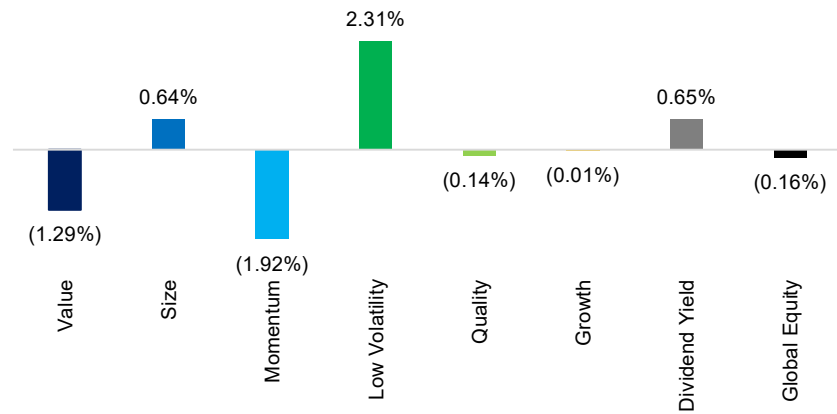
Factor Performance & Research Update

Factor Performance Update

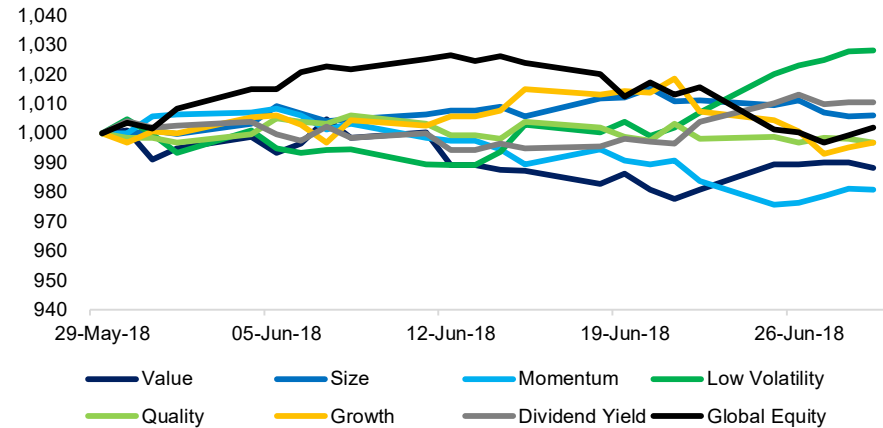
Factor Performance Update: June 2018

The Size Factor Has Taken YTD Leadership, likely Reflecting the Threat of Global Trade Wars

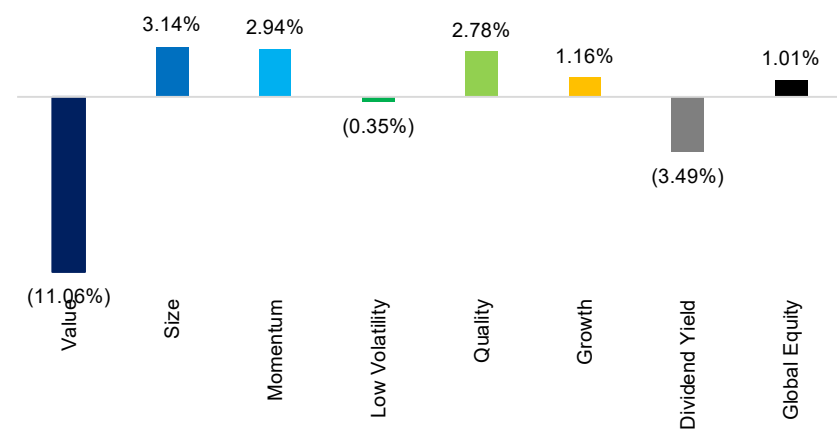
Global Equity Factors (Long-Short): Last Month



