



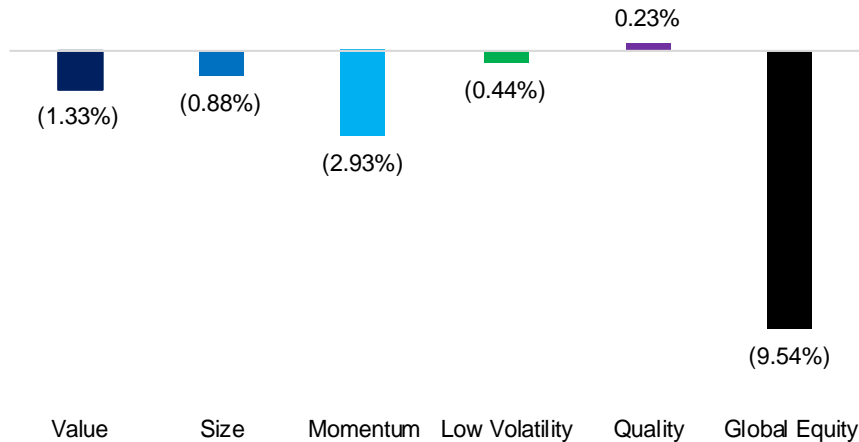
Factor Performance & Research Update

Factor Performance Update

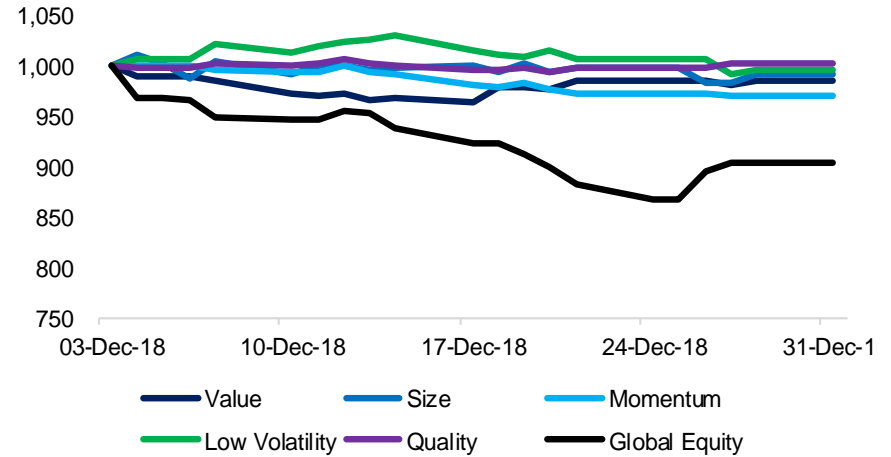
Factor Performance Update: December 2018

A Poor Month in a Challenging Year for Factor Investors

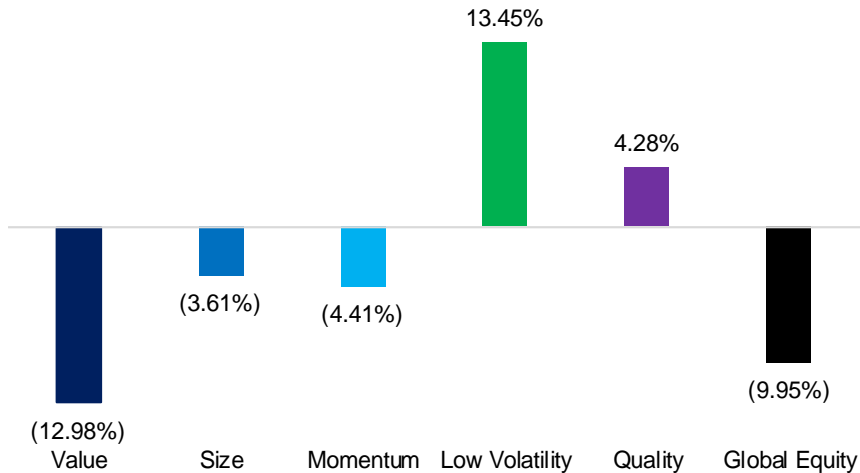
Global Equity Factors (Long-Short): Last Month



