

How to gain domestic pure play exposure and increase portfolio efficiency?

May, 2016



Agenda

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The investment environment and possible reactions

Overview

Investment environment

- » Institutional investors are changing the way they invest due to:
 - » Continued low yields on Developed Market government bonds
 - » Increasing volatility and uncertain outlook for listed equities

Possible reactions to this environment

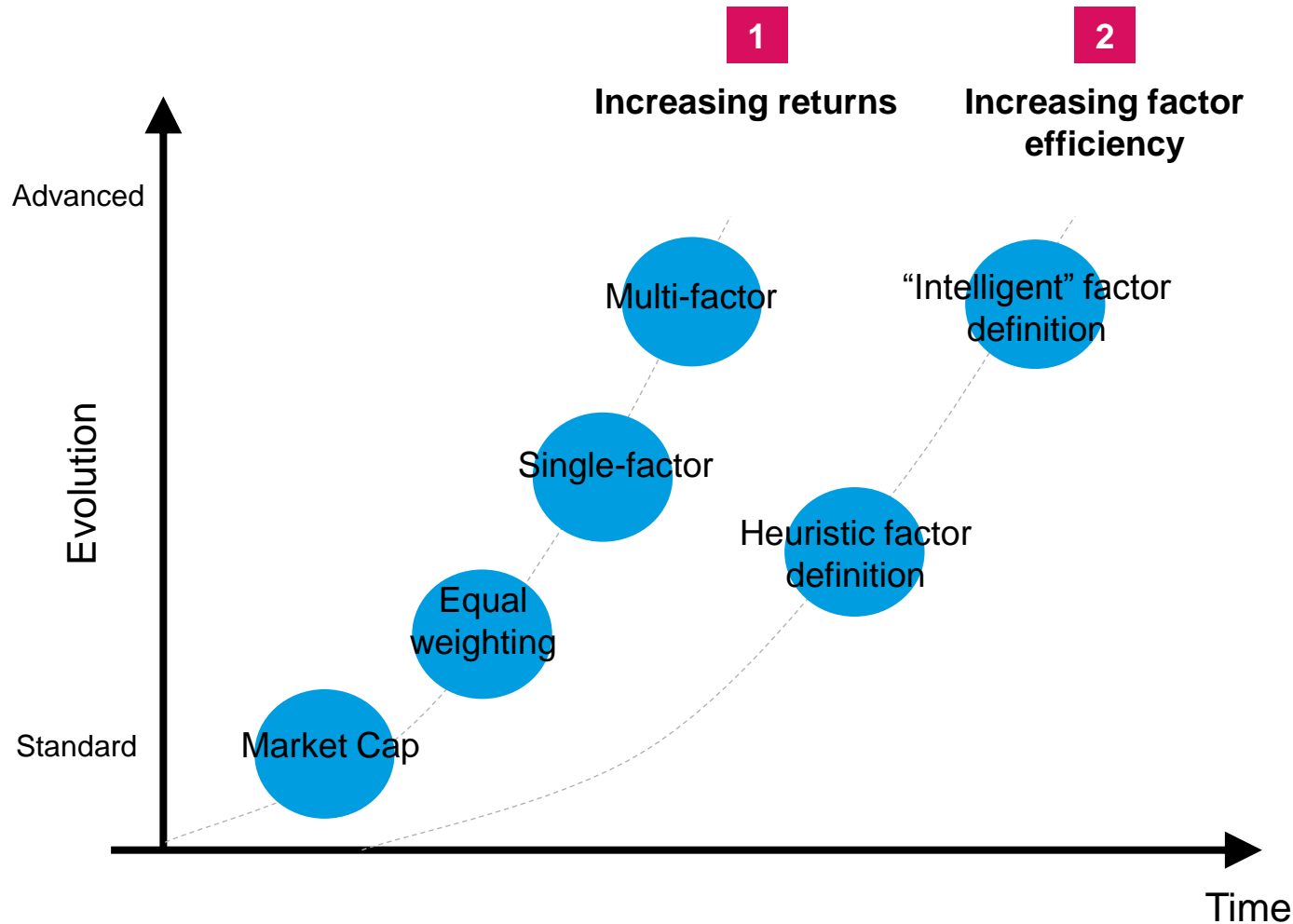
- » Increase efficiency of indices
 - » with focus on returns per unit of risk taken (e.g. by moving from standard market-cap weighted indices to smart-beta concepts)
 - » with focus on factor exploitation