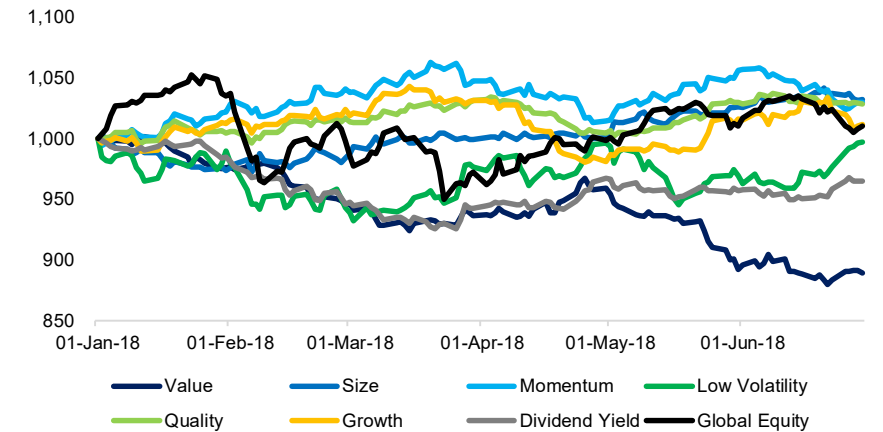
Global Equity Factors (Long-Short): Last Month



Global Equity Factors (Long-Short): Year to Date



Global Equity Factors (Long-Short): Year to Date



Research Topic 1:
Tactical Mean-Reversion

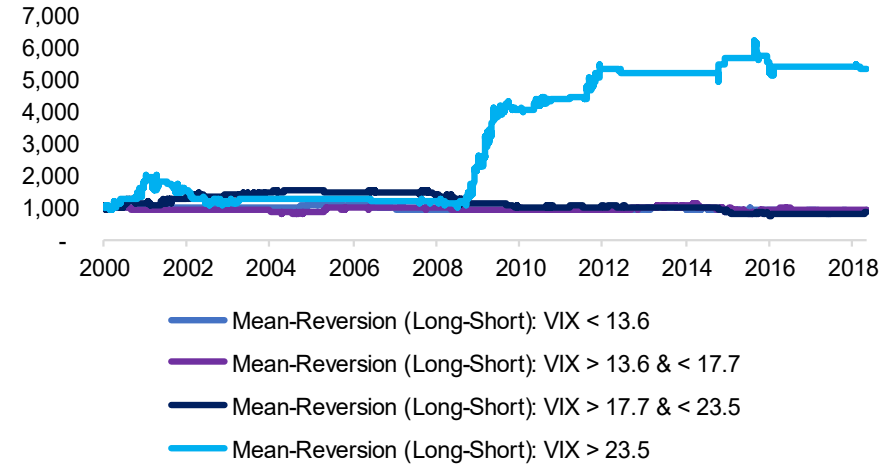
Tactical Mean-Reversion (I / II)

