nabassetmanagement

STYLE MATTERS

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MARCH 2018

AGENDA

- Introduction
- Factor/Styles definitions
- Style returns vs. risk
- Combining different styles together
- Looking back at the recent period through the style lenses
- Quantifying style contributions - returns-based analysis from BlackRock (Ronald N. Kahn and Michael Lemmon)
- Generalised risk and return attribution
- Holdings-based analysis
- Not all Smart Betas are made the same (practical experience)
- Conclusions

INTRODUCTION – WHAT THIS PRESENTATION IS AND IS NOT ABOUT

- This presentation is not about market returns or volatility
- It is about active returns and their volatilities
- Passive, a.k.a. index, managers aim to deliver index/benchmark returns while Active managers aim to outperform their respective benchmarks by deviating from the index weights
- Alpha is the active (i.e. relative to the benchmark) return
- Volatility of alpha is known as Tracking Error (or Active Risk)
- Alpha adjusted for (divided by) Tracking Error is known as Information Ratio (similar to Sharpe Ratio for total returns)
- Different active managers apply different investment processes to decide which stocks to hold and their weights
- The process can be broadly classified by investment style, with Value and Growth being two major ones
- Many other styles or factors can be identified
- Style and factors can be represented by long-short portfolios neutralised for other factors – “smart betas”

STYLE DEFINITIONS

- This presentation is based on two main sources of information
  1. **Investment risk factors and models**
  2. **Global equity managers portfolio holdings**

- We used GEMLT, global equity risk model from MSCI BARRA but this presentation is not meant to be any particular model's promotion as we believe the results/observations are fairly general but...

... definitions do matter!

- As an asset owner we had access and used real managers' holdings but...

... their names were removed

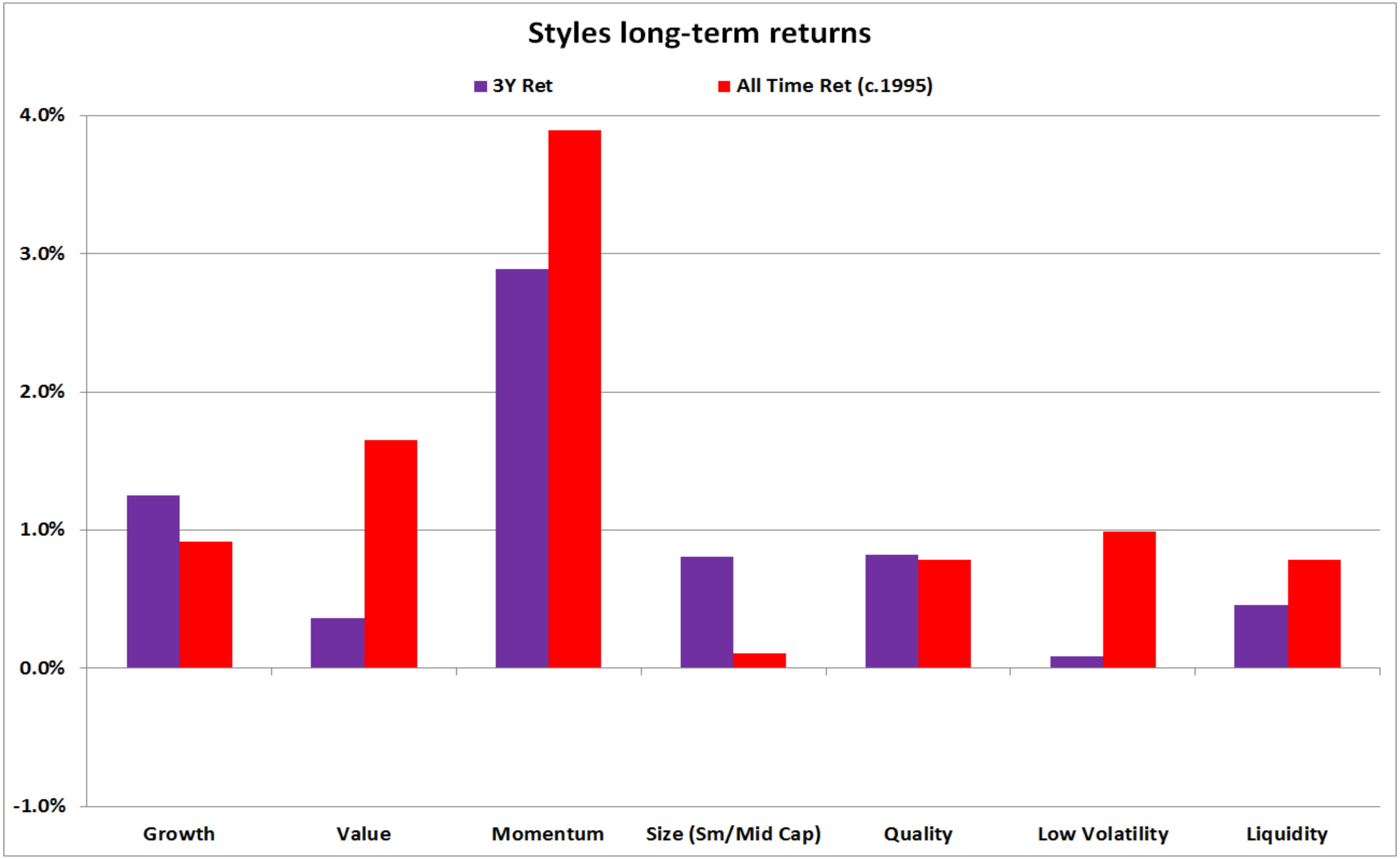
- BARRA GEMLT model includes 16 factors
- We mapped them into 7 styles
- For simplicity factors were equally weighted
- Some factors were reversed (their returns and managers' exposures multiplied by -1) to match with the traditional style definitions

STYLE	FACTOR
Growth	
Value	Book-to-Price
	Earnings Yield
	Dividend Yield
	Long-Term Reversal
Momentum	
Quality	Profitability
	Investment Quality
	Earnings Quality
	Earnings Variability*
	Leverage*
Size	Size*
	Mid Capitalisation
Low Volatility	Beta*
	Residual Volatility*
Liquidity*	