KEY QUESTIONS TO BE EXPLORED:

- » How to increase risk adjusted returns by moving from standard market weighted indexing to multi-factor approaches
- » How to improve portfolio efficiency by “redefining” existing factors

The evolution of index concepts



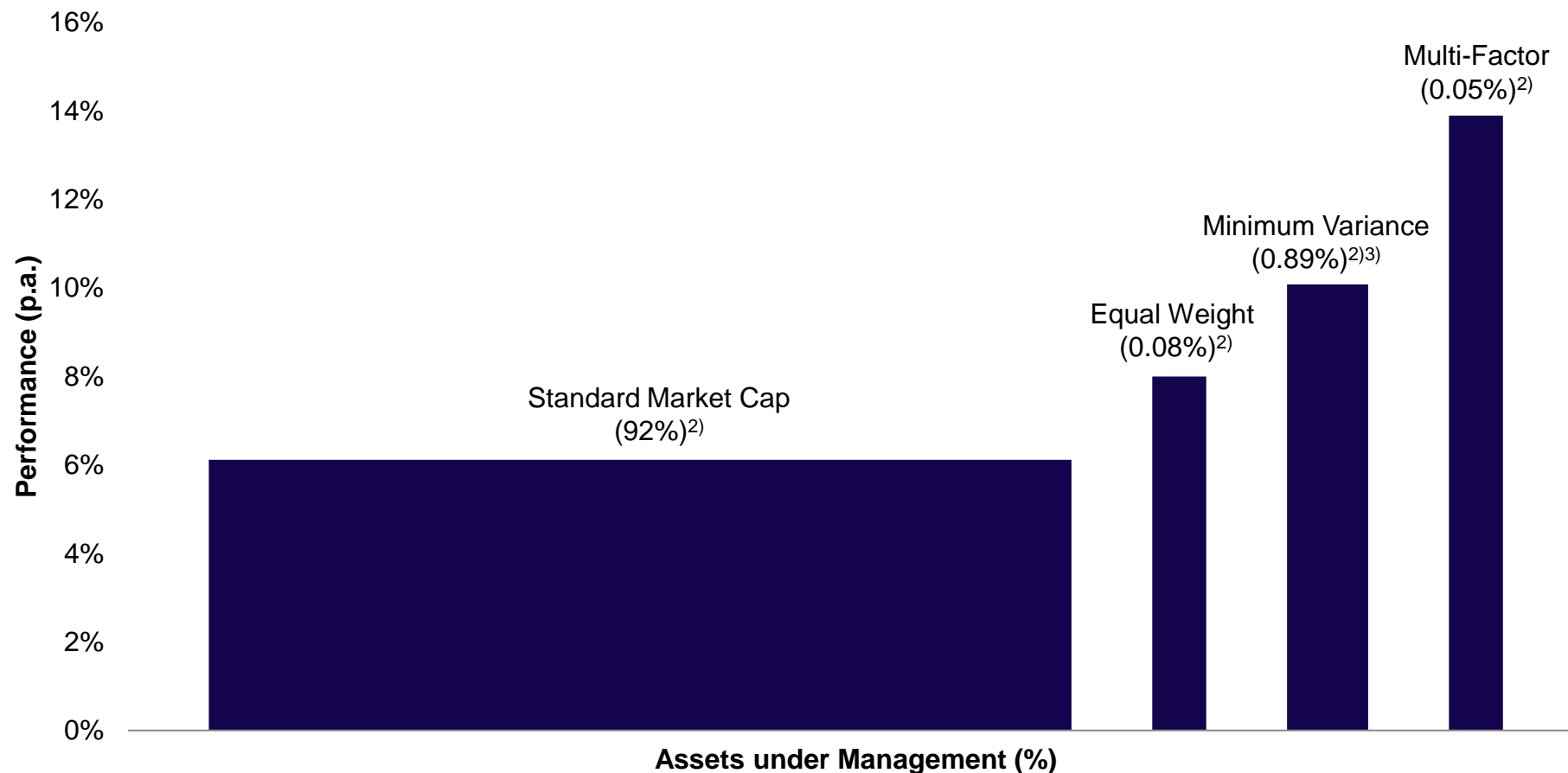
