Wilshire

Did traditional style indexes create a false narrative for factor analysis in 2022?

Was the rotation from Growth to Value in 2022 as significant as it seemed? Not if viewed through the prism of ‘Pure Factors’

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Index Research

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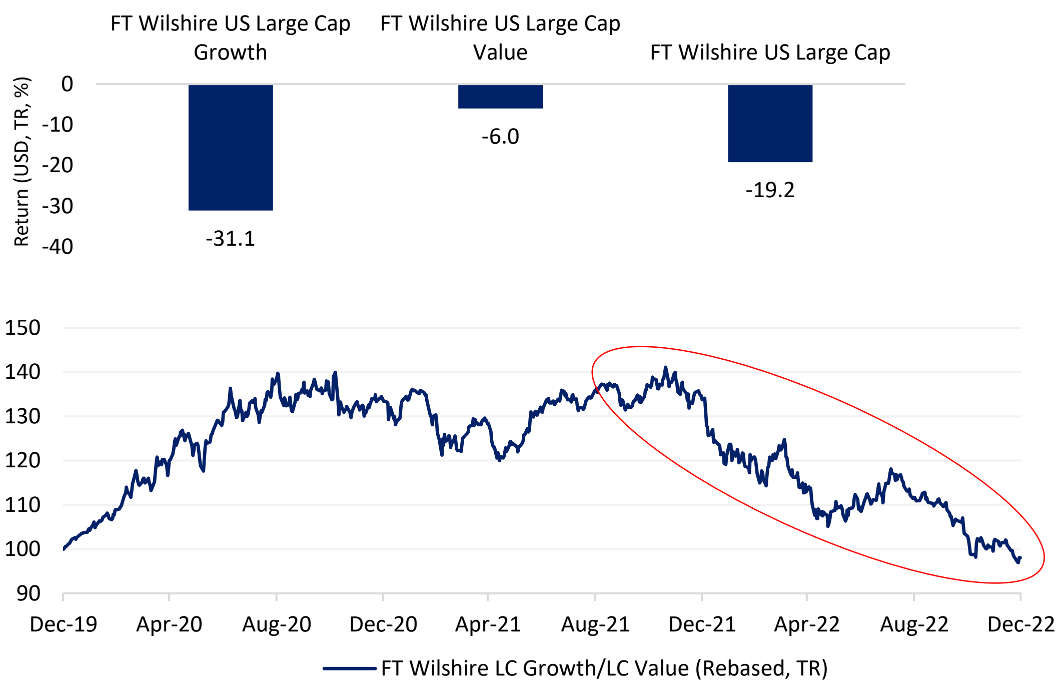
One of the key market dynamics in 2022 was the significant rotation out of Growth stocks towards Value stocks depicted though the movement of style indexes. As can be seen in exhibit 1 the FT Wilshire large cap value index not only outperformed the FT Wilshire Large Cap index by 13.2% in 2022 it outperformed the large cap growth index by a significant 25.1%. The Growth style underperformed the FT Wilshire Large Cap index by 11.9%. The rotation out of Growth towards Value in 2022 in effect neutralized the marked rotation to Growth that occurred in the immediate aftermath of the Covid pandemic in 2020.

Exhibit 1: Value Style outperformed Growth by 25.1% in 2022



Source: Wilshire. Data as of 31 December 2022

Why did Value Style outperform Growth in 2022?