* "reversed" factors

Source: MSCI Barra, NSL

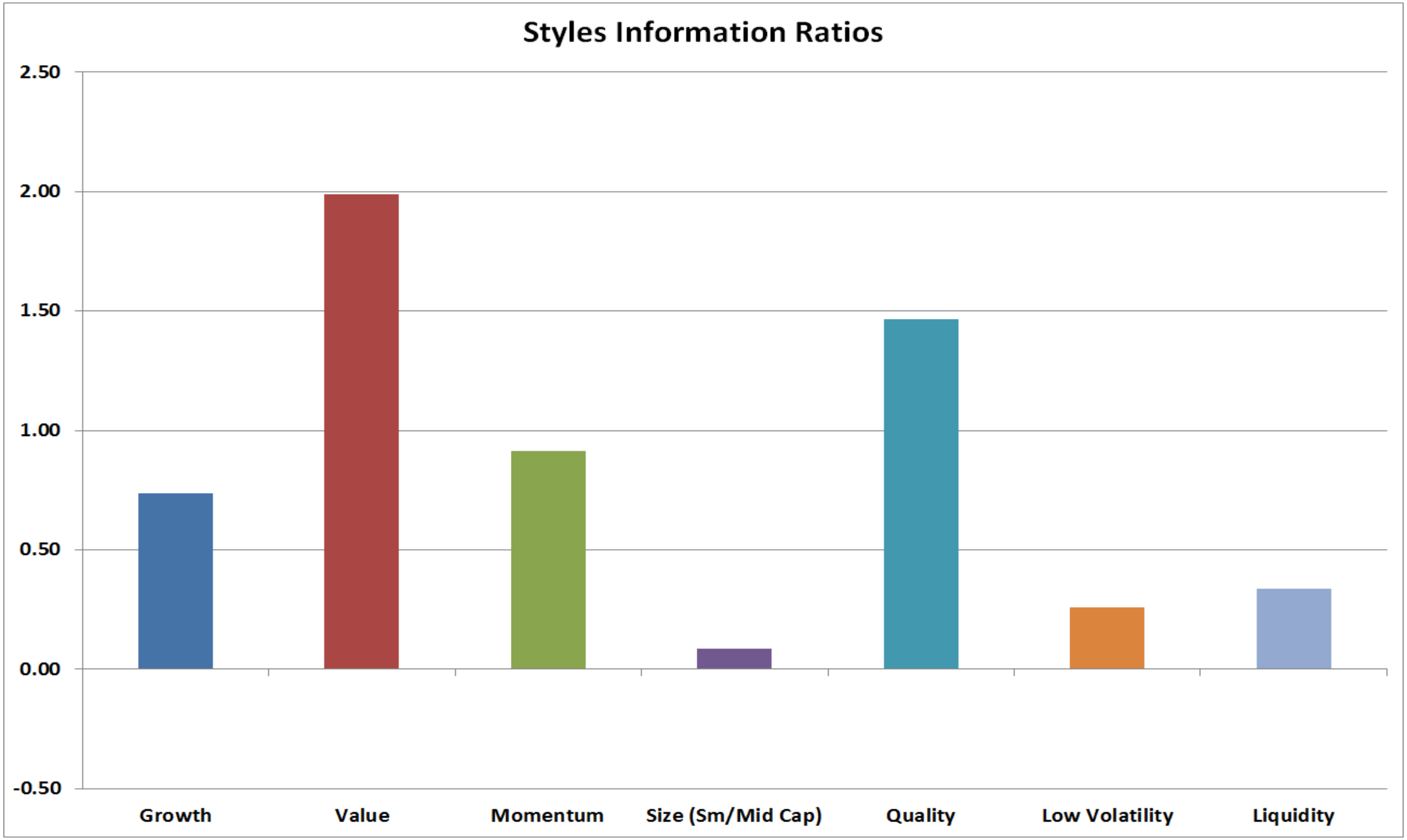
(1) LONG-TERM STYLE RETURNS – POSITIVE



- All Styles delivered positive risk premiums (alpha) over longer periods (3 Years, 23 Years)

