

Equity Factor Insights

QUARTERLY REPORT | **APRIL 2024**

Sustained equity rally puts Momentum on top for Q1

In broad equity rally, factor patterns generally hold

Momentum outperformed, indicating region-specific factor patterns generally held. Size and Low Vol underperformed in most regions in Q1, suggesting that larger and more cyclical stocks drove equity returns.

Cyclical industries, particularly Tech, influenced returns

Factor performance hinged largely on exposures to cyclicals, especially Tech, benefiting Momentum and hurting Value and Yield. Selection within cyclicals tended to favor larger stocks, and the (Small) Size factor struggled.

Value and Yield outperform in Japan and EM

In a reversal from Q4, Value and Yield outperformed in Japan that saw a historic monetary policy normalization in Q1. EM factor patterns continued to be distinct from those in major DMs, and Value, Yield, Low Vol & Quality outperformed.

Factor re-ratings continue

Factor forward P/Es continued to expand in Q1, reaching or surpassing their 10-year averages in most regions, particularly in the US. UK was an exception, where absolute P/Es, despite rerating, were well below historical averages.

CONTENTS

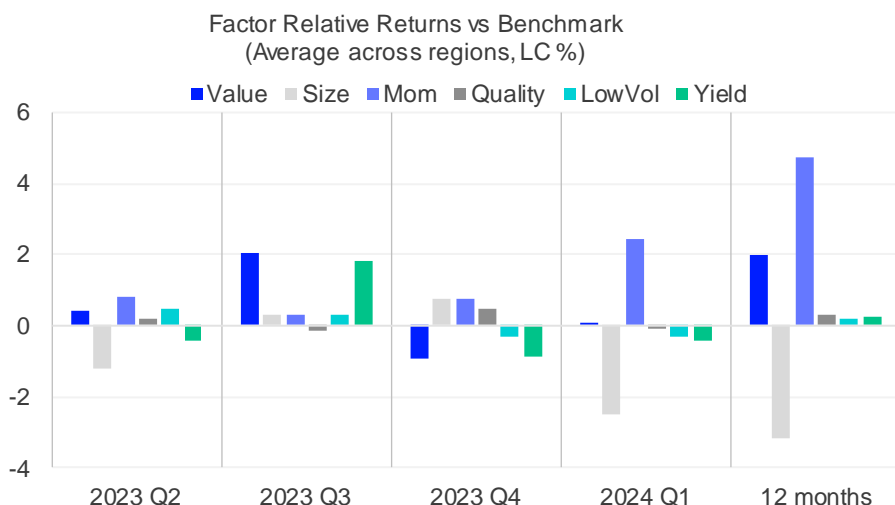
Global View	2
US	6
UK	9
Europe ex UK	12
Japan	15
Asia Pacific ex Japan	18
Emerging Markets	21
FTSE Russell Factor Indices	24
Notes and Glossary	26

AUTHORS

Mark Barnes PhD
Head of Global Investment
Research, Americas
Mark.Barnes@lseg.com

Indhu Raghavan, CFA
Investment Research Writer
Indhu.Raghavan@lseg.com

Regional Factor Performance Highlights



Select Regional Relative Returns, 3M (%)

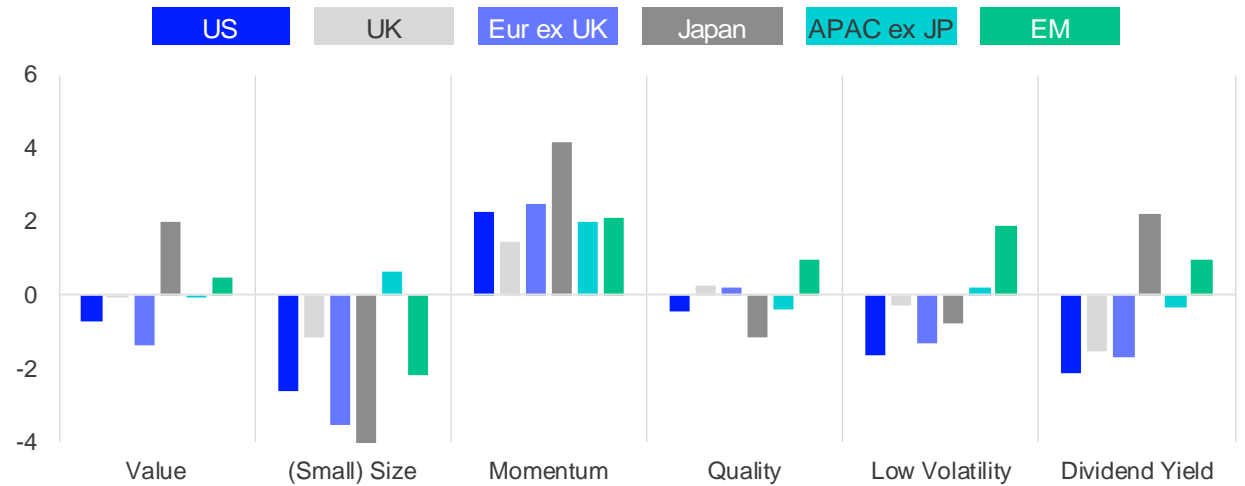
+2.3% US Momentum	+2.5% Europe ex UK Momentum
-2.6% US Size	-3.5% Europe ex UK Size
+4.1% Japan Momentum	+2.1% Emerging Momentum
-6.2% Japan Size	-2.2% Emerging Size

Source: FTSE Russell and LSEG. All data as of March 31, 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 sustained equity market rally in Q1 2024, Momentum outperformed the benchmark index in all regions, indicating the continuation of factor patterns over the last 12 months. (Small) Size underperformed in 5 out of 6 regions, and Low Vol in 4 out of 6 regions, indicating that larger and more cyclical stocks drove equity markets returns in those regions. Performance of Value, Quality and Dividend Yield was mixed for the quarter. In the Emerging region, Low Vol, Yield and Value outperformed, suggesting a preference for more stable, less cyclical stocks.