Volatility as Key Driver

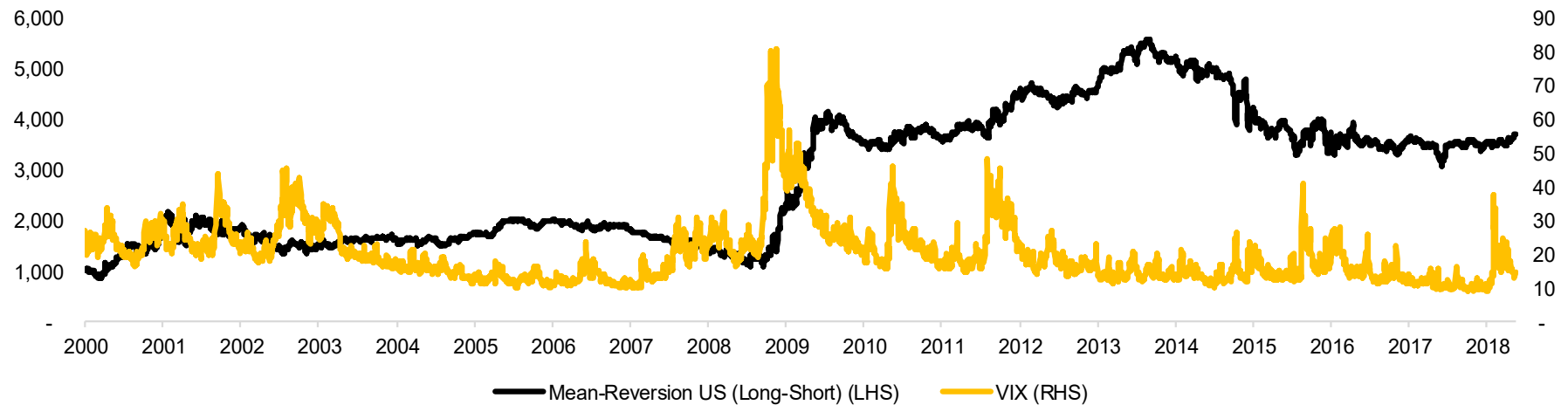
Comment

- The Mean-Reversion strategy buys last weeks losers and shorts last weeks winners
 - Create a portfolio each day and rebalance weekly
- The Mean-Reversion strategy is a liquidity-proving strategy
 - Compensation for providing liquidity is higher, when investors overreact more frequently
- Almost zero returns when volatility is low, depending on transaction cost assumptions

Mean-Reversion in Different VIX Quartiles



Mean-Reversion in US & VIX



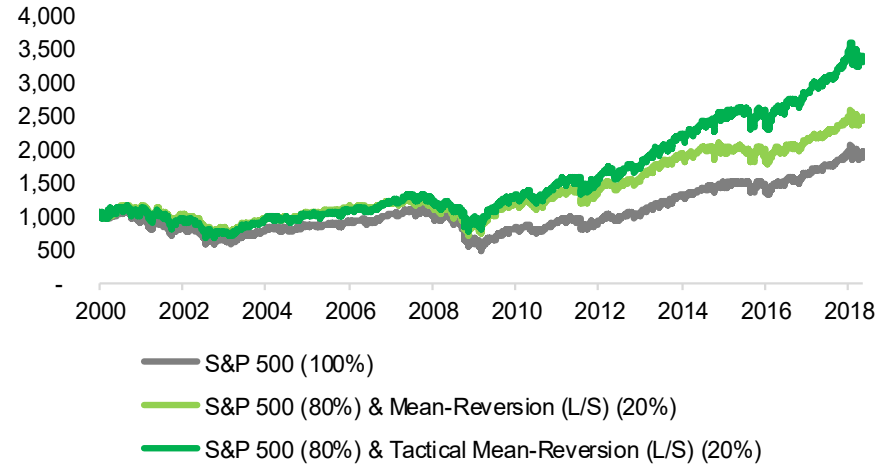
Tactical Mean-Reversion (II / II)

Hedging the Tail Risks of Equity Portfolios Efficiently

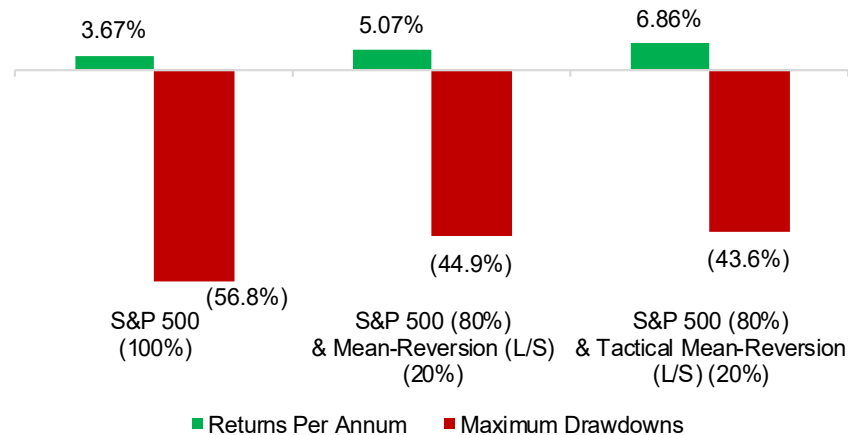
Comment

- Given that the strategy does best when volatility is high, it's an attractive addition for an equity portfolio
- Ideally increase exposure when volatility is high and decrease when volatility is low
 - Can be considered as tail risk hedge