Source: MSCI Barra, NSL as of 31 Dec 2017

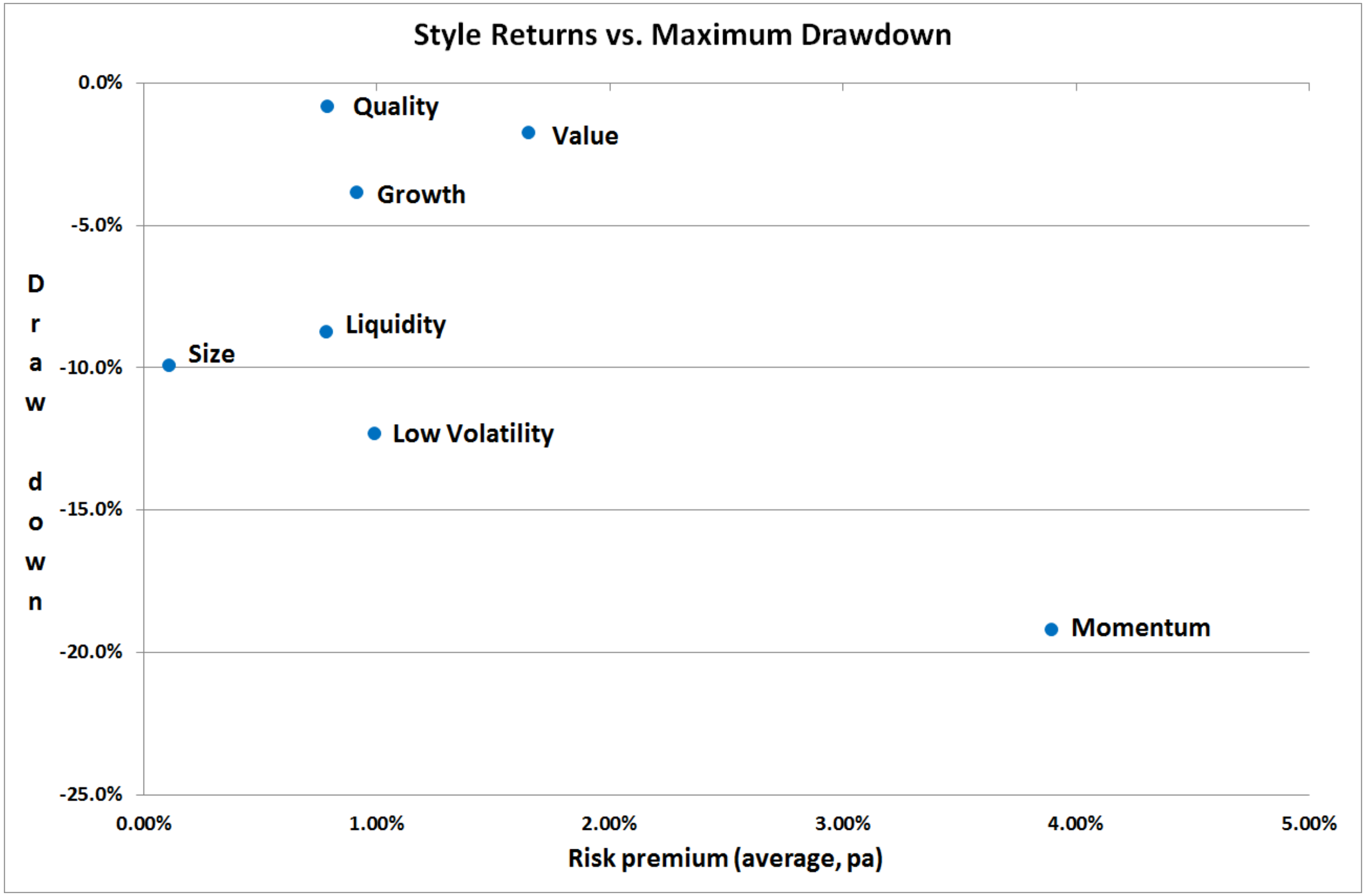
(2) LONG-TERM STYLE RETURNS – POSITIVE



- On the risk-adjusted basis, Value and Quality look better, Momentum worse (returns data c.1995)

Source: MSCI Barra, NSL as of 31 Dec 2017

NO FREE LUNCH – WITH RETURNS COMES RISK



- All styles experience – sometimes prolonged - periods of underperformance
- Quality delivers low but steady returns
- Value looks the best, Growth is good as well but is “dominated” by Value
- Betting on Momentum or Low Volatility can be dangerous

Source: MSCI Barra, NSL as of 31 Dec 2017

MOST STYLES ARE NOT HIGHLY CORRELATED

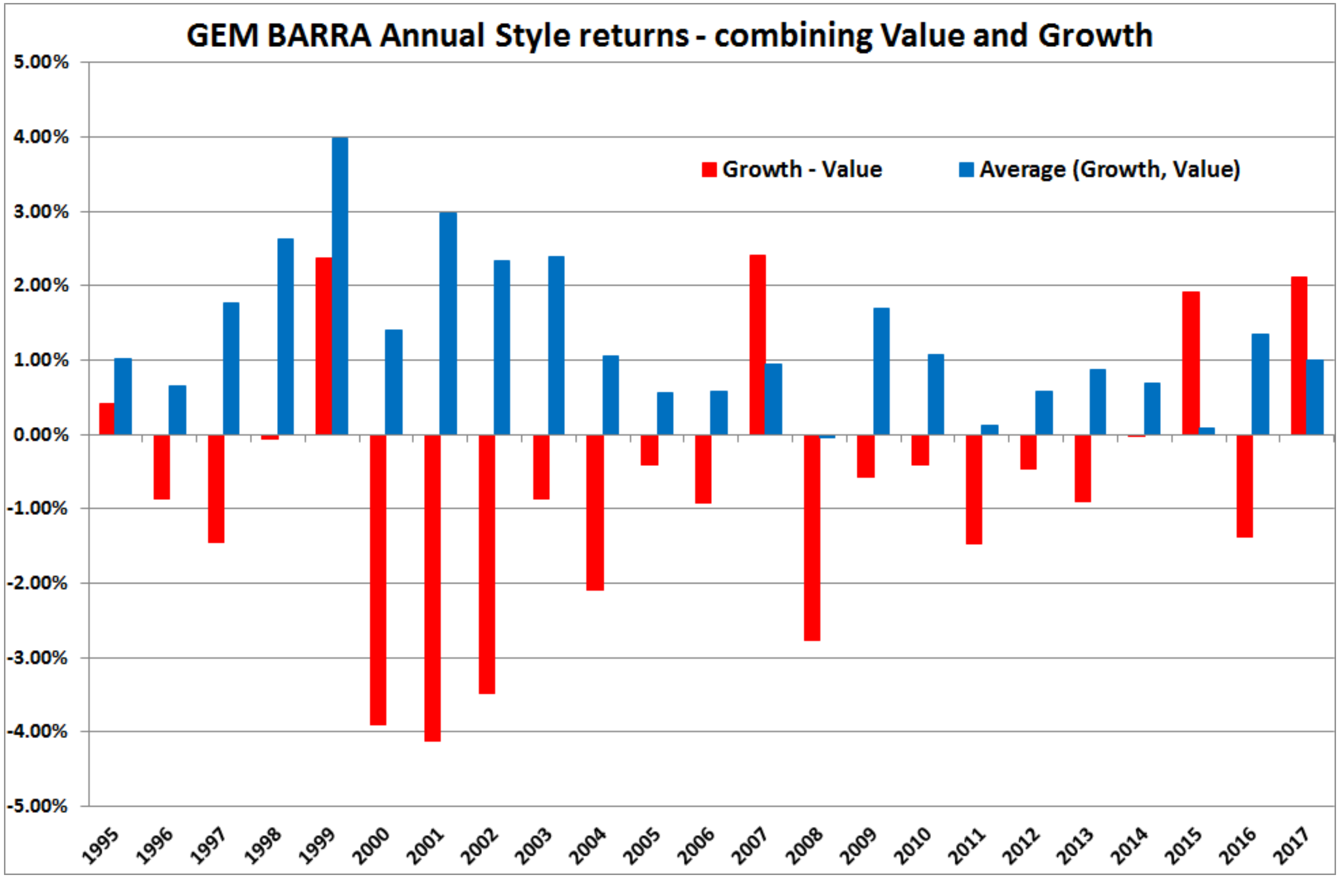
Correlation (3 years)	Growth	Value	Momentum	Size	Quality	Low volatility	Liquidity
Growth	1	0.02	0.03	-0.08	-0.45	-0.09	-0.02
Value	0.02	1	-0.66	-0.08	0.09	-0.4	-0.21
Momentum	0.03	-0.66	1	-0.04	0.11	0.46	0.35
Size	-0.08	-0.08	-0.04	1	-0.02	-0.31	-0.3
Quality	-0.45	0.09	0.11	-0.02	1	0.51	0.31
Low volatility	-0.09	-0.4	0.46	-0.31	0.51	1	0.65
Liquidity	-0.02	-0.21	0.35	-0.3	0.31	0.65	1

Correlation (c.1995)	Growth	Value	Momentum	Size	Quality	Low volatility	Liquidity
Growth	1	-0.09	0.15	0.14	-0.04	-0.39	-0.43
Value	-0.09	1	-0.28	-0.07	-0.09	-0.01	0.01
Momentum	0.15	-0.28	1	-0.19	0.08	0.35	0.2
Size	0.14	-0.07	-0.19	1	-0.18	-0.41	-0.4
Quality	-0.04	-0.09	0.08	-0.18	1	0.25	0.19
Low volatility	-0.39	-0.01	0.35	-0.41	0.25	1	0.72
Liquidity	-0.43	0.01	0.2	-0.4	0.19	0.72	1

