

Equity Factor Insights

QUARTERLY REPORT | JULY 2024

Momentum shows signs of slowing in narrowing equity rally

Momentum slows in Q2, (Small) Size lags badly

Momentum outperformed in 4 of 6 regions, in a change from its broad-based outperformance in Q1. Size continued to lag broadly, suggesting the Q2 rally was driven primarily by large stocks. Quality and Low Vol outperformed, on average.

Factor leadership shifts out of Momentum

In a shift from Q1, Momentum no longer led factor relative performance in many regions. Quality led in the US, Low Vol in Europe and Yield in the UK and Japan.

Narrow set of industries drove regional factor returns

Factor performance hinged on a narrow set of industry allocation and selection effects in each region. In many regions, Tech exposure benefited Momentum and hurt (Small) Size, Value and Yield. Selection within industries tended to favor larger stocks.

Many factors de-rated in Q2

Many factors de-rated in Q2, in terms of their absolute forward P/Es, after generally expanding over the last two years. Q2's moves pulled several factor valuations below their historical averages.

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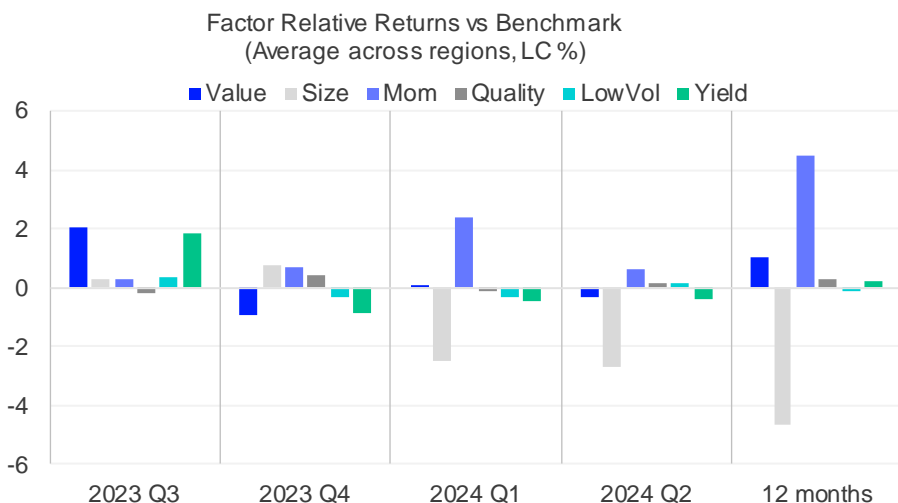
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Regional Factor Performance Highlights



Select Regional Relative Returns, 3M (%)

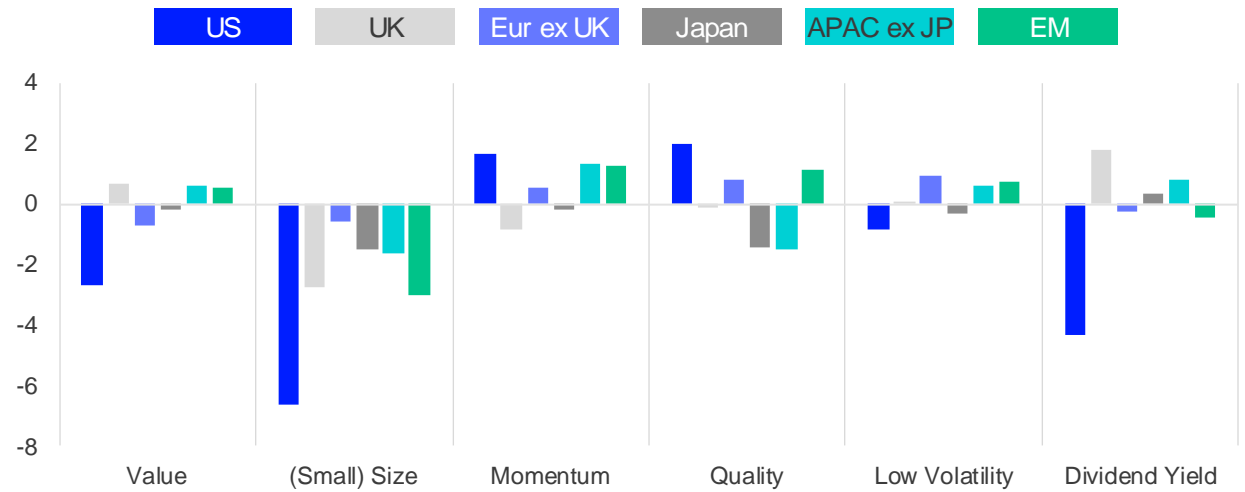
+2.0% US Quality	+0.9% Europe ex UK Low Vol
-6.6% US Size	-0.7% Europe ex UK Value
+1.8% UK Yield	+1.3% Emerging Momentum
-2.7% UK Size	-3.0% Emerging Size

Source: FTSE Russell and LSEG. All data as of June 30, 2024. Please see Appendix for important legal disclosures and details on rules-based factor indicator calculations and construction methodology.

Global View – Factor and Benchmark Performance Highlights, 3M

Amid a moderating global equity rally in Q2 2024, Momentum continued to outperform the benchmark in most regions even if it did not lead factor returns. (Small) Size underperformed broadly. Performance was mixed for other factors. US Value, Yield and Size were deeply negative while US Quality and Momentum were positive relative to its benchmark. UK Size and Emerging Size also notably underperformed their respective benchmarks. Factor performance suggests the Q2 rally may have been driven largely by large-caps with a continuation of 12-month factor trends in most regions.

Regional Relative Factor returns vs benchmark — 3M (TR, LC%)



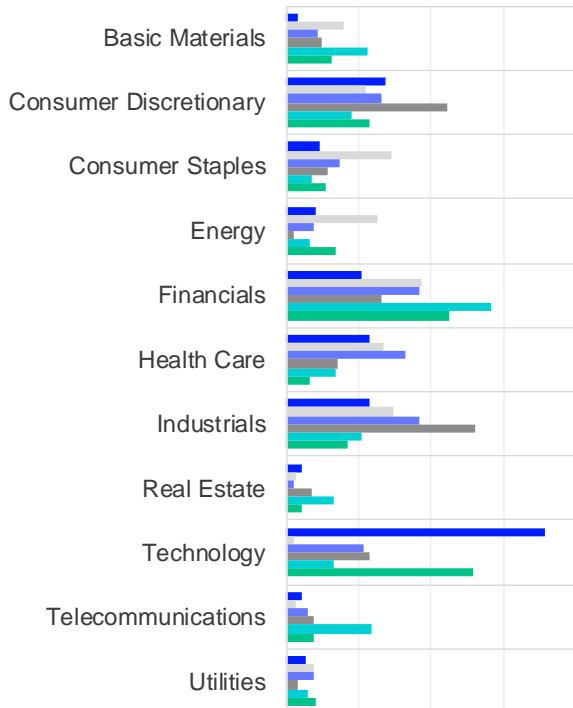
Regional Equity Market Returns – 3M (TR, LC %) – Emerging and US equities shine

The Emerging index outpaced peers in Q2 in local currency terms, followed by the US. Both indices were helped by strong returns in and exposure to Tech. Japanese and European equities moderated relative to Q1, with Discretionary detracting notably from benchmark returns. Financials made positive contributions except in the US.



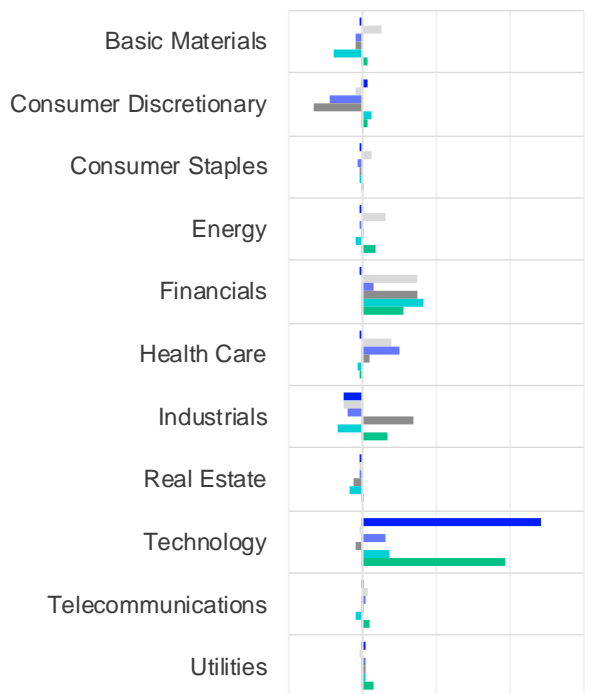
Benchmark Industry Weights, 3M average (%)

0 10 20 30 40



3M – Contributions to Total Benchmark Returns (%)

-2 0 2 4 6

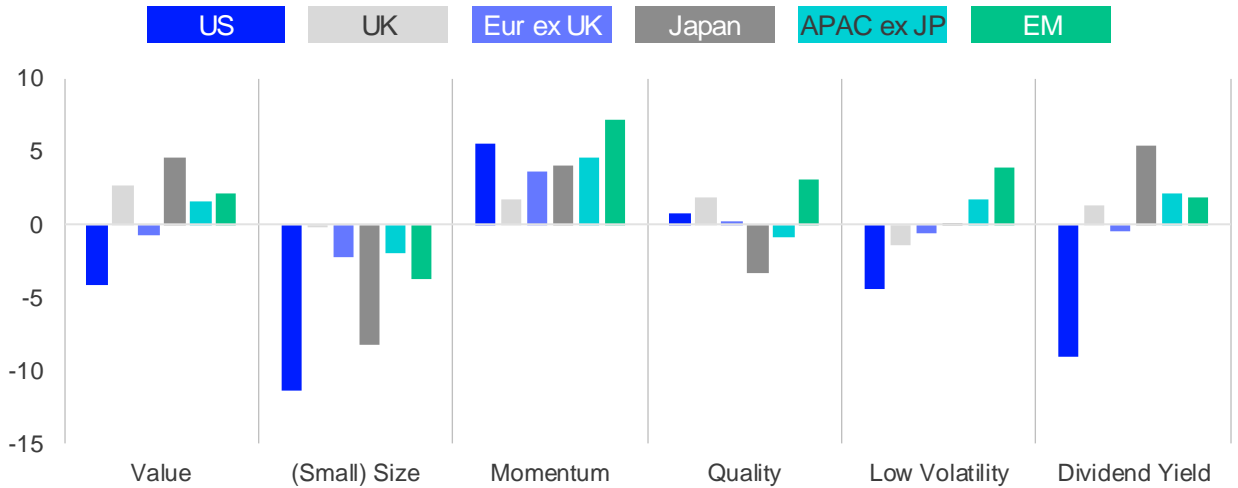


Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Global View – Factor and Benchmark Performance Highlights, 12M

Over 12M, Momentum was on top and (Small) Size underperformed across regions. Value, Dividend Yield and Quality outperformed in 4 out of 6 regions. Performance of Low Vol was mixed. A momentum-driven rally, which looked different in different regions, helped Japanese, US and Emerging equities' 12-month performance. While large-caps seem to have driven performance in all three regions, more expensive, non-dividend-paying stocks participated more in the US, Value and Yield helped the Japanese and Emerging indices' returns.

Regional Relative Factor returns vs benchmark — 12M (TR, LC%)



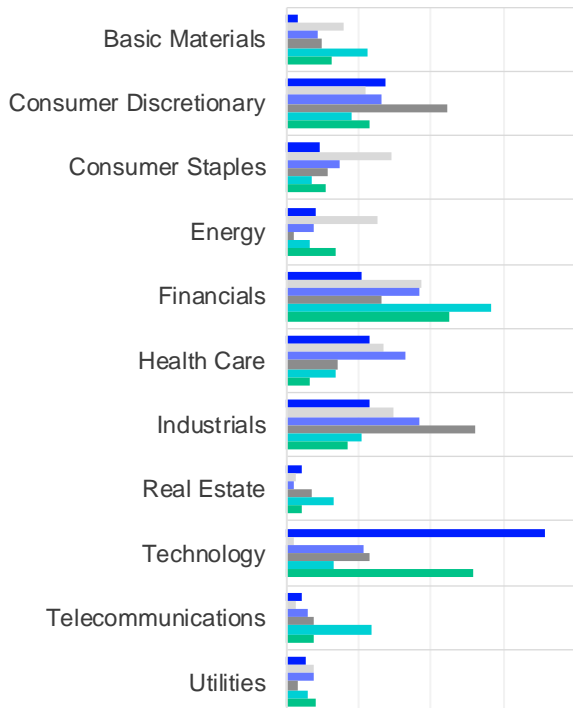
Regional Equity Market Returns – 12M (TR, LC %) – Japan and the US hold lead

Japan and the US held their lead over 12 months, followed by the Emerging index. European and UK equities had comparable performance, while Asia Pacific equities lagged the most. Industry contributions were mostly positive and led by cyclicals such as Tech, Financials, Industrials and Discretionary. Defensives lagged in most regions.