Index design focuses on three areas

- » Increase in returns (per unit of risk taken)
- » Increase in efficiency or exploitation of factors

2. USE OF SMART BETA TO INCREASE RETURNS

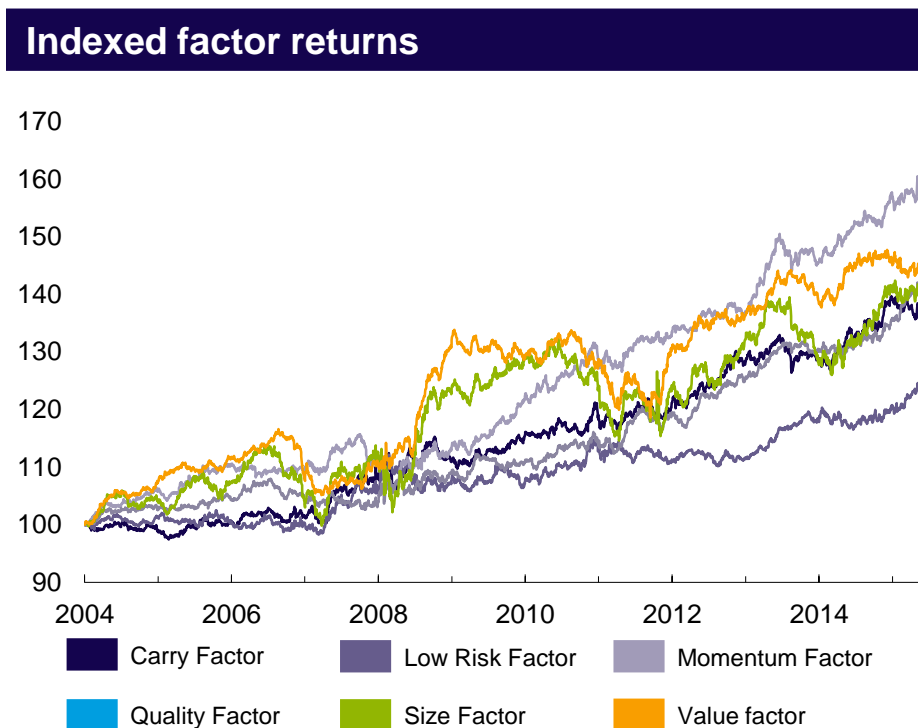
Do investors lose money by choosing the wrong concept?