- Most style correlations are negative or, at worst, low positive
- This implies benefits of either combining styles together (“Smart Beta”) or combining managers of different styles into multi-manager portfolios

Source: MSCI Barra, NSL as of 31 Dec 2017

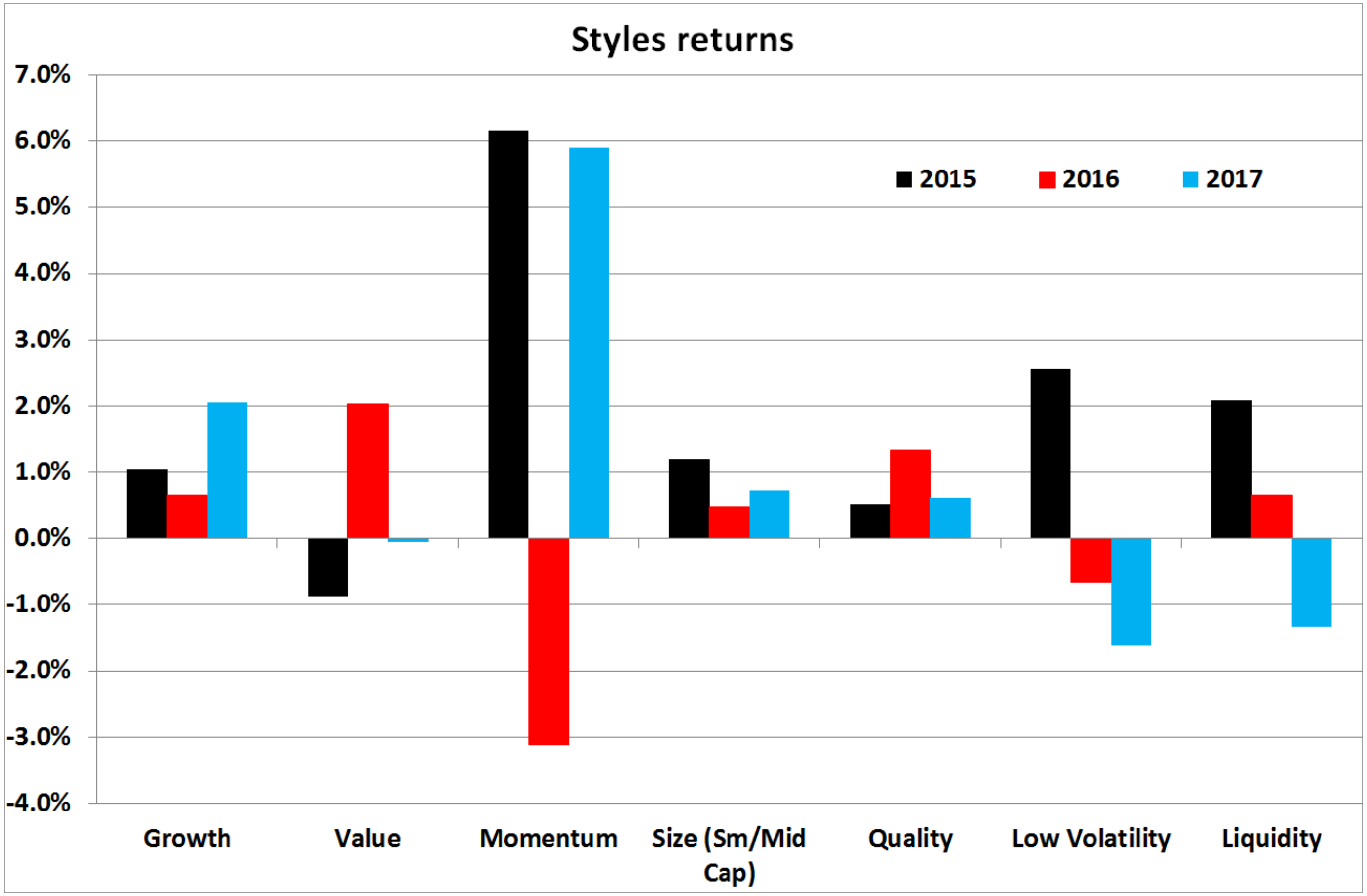
VALUE VS. GROWTH – TWO MAJOR STYLES



- The difference between annual Growth and Value returns is volatile. Why is that important?
  - **Most of Growth managers have positive exposures to Growth but also negative to Value**
  - **Opposite is true for Value managers: positive to Value, negative to Growth**
- Average of Value and Growth is positive most of the time, without much draw down
- Therefore, combining managers of different styles is beneficial