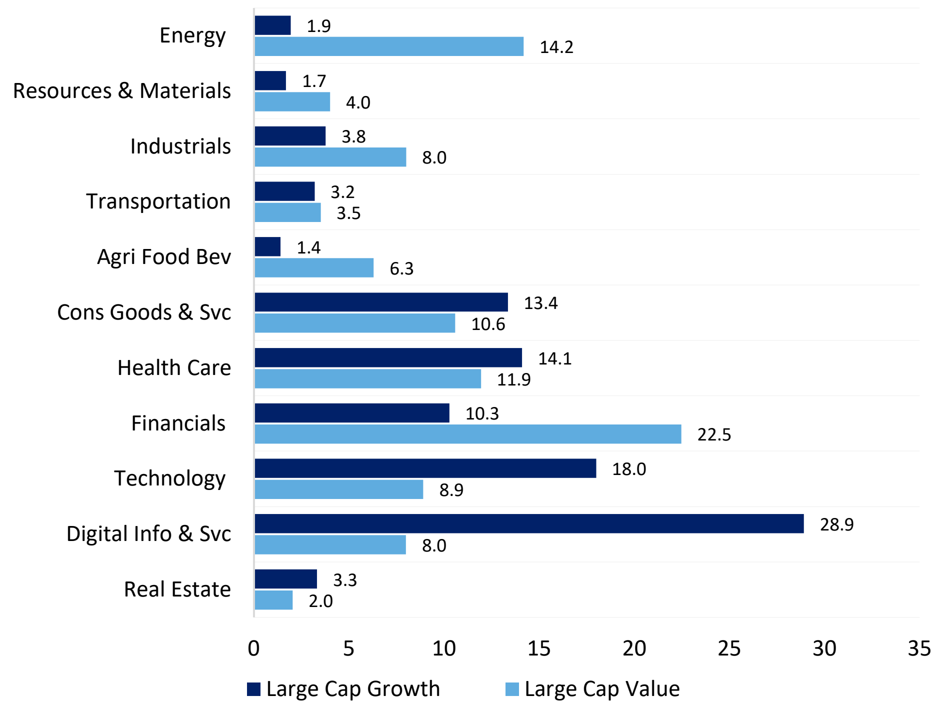
A key driver of style performance was due to differentials in sector weighting exposure

The start point for analysis of the difference in performance between Growth and Value is to understand the difference in sector exposures captured by the respective indexes.

It can be seen in Exhibit 2 that the Growth index has a larger exposure to technology, digital information and consumer goods and services sectors compared with the Value Index. The Value index has a much heavier exposure to the energy, financials and industrials sectors.

A big difference in sector exposure between the Value and Style indexes, Particularly financials, energy, technology and digital info sectors

Exhibit 2 : Sector exposure for the Growth and Value indexes



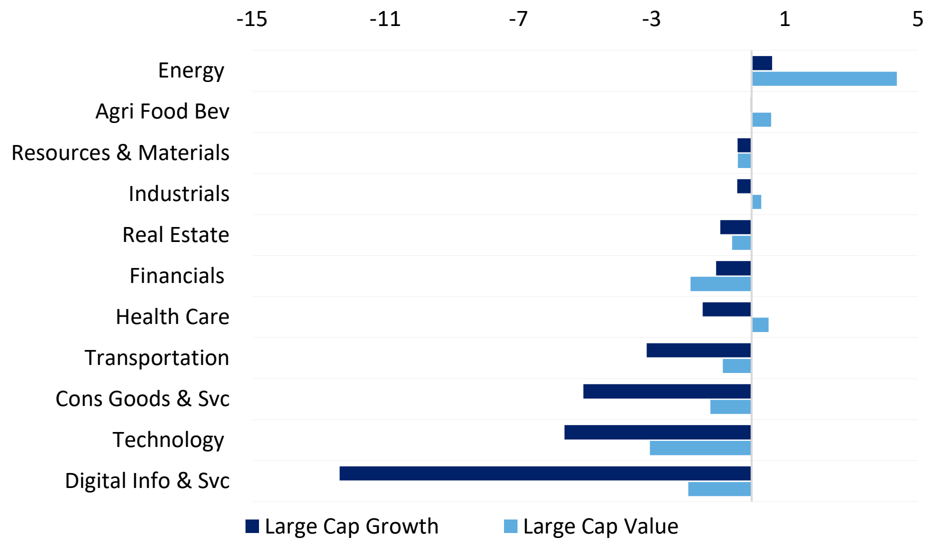
Source: Wilshire. Data as at 31 December 2022

Sector weighted performance contributions tell the story

Sector weighted performance contributions take account of the combined impact of sector weighting and sector performance. Exhibit 3 shows the respective sector contributions for Growth and Value Indexes for 2022.