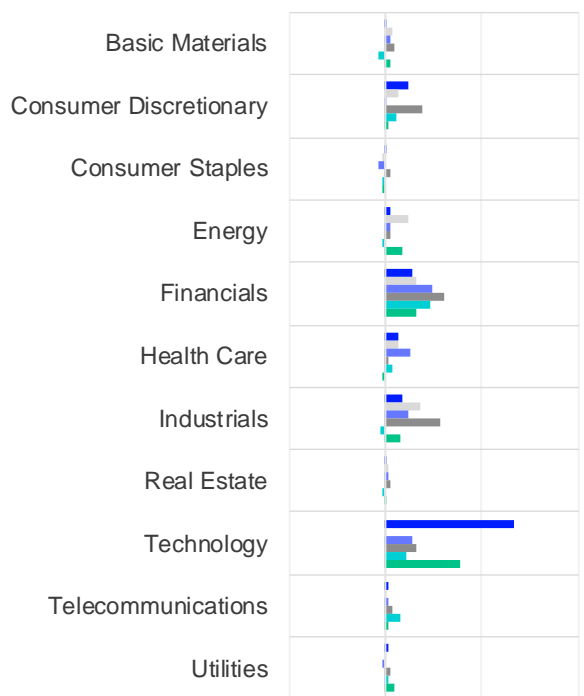
Benchmark Industry Weights, 3M average (%)

0 10 20 30 40



12M – Contributions to Total Benchmark Returns (%)

-10 0 10 20

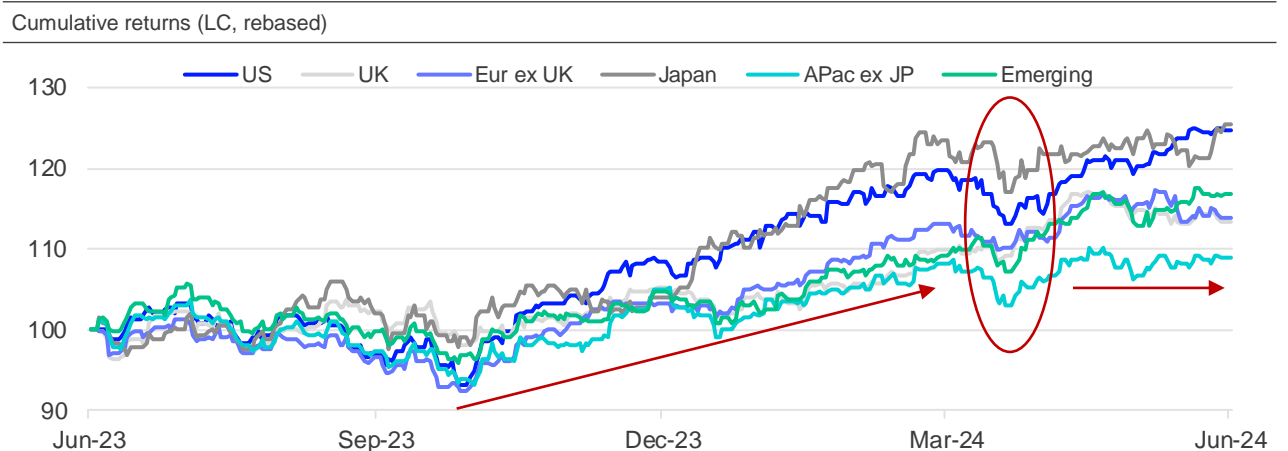
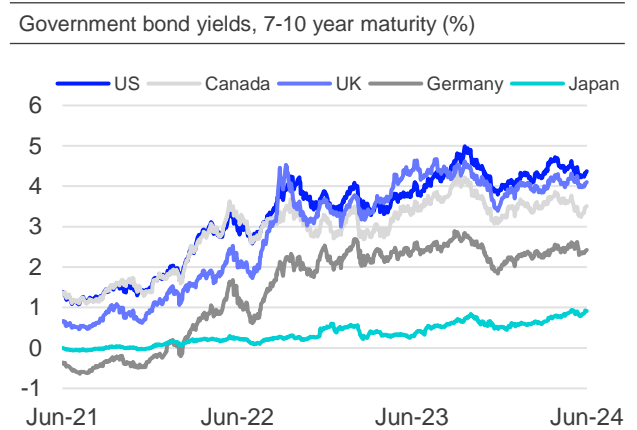
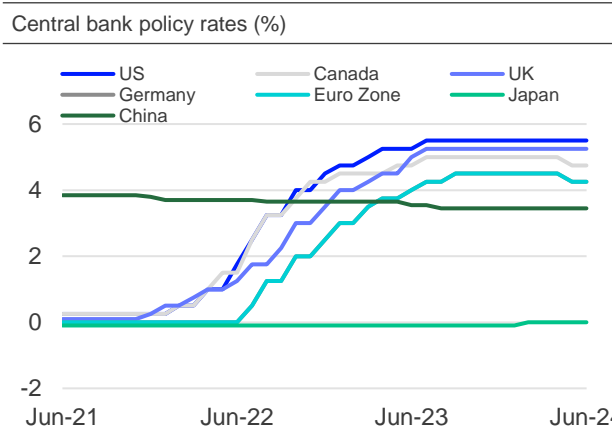
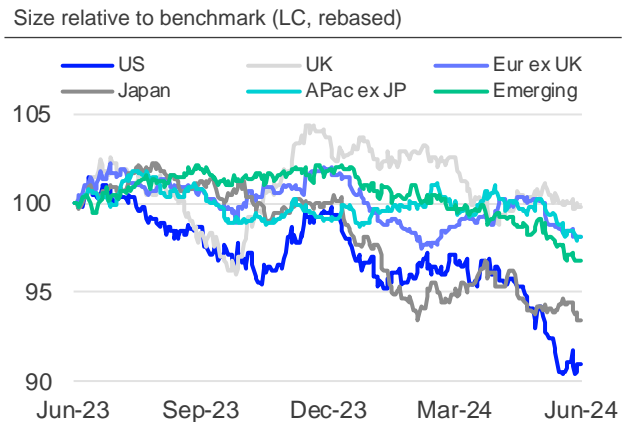
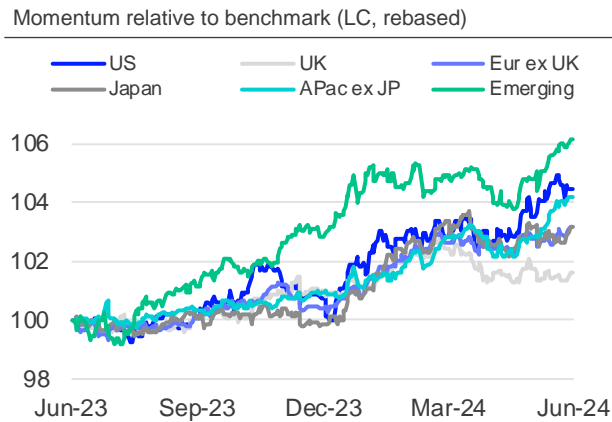


Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Global View – Factor rotation

Momentum's relative performance moderated in Q2 when compared to its 12-month run. Over the last year, many economies saw policy rates and long yields stay at historically high levels, even as disinflation was underway. Until October 2023, this somewhat steady macro backdrop supported Momentum's outperformance. At the end of October, when expectations of monetary policy easing took hold in the US, the UK and Europe, Momentum's performance declined slightly in developed markets before taking off. However, in Q2, sticky March inflation numbers led to renewed fears of higher-for-longer rates and benchmark indices pulled back in April. They rebounded in May before moving mostly sideways in June when central banks in Canada and Europe made the first policy rate cuts of the new easing cycle. These changes provided the context for Momentum's outperformance slowing or reversing in Q2.

Another possible consequence of the restrictive monetary environment over the last 12 months may be that larger companies have found it easier to navigate the tight liquidity conditions better than smaller companies. Small-caps and the (Small) Size factor have been out of favor with markets over that time, except in the UK, where Size's performance also moderated in Q2. It remains to be seen whether Q2 will be an inflection point for the Size factor's performance, insofar as it marks the beginning of easier liquidity conditions while the growth environment is still benign.

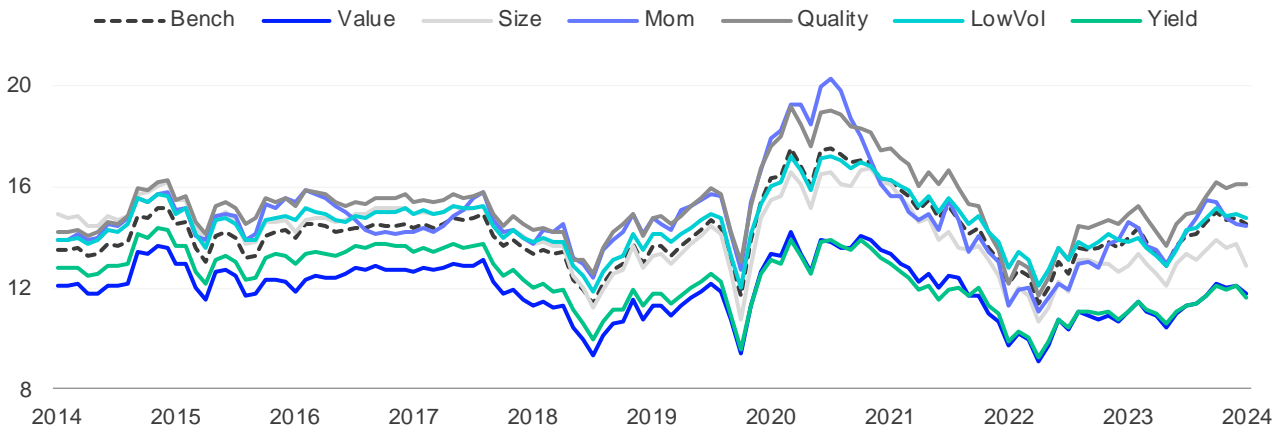


Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

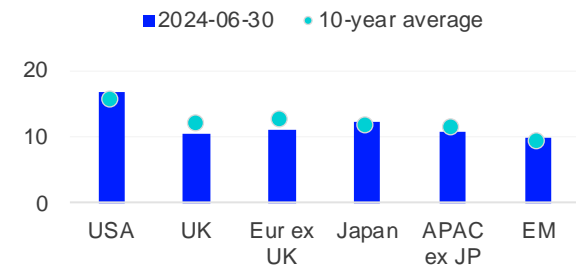
Global View – Factor Valuations

Average forward factor P/Es moderated over Q2 after having climbed since October 2023. Most US and Emerging factors traded above their 10-year averages at quarter-end (except US Size). Quality in Europe and Japan was also valued above its long-term average. US factors continue to trade at a premium to those in other regions.

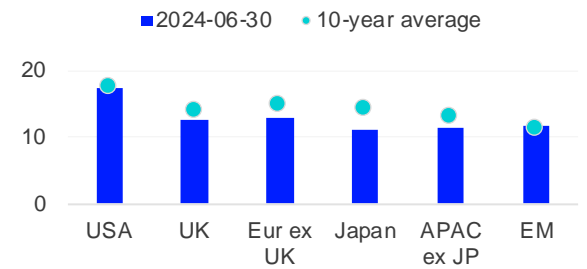
12-month forward factor P/E ratios, average of six regions



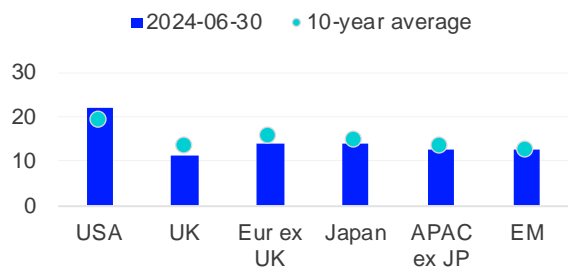
Value - 12M forward P/E



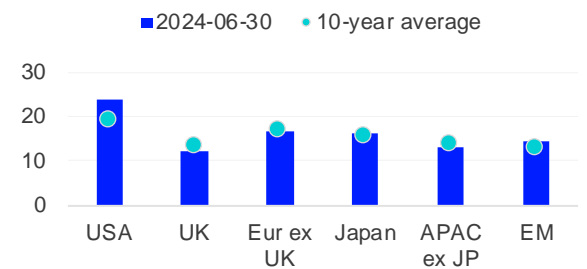
Size - 12M forward P/E



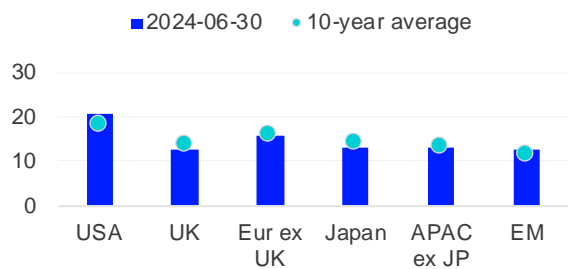
Momentum - 12M forward P/E



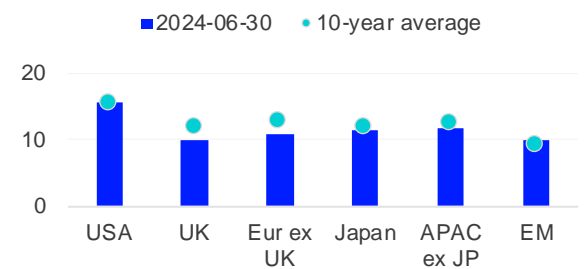
Quality - 12M forward PE



Low Volatility - 12M forward PE



Yield - 12M forward PE



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

US Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- Quality and Momentum outperformed the benchmark in Q2, helped by positive allocation and selection effects in Technology, which contributed substantially to benchmark returns.
- Other US factors were hurt by their underweight to Tech. Size, which lagged the benchmark the most, also had negative selection within Technology, Discretionary and Health Care.
- Over 12M, Momentum and Quality outperformed, while Size and Yield lagged the most.
- Factor forward P/Es derated in Q2, except for US Quality. Absolute 12M forward P/Es were above their 10-year averages for all but Size.
- In relative terms, Quality was the sole factor that traded above its long-term average at quarter-end.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

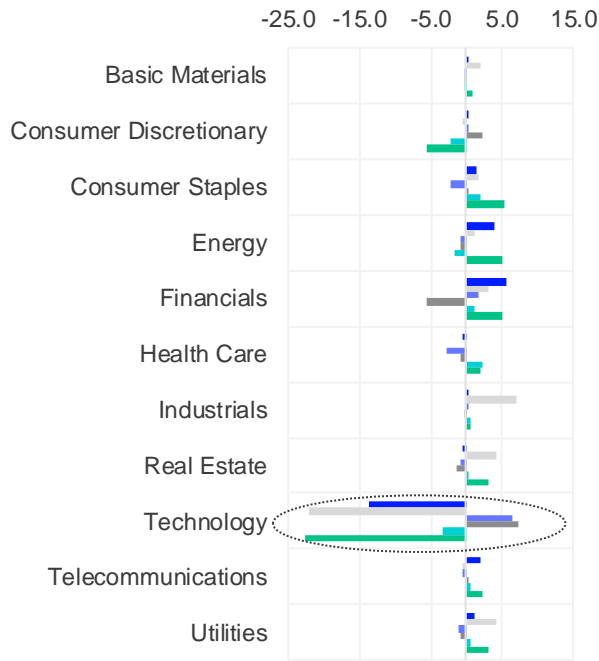
US Factor Performance & Industry Attributions — 3M

Tech exposure supports Quality and Momentum

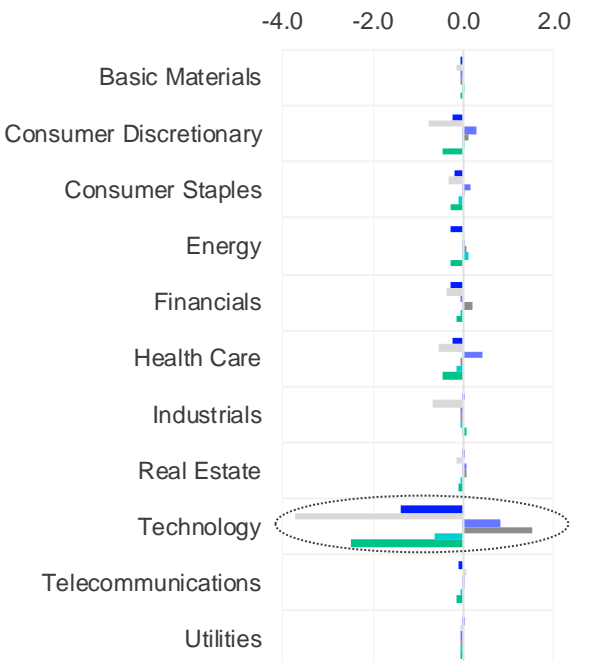
Quality and Momentum outperformed over 3M, helped by their overweight to Tech stocks, which have contributed substantially to the benchmark's return with positive allocation and selection effects. Conversely, other US factors were hurt by their underexposure to Tech. Selection effects within Discretionary and Health Care also helped Momentum.