Source: MSCI Barra, NSL as of 31 Dec 2017

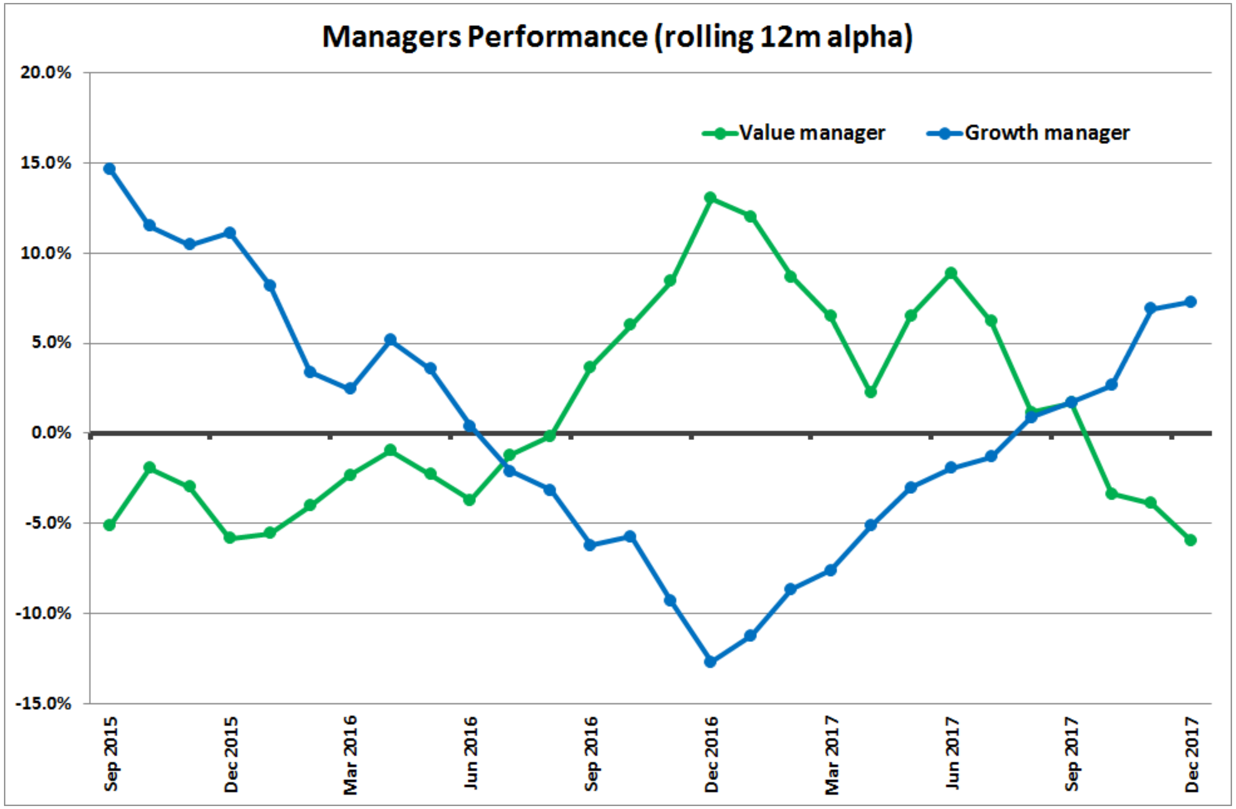
LAST THREE YEARS WERE VERY VOLATILE FROM STYLE PERSPECTIVE



- Value had one of the best years ever in 2016 but suffered in both 2015 and 2017
- Growth did really well in 2015 and 2017 but underperformed Value in 2016
- Momentum had a rare negative year in 2016
- Low Volatility performed strongly up to 2015 – has been underperforming since the early 2016

Source: MSCI Barra, NSL as of 31 Dec 2017

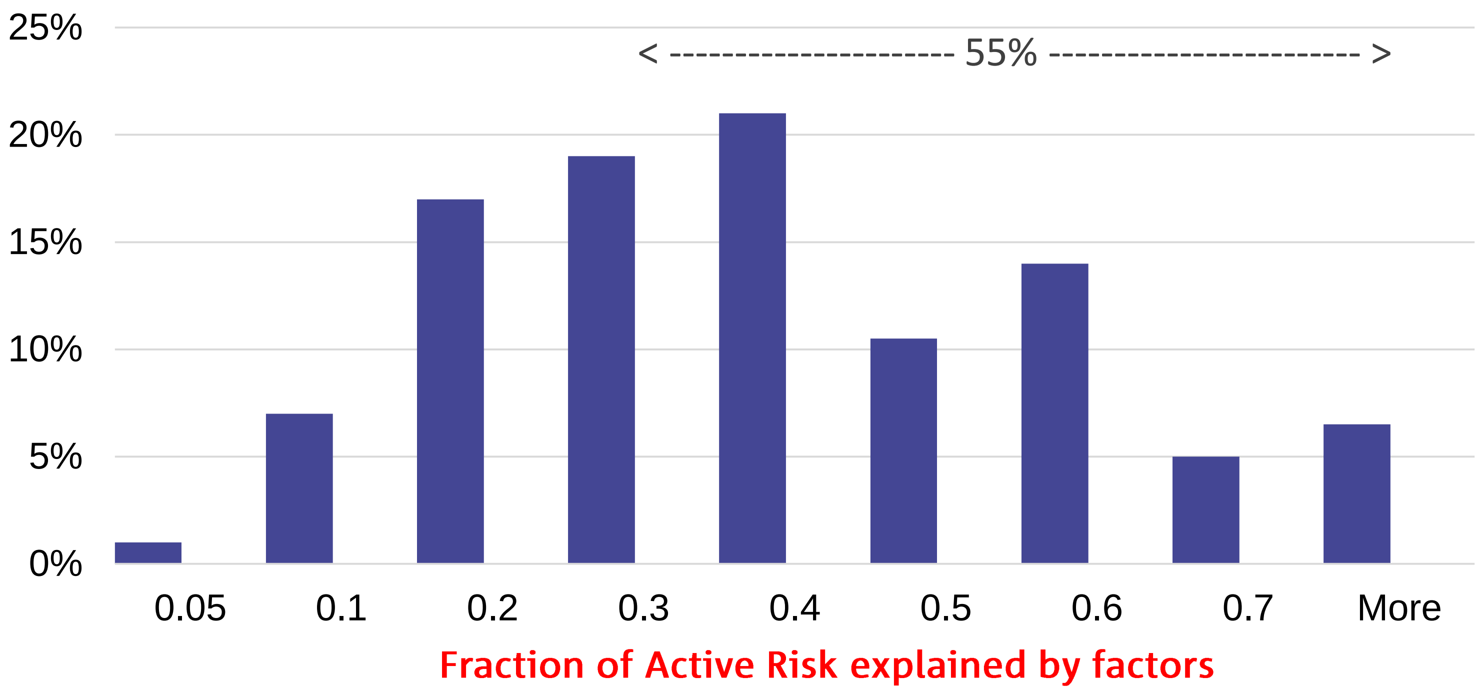
RECENT PERFORMANCE OF STYLE-SPECIFIC MANAGERS



- Strong - and varied - investment style environment has affected global equity managers' performance over the last three years
- Depending on an individual manager's style, it either provided a strong headwind or a strong tailwind
- Here's the rolling 12-month alpha (active, relative to the benchmark returns) generated by two well-established and successful global managers – both of them generated positive long-term active returns
- So, how significant is style's contribution to performance in general? Can it be quantified?

