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# Putting the Style into Smart Beta

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# Putting the Style into Smart Beta

What is factor investing?

What is its relevance for non-life, non-profit,  
pension and with-profit funds?

How should different smart beta strategies be  
classified?

Why do factors exist?

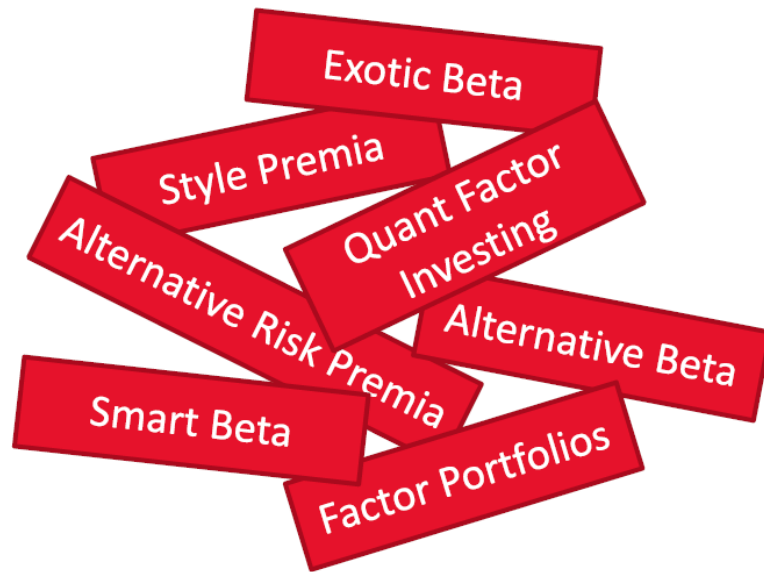
Why diversification is not what you think

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ponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

# Style Premia Investing



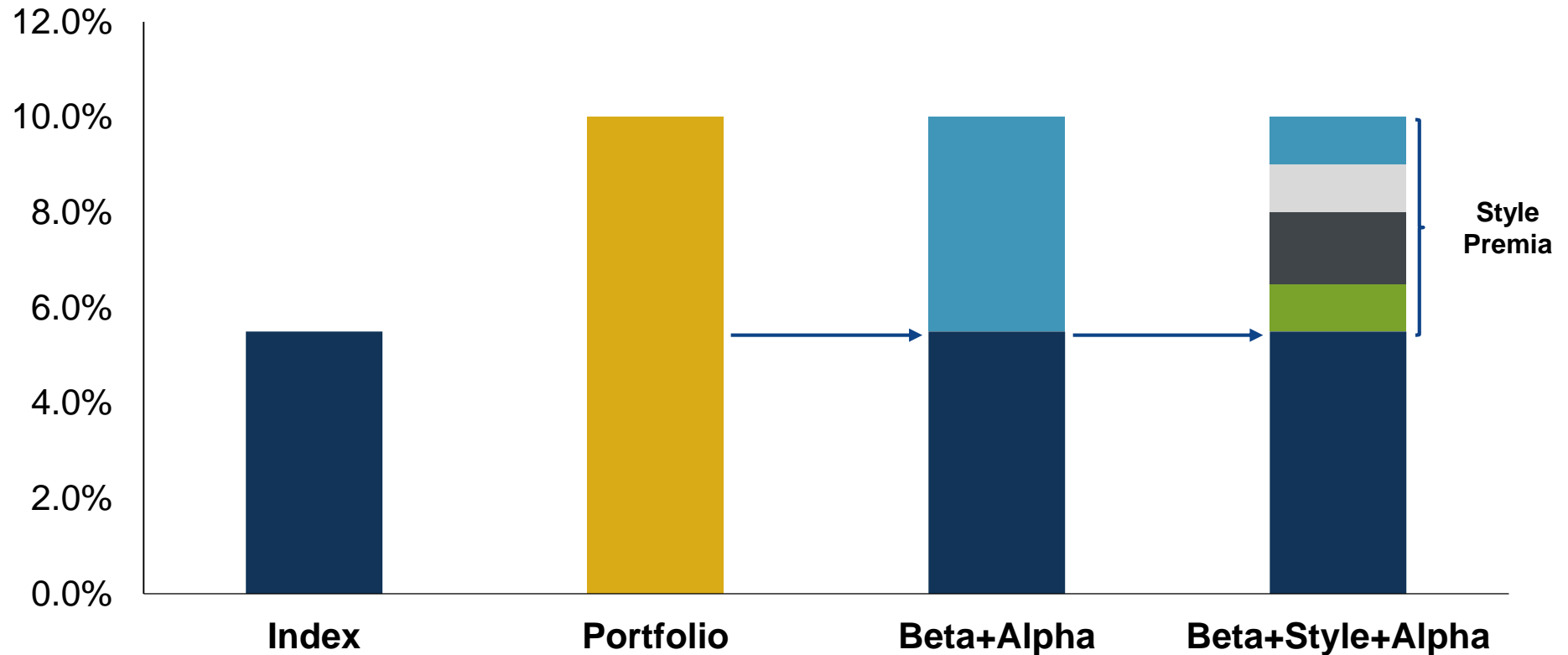
## What is Style Premia Investing?



*Many names, same underlying premise...*

**Style Premia Investing** refers to allocating to various risk factors, within and across asset classes, that have been proven to generate significant risk-adjusted returns over time.