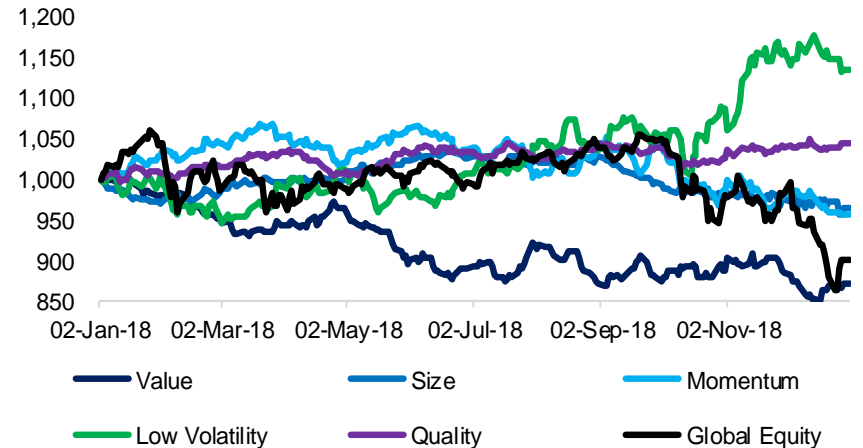
Global Equity Factors (Long-Short): Last Month



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



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



Research Topic 1:
Factor Optimisation

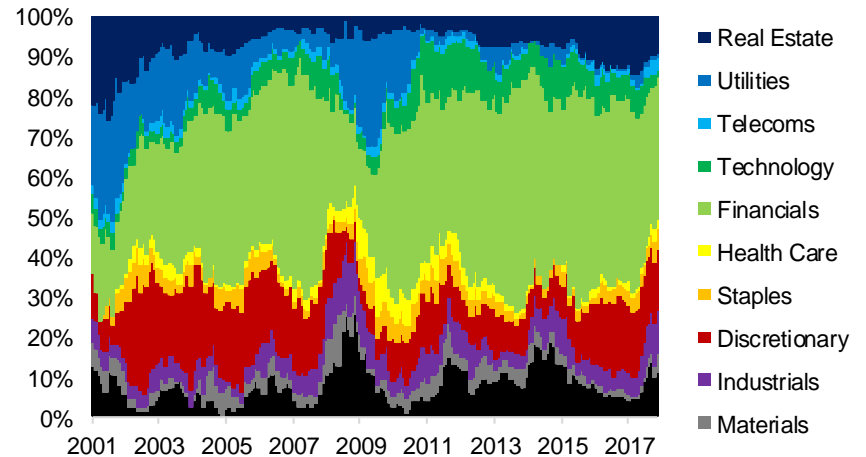
Factor Optimisation (I / III)

Pure versus Raw Factors

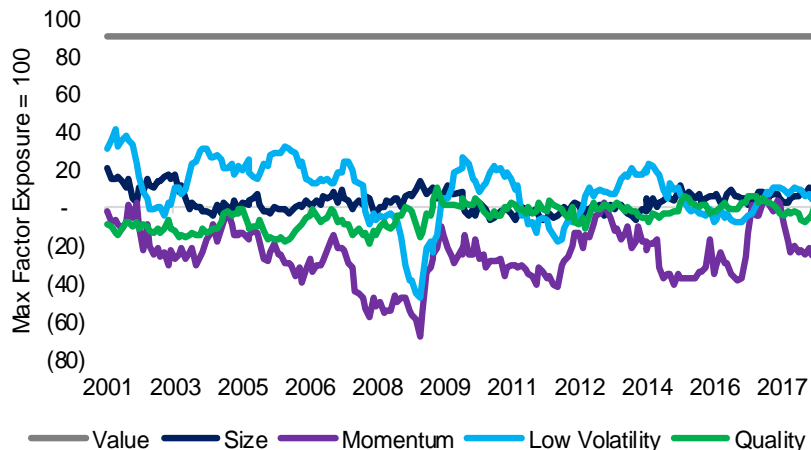
Comment

- Equity factors exhibit sector biases and exposures to other common factors
 - Sector biases can be removed by creating long-short sector-neutral portfolios
- A factor optimisation process allows investors to create pure factors
 - Maximise exposure to target factor (Value) and minimise exposure to non-target factors