Source: MSCI Barra, NSL to 31 Dec 2017

MANAGER RISK/RETURN EXPLAINED BY FACTORS (FROM BLACKAROCK)

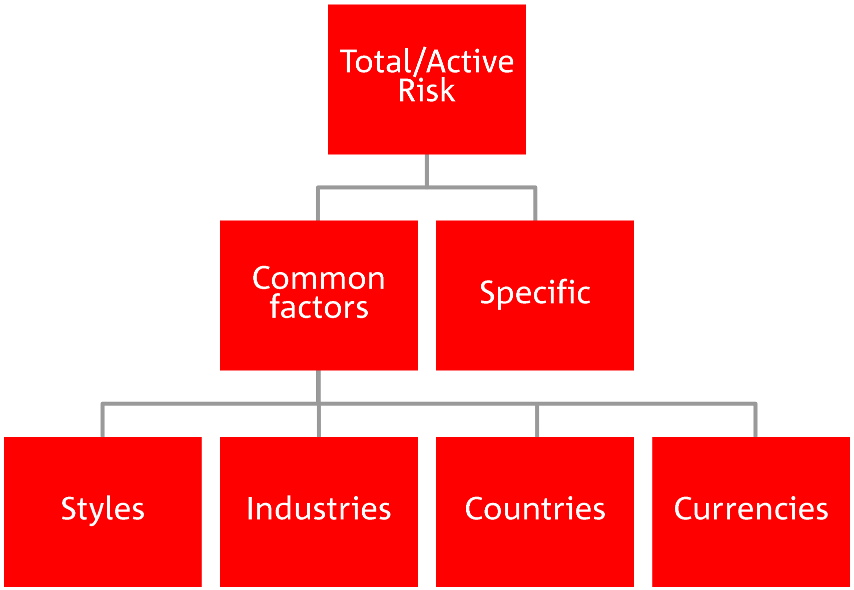


- R. Kahn and M. Lemmon (BlackRock) analysed a large selection of global managers (138 funds)
- For more than 55% of managers at least 40% of Active Risk (Tracking Error) was explained by just 4 styles
- Our analysis produced very similar results based on historical holdings
- Smart Beta products are 100% style, at least in theory

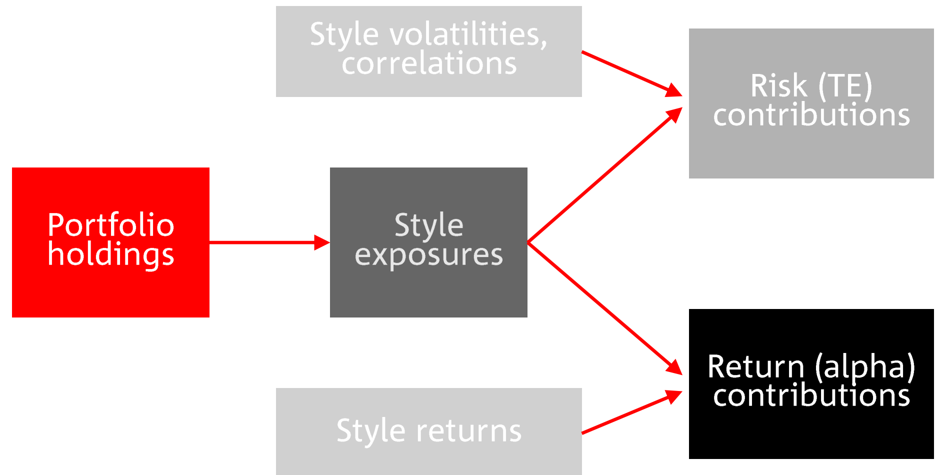
Source: “Smart Beta: The Owner’s Manual” by R. N. Kahn and M. Lemmon, The Journal of Portfolio Management, Winter 2015, pp. 76-83

SETTING UP MANAGERS ANALYSIS

General model-based risk decomposition



From portfolio holdings to style contributions



- For ‘traditional’ equity managers, Style is only one of several risk/performance factors
- Managers define holdings
- Holdings imply style exposures – along with industry, country, currency and stock specific positions
- Style exposures contribute to risk (Tracking Error) via Style volatilities and correlations
- Style exposures also contribute to performance (Alpha) via Style returns
- Other exposures (industry, country, etc.) contribute to both risk and performance as well
- Risk models decompose risk into contributions from different risk sources
- This de-composition can be equally applied to returns

Source: MSCI Barra, NSL

MANAGERS' SENSITIVITIES (EXPOSURES) TO STYLES

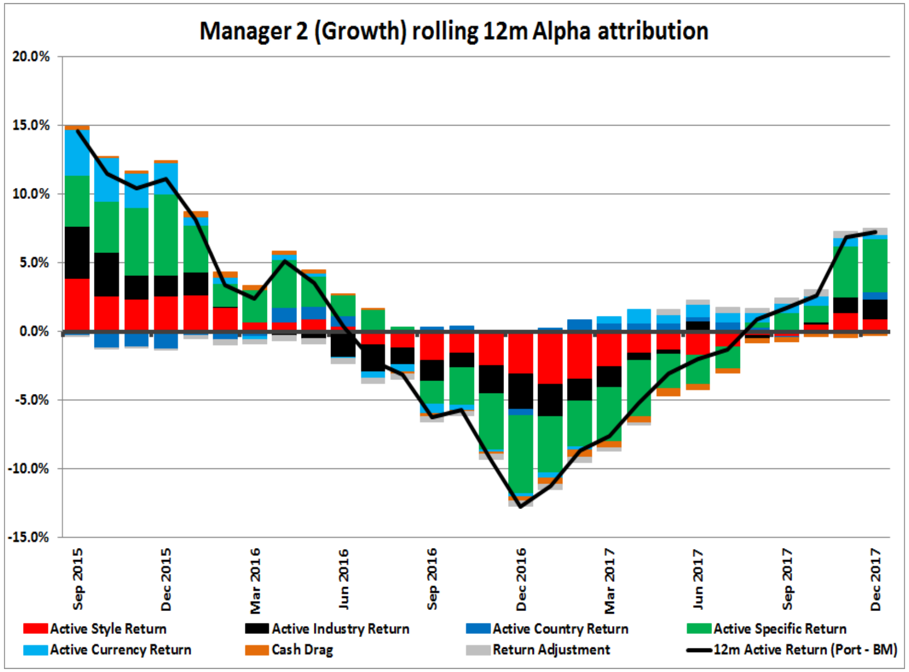
Style	Factor	Manager 1	Manager 2	Manager 3	Manager 4	Manager 5	Manager 6	Manager 7	Manager 8	Manager 9	Manager 10	Manager 11	Manager 12
Growth		0.86	0.30	0.28	0.19	0.06	0.02	0.00	-0.07	-0.12	-0.16	-0.18	-0.31
Value	Book-to-Price	-0.59	-0.28	-0.46	-0.33	0.01	-0.49	0.30	0.12	0.12	0.17	0.94	0.54
	Earnings Yield	-0.72	-0.13	-0.40	-0.20	0.11	-0.27	0.07	0.17	0.25	0.00	0.20	0.17
	Dividend Yield	-0.89	-0.22	-0.66	-0.50	-0.09	-0.33	-0.36	0.05	0.13	0.06	0.04	0.17
	Long-Term Reversal	-0.25	-0.18	-0.11	-0.18	0.11	-0.06	0.18	0.05	0.06	0.25	0.60	0.46
Quality	Profitability	0.63	0.30	0.32	0.42	0.24	0.71	-0.14	0.06	0.19	-0.21	-0.38	-0.22
	Investment Quality	-0.64	-0.10	-0.29	-0.30	0.12	0.06	-0.02	0.13	0.16	0.10	0.21	0.22
	Earnings Quality	0.07	-0.14	-0.24	-0.14	0.04	0.05	0.13	0.11	0.00	-0.02	0.13	0.10
	Earnings Variability*	-0.33	-0.04	0.10	0.06	-0.03	0.20	-0.38	-0.07	0.03	0.05	-0.23	0.00
	Leverage*	0.42	0.05	0.38	0.10	-0.03	0.36	-0.09	0.04	0.10	0.10	-0.10	-0.01
Size	Size*	0.01	-0.51	0.19	0.01	0.18	-0.19	0.51	0.24	0.22	-0.05	0.14	0.47
	Mid Capitalization	-0.01	-0.36	0.12	0.01	0.13	-0.14	0.12	0.12	0.05	-0.11	0.08	0.26
Low Volatility	Beta*	-0.22	-0.03	-0.15	0.05	-0.11	0.23	-0.29	-0.07	-0.02	-0.10	-0.70	-0.33
	Residual Volatility*	-0.38	-0.02	0.03	0.01	-0.05	0.06	-0.21	0.04	0.00	0.04	0.01	0.19
Momentum		0.14	0.12	0.01	0.02	0.22	-0.10	0.01	0.15	-0.10	-0.09	-0.18	-0.25
Liquidity*		-0.23	0.11	-0.13	0.04	-0.09	0.18	-0.12	-0.07	-0.03	0.24	-0.21	-0.11