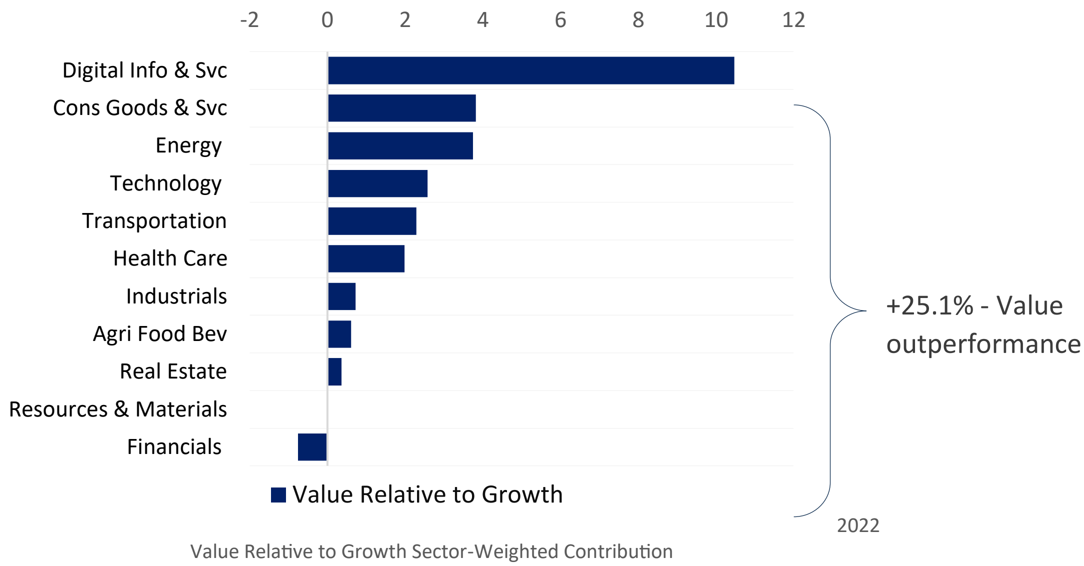
Exhibit 4 depicts the spread between the contribution delivered by the Growth sectors and Value sectors. For instance, the negative contribution from the Digital and Information sector for Growth was -11% compared with a -4% contribution for the respective Value sector (shown in Exhibit 3). This is shown as a +7% contribution to Value's relative outperformance of Growth in Exhibit 4. Other significant drivers of Values outperformance were the contributions from consumer goods, energy, transportation, technology and healthcare sectors. All the contribution spreads in exhibit 4 sum to 25.1% - the scale of Value's outperformance over Growth in 2022.

Exhibit 3: Comparing the 2022 sector weighted performance contributions for the Growth and Value style indexes - a smaller negative drag on value sectors.



Source: Wilshire. Data as at 31 December 2022

Exhibit 4: The spread between Value and Growth contributions for 2022 – the large beneficial impact to Value from a smaller digital info and consumer goods drag.



Source: Wilshire. Data as at 31 December 2022

Almost half of Values 25.1% outperformance was attributable to a smaller negative contribution drag from the digital info and consumer goods sectors

The second element of exposure analysis is the bottom-up stock concentration impact - Growth style almost twice as concentrated

A comparison in stock performance contributions for the top 10 stocks by weighting in the Growth and Value indexes shows the significant positive contribution of energy stocks in Value and the scale of the negative contribution generated by some tech stocks in the Growth index.

Growth style top 10 holdings accounted for 40% of the index (almost twice that of Value).

They also delivered negative returns while Value top 10 posted positive returns.

Exhibit 5: The performance contribution from the 10 largest stocks in the Growth and Value index

Growth	Weight	Cont	Value	Weight	Cont
Microsoft Corp.	10.1	-2.8	Apple Inc.	4.0	-1.0
Apple Inc.	9.3	-2.5	Exxon Mobil Corp.	2.7	2.4
Amazon.com Inc.	4.9	-2.4	Johnson & Johnson	2.5	0.1
Alphabet Inc Cl-C	3.1	-1.2	Berkshire Hathaway Inc	2.4	0.1
Alphabet Inc Cl-C	3.0	-1.1	JPMorgan Chase & Co.	2.3	-0.3
NVIDIA Corp.	2.3	-1.2	Procter & Gamble Co.	2.1	-0.1
Tesla Mtrs Inc	2.1	-1.4	Chevron Corp.	2.1	1.2
MasterCard Inc.	2.0	-0.1	Pfizer Inc.	1.7	-0.2
UnitedHealth Group Inc.	1.6	0.1	Merck & Co. Inc.	1.7	0.8
Eli Lilly & Co.	1.6	0.6	Coca-Cola Co.	1.6	0.2
Total	**40.1**	**-12.0**	**Total**	**22.9**	**3.2**