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



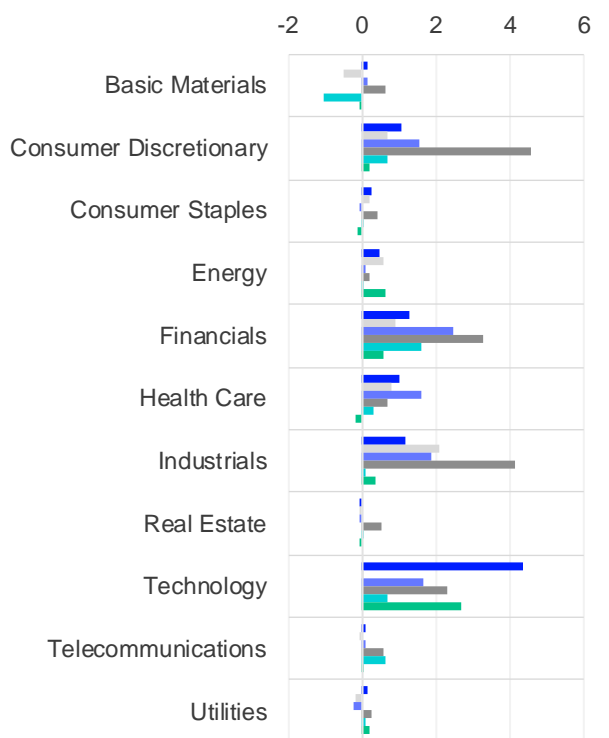
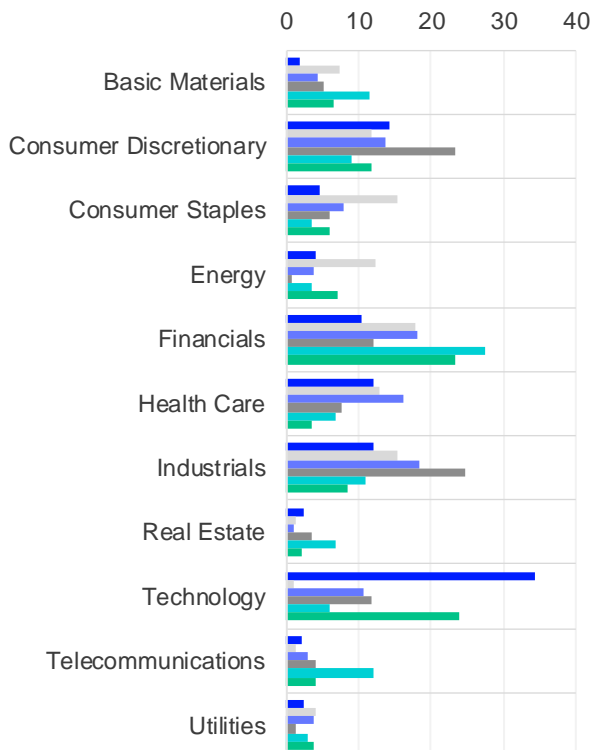
Regional Equity Market Returns – 3M (TR, LC %) – Japan outperforms, US and Europe shine as well

Japan far outpaced its peers in Q1 in local currency terms. The US and Europe followed with healthy returns. Amid broad-based gains, cyclical industries led contributions in most regions. Health Care pitched in notably, and Energy rebounded to make positive contributions. Materials detracted substantially in the UK and Asia Pacific.



Benchmark Industry Weights, 3M average (%)

3M – Contributions to Total Benchmark Returns (%)

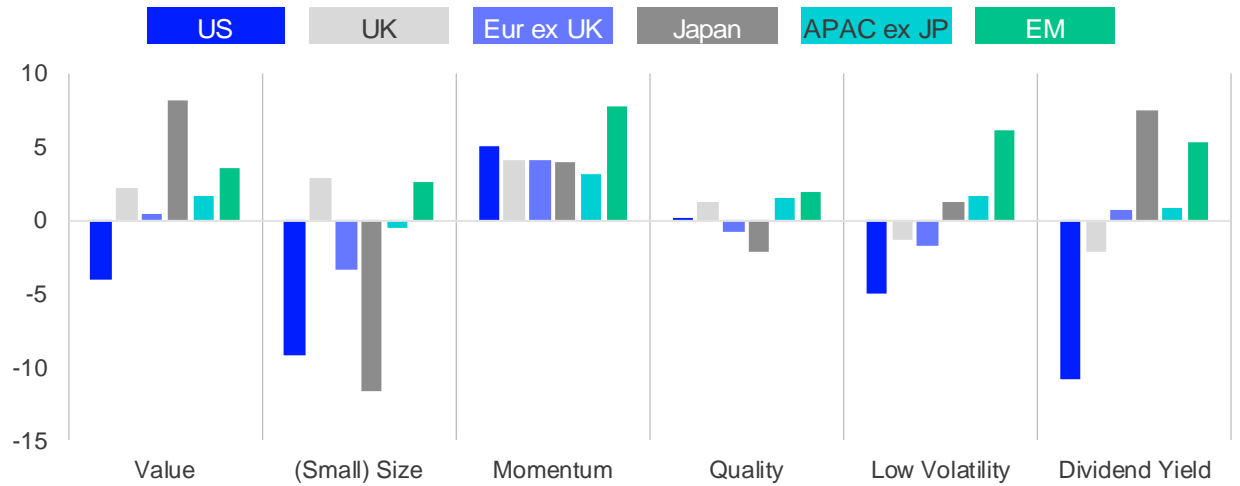


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

Global View – Factor and Benchmark Performance Highlights, 12M

Over 12M, Momentum was on top. Value and Dividend Yield outperformed in most regions, with the notable exception of the US (along with Dividend Yield in the UK) where benchmark returns were driven by more expensive and low-dividend-paying stocks. (Small) Size underperformed in 4 of 6 regions, most of all in Japan and the US whose benchmarks outpaced peers. In the Emerging region, where China has been a drag on 12M performance, Low Vol was second best performing (after Momentum), followed by Dividend Yield and Value. Quality's performance was mixed.