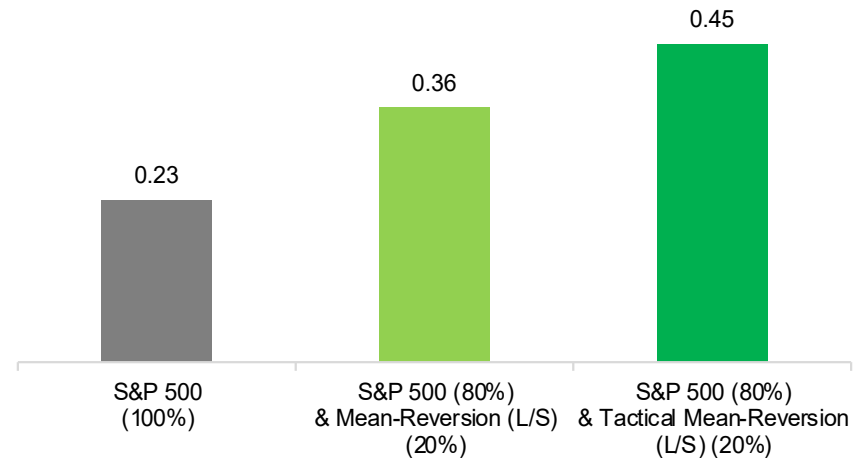
Hedging Equity Portfolios



Returns Per Annum & Max Drawdowns (2000 - 2018)



Equity Combinations: Risk-Return Ratios (2000 - 2018)



Research Topic 2:
Market Timing with Multiples, Momentum & Volatility

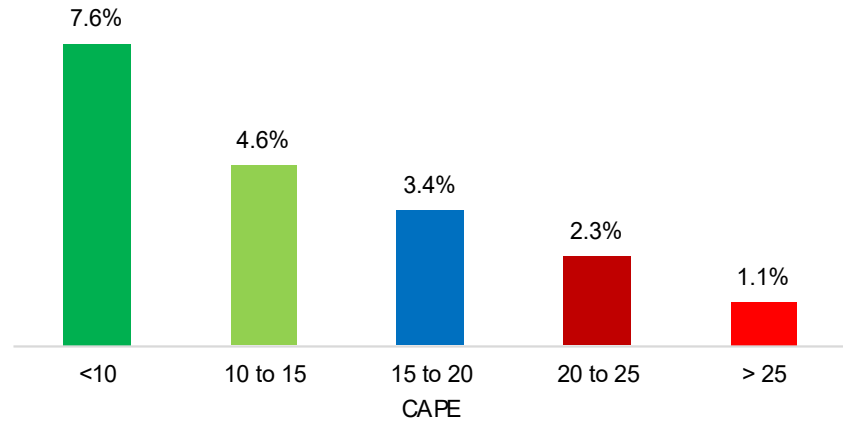
Market Timing with Multiples, Momentum & Volatility (I / II)