# Decomposing portfolio styles

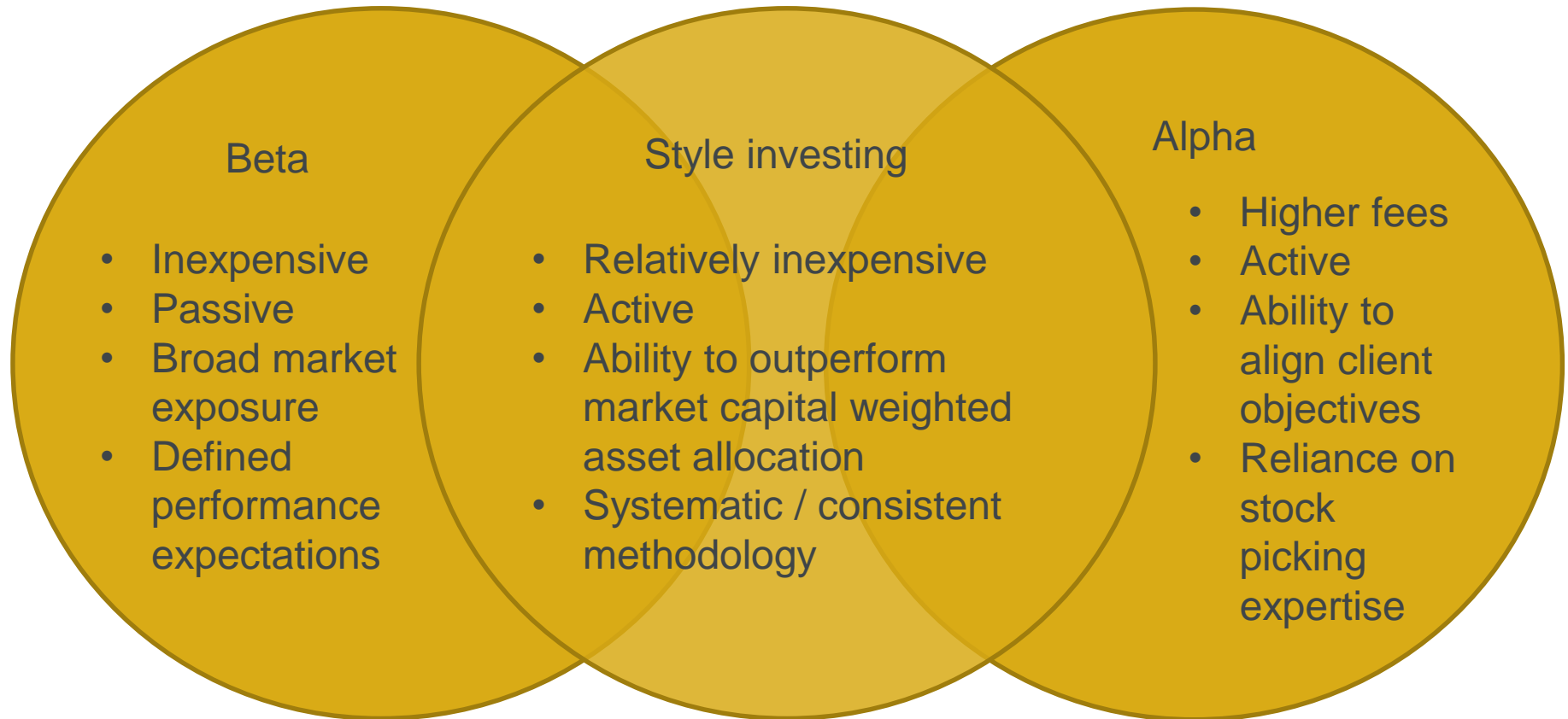


Source F&C Investments - for illustrative purposes only

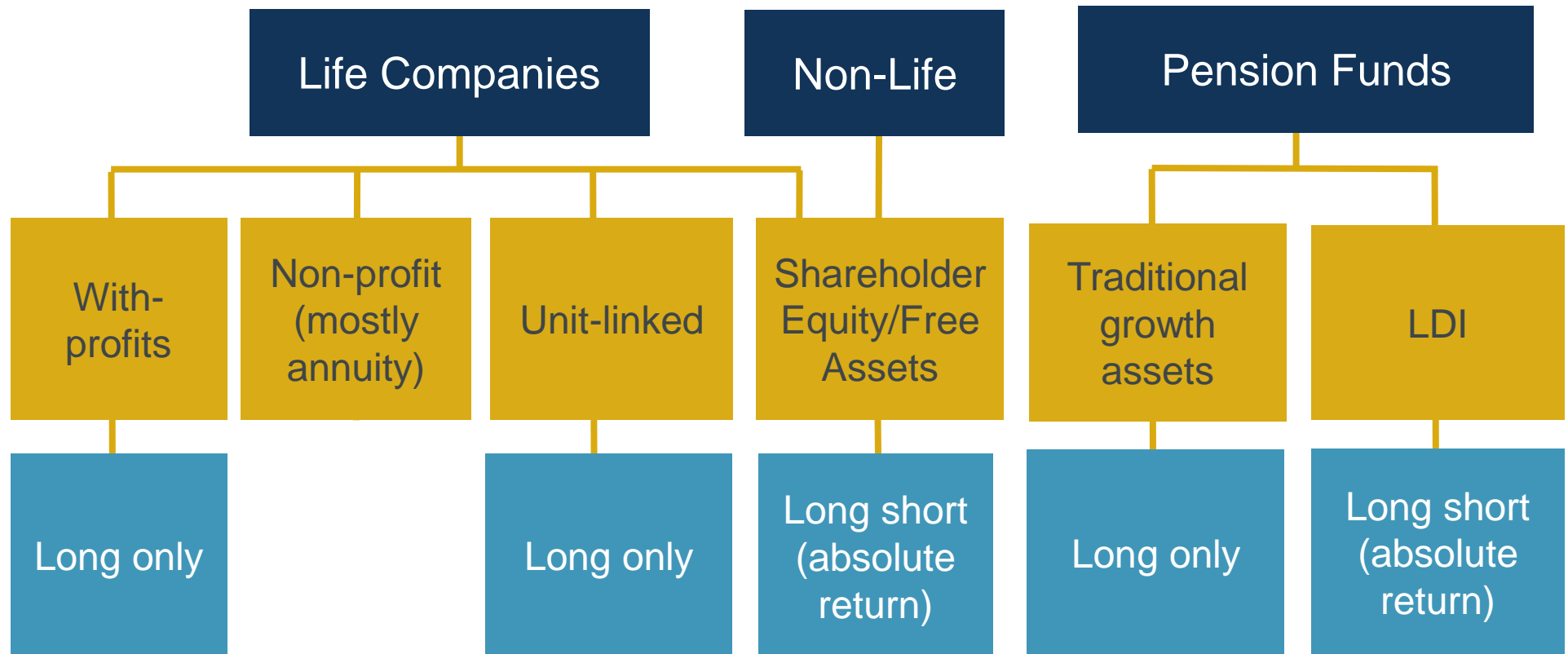


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# Style investing overview



# Potential applications



Small cap stocks outperform large cap stocks over the long term (1962-1989)