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



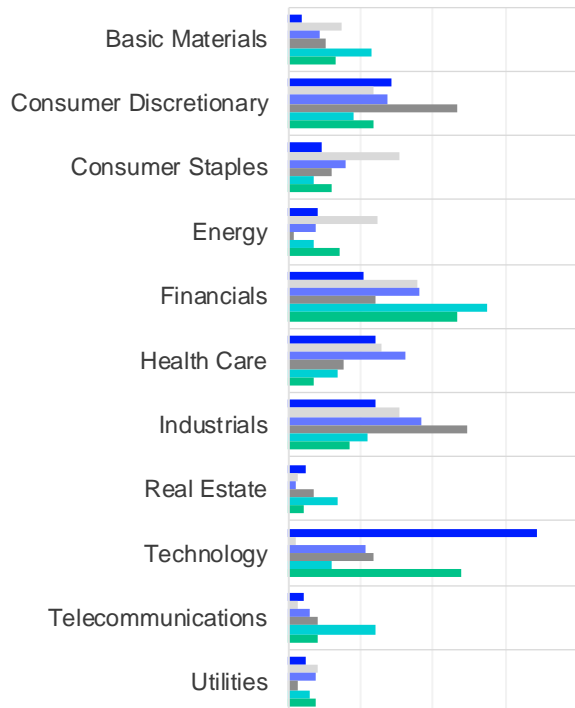
Regional Equity Market Returns – 12M (TR, LC %) – Japan and the US outshine peers

Japan and the US outshone peers over 12M, amid broad-based gains. Cyclical led in most regions. The optimism surrounding AI technologies provided a secular tailwind to equities globally. Tech dominated returns in the US. Other cyclical, such as Discretionary, Financials and Industrials drove returns in Japan.



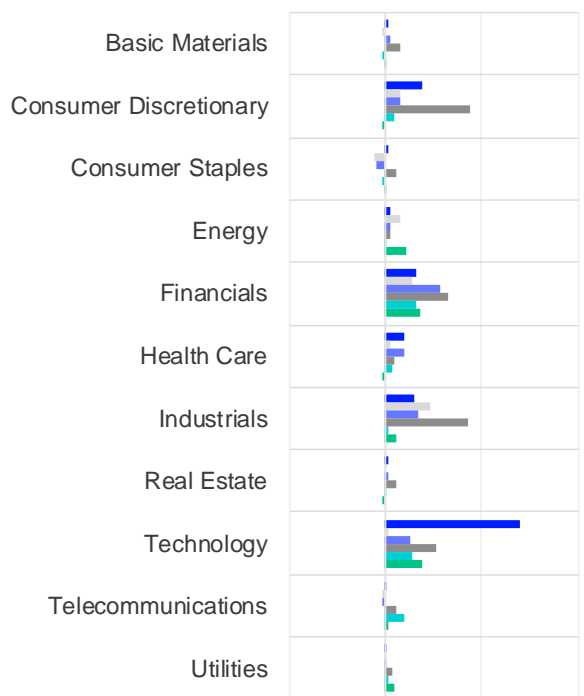
Benchmark Industry Weights, 3M average (%)

0 10 20 30 40



12M – Contributions to Total Benchmark Returns (%)

-10 0 10 20



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

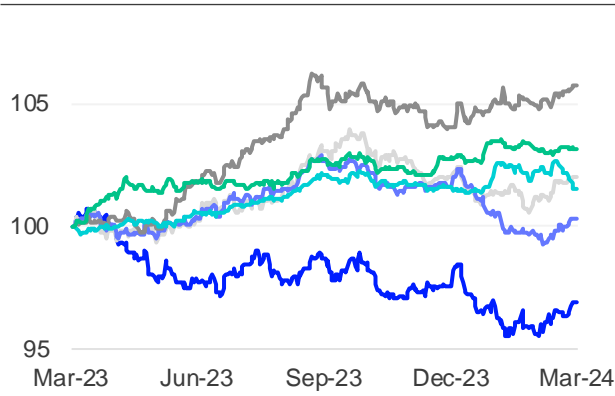
Global View – Factor rotation

Expectations for monetary policy action remained the primary macro driver of returns in most markets. Over Q1, US, UK and European markets recalibrated their expectations for the size and timing of interest rate cuts, after pricing in overly optimistic scenarios in November-December of last year. Long yields in these markets rose during Q1. However, they remained lower than the peaks seen at end-October, which sustained tailwinds for equity markets within the context of their central bank’s easing bias. Value and Yield that are typically positively correlated with the change in long rates struggled in these markets, while Quality modestly outperformed in the UK and Europe.

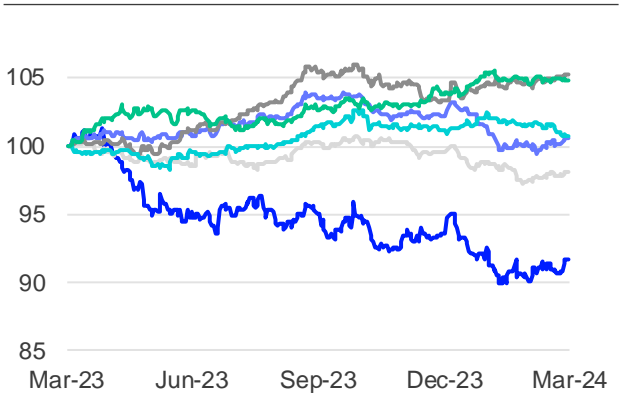
Coming into Q1, Japanese monetary policy remained ultra-loose, but saw a historic normalization (from a negative rate to zero at the short end; abandoning yield curve control at the long end). Value and Yield outperformed in Japan, reversing Q4 patterns. With China easing monetary conditions to support growth, and several other EM central banks beginning to ease, EM factor patterns remained distinct from that of major DMs. Value, Yield, Quality and Low Vol outperformed in EM.