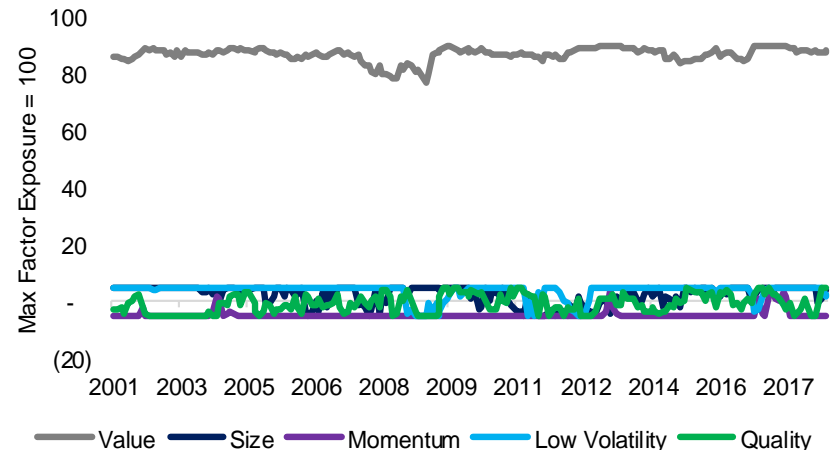
Value Factor (Long Portfolio): Breakdown by Sectors