Example: Dev. Europe / Index performance [10/2004-04/2016]¹⁾



Exposure to risk factors has been systematically rewarded by additional return

Factor returns¹



Risk and return characteristics

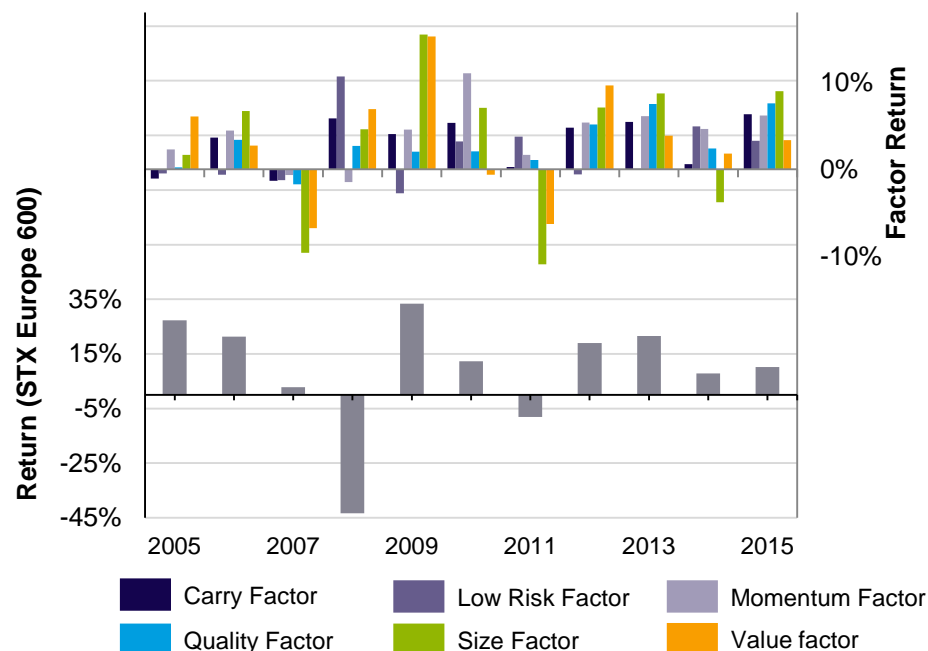
	Factor		Factor plus market ²⁾	
	Perf. (p.a.)	Correl. to market	Perf. (p.a.)	Annualized Volatility
Carry	3.08%	-0.37	9.98%	18.23%
Low Risk	1.98%	-0.71	8.92%	16.73%
Momentum	4.37%	-0.19	11.21%	19.10%
Quality	3.15%	-0.28	9.93%	18.67%
Size	3.24%	-0.24	9.94%	18.93%
Value	3.52%	0.03	10.12%	20.07%
STX Europe 600			6.56%	19.48%

- » Systematic exposure to style factors (value, size, quality, momentum, risk and carry) has been rewarded by additional return
- » However, factor returns are found to fluctuate over time

Factor returns are found to have low correlations among each other

Correlation of factor returns

Factor returns [2005 – 2015]



Correlation among factor returns¹⁾

	Carry	Low Risk	Momentum	Quality	Size	Value
Carry		0.41	0.58	0.45	0.50	0.13
Low Risk	0.41		0.34	0.34	0.35	0.08
Momentum	0.58	0.34		0.38	0.47	0.16
Quality	0.45	0.34	0.38		0.49	0.29
Size	0.50	0.35	0.47	0.49		0.51
Value	0.13	0.08	0.16	0.29	0.51	
Average	0.41	0.31	0.39	0.39	0.46	0.23

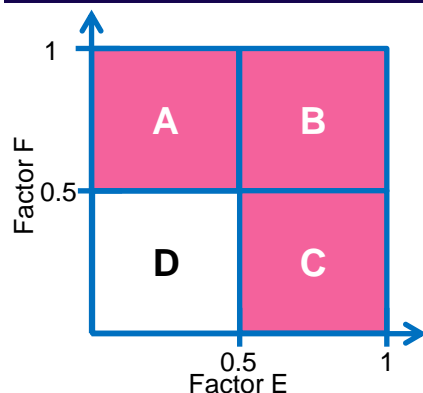
- » Correlations among factor returns are comparably low
- » They range from a minimum of 0.08 between Value and Low Risk to a maximum of 0.58 between Carry and Momentum

Different ways to construct a multi-factor index possible

Multi-Factor Index Construction

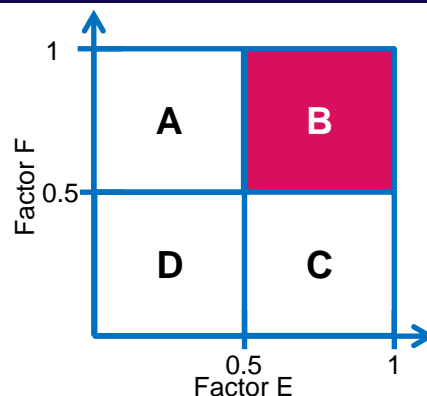
Construction of multi-factor indices

“Index of indices”