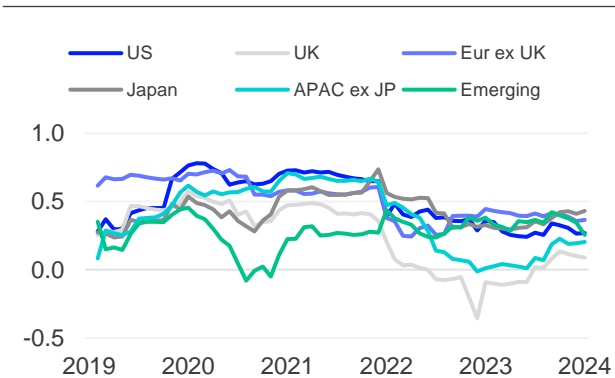
Value relative to benchmark (LC, rebased)



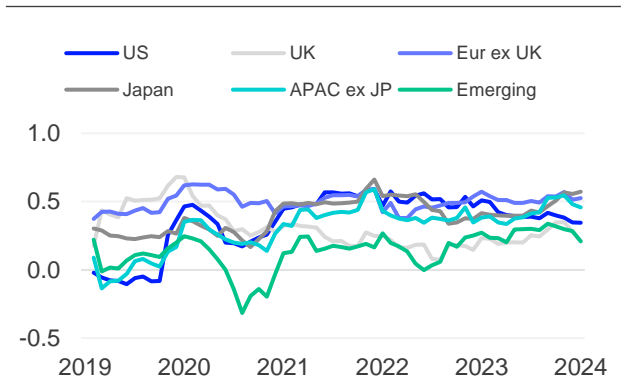
Yield relative to benchmark (LC, rebased)



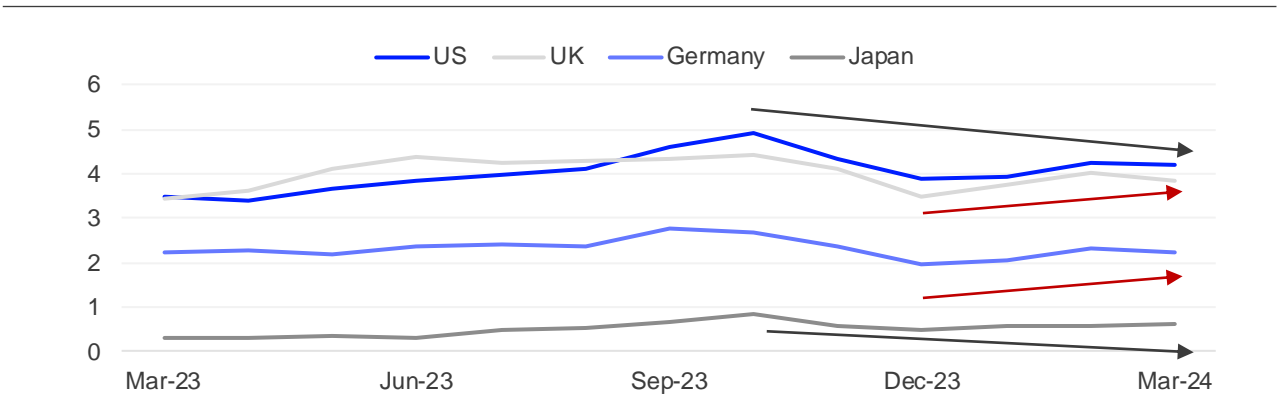
24M correlation of US 7-10yr yield change to the Value factor



24M correlation of US 7-10yr yield change to the Yield factor



7-10 years yields in major developed markets (%)

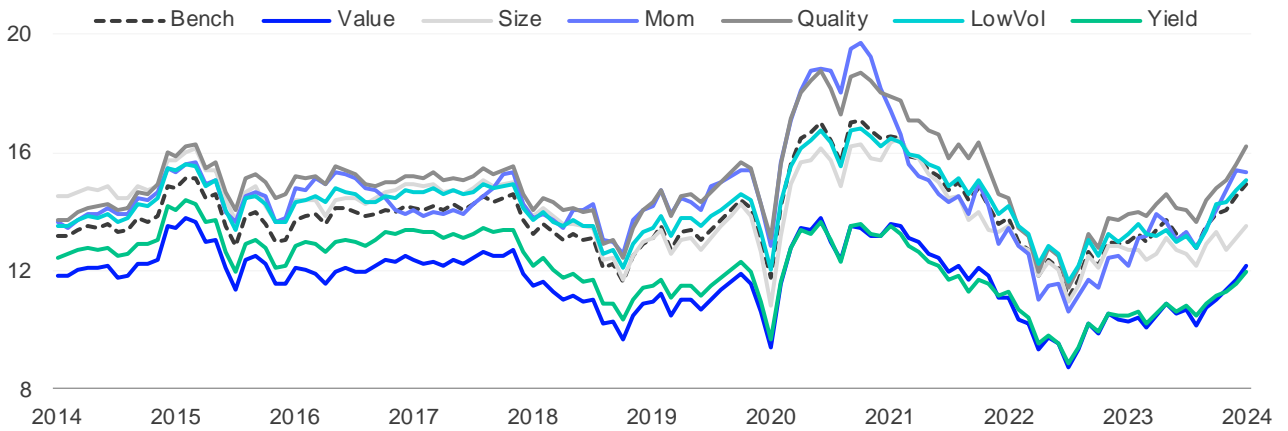


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

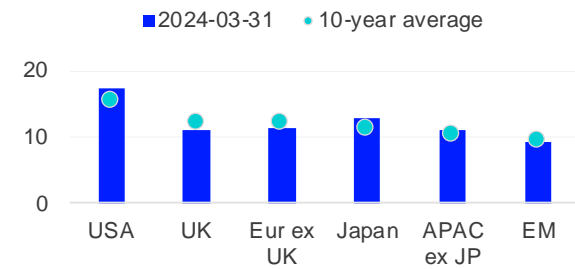
Global View – Factor Valuations

Since Oct 2023, factor forward P/E ratios have climbed to reach their 10-year averages in most regions, particularly in the US. The UK is an exception where valuations are still below their 10-year averages. Momentum, Quality and Low Vol remain most expensive within regions. And US factors continue to trade at a premium to those in other regions.