Value Factor (Long): Exposure to Equity Factors

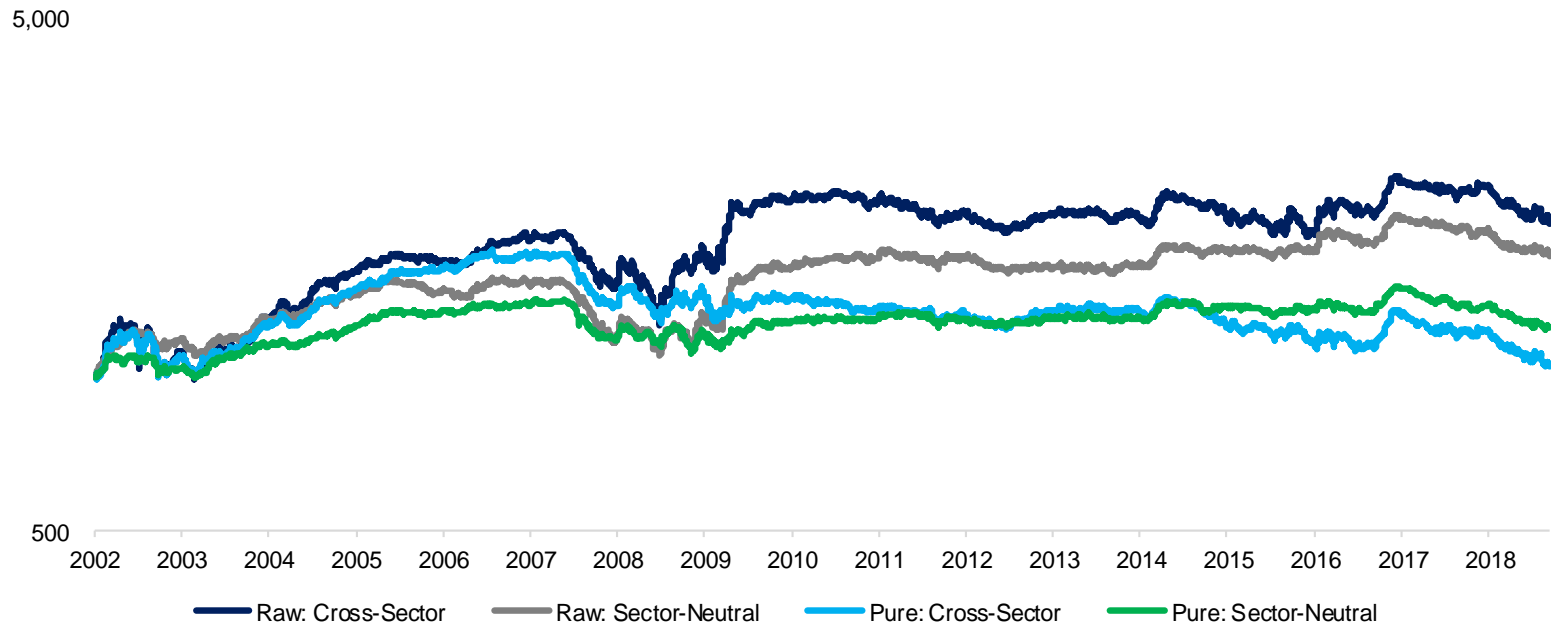


Pure Value Factor (Long): Exposure to Equity Factors



Raw and Pure Value Factors Shows Similar Trends in Performance

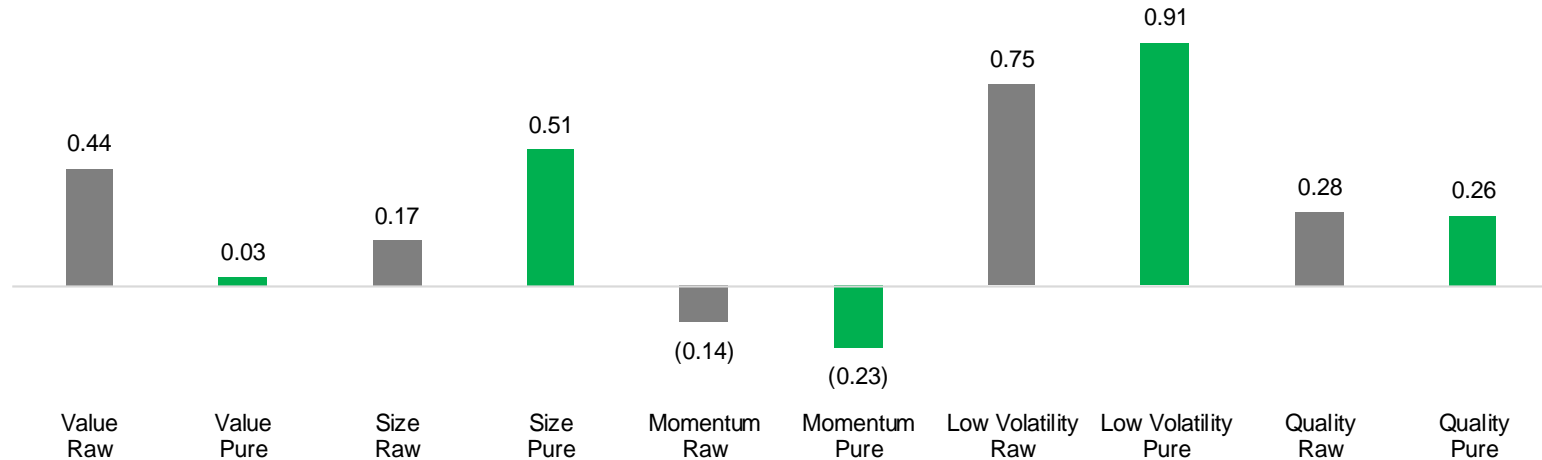
Value Factor in US: Raw versus Pure Factor Performance



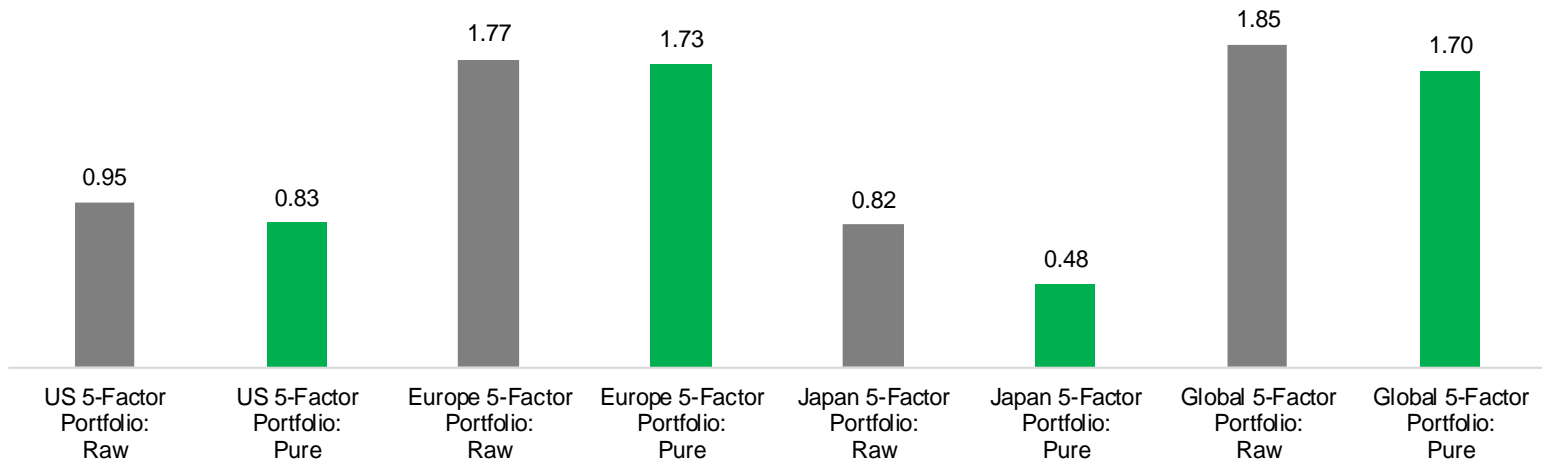
Factor Optimisation (III / III)