2024 Q2	Relative to Benchmark (TR %)					
FTSE USA	Value	Size	Mom	Quality	Low Vol	Yield
4.1%	-2.7	-6.6	1.6	2.0	-0.9	-4.3

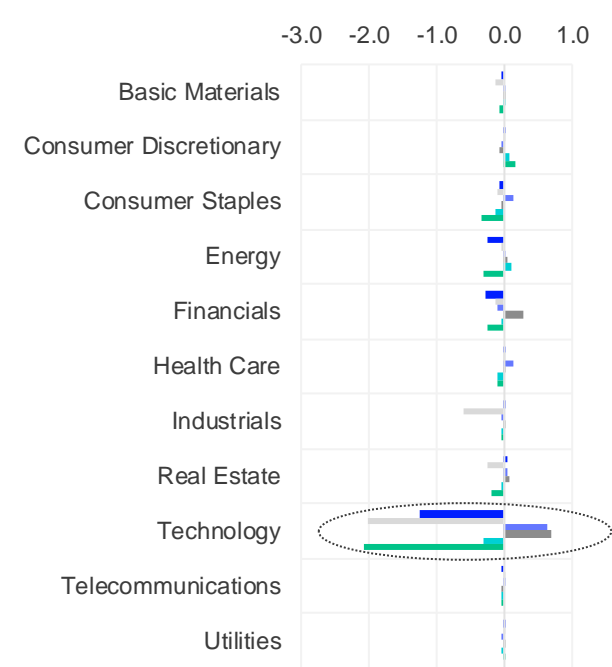
Industry active weights, 3M average



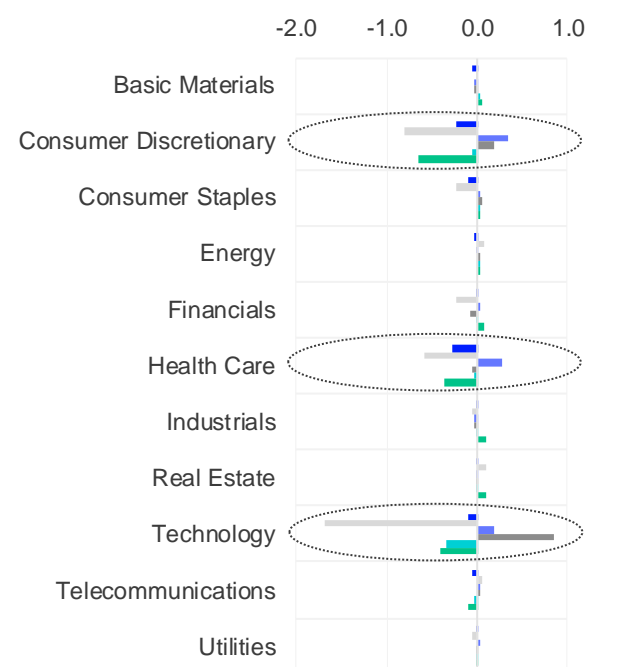
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M



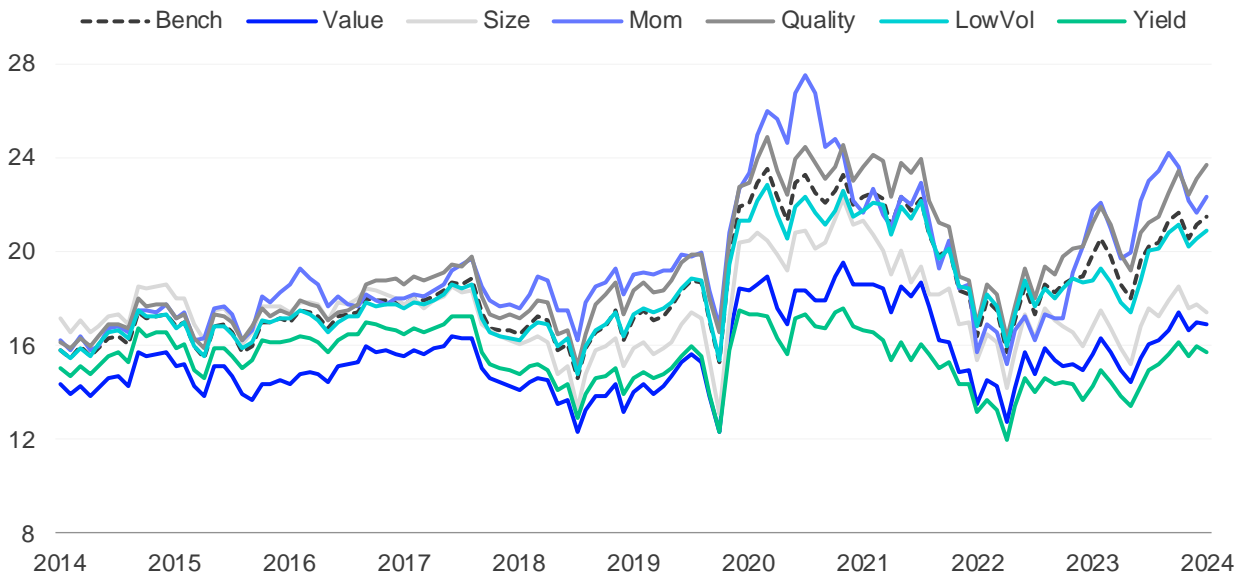
Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

US Factor Valuations

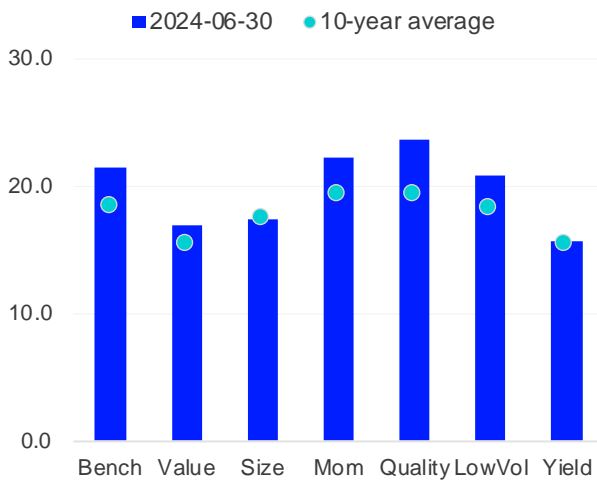
US factor forward P/Es moderated and valuations were lower at the end of Q2 from the previous quarter for all but US Quality, which continued to re-rate as it has in the past two years. Absolute 12M factor forward P/Es are higher than their 10-year averages for all US factors except Size. Quality traded at the largest premium to its long-term average compared to other factors, and at a 40% premium to Value, higher than the 10-year average Quality-Value premium of 25%.

In relative terms, Quality was the sole factor to trade above its 10-year average, but Momentum was not far behind its long-term average.

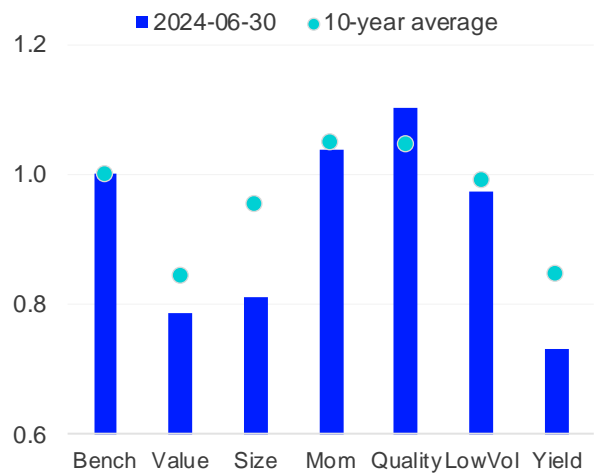
FTSE USA – Absolute 12M forward P/Es



Current Absolute 12M forward P/E vs history



Current Relative 12M forward P/E vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

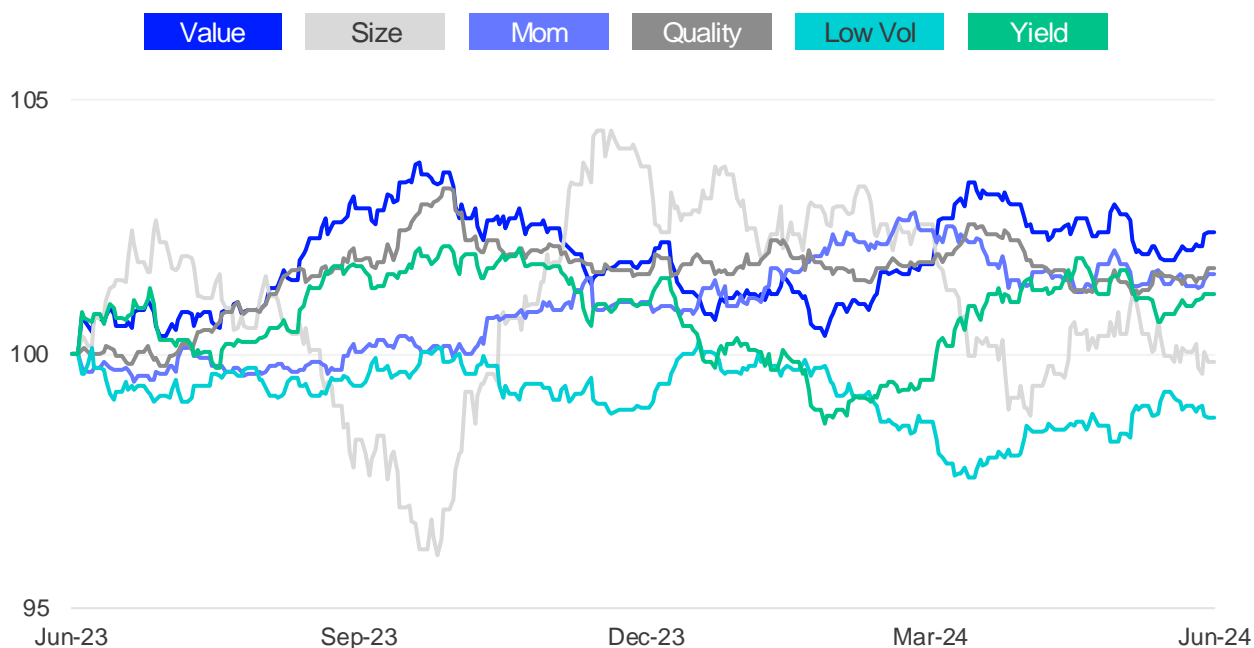
UK Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- UK Value and Yield outperformed the benchmark and Momentum underperformed in Q2. This was a reversal from Q1.
- Value and Yield benefited from positive selection within Financials and Staples, and from their underweight to Industrials, which detracted from index returns.
- Over 12M, Value, Quality, Momentum and Yield outperformed, while Low Vol and Size lagged the benchmark.
- Factor forward P/Es diverged in Q2. Absolute 12M forward P/Es expanded for Quality, Low Vol and Yield, and contracted for Value, Size and Momentum.
- In relative terms, all factors traded below their long-term averages. Relative forward P/Es for Quality and Low Vol were only slightly below their 10-year averages.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

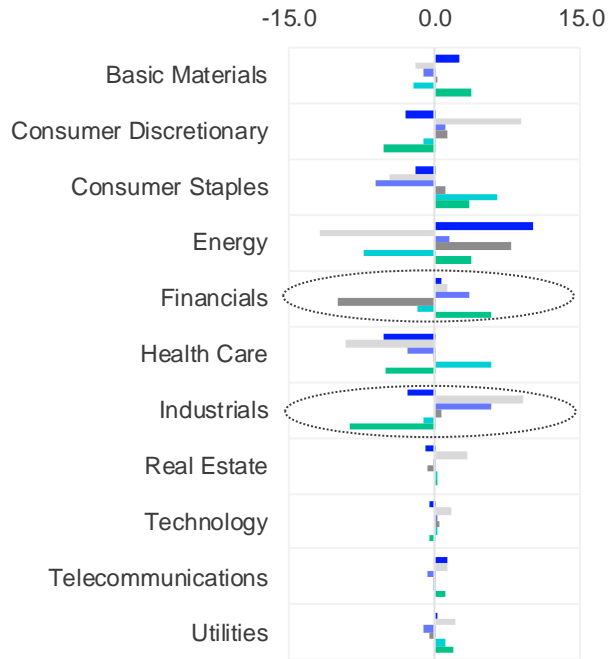
UK Factor Performance & Industry Attribution — 3M

UK Value and Yield lead, (Small) Size lags most

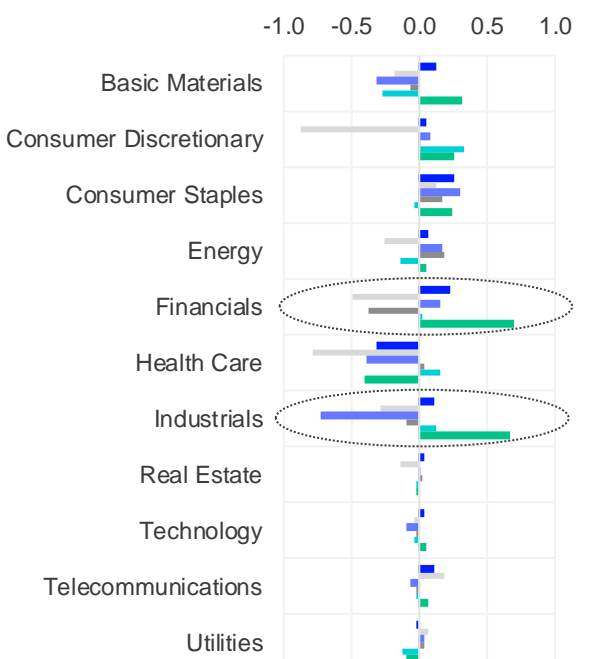
Value and Yield outperformed and Momentum underperformed the benchmark in a reversal from Q1. Size continued to lag. Value and Yield benefited from their underweight to Industrials, which detracted from index returns. They were also helped by positive selection within Financials and Staples. Size was hurt by its exposure to Industrials and negative selection effects within Financials, Health Care and Discretionary.