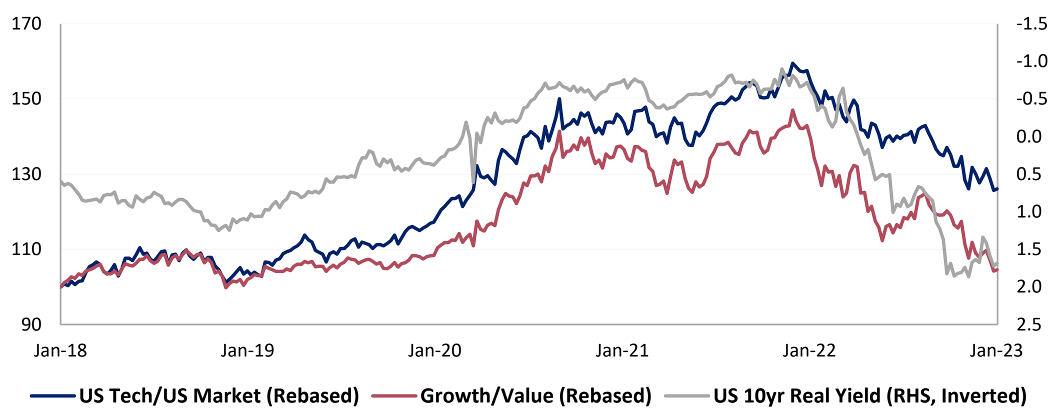
Source: Wilshire. Data as at 31 December 2022

The rotation out of Growth also had macro drivers – a response to rising real yields

Another explanation for the rotation from Growth to Value in 2022 was due to macro influences, principally that of rising real yields exerting pressure on highly valued long duration (technology) growth stocks. Exhibit 6 shows the connectivity between inflections in the real yield and the relative performance of the growth and technology sector.

Rising real yields exerted valuation headwinds on highly valued growth stocks in 2022

Exhibit 6: FT Wilshire LC Growth/Value, US Tech Relative and US Real Yield



Source: Wilshire and Refinitiv. Data as at 3 January 2023

However, the rotation looked different via the prism of 'Pure' factors?

Given that most of the rotation from Growth to Value in 2022 can be explained by the difference in sector exposure, sector weighted contributions and stock concentration, it is difficult to ascertain whether there was a genuine style/factor rotation or simply a business model and sector positioning recalibration.

Pure factors are designed to strip away the noise generated by traditional factor indicators

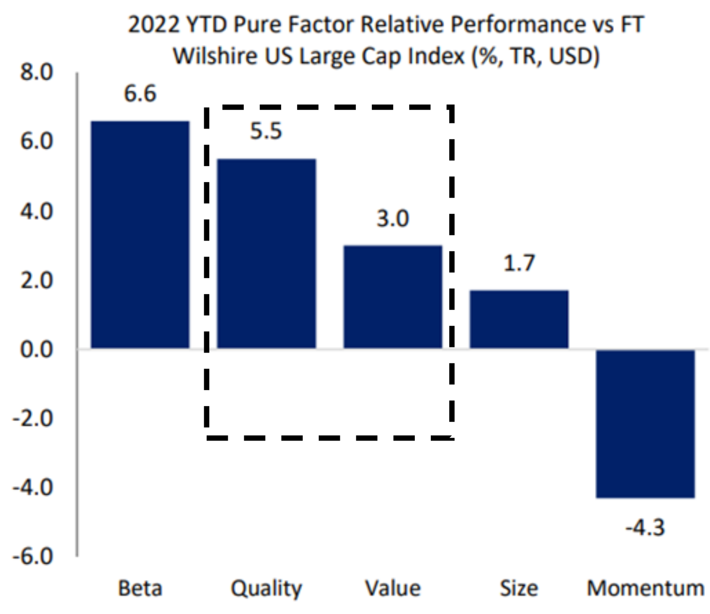
In order to overcome this analytical impediment our family of Pure factors are designed to strip away the noise (off target components) embedded in traditional style and factor indexes and identify genuine factor premia moves. Our Pure factor methodology neutralizes sector and other unintended factor exposures (see methodology paper).

Pure Factor performance in 2022 showed both Quality and Value outperformed (unlike the Style indexes).

Exhibit 7 shows the performance of the Pure factors relative to the FT Wilshire US large cap index in 2022. It can be seen that both Quality (a proxy for Growth Style) and Value outperformed. This is a very different profile to the performance delivered by the growth and value style indexes.