Risk-Return Ratios Don't Increase, but Pure Factors Are Attractive for Multiple Reasons

Raw versus Pure Factors in US (Sector-Neutral): Risk-Return Ratios (2002 - 2018)



Raw versus Pure Factors Across Markets (Sector-Neutral): Combination Model: Risk-Return Ratios (2002 - 2018)



Research Topic 2:
Private Equity: The Emperor Has No Clothes

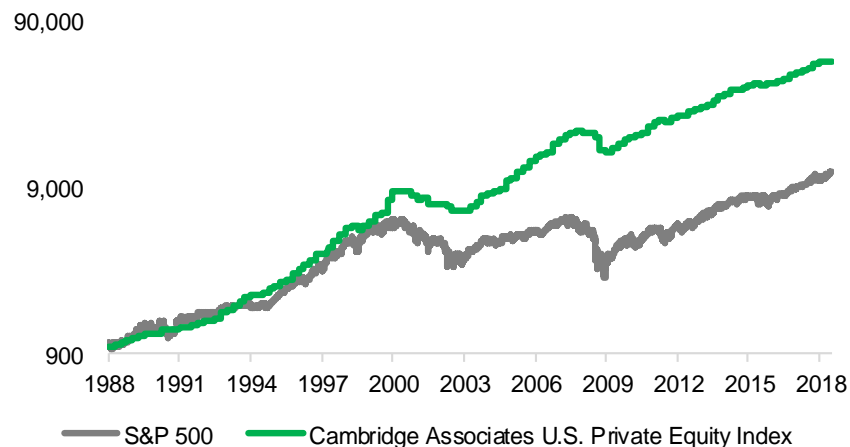
Private Equity: The Emperor Has No Clothes (I / II)

Replicating Private Equity Returns with Private Equities

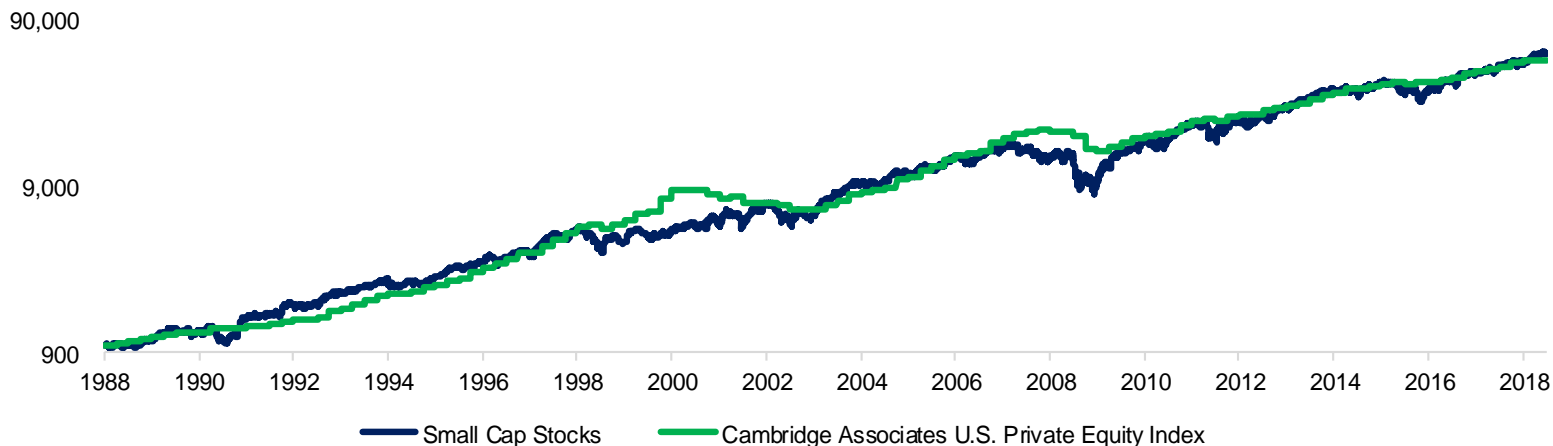
Comment

- Private equity (“PE”) industry is booming with \$1 trillion of uninvested cash as of 2018
- PE targets were historically small companies with stable cashflows that could bear large amounts of debt
- PE returns can be replicated with small cap equities
- PE returns are less volatile than public equity returns, but this is misleading
 - Explained by a lack of daily data and smoothed valuations of PE portfolios companies