Getting Comfortable with High Equity Multiples

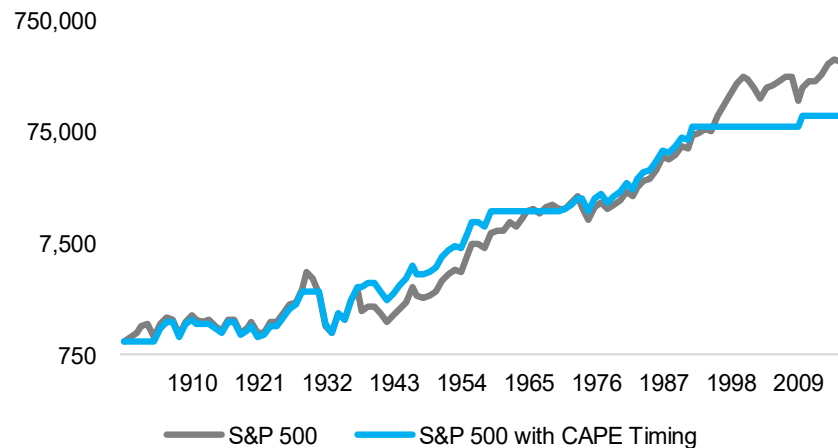
Comment

- Equity multiples have been elevated in recent years, creating investor concerns
- Historical relationship between spot multiples and forward returns indicate low returns
 - However, challenging to implement this strategy as it would imply decades of being out of the market

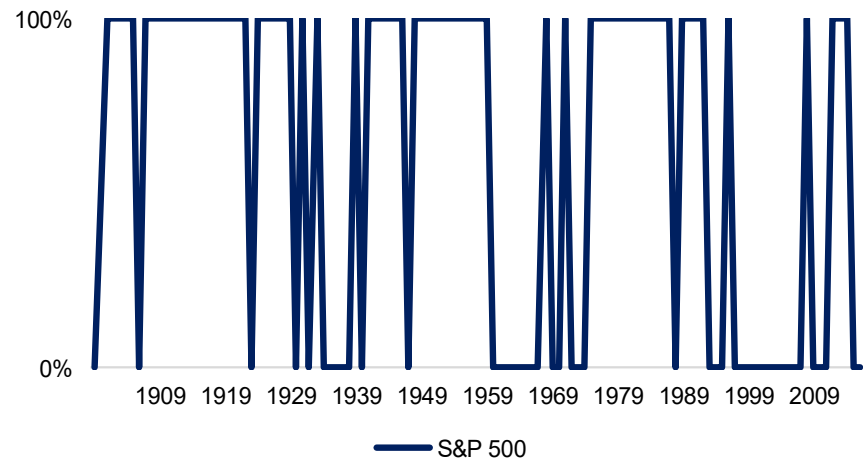
CAPE vs 10-Year Forward Returns PA (1881 – 2007)



S&P 500 with CAPE Timing



S&P 500 with CAPE Timing: Time In / Out of the Market



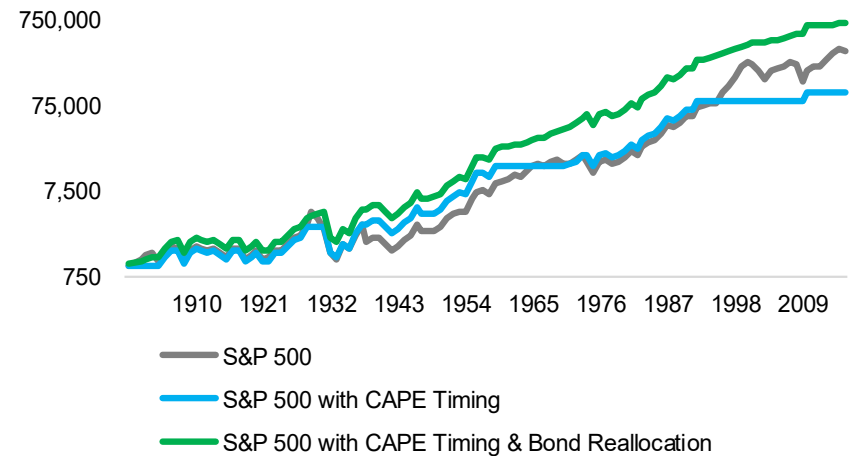
Market Timing with Multiples, Momentum & Volatility (II / II)