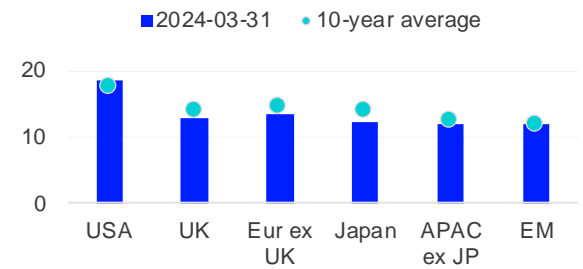
12-month forward factor P/E ratios, average of six regions



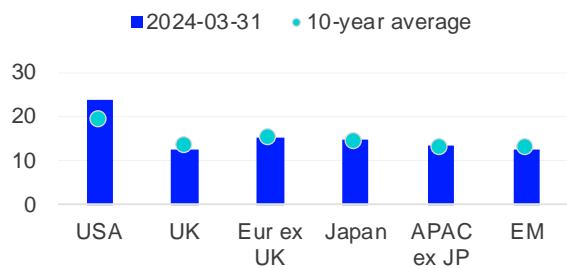
Value - 12M forward P/E



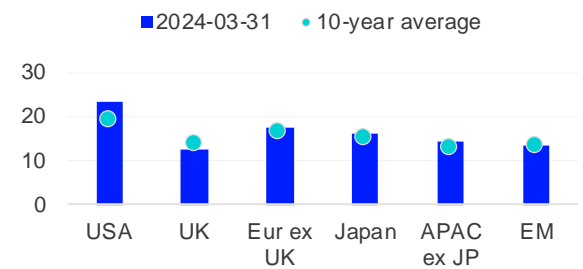
Size - 12M forward P/E



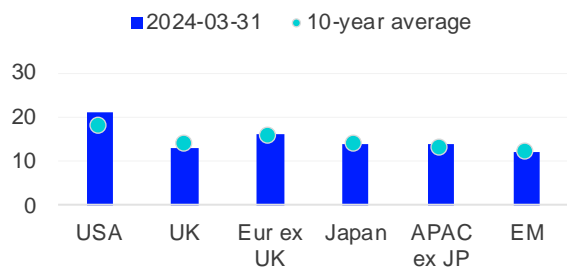
Momentum - 12M forward P/E



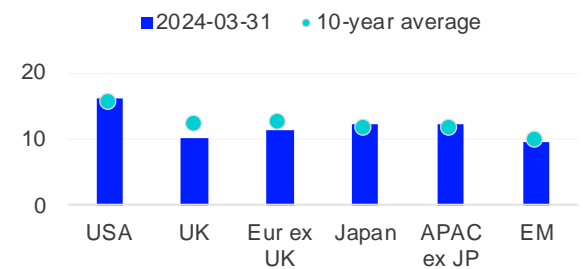
Quality - 12M forward PE



Low Volatility - 12M forward PE



Yield - 12M forward PE



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

US Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- Momentum was the sole outperformer among US factors over 3M, helped by its overweight to Tech, which contributed substantially to benchmark returns.
- Quality benefited less from its Tech exposure due to a negative stock selection effect. All other factors were hurt by their underweight to Tech.
- Over 12M, Momentum and Quality outperformed, while Yield and Size lagged the most.
- Factor forward P/Es continued their expansion in Q1, surpassing their 10-year averages in absolute terms for all factors and in relative terms for Momentum and Quality.
- Momentum and Quality remain the most expensive in both absolute and relative terms, given their Tech exposure.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

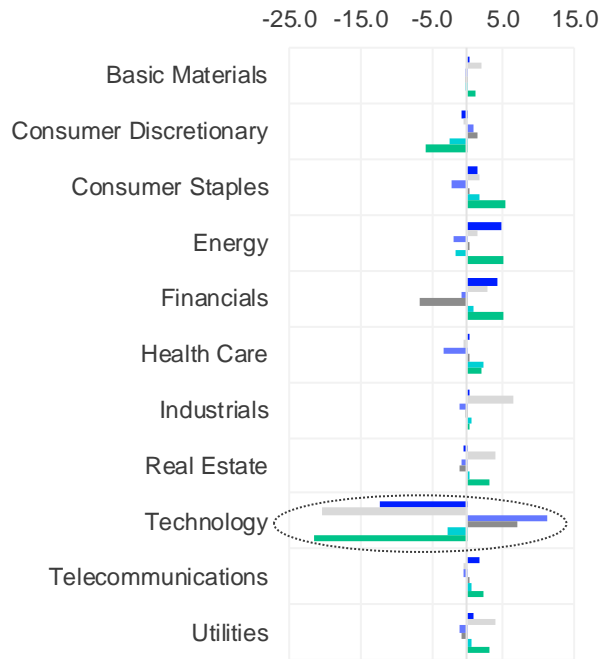
US Factor Performance & Industry Attributions — 3M

Tech strength holds Momentum on top

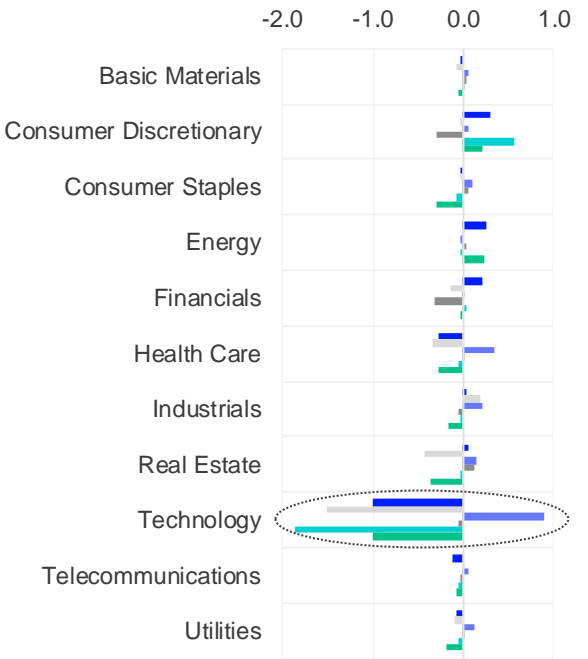
Momentum was the sole outperformer among US factors over 3M, helped by its overweight to Tech, which has contributed substantially to the benchmark's return. Quality benefited less from its Tech exposure due to negative stock selection effects. All other factors were hurt by their underweight to Tech.