U.S. Private Equity Returns versus S&P 500



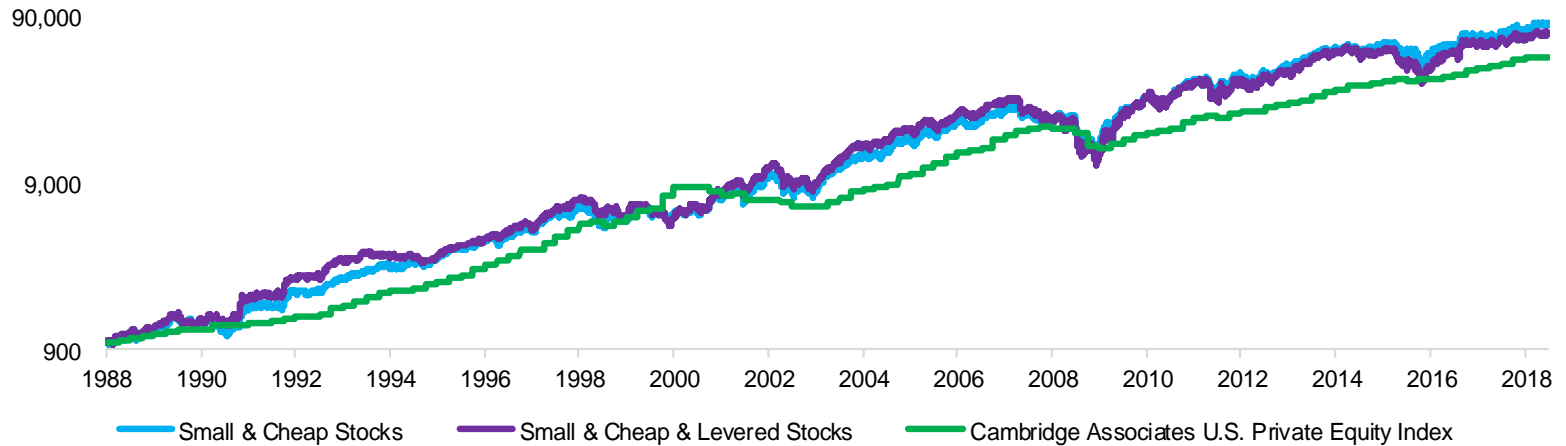
Replicating Private Equity Returns with Small Cap Equities



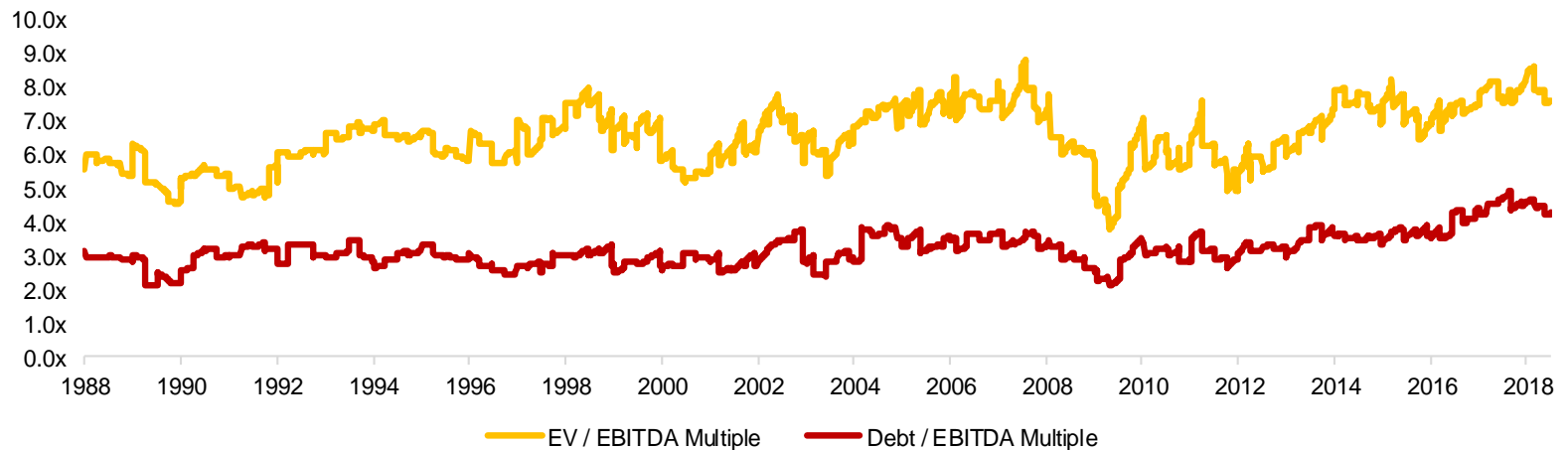
Private Equity: The Emperor Has No Clothes (II / II)