2024 Q2	Relative to Benchmark (TR %)					
FTSE UK	Value	Size	Mom	Quality	Low Vol	Yield
3.0%	0.6	-2.7	-0.9	-0.1	0.1	1.8

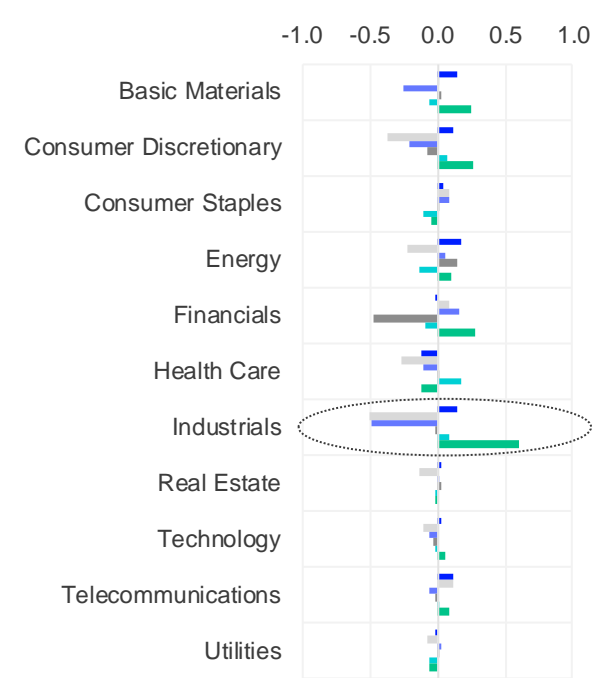
Industry active weights, 3M average



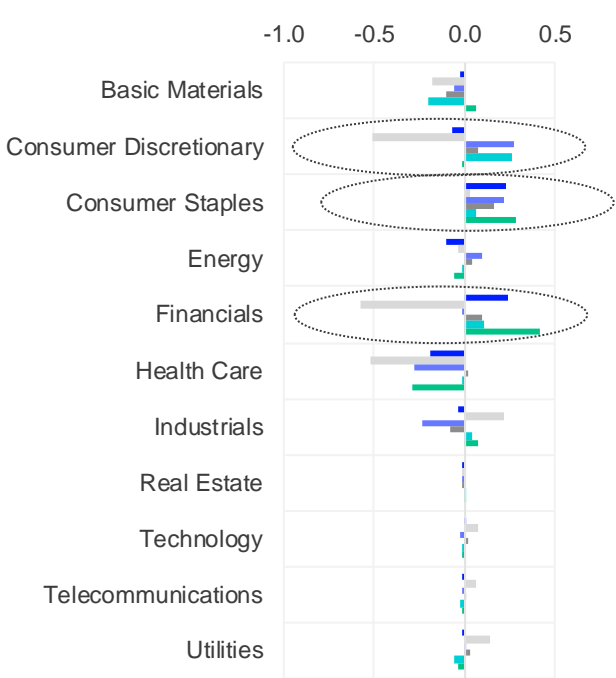
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M



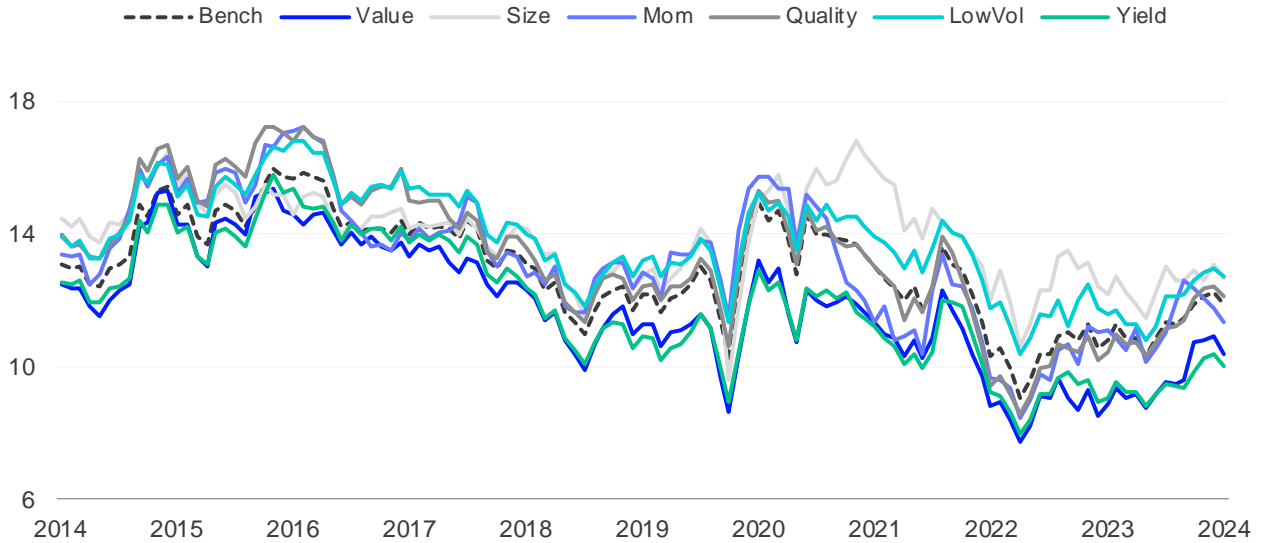
Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

UK Factor Valuations

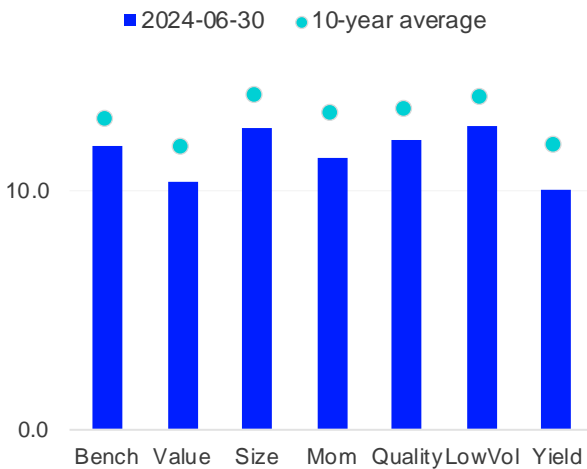
UK factor forward P/Es for Quality, Low Vol and Yield expanded in Q2, as they have over the last two years, but they moderated for Value, Size and, particularly, Momentum. They remain well below their 10-year averages in absolute terms. The Quality-Value premium is at 17%, slightly above the 10-year average premium of 13%.

In relative terms, Value, Momentum and Yield traded well below their long-term averages while Quality and Low Vol's relative forward P/Es were just slightly below their 10-year averages. Low Vol remains the most expensive UK factor on both an absolute and relative basis.

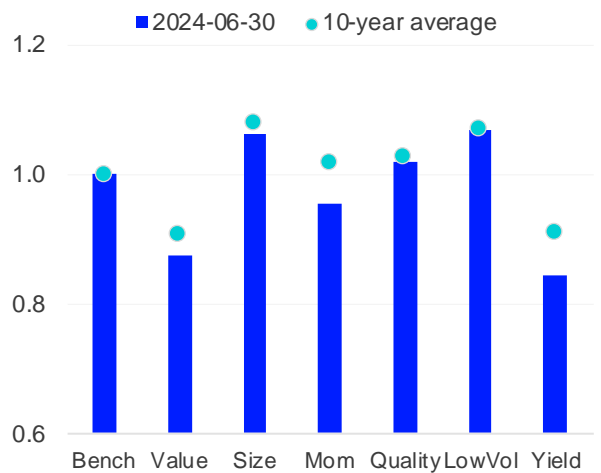
FTSE UK – Absolute 12M forward P/Es



Current Absolute 12M forward P/Es vs history



Current Relative 12M forward P/Es vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Europe ex UK Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- Low Vol outperformed the benchmark the most in a reversal from Q1. Momentum and Quality continued their outperformance from the previous quarter.
- Low Vol was helped by positive allocation in Health Care, which was one of the better performing UK industries. Size, Value and Yield were hurt by their underweights to Health Care and Technology.
- Over 12M, Momentum outpaced other factors in terms of its relative performance. Size lagged the most.
- Factor forward P/E's de-rated in Q2 in a reversal from Q1. Momentum's valuation contracted the most. Most absolute forward P/E's except for Quality traded below their 10-year averages.
- In relative terms, Quality and Low Vol remained the most expensive and above their 10-year averages.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

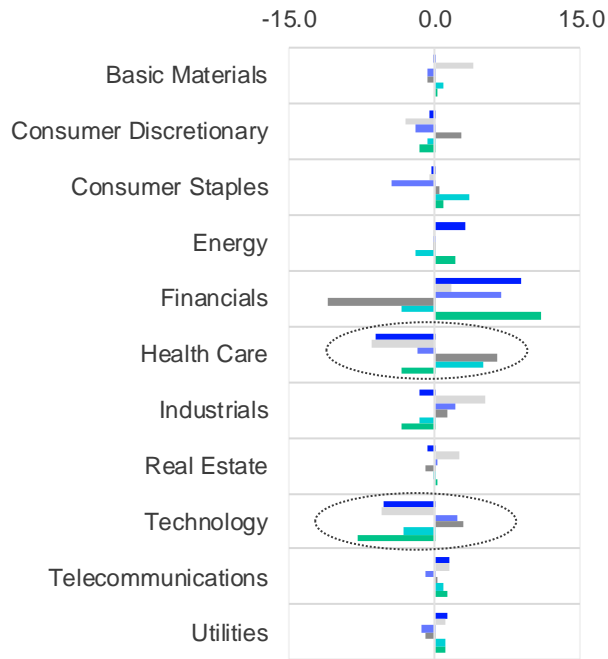
Europe ex UK Factor Performance & Industry Attribution — 3M

Low Vol and Quality on top

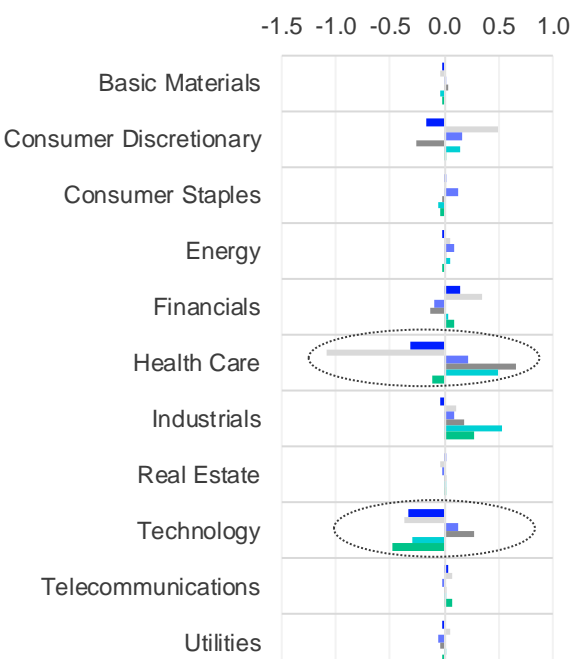
While Momentum and Quality continued their outperformance of the benchmark, Low Vol was on top in Q2 in a reversal from the previous quarter. Quality benefited from positive allocation and selection within Health Care and Tech. Low Vol was helped by positive allocation in Health Care and selection within Industrials and Health Care. Size, Value and Yield were hurt by their underweights to Health Care and Tech.