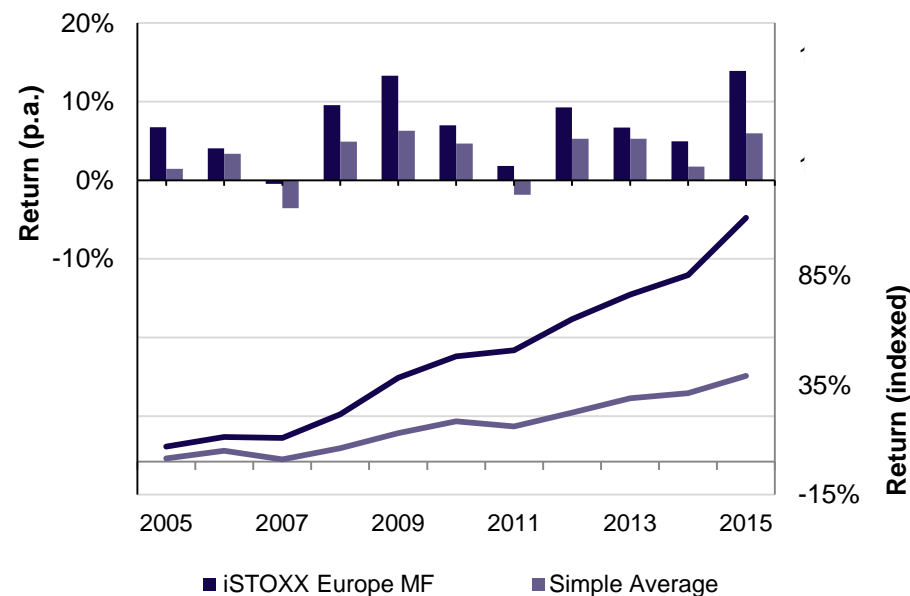
» Leads to very high and very low exposures to factors

Simult. maximization



» Only companies that score high in both factor dimensions

Perf. of iSTOXX Europe Multi-Factor Index¹⁾



» With an overall performance of 108% measured from Jan. 2005 to Dec. 2016, the iSTOXX Europe Multi-Factor Index outperforms substantially compared to a simple, e.g. equal-weighted combination of single-factor indices (which generated a performance of just 38%)

3. INTELLIGENT FACTOR DEFINITION

STOXX True Exposure indices enhance portfolio efficiency and improve visibility of regional exposure

Value proposition

I

Access domestic pure play exposure

- » By disentangling revenue overlaps, STOXX True Exposure indices allows investors to get pure- play exposure to targeted countries and/or regions
- » Isolating country exposures is found to immunize indices against foreign crises

II

Increase portfolio efficiency

- » Companies in traditional equity indices are found to have significant revenue overlaps
- » Those revenue overlaps increase correlations among indices
- » Disentangling revenue overlaps decreases correlations and de-risks portfolios with same regional allocations

STOXX True Exposure indices enable investors to increase the desired regional exposure of their portfolio

Index concept and revenue exposure¹⁾

S&P 500

» Selection of companies based on country of domicile

TRU USA

» Selection of companies based on country of domicile and regional source of revenue generation

Exposure to USA

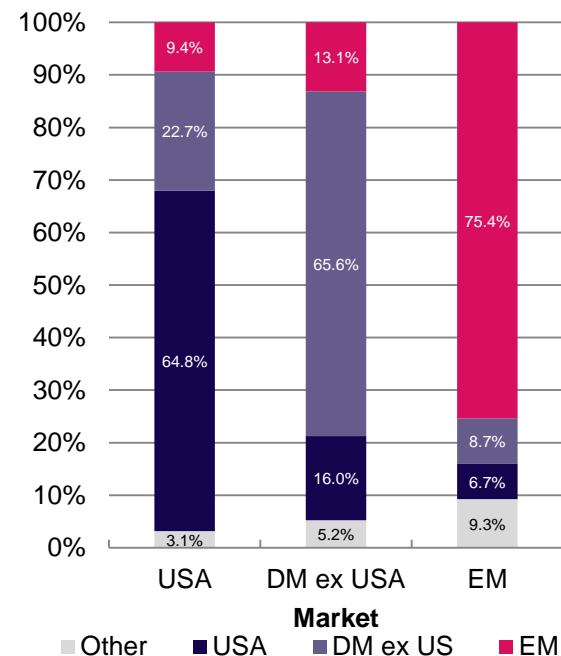
Indices	S&P 500	TRU USA 25%	TRU USA 50%	TRU USA 75%	TRU USA 100%
USA	64.84%	73.48%	79.34%	91.82%	99.47%
Developed Europe	13.54%	10.88%	8.69%	3.21%	0.14%
Emerging Markets	9.35%	6.41%	4.64%	1.81%	0.28%
Developed APAC	5.81%	4.16%	3.36%	1.16%	0.06%
Other	6.46%	5.07%	3.97%	2.00%	0.06%