Valuation and Debt Multiples are At All-Time Highs, Expected Returns Are Less Attractive

Liquid Private Equity Alternatives



Small, Cheap and Levered Stocks: Valuation and Debt Multiples



Research Topic 3:
Factor Investing Made in China

Factor Investing Made in China (I / II)

Harvesting Factor Returns in the Middle Kingdom

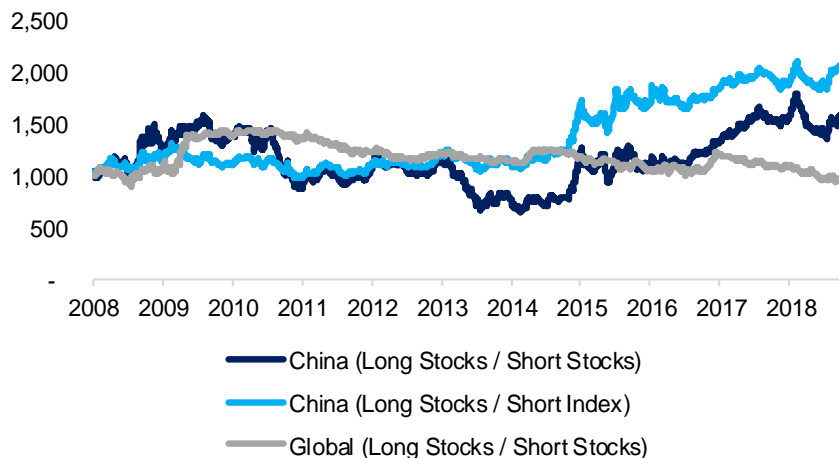
Comment

- Chinese stocks have gained in importance with MSCI increasing the weight in the MSCI Global Emerging Market Index (followed by \$1.6 trillion of assets)
- Chinese stock markets were / are dominated by retail investors
- Factor performance in China often mirrors global factor performance
- Indicates common factor drivers that permeate even emerging and isolated markets