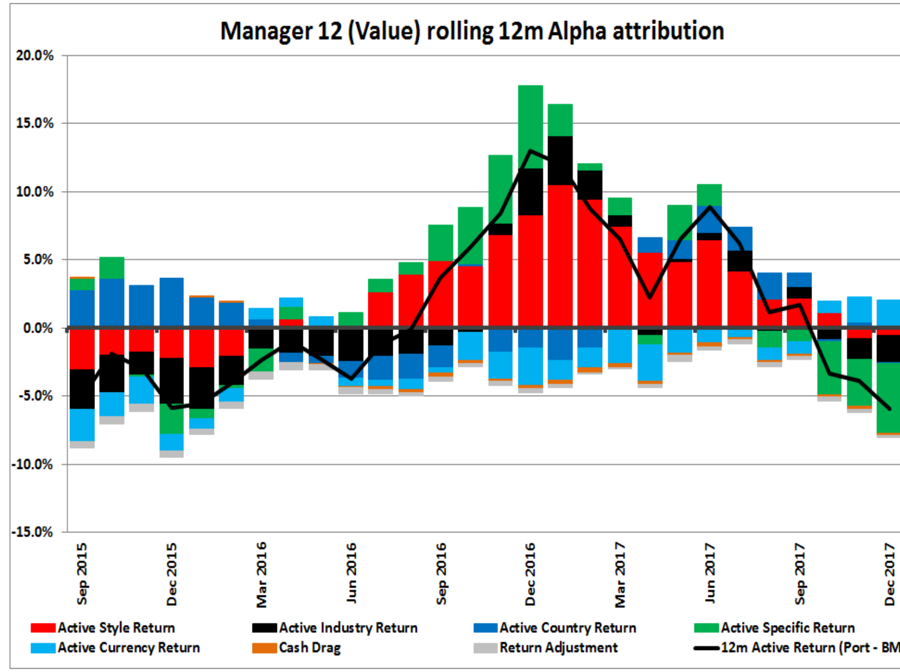
* "reversed" factors

- As an asset owner and a manager of managers, we have on-going access to the holdings of a large number of managers - which we continuously analyse using risk models
- Here's a representative selection of the global managers we follow (names are removed) – sorted by their Growth exposure
- Managers on the left have strong bias to Growth and are negatively exposed to Value factors
- Managers on the right maintain negative exposure to Growth and are positively exposed to Value factors, particularly to B/P and Long-term reversal
- Many managers are positively exposed to - some of - Quality factors (Growth managers to Profitability, Value managers to Investment Quality)
- Continuously monitoring managers' style biases against their declared styles is an integral part of our manager selection and portfolio construction process

Source: MSCI Barra, NSL – 12-month average to 31 Dec 2017

REVISITING MANAGERS PERFORMANCE – TOP-LEVEL ATTRIBUTION



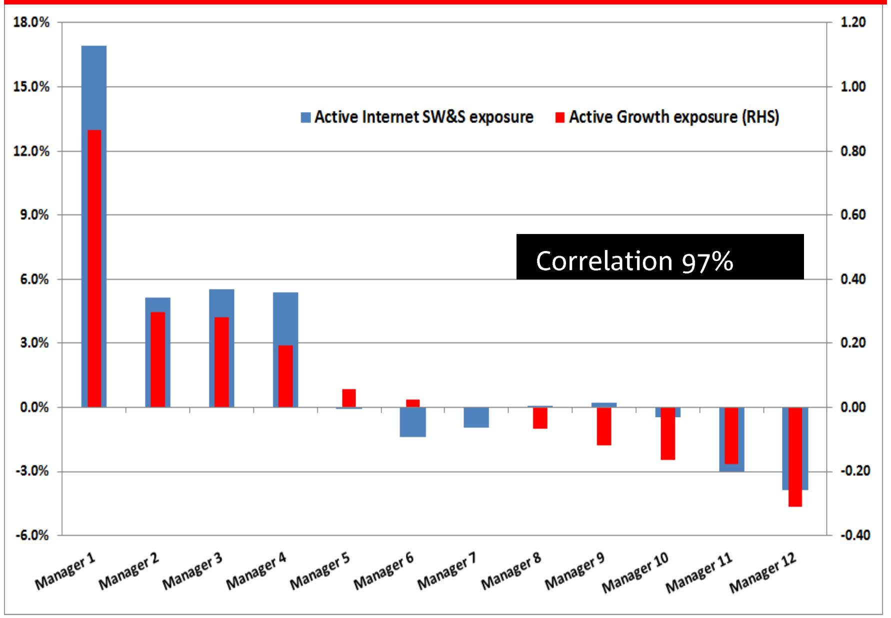


- Revisiting the Value and Growth managers' performance, we can apply the risk model to attribute active returns to the major sources of risk including not just style but also sector, country, currency – and then ultimately stock specific contributions
- Style seems to be a significant but not necessarily critical contributor to active performance
- Are we missing something here?