– **“the size factor”**

Cheap’ stocks (based on fundamental ratios such as price-to-book or price-to-earnings) outperform ‘expensive’ stocks

– **“the value factor”**

Fama & French (1992)

Buying rising stocks and selling falling stocks leads to excess outperformance of about 1% per month (1965-1989)

– **“the momentum factor”**

Jegadeesh & Titman (1993)

Over the past 40 years, high volatility and high beta stocks in U.S. markets have substantially underperformed low volatility and low beta stocks

– **“low volatility factor”**

Baker, Bradley, Wurgler (2009)

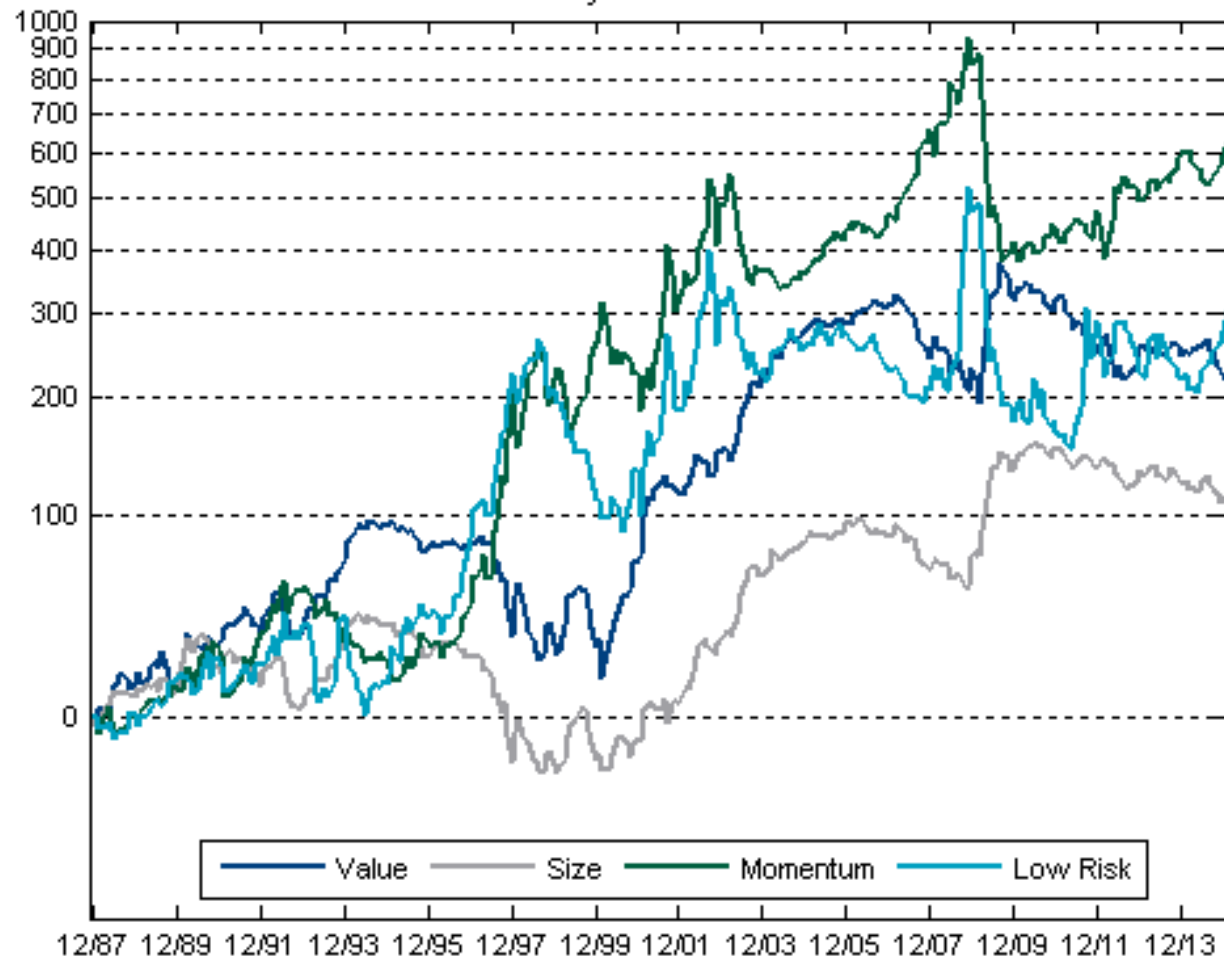
## Decomposing portfolio styles

The economic fundamentals behind “style” or “factor” investing



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# Style returns



Source: F&C Investments Jan '88 – Jan '15



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# Examples of styles

We call them 'true styles' because they represent the essence of those styles

True Value

True Momentum

Low volatility

True Growth at a reasonable price

True Size



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# How 'Value' are these stocks?

	Fugro NV	AP Moller - Maersk AS Class A
Book-to-price	1.006	0.817
Beta	2.00	1.30
Market cap (US\$ bn)	1,557	21,598
Momentum	-76.5%	21.4%
GICS sector	Energy	Industrials
Country	Netherlands	Denmark