Alternatives to Market Timing with Equity Multiples

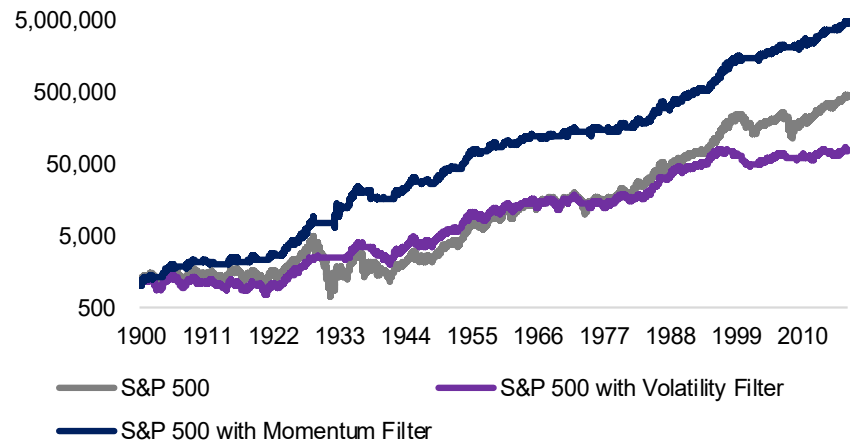
Comment

- Reallocating to bonds when multiples were too high resulted in attractive performance, but is less interesting currently given low bond yields and requires a flexible mandate
- Alternative frameworks are volatility and momentum-based filters, which are relatively easy to implement and avoid the long out-of-market periods
 - The momentum-filter shows especially attractive risk-return ratios

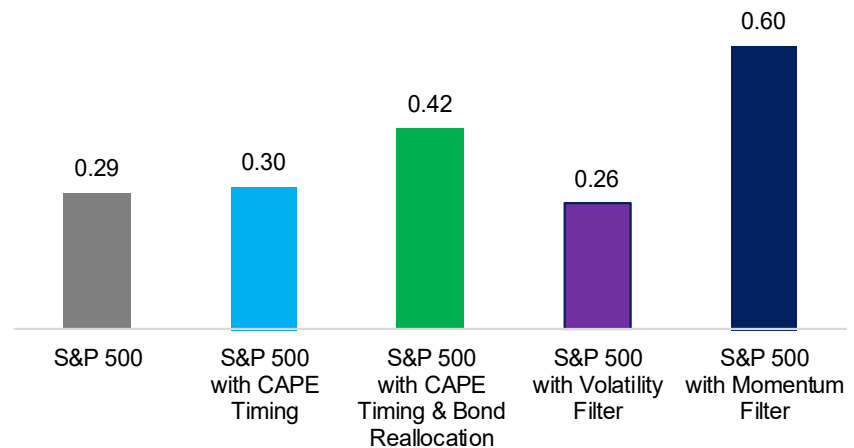
S&P 500 with CAPE Timing & Bond Reallocation



S&P 500 with Volatility & Momentum Filters



Risk-Return Ratios (1900 - 2007)



Research Topic 3:
Sector vs Country Momentum

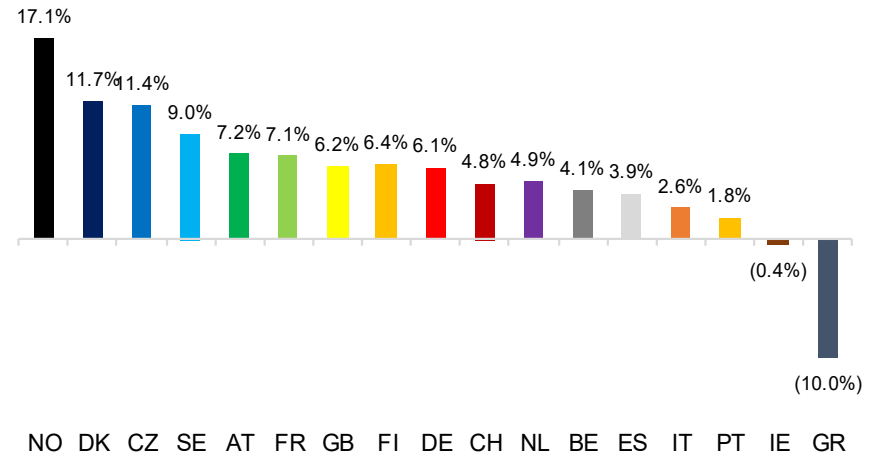
Sector vs Country Momentum (I / II)

Does Performance Chasing Work?