2024 Q2	Relative to Benchmark (TR %)					
FTSE Dev Europe ex UK	Value	Size	Mom	Quality	Low Vol	Yield
0.6%	-0.7	-0.6	0.5	0.8	0.9	-0.2

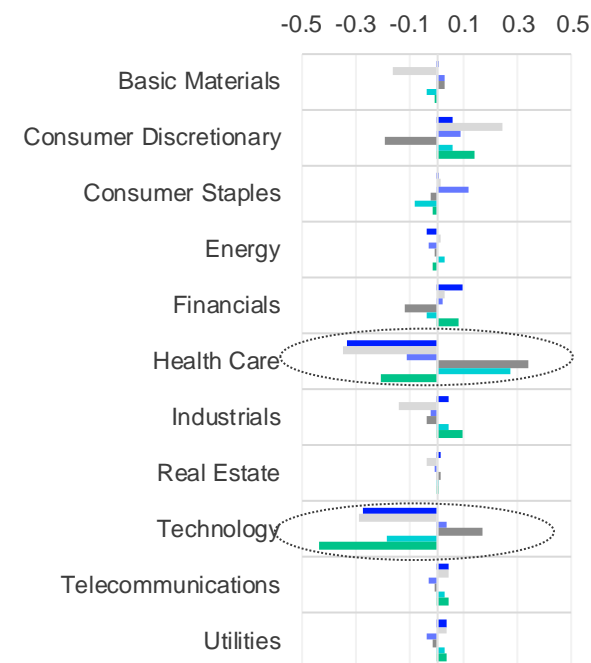
Industry active weights, 3M average



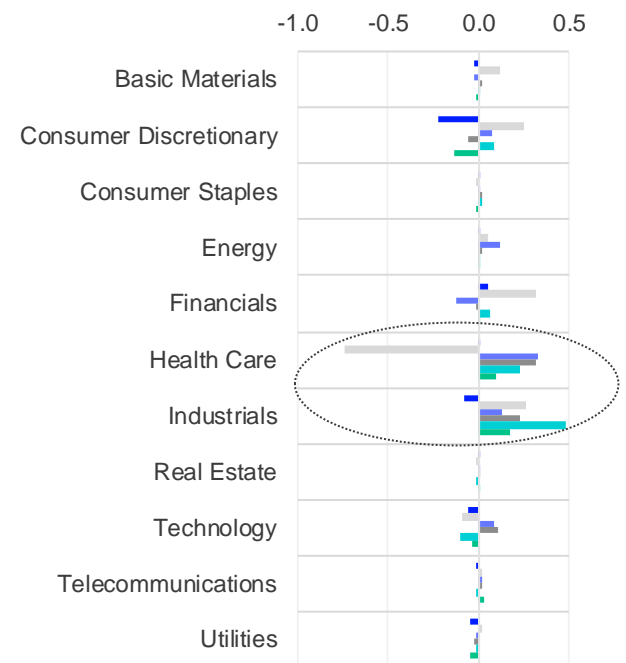
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M



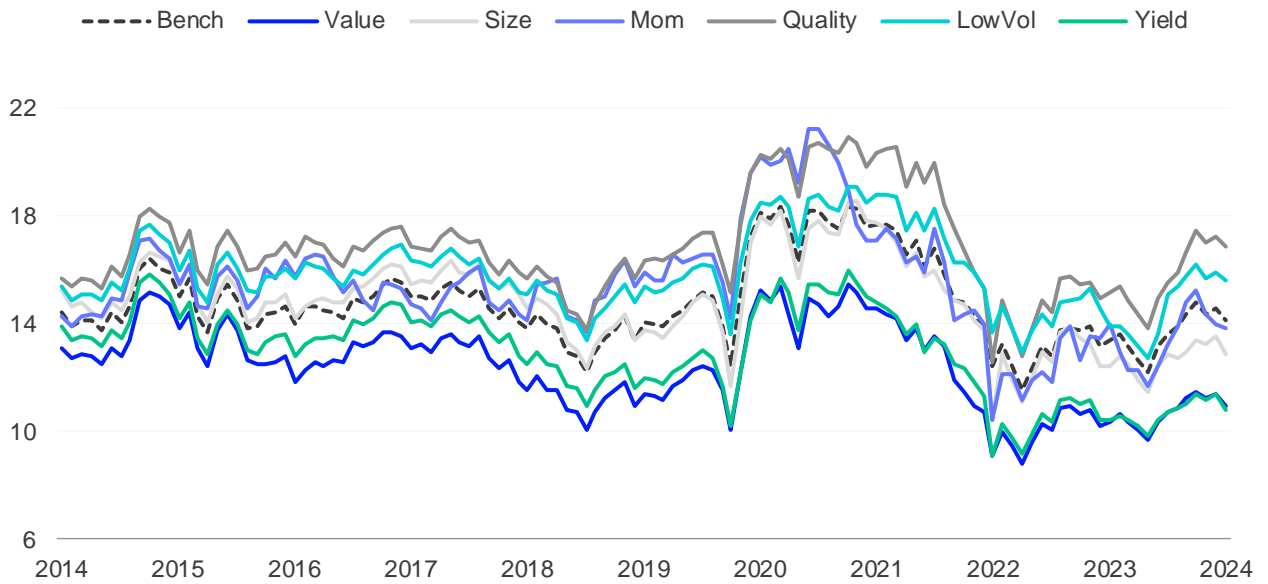
Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Europe ex UK Factor Valuations

Factor forward P/Es in Europe de-rated in Q2 in a reversal from Q1, with the largest contraction seen in Momentum, even as the factor modestly outperformed the benchmark over the quarter. Absolute forward P/Es for all but the Quality factor traded below their 10-year average PEs at quarter-end. Quality traded at a 54% premium to Value, higher than the historical premium of 36%.

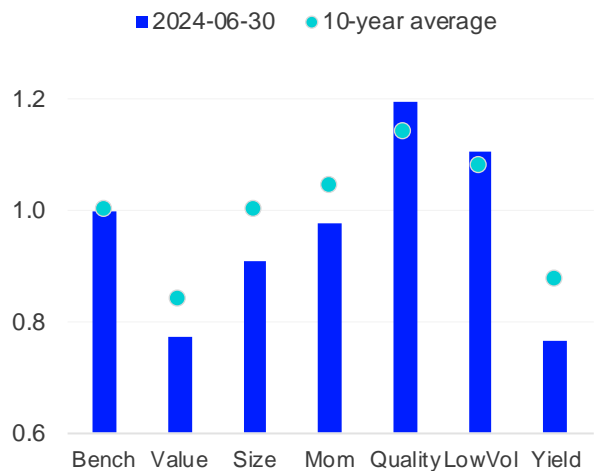
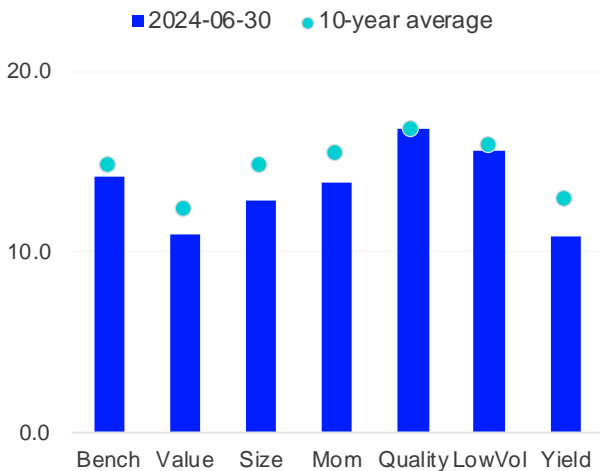
In relative terms, Quality and Low Vol remained the most expensive and above their 10-year averages, while the other factors traded below historical averages in relative terms.

FTSE Europe ex UK – Absolute 12M forward P/Es



Current Absolute 12M forward P/Es vs history

Current Relative 12M forward P/Es vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

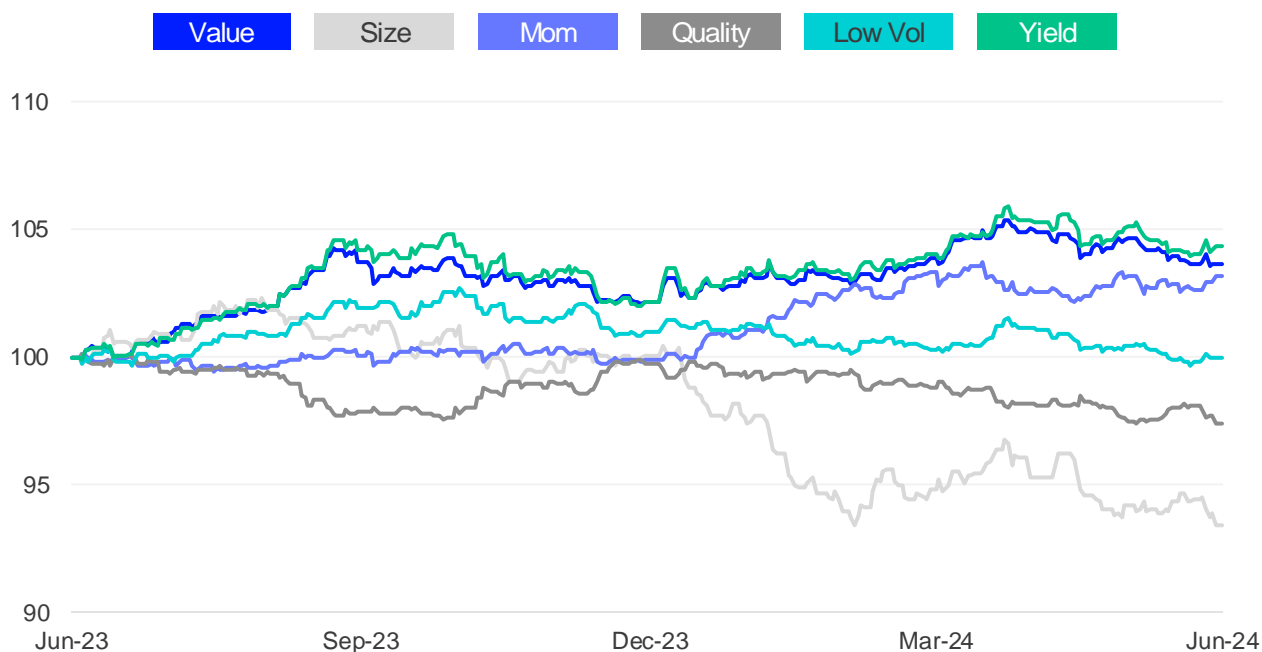
Japan Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- Yield was the only factor to outperform the benchmark in Q2. Size and Quality lagged the most.
- Yield benefited from its overweight to Financials and positive selection within Technology and Staples.
- Over 12M, Yield led relative returns, while Size lagged the most.
- Factor forward P/Es derated over Q2. Size experienced the largest pullback in valuation. Quality and Value continued to trade above their long-term averages.
- In relative terms as well, Quality and Value traded above their 10-year averages.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

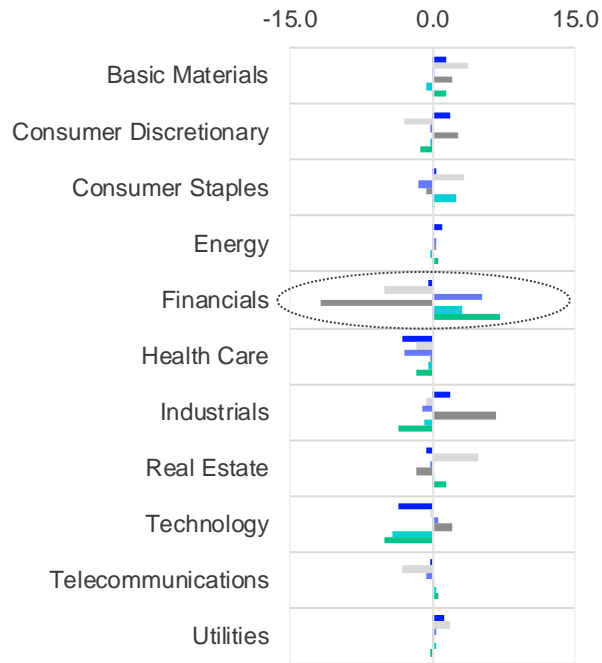
Japan Factor Performance & Industry Attribution — 3M

Yield is the sole outperformer

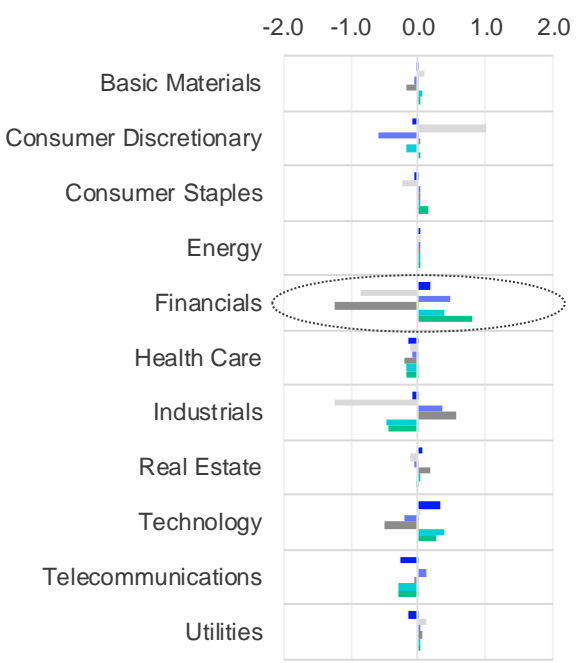
Yield was the sole factor to outperform the benchmark in Q2. Size and Quality continued to underperform. Yield benefited from its overweight to Financials and positive selection within Tech and Staples. Conversely, Size and Quality were hurt by their underweight to Financials with negative allocation effects. Size also had a large negative selection effect within Industrials, as did Momentum within Discretionary.

2024 Q2	Relative to Benchmark (TR %)					
FTSE Japan	Value	Size	Mom	Quality	Low Vol	Yield
1.4%	-0.2	-1.5	-0.2	-1.5	-0.3	0.3

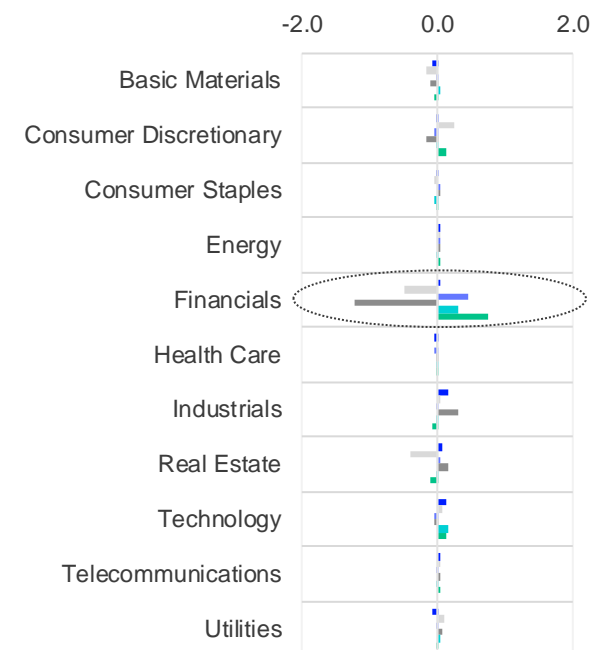
Industry active weights, 3M average



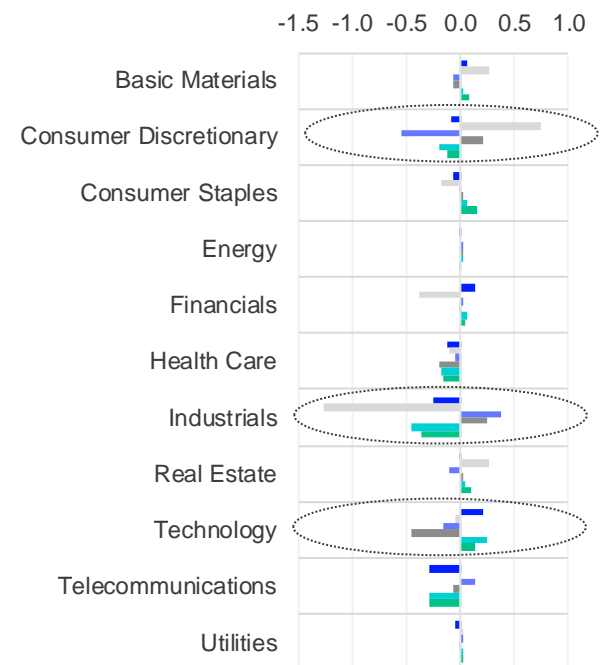
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M