Source: F&C, Factset as of 22.12.2014

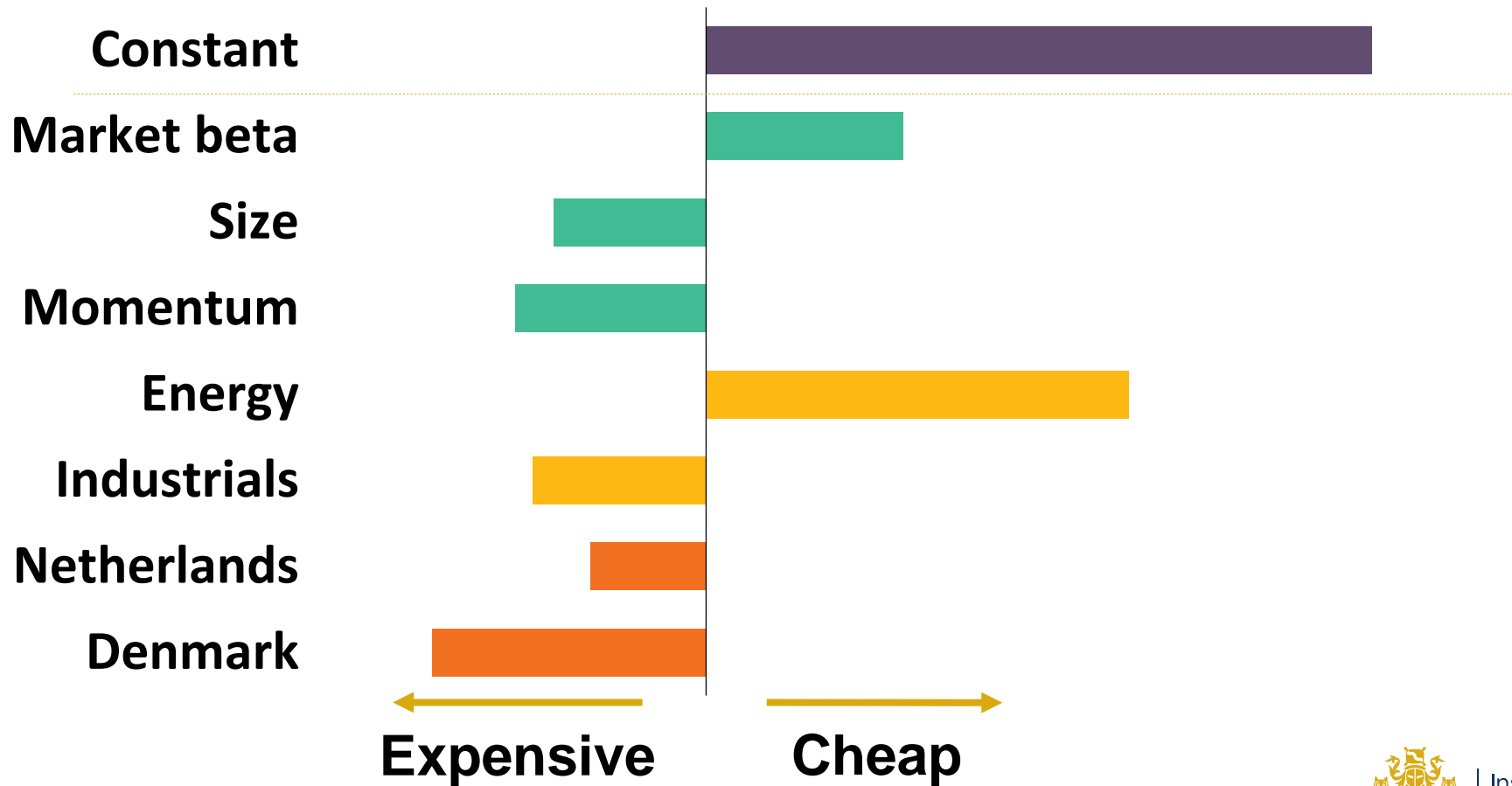
GICS = Global industry classification standard

Note: "GICS" is a trademark of MSCI and Standard and Poor's



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# What is the market telling us?



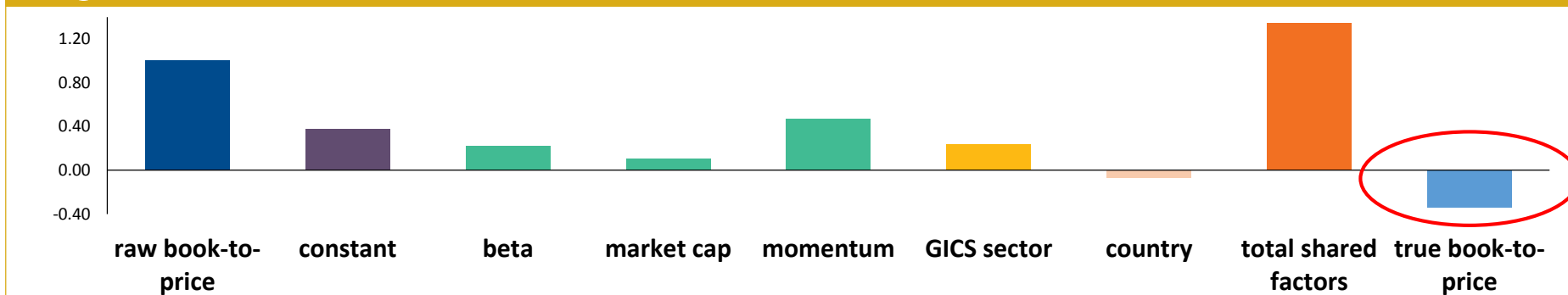
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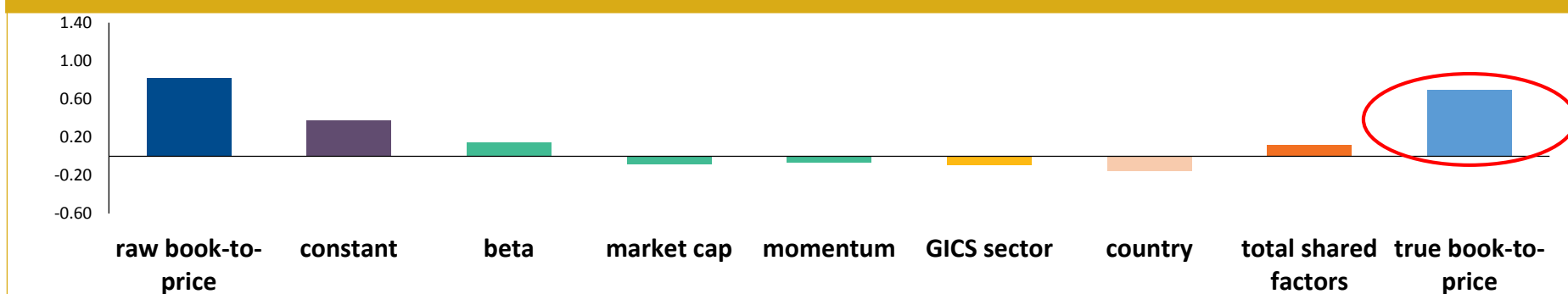
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# Market implied book-to-price