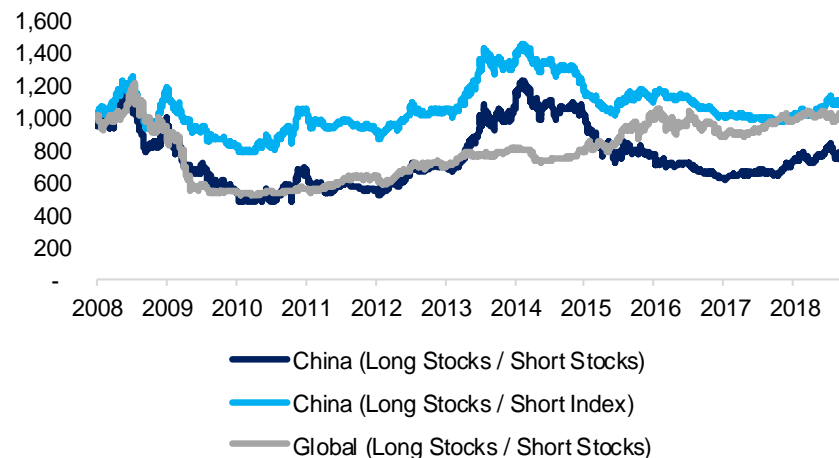
China Stock Market Index



Value Factor in China



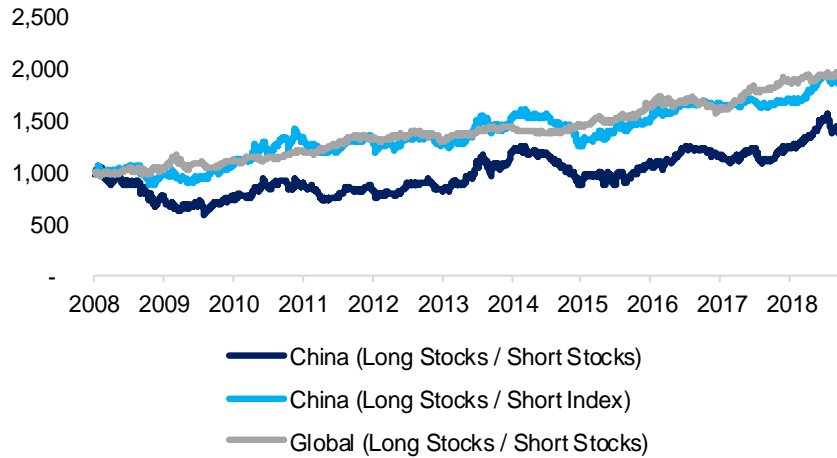
Momentum Factor in China



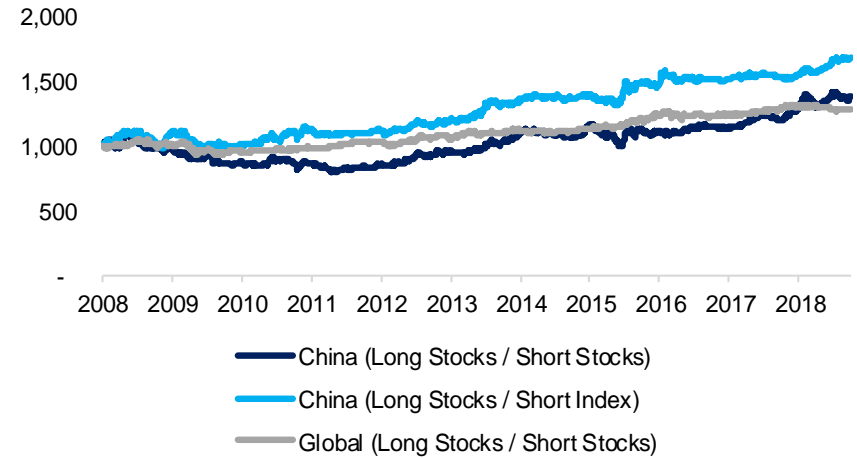
Factor Investing Made in China (II / II)

Why Does Chinese Factor Performance Mirror Global Factor Performance?

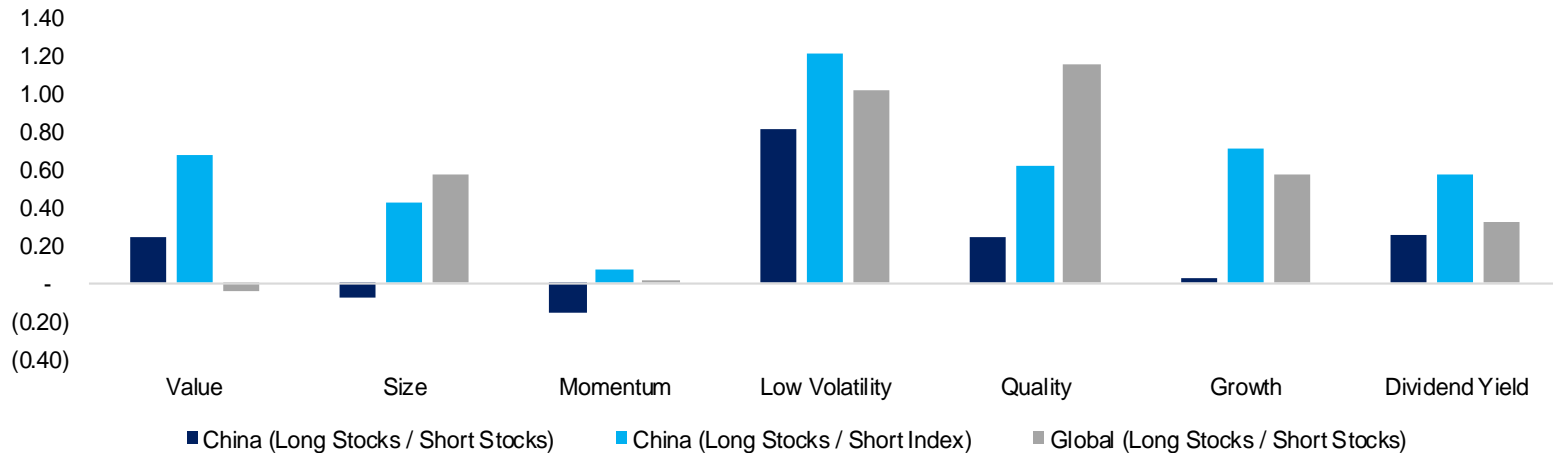
Quality Factor in China



Multi-Factor Portfolio in China



Risk-Return Ratios of Factors in China (2008 - 2018)




Q&A

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