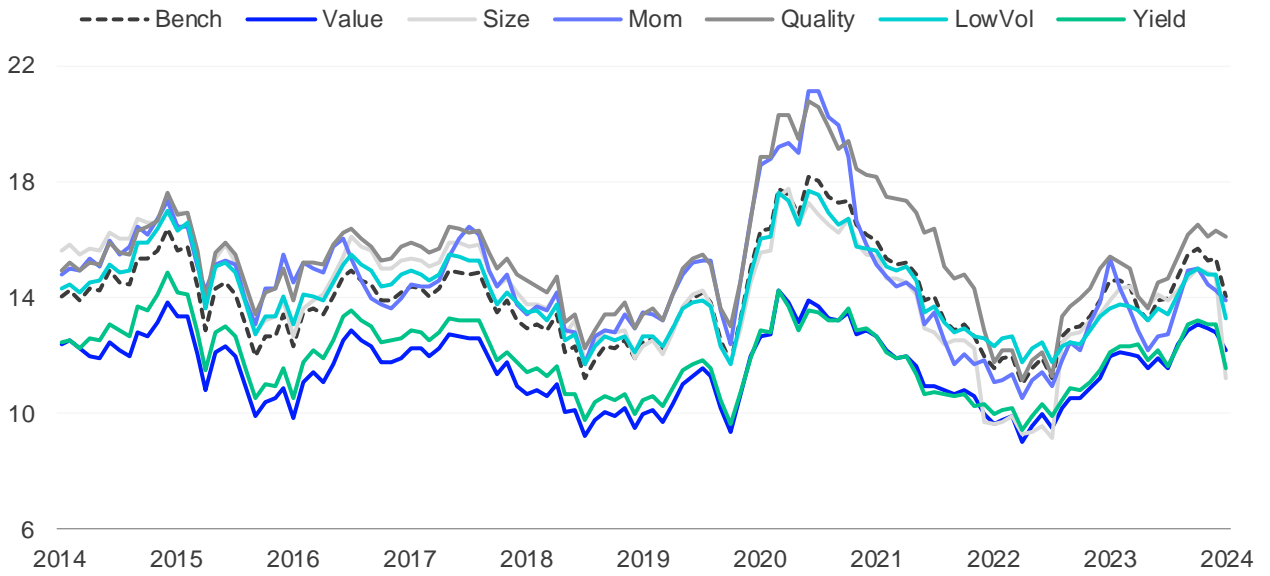
Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Japan Factor Valuations

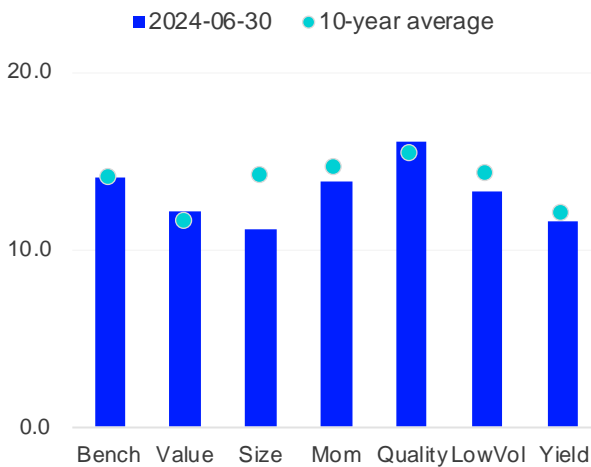
Factor forward P/Es for all Japan factors contracted over Q2 with Size experiencing the largest pullback in valuation. Q2's moves led absolute forward P/Es for Momentum, Low Vol and Yield to fall below their 10-year averages, while Quality and Value continued to trade above their long-term averages. The Quality-Value premium is on par with its historical average at 33%.

In relative terms, Quality joined Value over the quarter in trading above its 10-year average. Size traded at the largest discount to its long-term average.

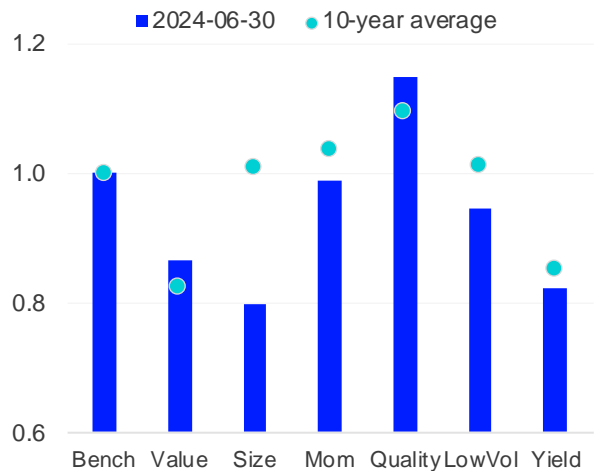
FTSE Japan – Absolute 12M forward P/Es



Current Absolute 12M P/Es vs history



Current Relative 12M P/Es vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

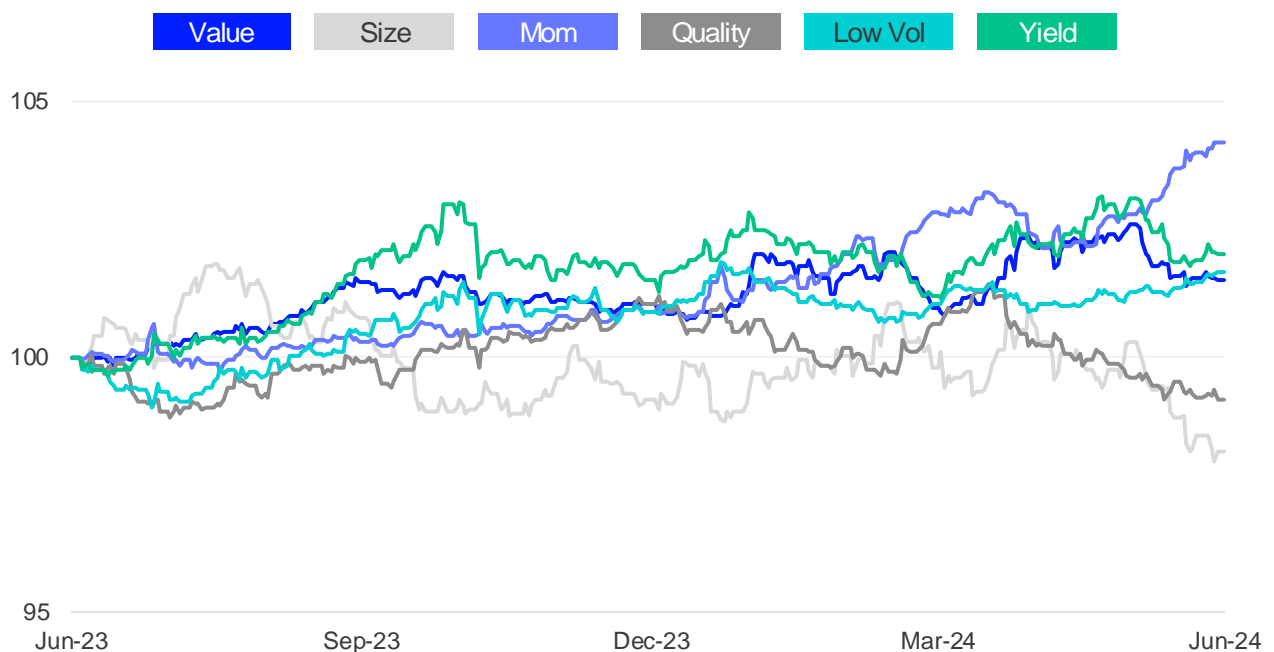
Asia Pacific ex Japan Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- Momentum led factor relative performance, while Size and Quality lagged the most.
- Momentum benefited from positive allocation and selection effects within Technology and Financials, the top contributing industries. Size and Quality were hurt by, among other things, their underweight to Financials.
- Over 12M, Momentum led factor performance, while Size lagged the most.
- Factor forward P/Es contracted in Q2 and Momentum experienced the largest fall in valuation. After Q2's moves all factors traded below their long-term average for absolute 12M forward P/Es.
- In relative terms, Low Vol and Quality traded just above their 10-year average at quarter-end.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

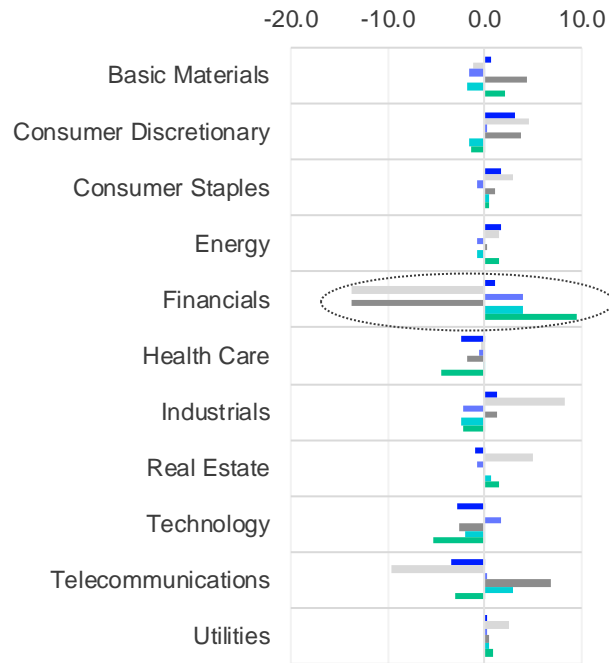
Asia Pac ex Japan Factor Performance & Industry Attribution — 3M

Momentum continues to lead in Q2

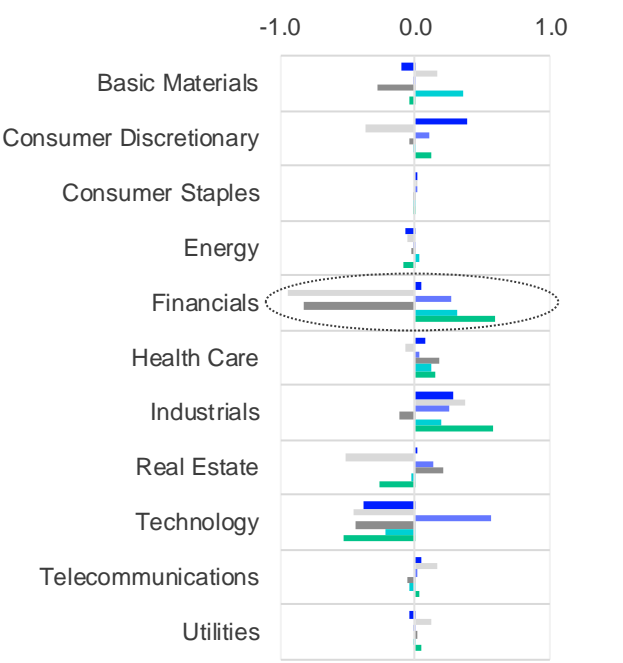
Momentum outperformed the benchmark, followed by Yield, Value and Low Vol. Size and Quality underperformed. Momentum benefited from positive allocation and selection effects within Tech and Financials. Yield was helped by positive allocation to Financials and selection within Industrials. Size and Quality were notably hurt by their underweight to Financials and negative selection within Discretionary, Tech and Financials.

2024 Q2	Relative to Benchmark (TR%)					
FTSE Dev Asia Pacific exJP	Value	Size	Mom	Quality	Low Vol	Yield
0.6%	0.6	-1.6	1.3	-1.5	0.6	0.8

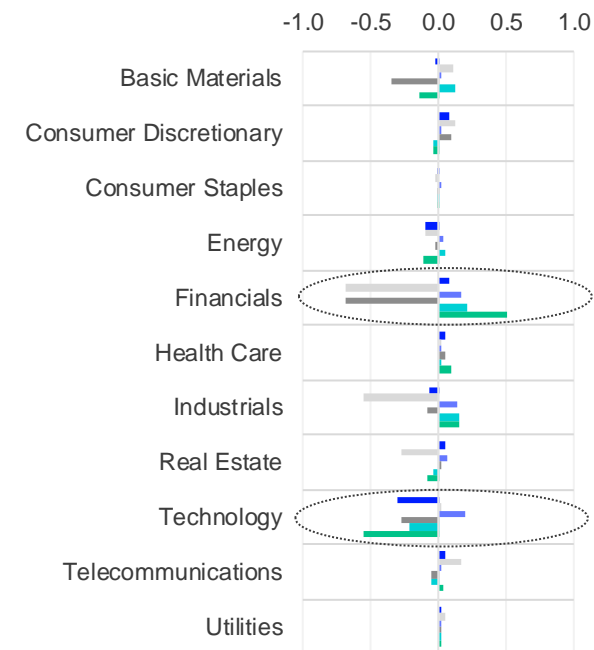
Industry active weights, 3M average



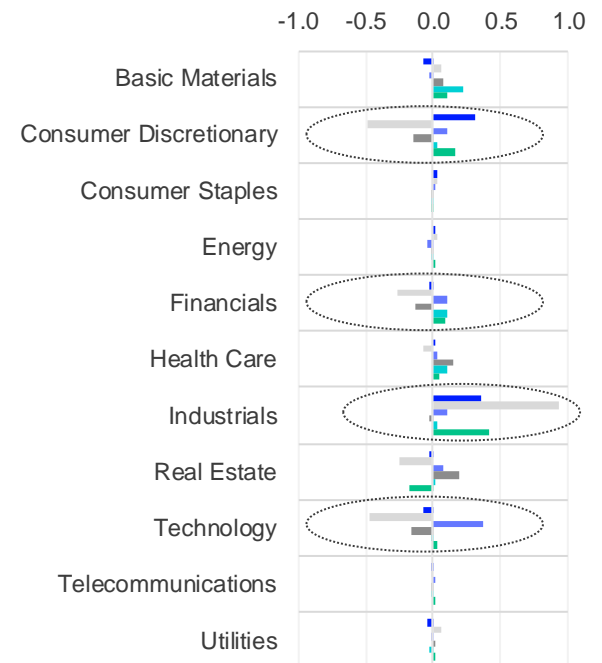
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M