## Fugro NV



## AP Moller-Maersk AS



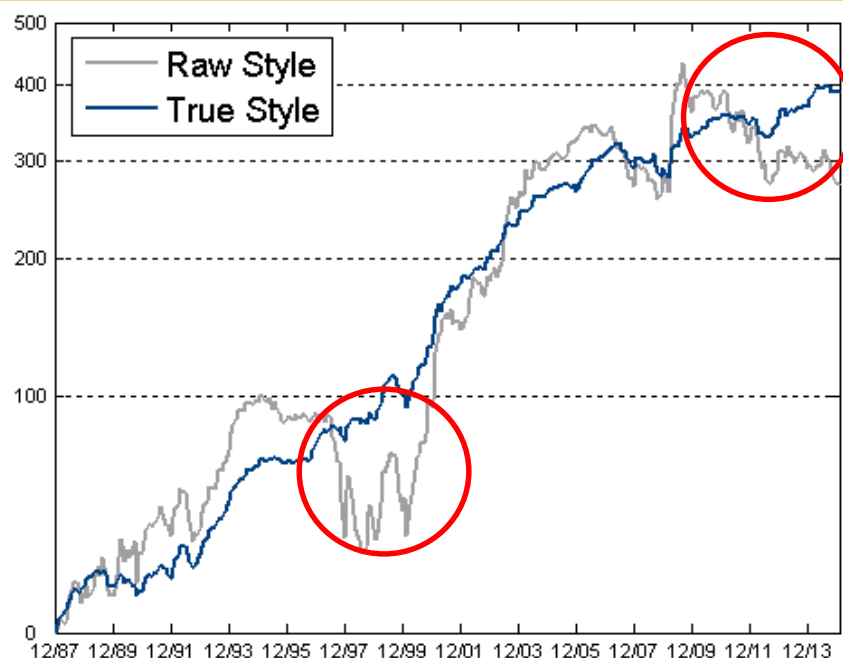
Source: F&C, Factset as of 22.12.2014



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# 'Raw Value' vs 'True Value' performance

## Frictionless long-short payoff to book-to-price



	Ann. avg return	Ann. vol	Info ratio
<b>Raw style</b>	5.0%	12.5%	0.40
<b>True style</b>	6.1%	4.8%	1.26

Source: F&C, Factset  
Strategy launched March 2015. Jan '88 – Jan '15 – historical simulations under realistic constraints



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# Step 1 : Portfolio construction – individual true styles

- For each of the individual True Style portfolios the objective is to:
  - Maximize the exposure to that relevant True Style
  - Have limited active exposure to sectors, countries and the other styles
  - Limit the effects of stock specific risks
  - Control transaction costs

***Each “True Style” portfolio has limited exposures to the other styles – both implicitly by style design as well as explicitly by portfolio construction***



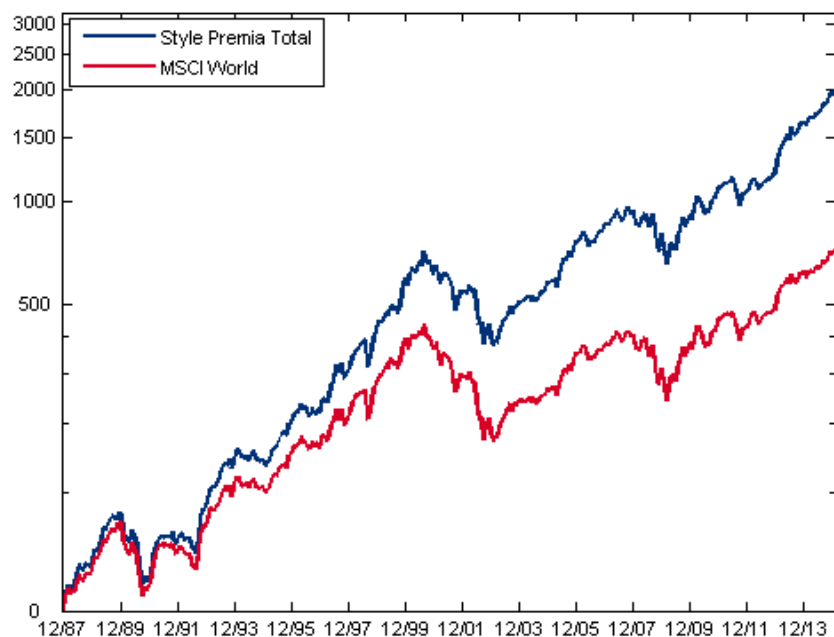
## Step 2 : Portfolio construction – combining the style portfolios

- The individual style portfolios are combined into one final portfolio through (active) **equal risk contribution** (ERC)
- ERC aims to have each component contributing equally to the total (active) risk
- We view ERC as an intuitive, bias-free way to allocate to the components
- This allocation process is purely systematic – no subjective bets on individual styles



# Equity Style Premia - Long only strategy

## Cumulative Total Return £ (net dividends reinvested)



## F&C Global Equity Style Premia

<b>Benchmark</b>	MSCI World Index
<b>Expected tracking error</b>	3%
<b>Targeted long term outperformance</b>	+2%
<b>Liquidity</b>	Daily
<b>Indicative number of stocks</b>	200