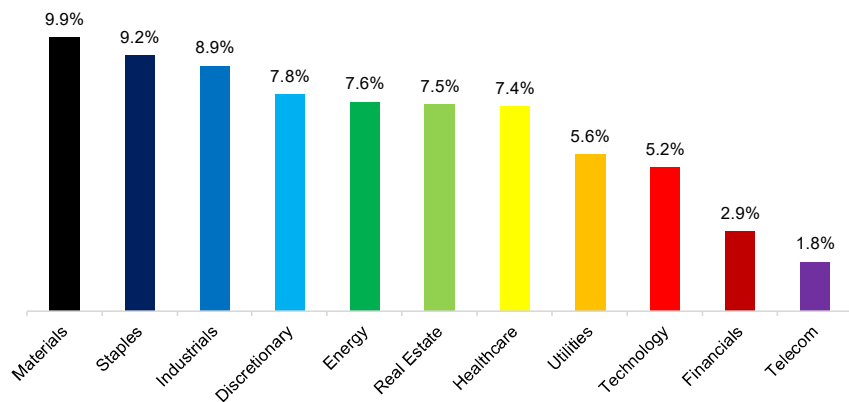
Comment

- The returns of countries and sectors in Europe has been quite divergent since 2000
- The momentum strategy can be applied to stocks, sectors and countries
 - 11 sectors and 17 countries
- Sector and country momentum generate positive excess returns, albeit with high volatility

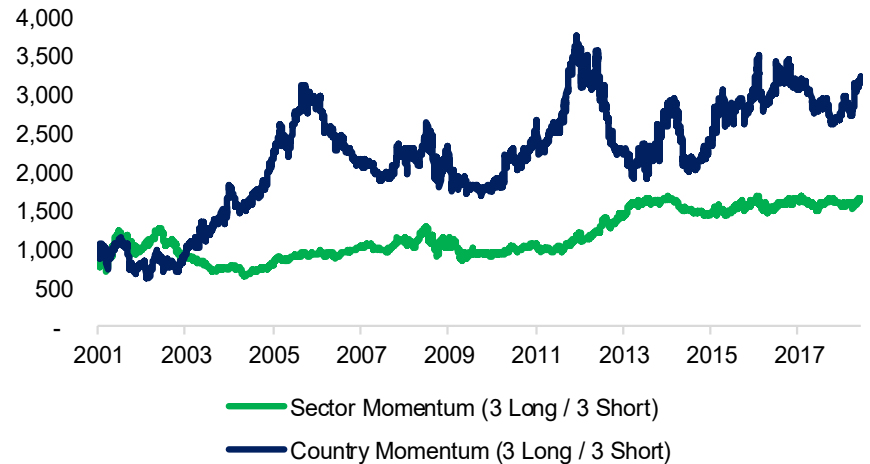
European Stock Market by Countries: CAGRs (2000-2018)



European Stock Market by Sectors: CAGRs (2000-2018)