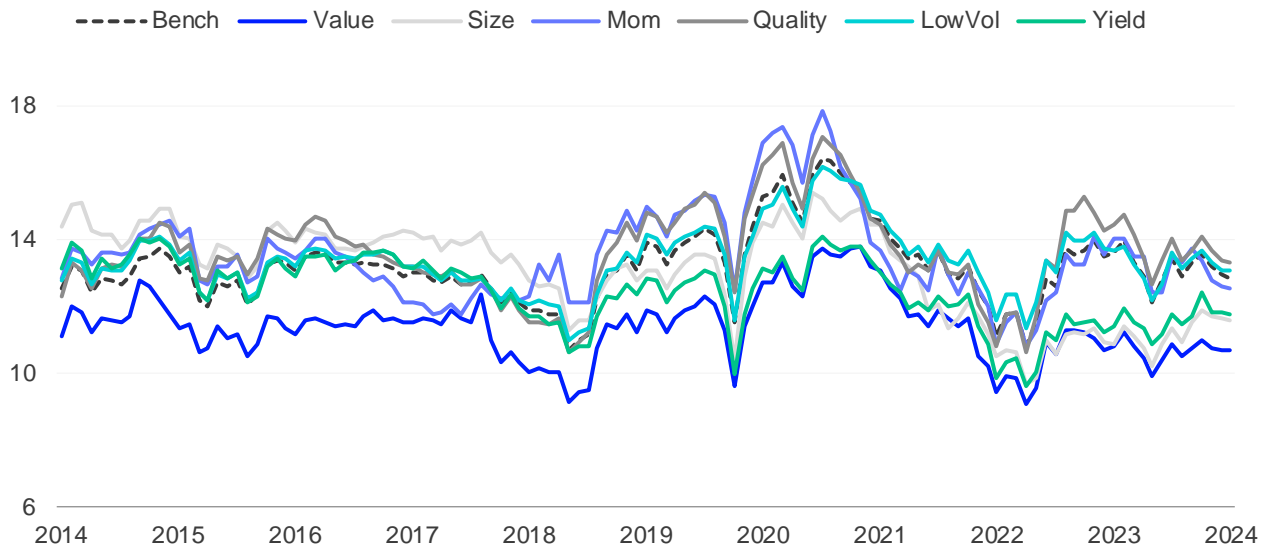
Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Asia Pacific ex Japan Factor Valuations

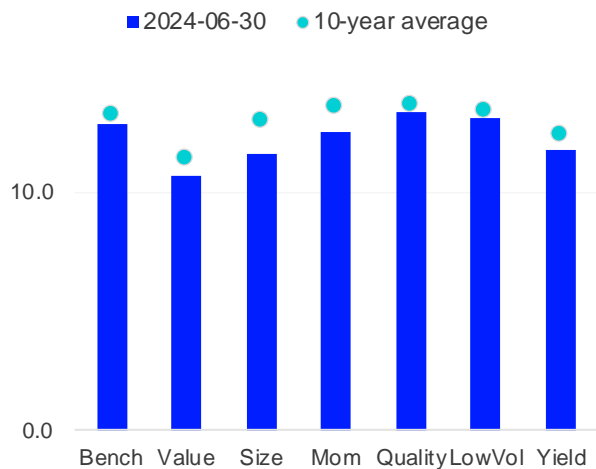
Asia Pacific ex Japan factor forward P/Es contracted in Q2, with Momentum experiencing the largest fall in valuation even as the factor outperformed the benchmark. Q2's moves pulled absolute forward P/Es below their long-term averages for all factors except Size which was already trading below the 10-year average. The Quality/Value premium declined to 25% but was still above its 10-year average of 20% at quarter-end.

In relative terms, Low Vol joined Quality in trading just above its 10-year average.

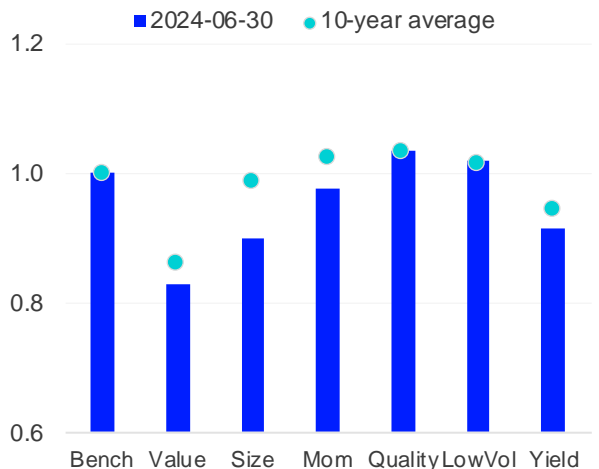
FTSE Asia Pacific ex Japan – Absolute 12M forward P/Es



Current Absolute 12M forward P/Es vs history



Current Relative 12M forward P/Es vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Emerging Markets Equity Factor Insights

SECOND QUARTER | 2024

Key Observations

- All EM factors except Size and Yield outperformed the benchmark in Q2. Momentum led, as it did in Q1, followed by Quality, Low Vol and Value. Size lagged the most.
- Allocation and selection effects within Tech continued to drive the bulk of EM factor performance.
- Over 12M, Momentum outpaced other factors, while Size lagged the most relative to the benchmark.
- All EM factor forward P/Es expanded during Q2 as they have over the last two years. In absolute terms, 12M forward P/Es for all factors were above their 10-year averages.
- In relative terms, Value, Quality, Low Vol and Yield traded at a premium to their long-term averages, while Size and Momentum traded at a discount.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

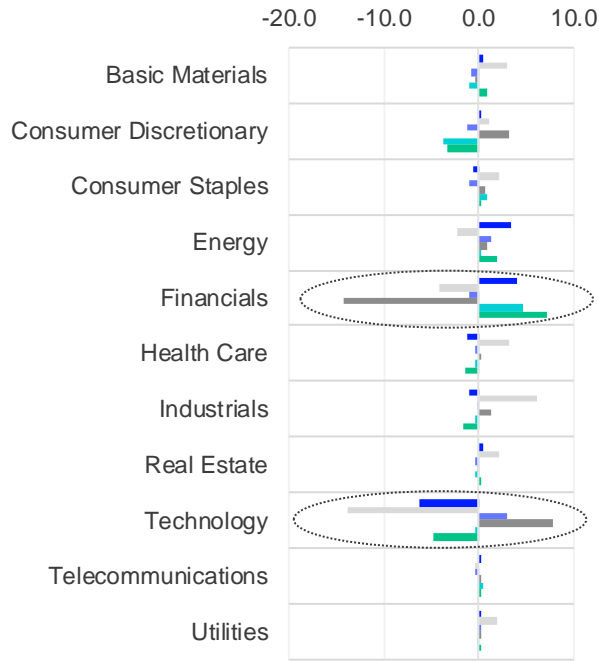
Emerging Markets Factor Performance & Industry Attribution — 3M

Momentum maintains lead

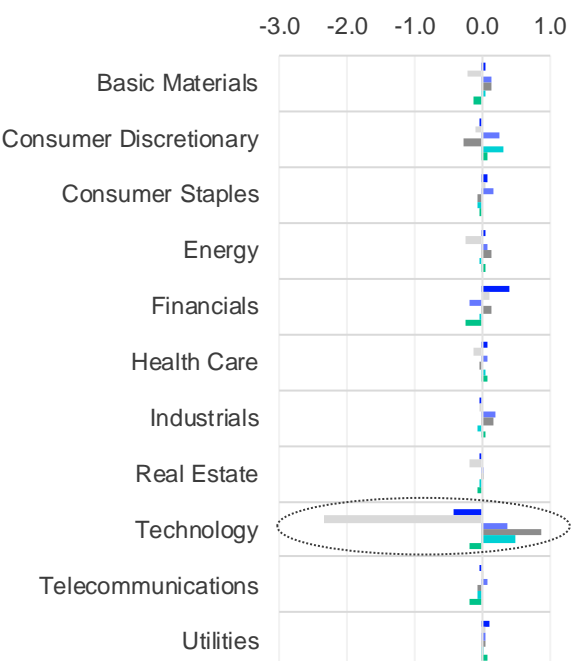
All EM factors except Size and Yield outperformed the benchmark in Q2. Momentum maintained the lead, followed by Quality, Low Vol and Value. Size lagged the most. Allocation and selection effects within Tech continued to drive the bulk of EM factor performance. Momentum also benefited from positive selection within several industries, notably Discretionary and Industrials. Value was helped by strong selection within Financials.

2024 Q2	Relative to Benchmark (TR %)					
FTSE Emerging	Value	Size	Mom	Quality	Low Vol	Yield
6.9%	0.5	-3.0	1.3	1.1	0.7	-0.5

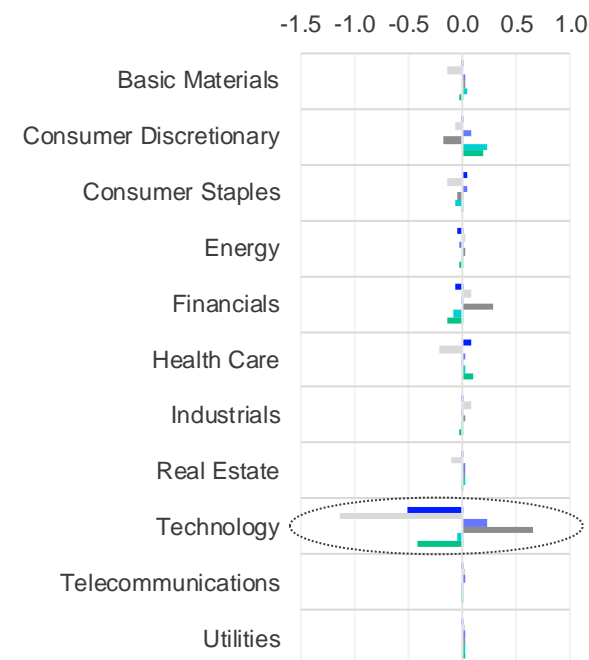
Industry active weights, 3M average



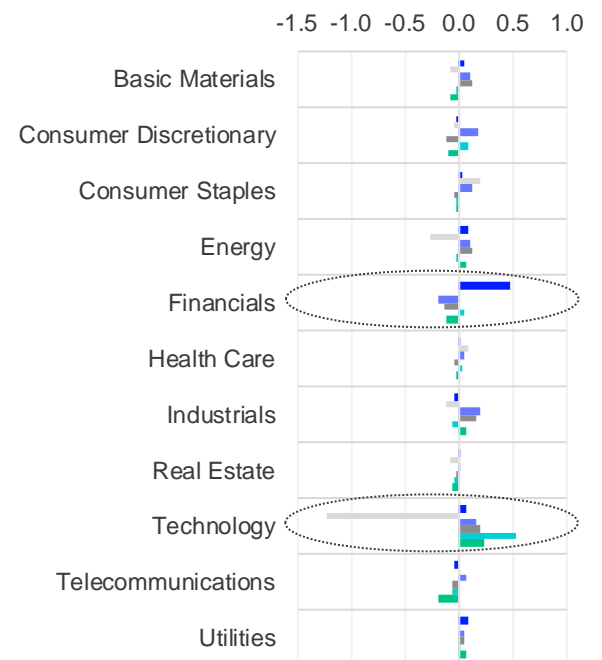
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M

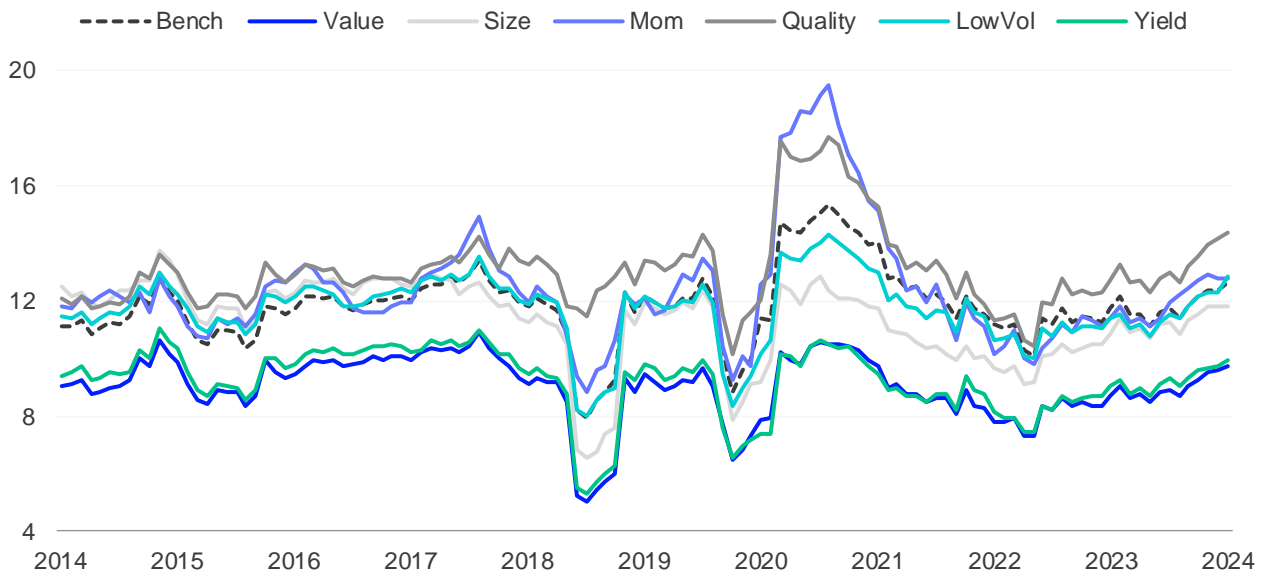


Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

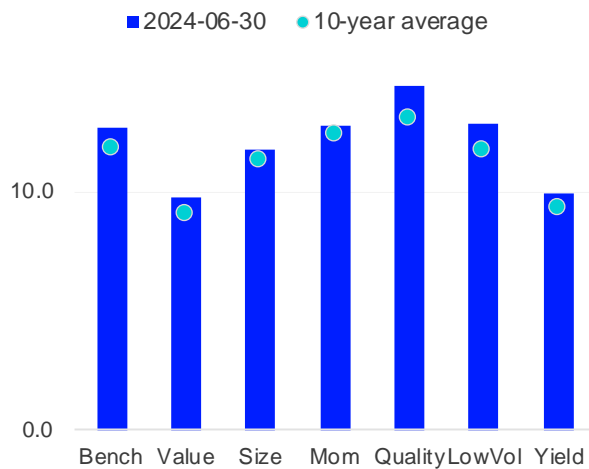
Emerging Markets Factor Valuations

All EM factor forward P/E's expanded during Q2 as they have over the last two years. In absolute terms, 12M forward P/E's for all factors were above their 10-year averages, with Quality trading at the largest premium to its long-term average followed by Low Vol. The Quality/Value premium expanded to 48%, above its long-term average of 45%. In relative terms, Value, Quality, Low Vol and Yield traded at a premium to their long-term averages, while Size and Momentum traded at a discount.