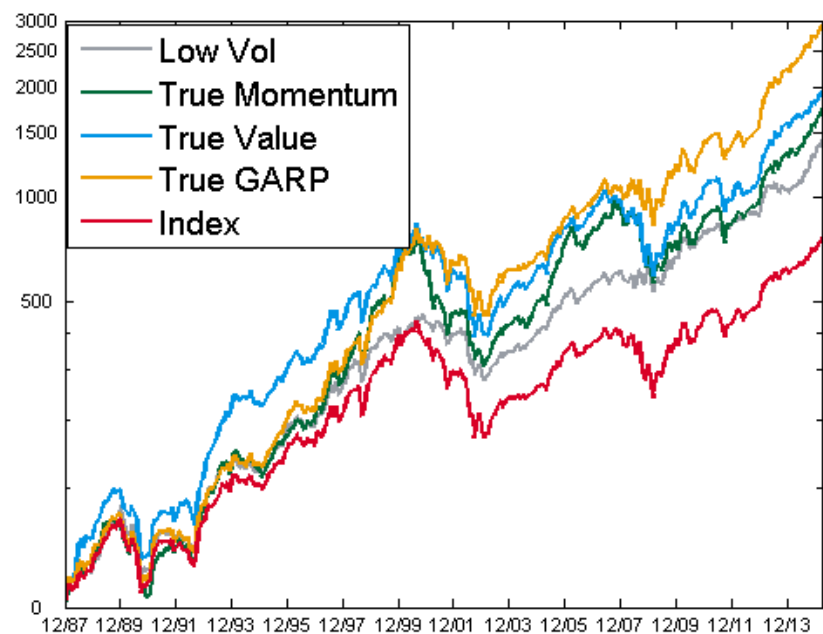
Source: F&C, Factset, Bloomberg  
 Strategy launched March 2015. Jan '88 – Jan '15 – historical simulations under realistic constraints



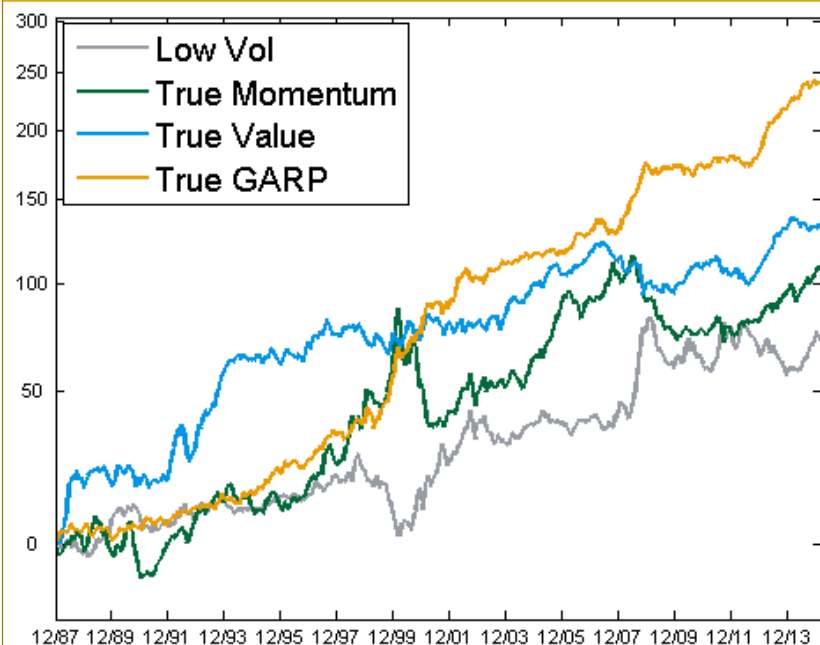
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# True style portfolio returns

**Cumulative Total Return £  
(net dividends reinvested)**



**Cumulative excess return £  
(geometric)**



Source: F&C, Factset  
Strategy launched March 2015. Jan '88 – Jan '15 – historical simulations under realistic constraints



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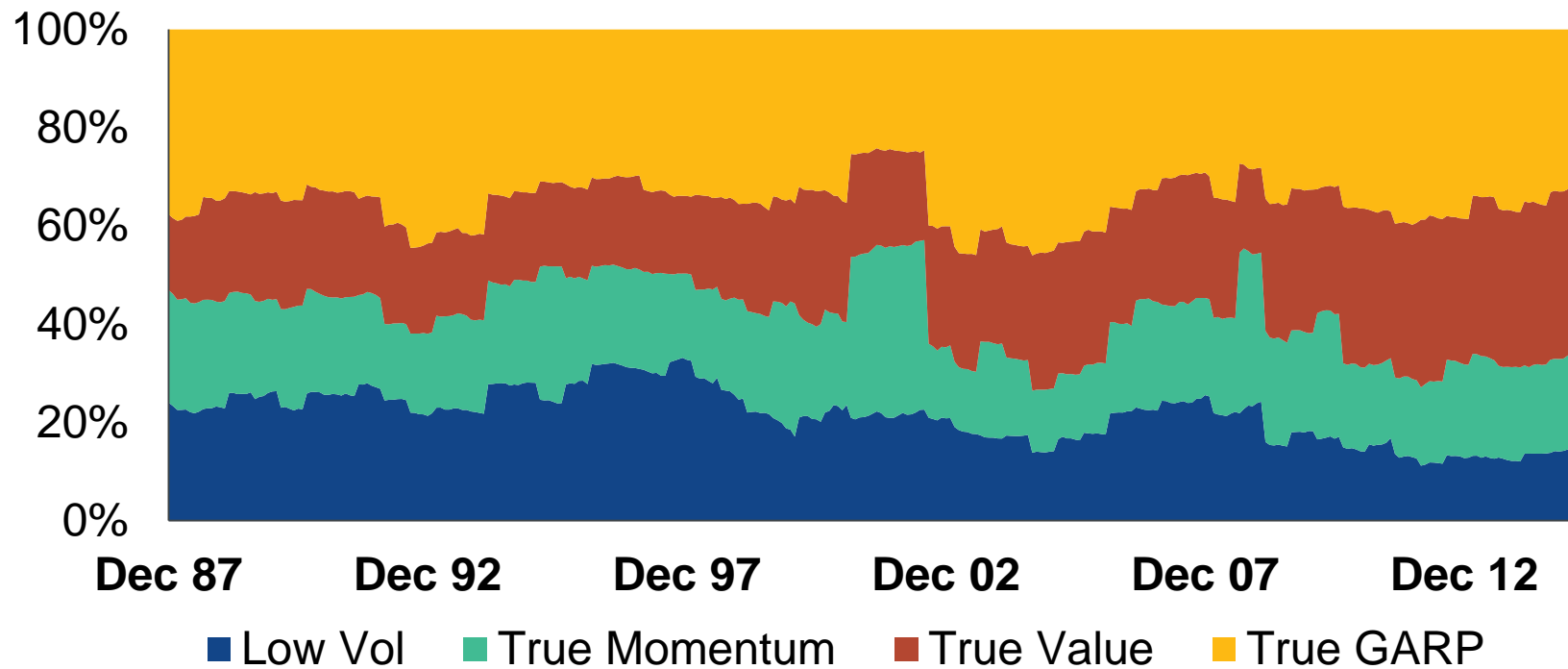
# True style correlations