2024 Q1	Relative to Benchmark (TR %)					
FTSE USA	Value	Size	Mom	Quality	Low Vol	Yield
10.3%	-0.7	-2.6	2.3	-0.5	-1.6	-2.2

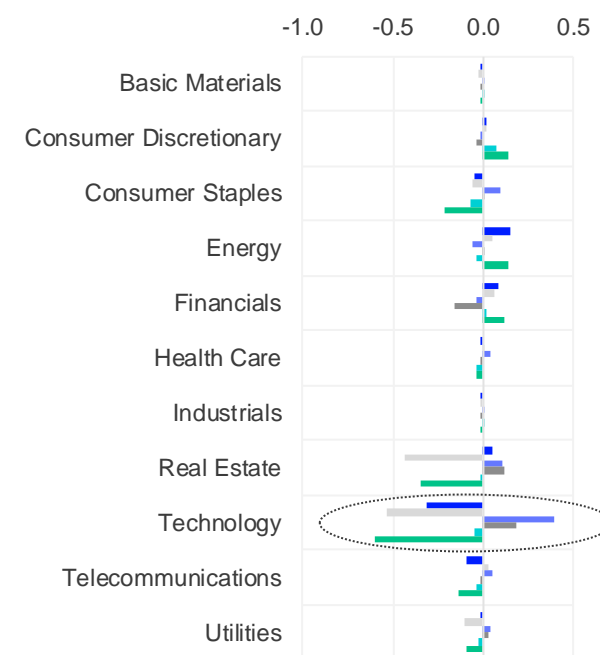
Industry active weights, 3M average



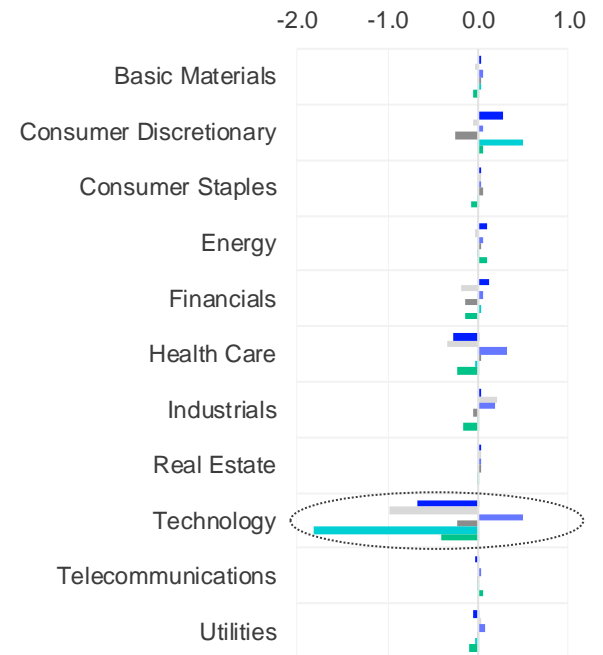
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M