Disentanglement of revenue overlaps allows for more efficient portfolio construction

Revenue allocation and portfolio efficiency

Standard Indices¹⁾

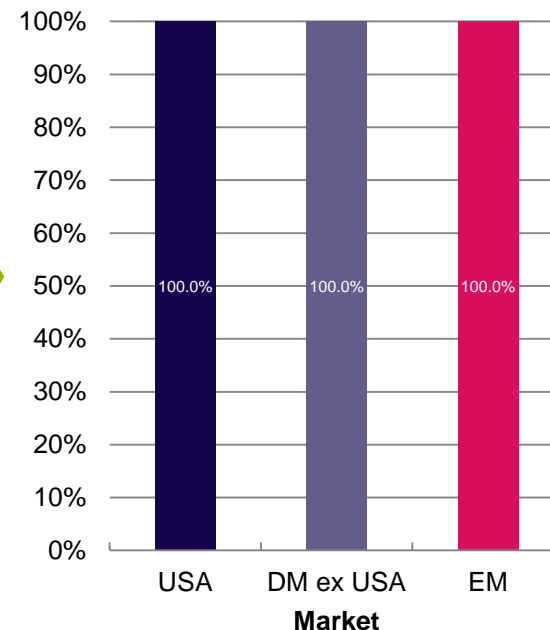
Revenue Exposure



Standard equity indices show significant revenue overlaps...

STOXX TRU Indices

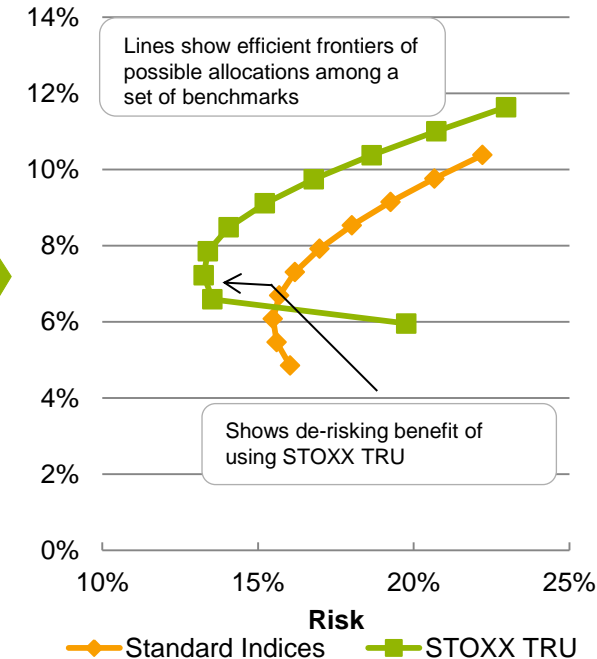
Revenue Exposure



...whereas distinct allocations based on STOXX TRU indices³⁾ disentangle revenue overlaps...