	True Size	True Momentum	True Value	True GARP
True Size	6.3%			
True Momentum	-16.1%	7.2%		
True Value	-7.3%	16.0%	5.3%	
True GARP	-6.7%	16.7%	21.7%	4.0%

Source: F&C, Factset  
 Strategy launched March 2015. Jan '88 – Mar'15 – historical simulations under realistic constraints

# Style allocation

## Style allocation – March 2015



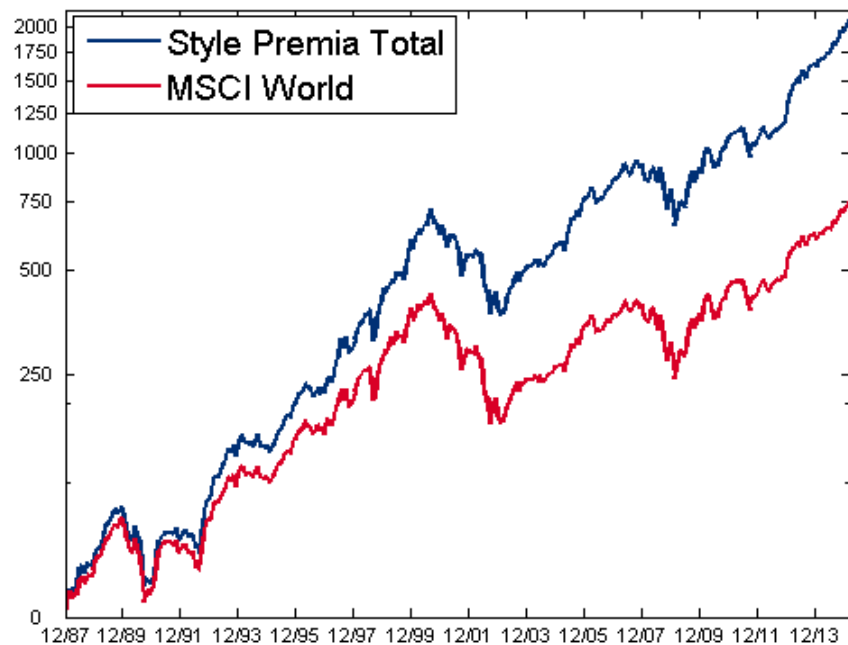
Source: F&C. Data as at 25.03.2015



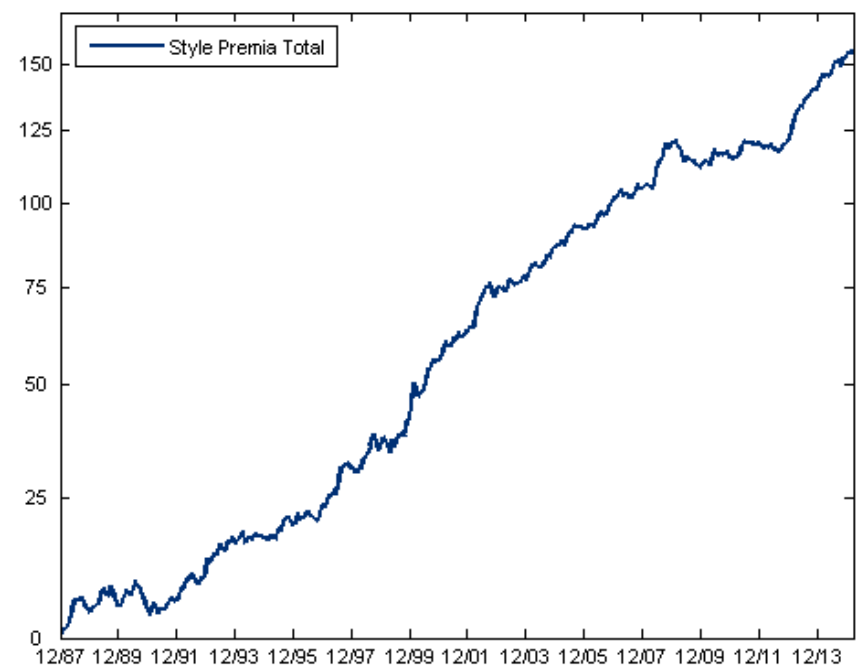
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# F&C Global Equity Style Premia Strategy

**Cumulative Total Return £ (net dividends reinvested)**



**Cumulative excess return £ (geometric)**



Source: F&C, Factset.  
Strategy launched March 2015. Jan '88 – Jan '15 – historical simulations under realistic constraints



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# Real example of asset allocation

'True style' methodology removes the overlap that causes stocks to appear in more than one style index  
Top 10 holdings

MSCI World	
Apple Inc	2.2%
Exxon Mobil Corporation	1.1%
Microsoft Corporation	1.0%
General Electric Company	0.8%
Johnson & Johnson	0.8%
Wells Fargo & Company	0.8%
Nestle SA	0.7%
Novartis AG	0.7%
JPMorgan Chase & Co	0.7%
Procter & Gamble Company	0.7%
<b>Total</b>	<b>9.4%</b>

SPDR® MSCI World Quality Mix ETF	
Exxon Mobil Corporation	2.2%
Johnson & Johnson	2.0%
Microsoft Corporation	1.5%
Procter & Gamble Company	1.5%
Roche Holding Ltd Genusssch.	1.2%
PepsiCo Inc.	1.1%
Wal-Mart Stores Inc.	0.9%
McDonald's Corporation	0.9%
International Business Machines	0.9%
Apple Inc.	0.9%
<b>Total</b>	<b>13.1%</b>

F&C Global Equity Style Premia	
Archer-Daniels-Midland Company	3.5%
Nippon Telegraph and Telephone	3.5%
Apple Inc	2.3%
Actavis Plc	2.1%
Yahoo! Inc	1.7%
DIRECTV	1.7%
Lowes Companies Inc	1.6%
Vodafone Group PLC	1.5%
EMC Corporation	1.5%
Mitsubishi Corporation	1.5%
<b>Total</b>	<b>20.9%</b>

Overlapping stocks from the 10 biggest holdings in MSCI World Index

Source: MSCI, F&C, [www.spdr.com](http://www.spdr.com). SPDR data as at 09.04.2015.  
All other data as at 10.04.2015.