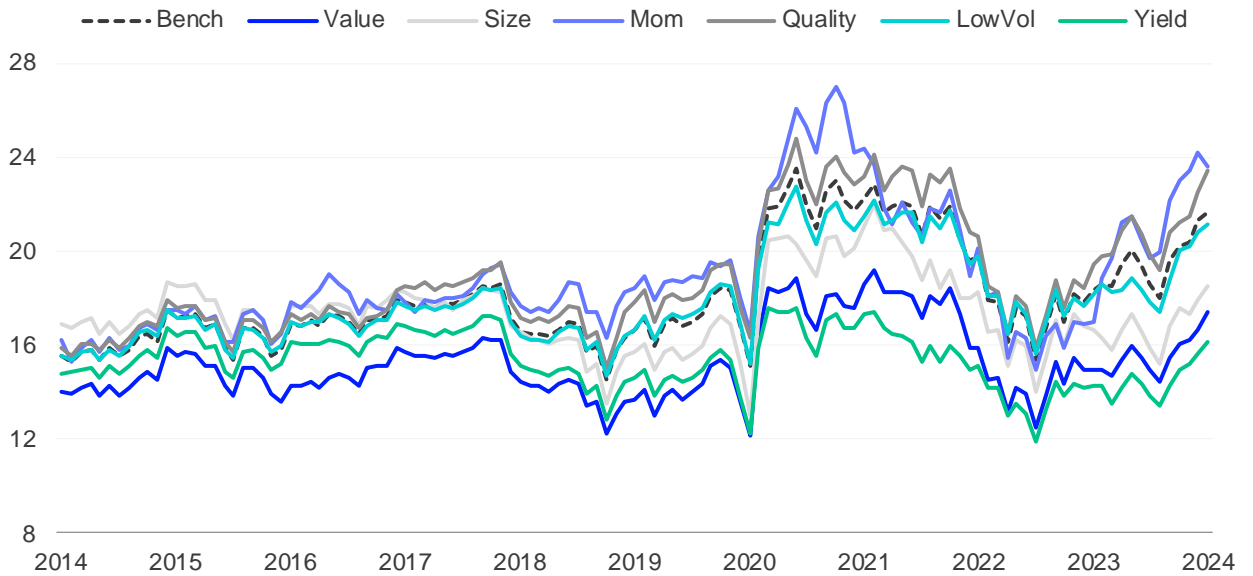


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

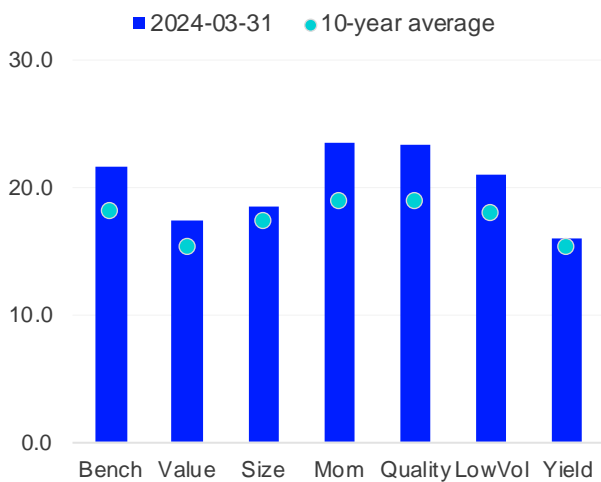
US Factor Valuations

Factor forward P/Es continued their expansion in Q1, surpassing their 10-year averages in absolute terms for all factors and in relative terms for Momentum and Quality. Momentum and Quality remain the most expensive in both absolute and relative terms, given their Tech exposure and Tech's continued strong performance. Quality trades at a 34% premium to Value, higher than the 10-year average premium of 23%.

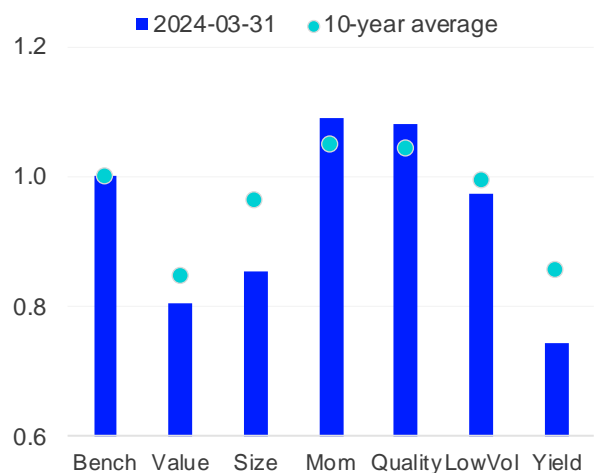
FTSE USA – Absolute 12M forward P/Es



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 March 31, 2024. Past performance is no guarantee of future results.

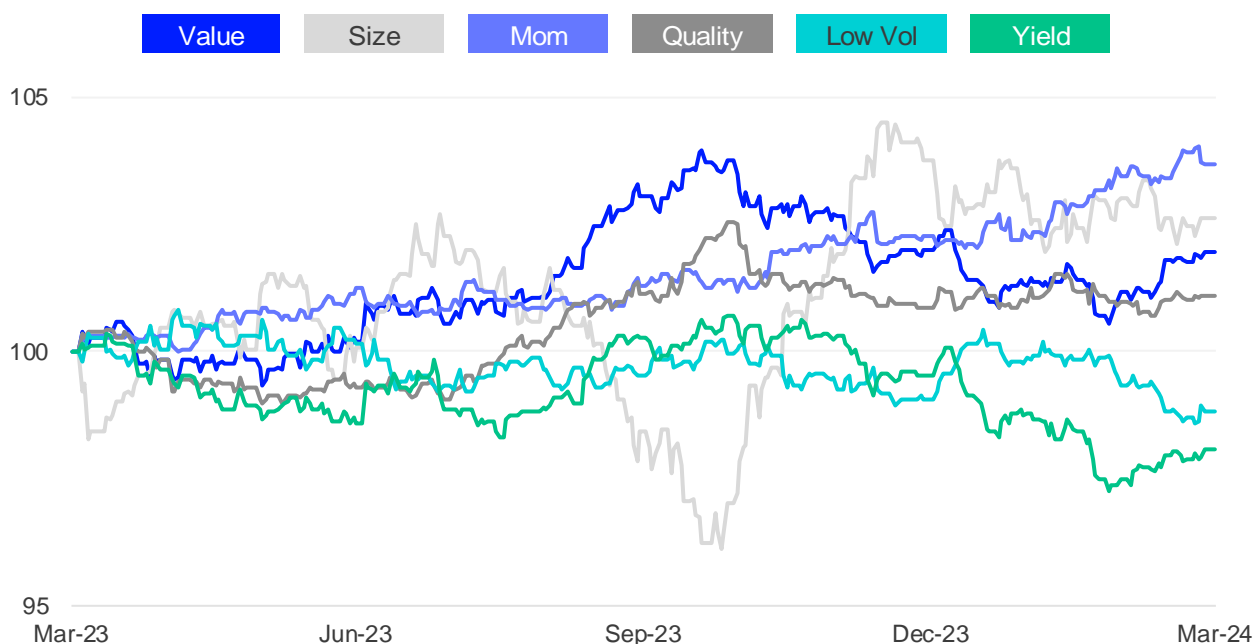
UK Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- Momentum led Q1 factor performance. In a reversal from Q4, Size underperformed. Yield lagged the most. Value, Quality and Low Vol's performance relative to the benchmark was more or less flat.
- Momentum benefited from an overweight to Industrials and an underweight to poorly-performing Basic Materials.
- Factor forward P/Es expanded in Q1, but they still remain well below their 10-year averages in absolute terms.
- In relative terms, Size's Q1 underperformance pulled its relative P/E below its 10-year average, and Momentum's Q1 outperformance pushed its relative P/E above its 10-year average.