Efficient Frontier comparison²⁾

Return



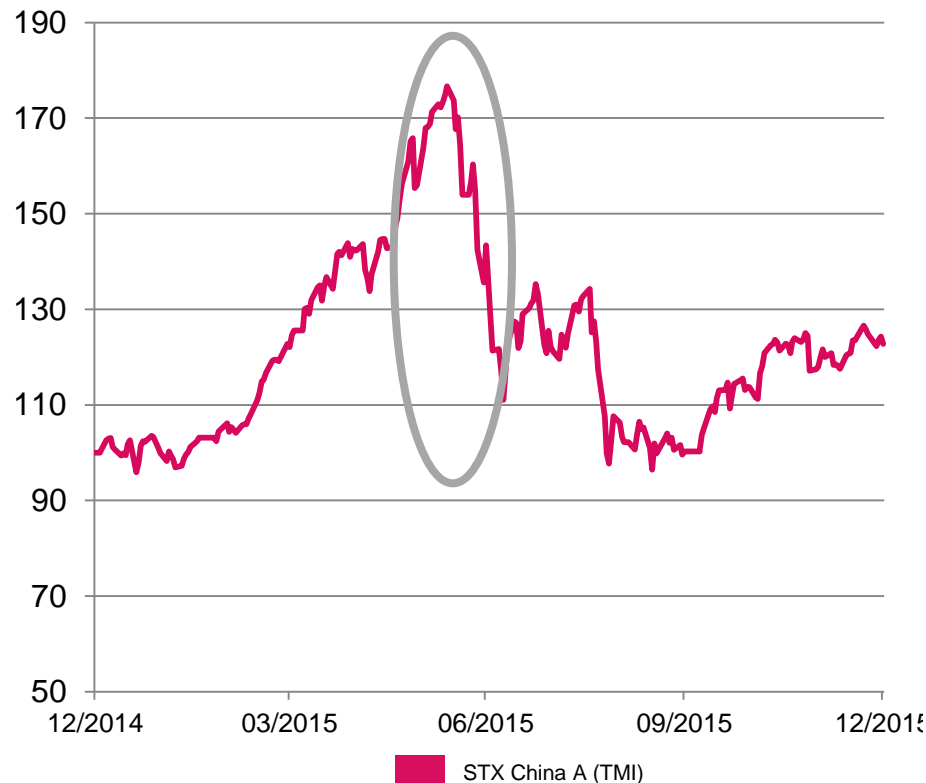
...which reduces correlations and leads to more efficient portfolios

APPENDIX

Performance of US companies in recent China crisis was negatively related to revenue exposure to China

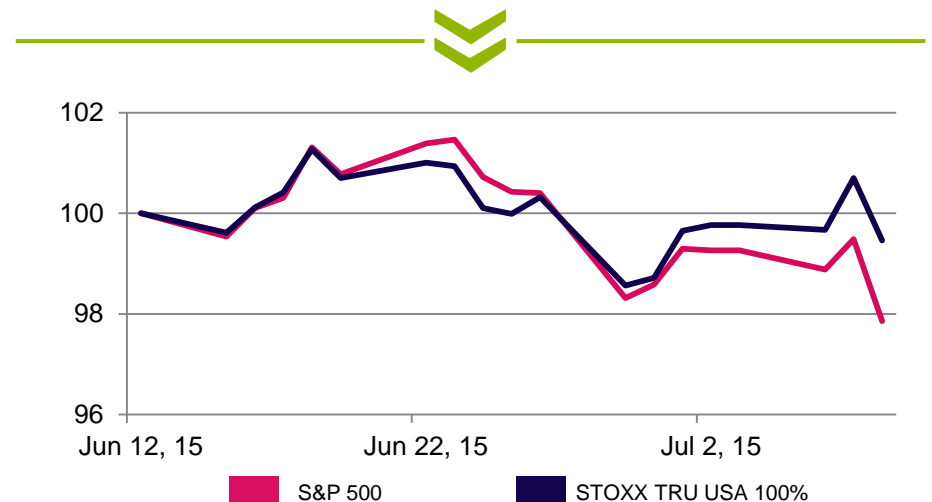
China crisis and drawdown of US equities

Performance (Jan 2015– Dec 2015)¹⁾



Perf. const. level (June 12, 2015 – July 08, 2015)¹⁾²⁾

N-tile	Median exp. to China	Median performance ¹⁾
1	0.00%	-0.87%
2	0.26%	-2.40%
3	1.45%	-2.44%
4	4.91%	-4.34%



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