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# Equity Style Premia – long / short market neutral strategy

- Strategy designed to capture the returns of uncorrelated styles in global equity markets
- The strategy pursues an absolute return strategy implemented via a market neutral, long/short equity portfolio
- The strategy is expected to exhibit very low correlation with traditional asset classes and common hedge fund strategies



# Real example: performance and correlations

Strategy Name	Inception date	Return (in excess of risk-free*) USD				Volatility	Sharpe	AUM US\$ mln**
		1yr	3yr	5yr	Since inception			
F&C Market Neutral Equity Style Premia (unlevered)	Jan-14	5.86%	-	-	4.32%	2.65%	1.63	260
F&C Market Neutral Equity Style Premia Vol10	Oct-14	-	-	-	19.60%	7.97%	2.46	37

	BAML Global Government Index	BAML Global Broad Market - Corporates	BAML Global High Yield	MSCI The World Index	MSCI EM (Emerging Markets)	HFRI Equity Hedge (Total)	HFRX Global Hedge Fund (USD)
F&C Market Neutral Equity Style Premia	8%	3%	-23%	-7%	8%	-9%	-21%

Period through 31 Mar 2015.

Returns over periods > 1year are annualized

\*Return in excess of 3 month LIBOR

\*\*AUM is exposure to the strategy in the F&C Multi-Asset Funds

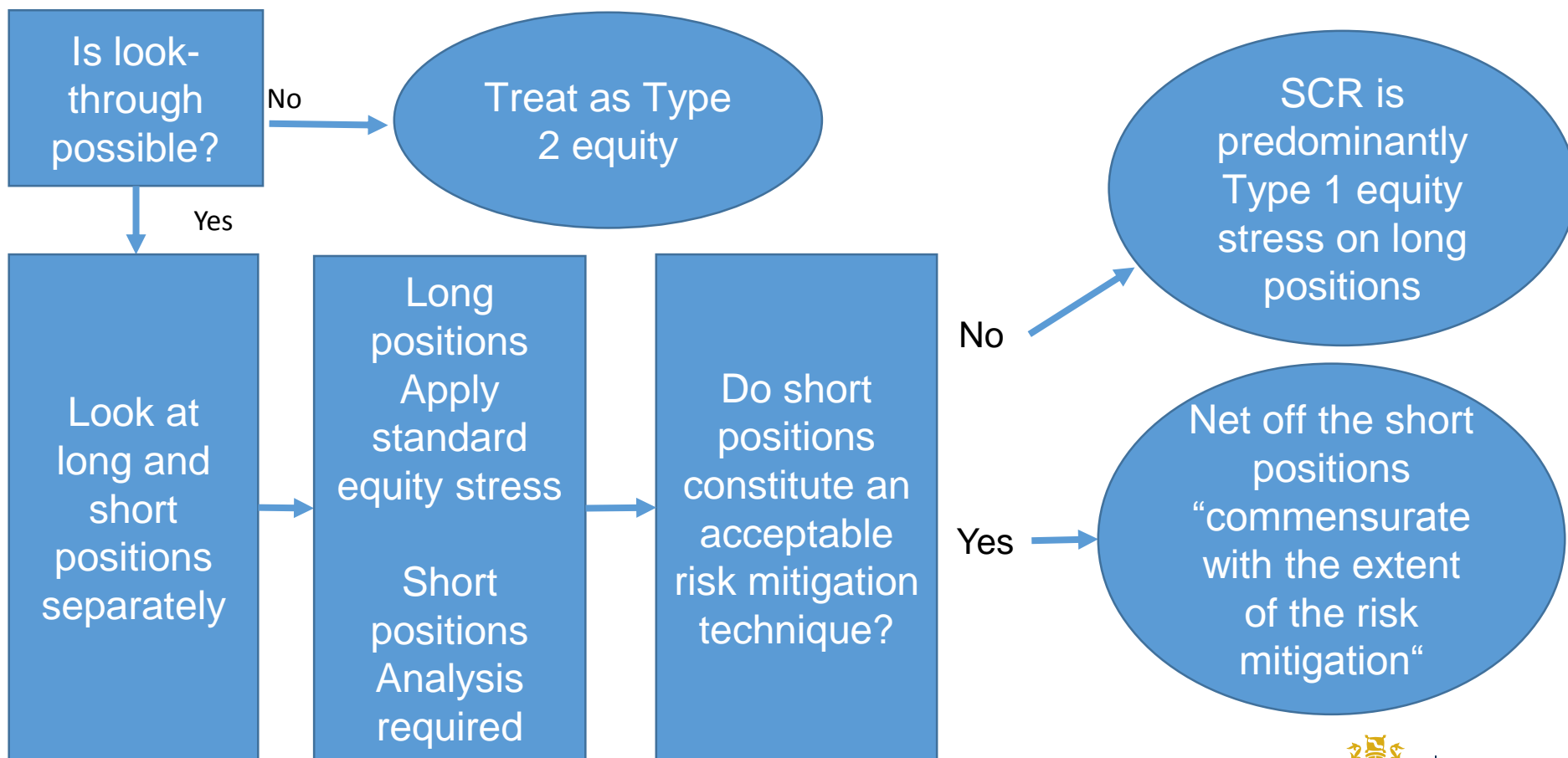
Source: F&C, JPMorgan, BoAML, Bloomberg, Factset

Launch date of F&C Market Neutral Style Premia unlevered was 12/12/13; Target vol 10% was launched on 09/09/14



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# Overview of SCR for equity long short under standard formulae





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Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

# Questions

# Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



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