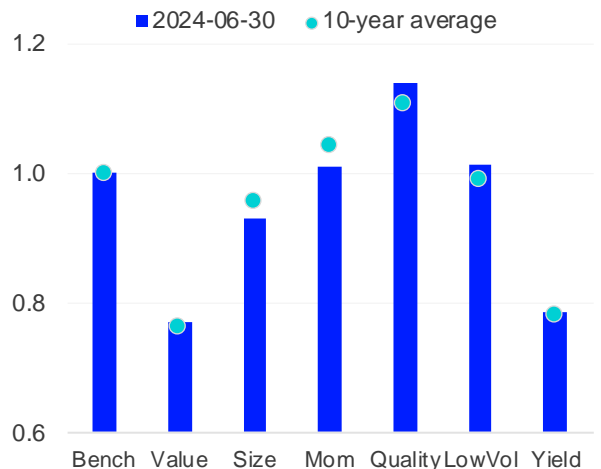
FTSE Emerging – Absolute 12M forward P/E's



Current Absolute 12M forward P/E's vs history



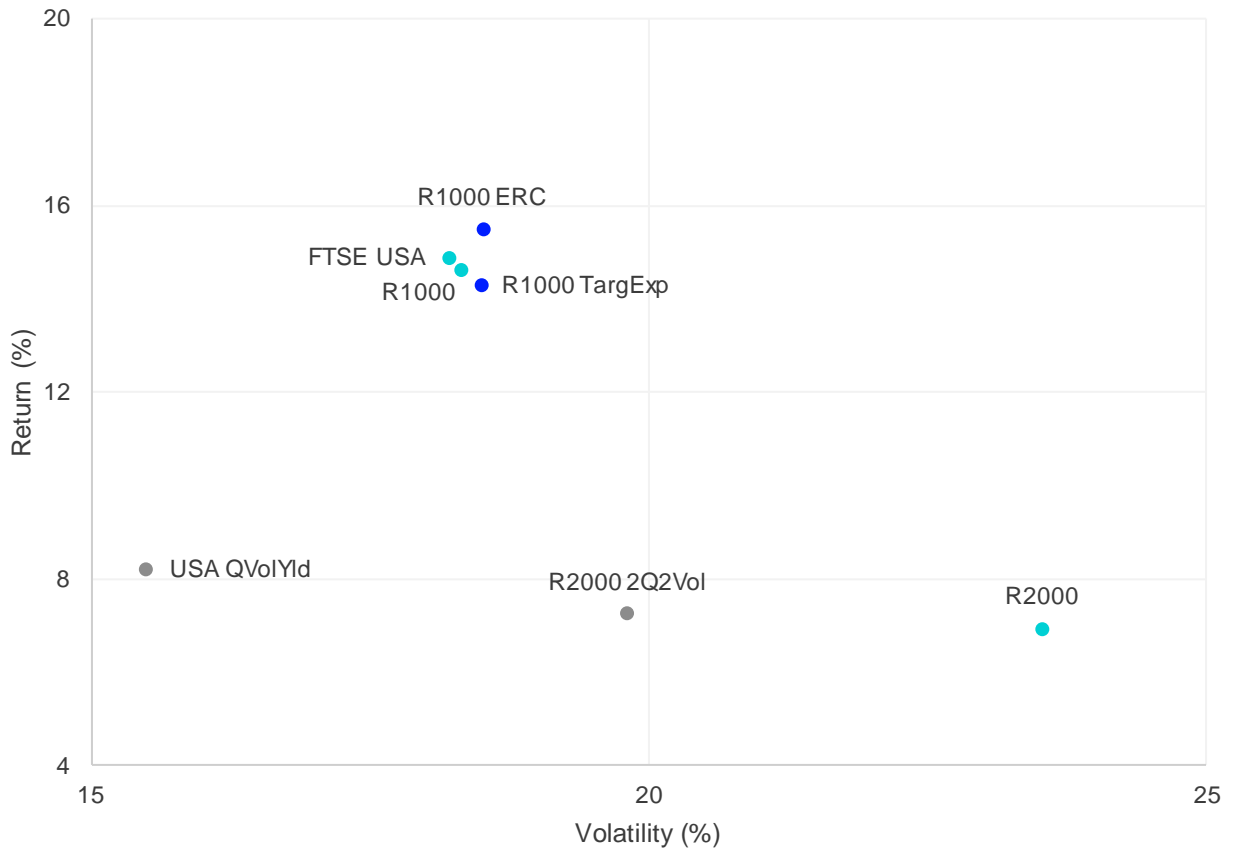
Current Relative 12M forward P/E's vs history



Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

FTSE Russell US Factor Index Risk/Return Performance

5-Year Annualized Return and Volatility (USD)



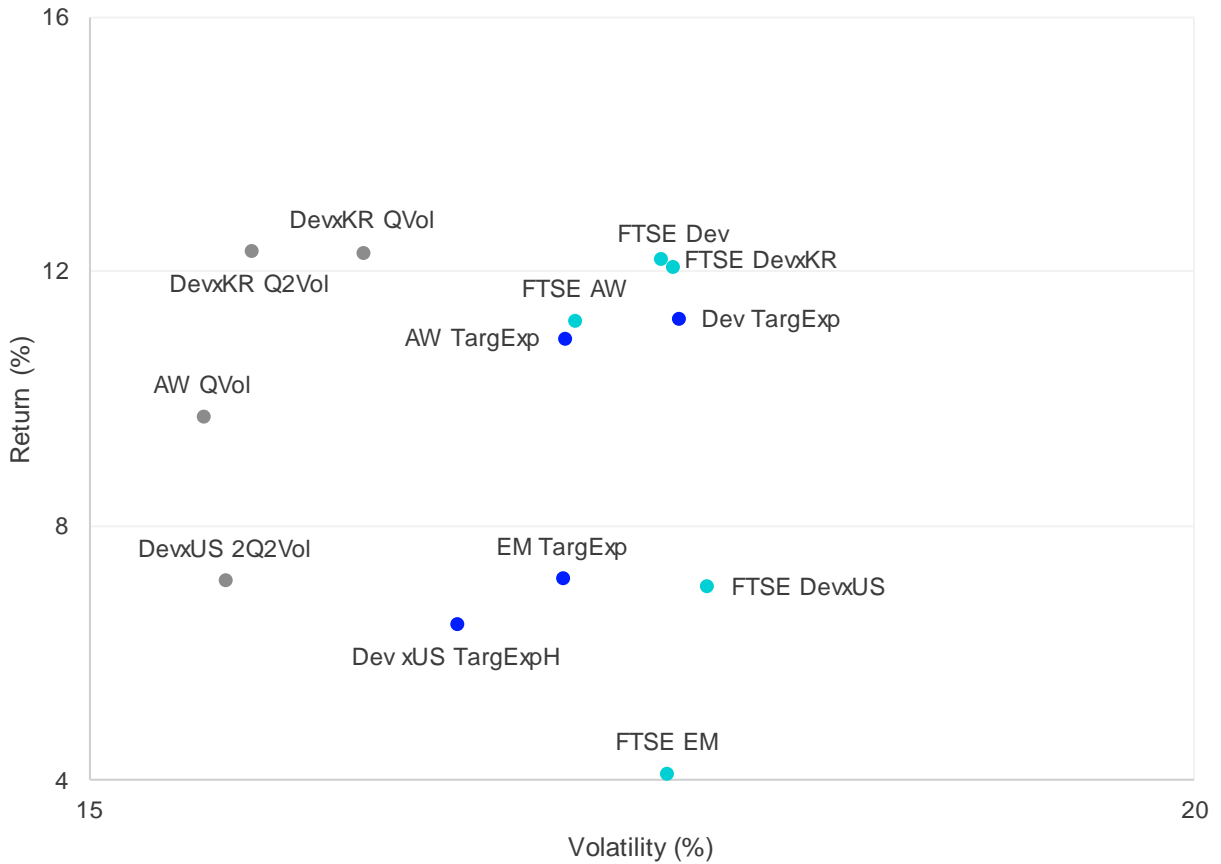
Annualized Returns and Volatility (USD %)

Label	Index	1-yr return	5-yr return	5-yr volatility
Diversified Indices				
● R1000 ERC	Russell 1000 Comprehensive Equal Factor Risk Contribution	25.5	15.5	18.5
● R1000 TargExp	Russell 1000 Comprehensive Target Exposure Factor Index	22.1	14.3	18.5
Defensive Indices				
● R2000 2Q2Vol	Russell 2000 2Qual/2Vol 3% Capped Factor Index	11.3	7.3	19.8
● USA QVolYld	FTSE USA Qual/Vol/Yield Factor Index	6.6	8.2	15.5
Benchmarks				
● FTSE USA	FTSE USA Index	24.6	14.9	18.2
● R1000	Russell 1000® Index	23.9	14.6	18.3
● R2000	Russell 2000® Index	10.1	6.9	23.5

Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

FTSE Russell Global Factor Index Risk/Return Performance

5-Year Annualized Return and Volatility (USD)



Annualized Return and Volatility (USD %)

Label	Index	1-yr return	5-yr return	5-yr volatility
Diversified Indices				
● AW TargExp	FTSE All-World Comprehensive Target Exposure Factor Index	18.8	11.0	17.1
● Dev TargExp	FTSE Developed Comprehensive Target Exposure Factor Index	19.2	11.3	17.7
● Dev xUS TargExpH	FTSE Developed ex US Comprehensive High Target Exposure	15.8	6.5	16.7
● EM TargExp	FTSE Emerging Comprehensive Target Exposure Factor Index	15.8	7.2	17.1
Defensive Indices				
● AW Qvol	FTSE All-World Target Exposure Qual Vol Factor Index	16.1	9.7	15.5
● DevxKR Q2Vol	FTSE Developed ex Korea Qual/2 Vol Factor Index	13.5	12.3	15.7
● DevxKR QVol	FTSE Developed ex Korea Qual/Vol Factor Index	13.5	12.3	16.2
● DevxUS 2Q2Vol	FTSE Developed ex US 2Qual/2Vol 5% Capped Factor Index	10.0	7.1	15.6
Benchmarks				
● FTSE AW	FTSE All-World Index	19.7	11.2	17.2
● FTSE DevxKR	FTSE Developed ex Korea Index	20.5	12.2	17.6
● FTSE DevxUS	FTSE Developed Ex US Index	11.6	7.0	17.8
● FTSE Dev	FTSE Developed Index	20.4	12.1	17.6
● FTSE EM	FTSE Emerging Index	13.9	4.1	17.6

Source: FTSE Russell and LSEG. All data as of June 30, 2024. Past performance is no guarantee of future results.

Notes and Glossary

Notes on Market Maps Factor Data

FTSE Russell employs a bottom-up “tilting” approach to create factor indices. Factor scores are calculated that range from 0 to 1, with higher scores being better. The underlying cap-weighted benchmark weights are multiplied by these scores, and this product is renormalized to give the factor index weights.

Intuitively, the index weights start with the benchmark weights and “tilt” towards stocks with better factor scores and away from stocks with worse factor scores. The magnitude of the index’s factor exposure can be controlled by raising the factor scores by an exponent, with higher exponents yielding higher factor exposure. All data in this Market Maps Equity Factor Insights report is based on hypothetical factor indicators that use an exponent (or tilt size) of 1 and are rebalanced monthly. For more Information on Factor Index Ground Rules and Construction Methodology, see: [FTSE Global Factor Index Series Ground Rules v4.4, January 2019](#)

The base indices used in this report are the FTSE USA, FTSE UK, FTSE Developed Europe ex UK, FTSE Japan, FTSE Developed Asia Pacific ex Japan, and FTSE Emerging indices.

Glossary of Terms

VALUE

Earnings Yield (E/P) – Latest reported annual earnings per share divided by full market capitalization. Earnings are based on net income from continuing operations, before amortization of goodwill and extraordinary items and after tax, minority interests, preferred dividend, at fiscal year end.

Cash-Flow Yield (CF/P) – Latest reported annual cash-flow yield is cash earnings per share divided by full market capitalization. Cash earnings are earnings plus depreciation, amortization, deferred taxes, other non-cash items, extraordinary item and changes in working capital for the most recent fiscal year.

Sales-to-Price (S/P) – Latest annual sales from continuing operations per share for the full fiscal year divided by full market capitalization. Sales values are generally as reported but occasional adjustments may be made. They are also computed for banks, insurance and other financial companies based on appropriate definitions. Sales are attributed across different share classes, where common equity is comprised of more than one share type.

MOMENTUM: Measure of changes in total stock returns in local currency terms over those of the previous year excluding the most recent month.

SIZE: Size is calculated as the natural logarithm of each company’s full market capitalization in US dollars.

QUALITY

PROFITABILITY

Return on Assets (ROA) – Net income divided by average total assets, calculated relative to the regional median stock level.

Delta Turnover – Net sales revenue divided by average total assets, calculated relative to the regional median stock level.

Accruals – Net operating assets (NOA) for the most recent reporting period minus NOA from the previous reporting period, as calculated with following formula: Change in working capital + change in non-current net operating assets + change in net financial assets ([short-term investments + long-term investments] – [long-term debt + short-term debt + preferred stock]), divided by average total assets. Calculated relative to the regional median stock level.

LEVERAGE

Leverage Ratio – Operating cash flow divided by total debt. A company whose net operating cash flow is greater than total debt or has no debt is assigned a maximum Leverage Ratio of one.

VOLATILITY (LOW): Standard deviation of five years of weekly local total returns prior to the rebalance month. A minimum of 52 weekly return observations are required to calculate volatility.

YIELD

Dividend Yield 12M – Calculated as the natural logarithm of each company’s 12-month trailing dividend yield.



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