Sector versus Country Momentum



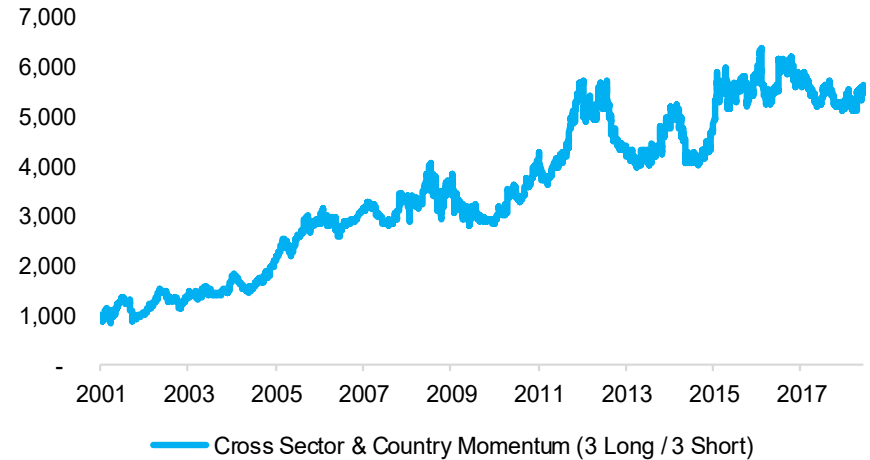
Sector vs Country Momentum (II / II)

Performance Chasing Works, Under Certain Assumptions

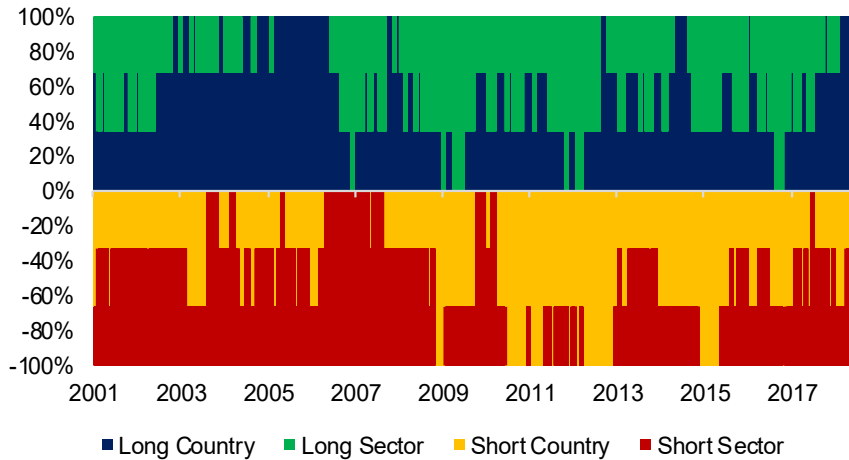
Comment

- Cross sector and country as well as single stock momentum generate higher risk-return ratios
 - Likely a result of a more diversified portfolio (28 securities in cross sector and country universe and 600 stocks in European stock universe)
 - Positions will be less correlated

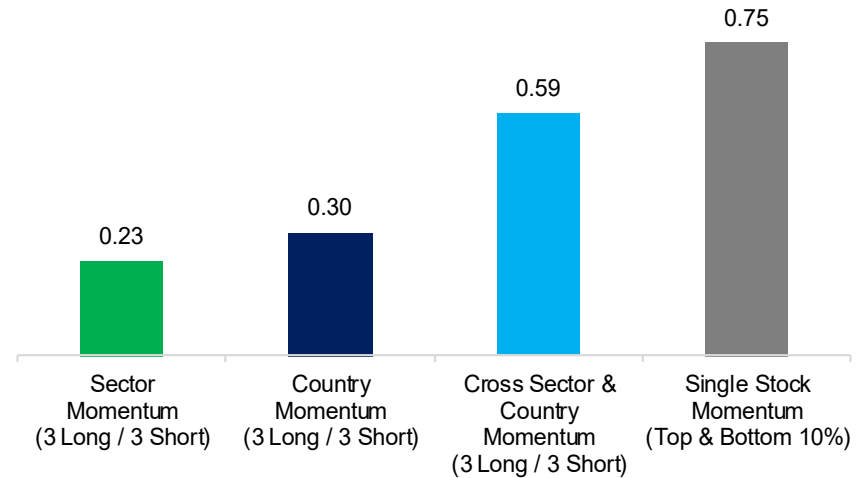
Cross Sector & Country Momentum



Breakdown of Long & Short Portfolio



Risk-Return Ratios (2000 - 2018)



Q&A

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