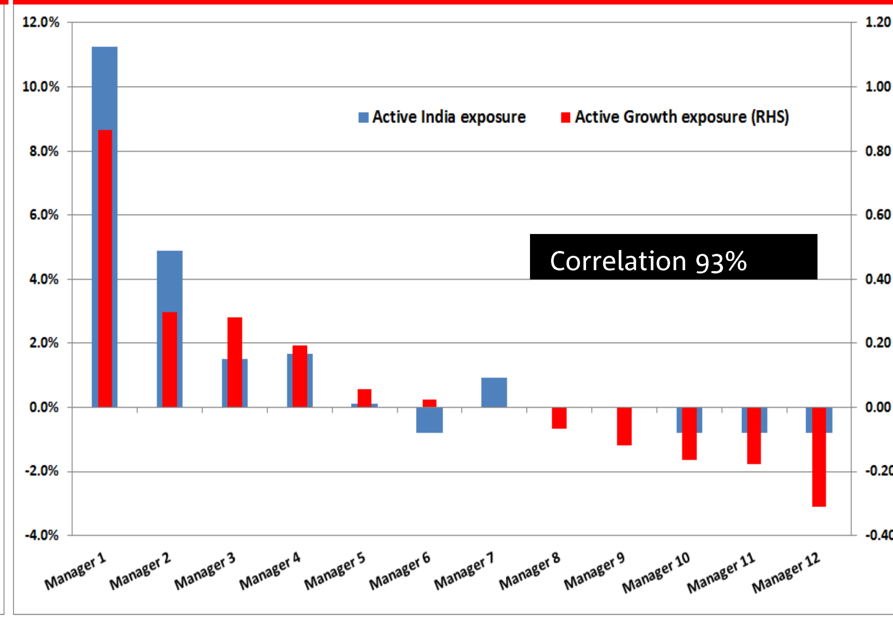
Source: MSCI Barra, NSL – to 31 Dec 2017

INDUSTRY AND COUNTRY POSITIONS ARE CLOSELY LINKED TO STYLE

Managers Growth vs. Internet, Software and Services positions



Managers Growth vs. India positions



- We can observe strong correlations between managers' style exposures and some of their concurrent industry and Country positioning
- For example, Internet Software and Services active positions are strongly positively correlated to managers' Growth exposures
- Similarly, Over- and Under- weights to India – are strongly correlated to Growth as well
- Correlations are in many cases strong and consistent over time
- Therefore, we can argue that the actual contribution from style/factors goes beyond the "direct" contribution

Source: MSCI Barra, NSL – 12-month average to 31 Dec 2017

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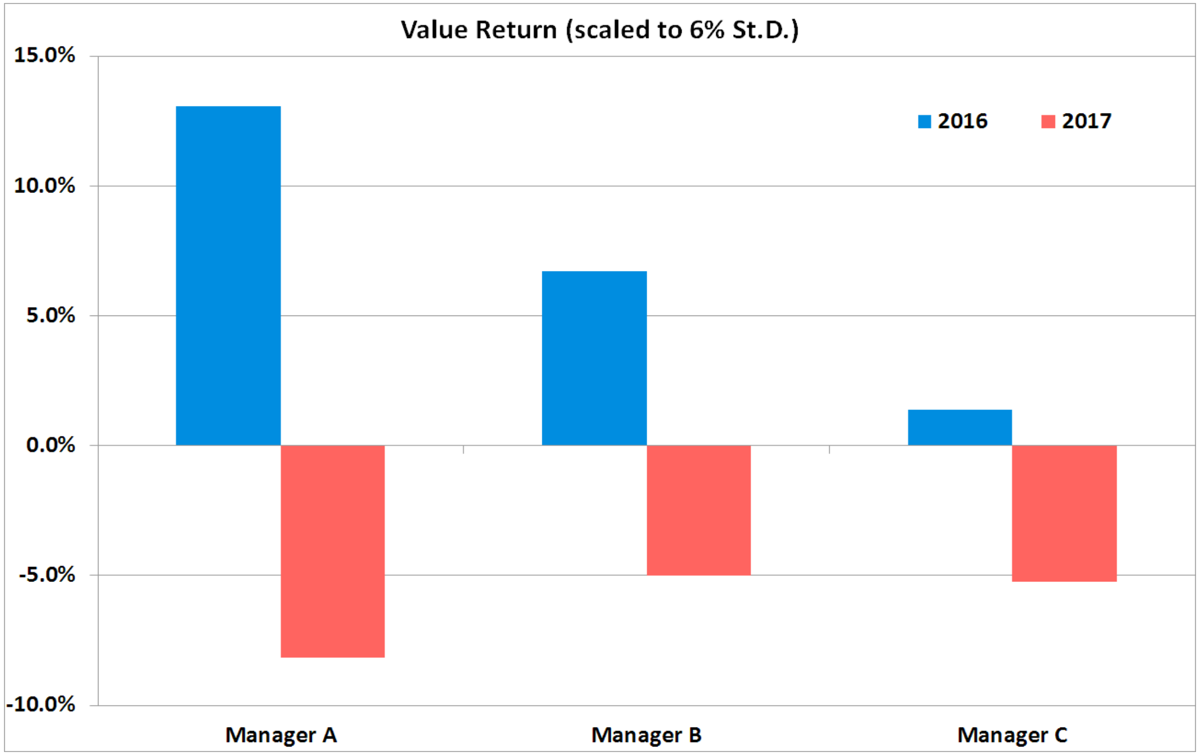
PRACTICAL EXPERIENCE WITH SMART BETAS



- Smart beta are effectively long/short portfolios where returns are 100% driven by specific, selected factors
- 2016 was a good year for Value and three Smart Beta managers (A, B and C) delivered positive Value returns…

  … but they were not just a bit different – they were more than 10% apart (scaled to the same volatility, 6%)
- 2017 was a difficult year for Value – and Value returns from the managers were negative but again substantially different
- Definitions and implementation may lead to a wide dispersion of performance in the same factor/style

Source: NSL

CONCLUSIONS

- Many equity styles have delivered positive returns over longer periods but this is of course subjective to the definitions and period-dependent
- There is no free lunch – all styles experience draw down periods and can be volatile over short periods
- Styles are generally not highly correlated and, therefore, mixing styles can provide for a smoother ride
- Style seems to make a significant contribution to managers risk and return and it can be quantified but you may need to go beyond the “standard” model-based attribution
- Definitions and implementation are important: no two managers are the same and it applies to smart betas too
- Other sources of risk and return (e.g. industry, currency, stock specific) play an important part as well and can help when style turns negative
- In practical terms, following investment style/factors behaviour can enhance managers’ risk and performance analysis

Style does matter!

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