Both Pure Factor Value and Quality (a Growth proxy) outperformed in 2022

Exhibit 7: Pure factor relative performance in 2022 - both Quality and Value outperformed

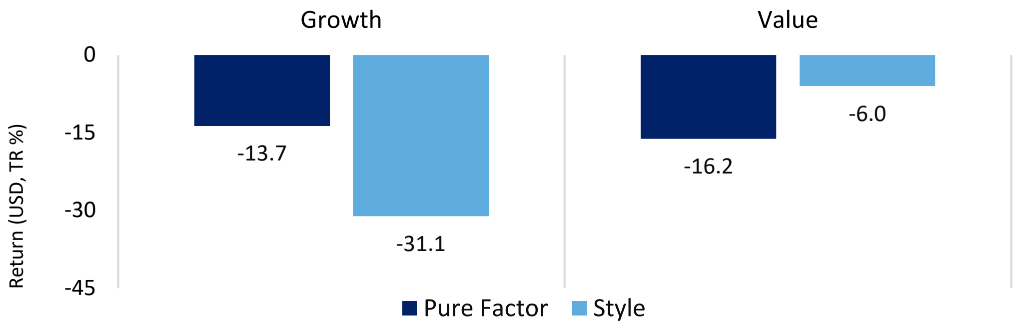


Source: Wilshire. Data as at 31 December 2022

Pure Value underperformed Value style but Pure Quality significantly outperformed Growth style

Exhibit 8 Compares the 2022 performance delivered by the growth and value style indexes and the Pure Value and Pure Quality factor indexes.

Exhibit 8: Comparing Growth and Value style performance with respective Pure factors



Source: Wilshire. Data as at 31 December 2022

Why did the Pure factors deliver a different return profile?

The primary differentiator (as stated earlier) is that the Pure factor methodology is deliberately designed to minimize unintended exposures that dilute the targeted factor return characteristics.

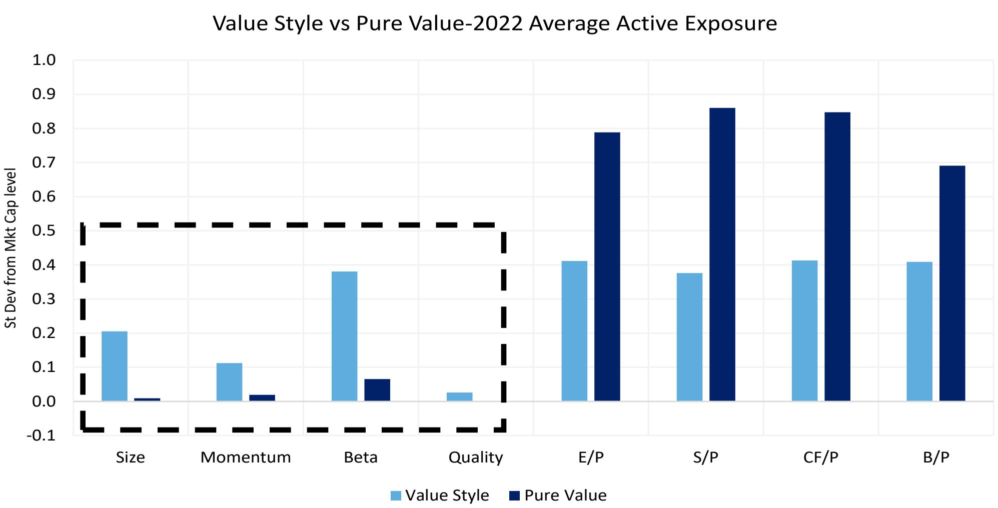
The avoidance of off target exposures

Value Style methodology captures large unintended exposures to size, momentum and beta diluting value measurement

We have already examined the impact sector and stock skew had on Style returns. We can take this a step further by identifying the active factor exposures captured within the respective Pure Factor and Style indexes. We start with a comparison of Value exposures in Exhibit 9.

Exhibit 9: Comparing the active exposures of Pure Value and Value Style

By contrast the Pure Value factor has de minimis off target exposures



Source: Wilshire. Data as at 31 December 2022

It can be seen that within the Value universe the Style methodology captures large (unintended) exposures to beta, momentum and size. This dilutes the exposure to value characteristics and metrics. By contrast the Pure factor has almost 100% exposure to Value drivers and de minimis exposure to the other factors.

Off target exposures distort Value style performance outcomes.

In 2022 the key driver of Value Style excess returns was the large contribution from industry exposure and beta

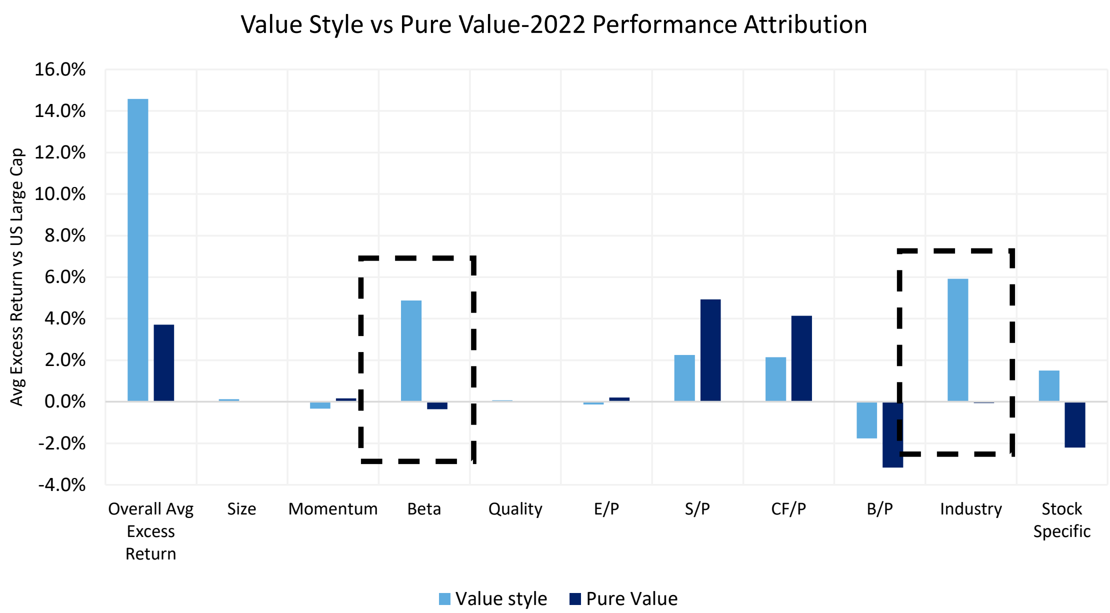
Exhibit 10 shows the 2022 performance attribution for both Value Style and the Pure Value Factor (using average period analysis). While the Value style delivered superior excess returns compared to the Pure factor, this was mainly attributable to the contribution from Industry (sector positioning as discussed earlier) and beta—both off target results. The contribution from valuation metrics are much smaller.

The Pure Value Factor applies a focus to 'on target' valuation metrics

By contrast the Pure Value Factor performance shows concentrated attribution linked to value metrics with a particular focus on Price to Sales and Price to Cashflow.

Pure value is designed to deliver performance focused on the value components

Exhibit 10: Comparing the performance attribution of Pure Value and Value Style



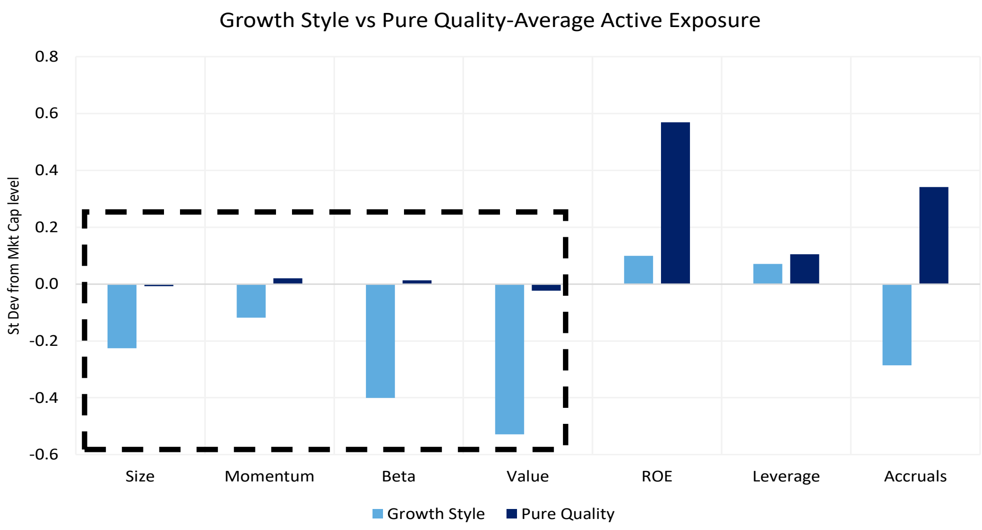
Source: Wilshire. Data as at 31 December 2022

Comparing the active exposures of Growth Style with Pure Quality.

Exhibit 11 shows the active exposures captured by both the Growth style and Pure Quality factor. It can be seen that Growth Style is dominated by off target exposures (underweighting) to size, momentum, beta, value and accruals and modest positive exposure to ROE and leverage. The Pure Quality Factor remains ‘on target’ by maintaining strong active exposures to ROE, leverage and accruals.

The Growth Style carried large off target exposures to several components

Exhibit 11: Comparing the active exposures of Pure Quality with Growth



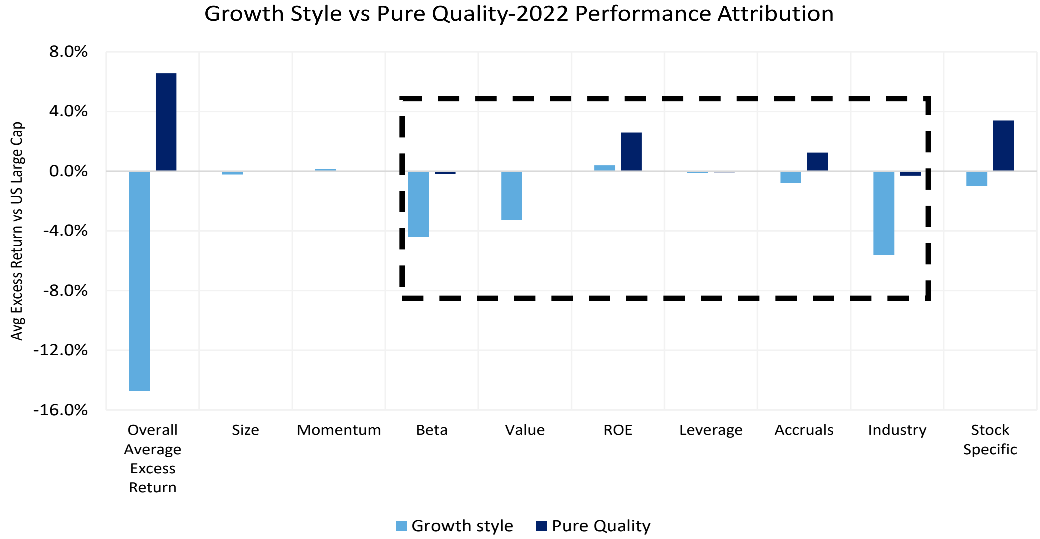
Source: Wilshire. Data as at 31 December 2022

The absence of off target impediments saw Pure Quality outperform Growth Style

Exhibit 12 shows the respective performance attribution for the Growth Style and Pure Quality Factor in 2022 (using average period analysis). There is a wide divergence in excess returns with the Pure Factor outperforming and the Growth Style significantly underperforming. The weakness in the Growth Style was a function of the negative contribution from beta, value and most importantly industry.

Pure Quality saw the positive performance driven by the contribution of ROE, Accruals and stock specific components. Importantly it did not incur any of the off target drags that impacted the Growth style.

Exhibit 12: Performance attribution within Pure Quality and Growth Style



Source: Wilshire. Data as at 31 December 2022

Pure Quality benefitted from not incurring the off target performance drags that impacted the Growth style

Conclusion - 2022 created a false narrative in factor analysis generated by off target exposures

The marked rotation in traditional factors and style indexes in 2022 created a narrative of a significant rotation away from Growth and/or Quality towards Value.

Unfortunately, we have shown this rotation was dominated by sector (industry) exposure, stock concentration and numerous unintended off target exposures. What was not confirmed was a genuine rotation in factor risk premia. To this extent it created a false narrative.

Pure Factors target genuine factor premia drivers

We have shown that the Pure Factor methodology is designed to reduce these extraneous variables and exposures enabling the user to isolate the on target factor attributes.

Through the prism of Pure factors both Value and Quality outperformed in 2022 - a radically different picture to that depicted by traditional methodologies. The avoidance of off target noise is also why Pure Factors have enormous utility in multi factor portfolios.

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