Factor returns relative to benchmark (rebased)



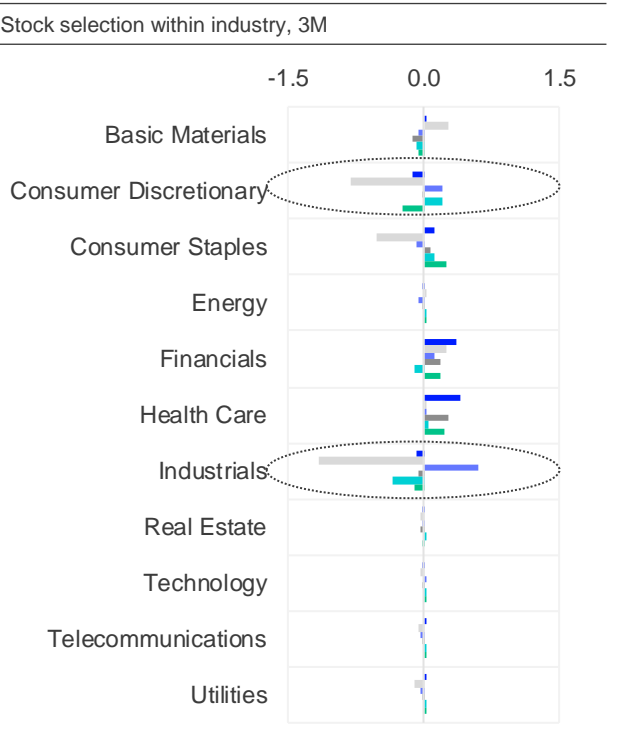
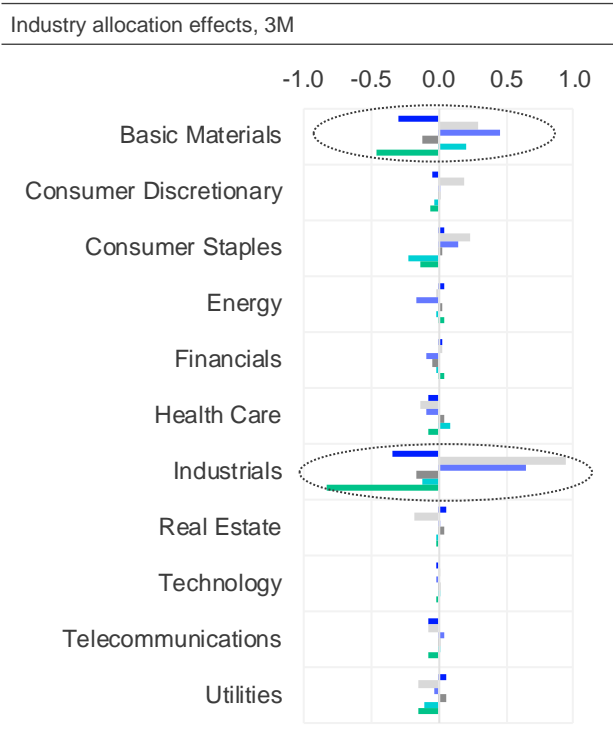
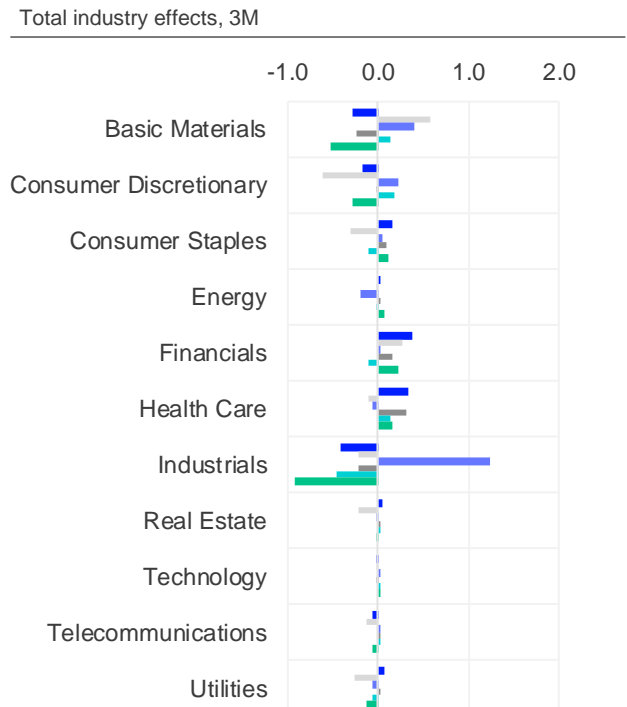
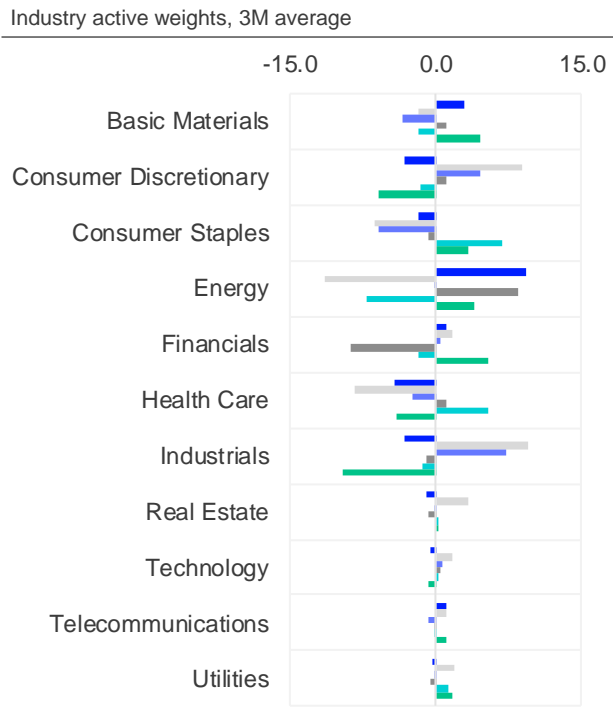
Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

UK Factor Performance & Industry Attribution — 3M

UK Momentum holds sway, while (Small) Size underperforms

In a reversal from Q4, Size underperformed, while Momentum continued to outperform and led Q1 factor performance. Momentum benefited from an overweight to Industrials and an underweight to poorly-performing Basic Materials. Size had similar exposures, but it was hurt by negative selection effects in Industrials and Discretionary.

2024 Q1	Relative to Benchmark (TR %)					
FTSE UK	Value	Size	Mom	Quality	Low Vol	Yield
4.6%	0.0	-1.2	1.4	0.2	-0.3	-1.5

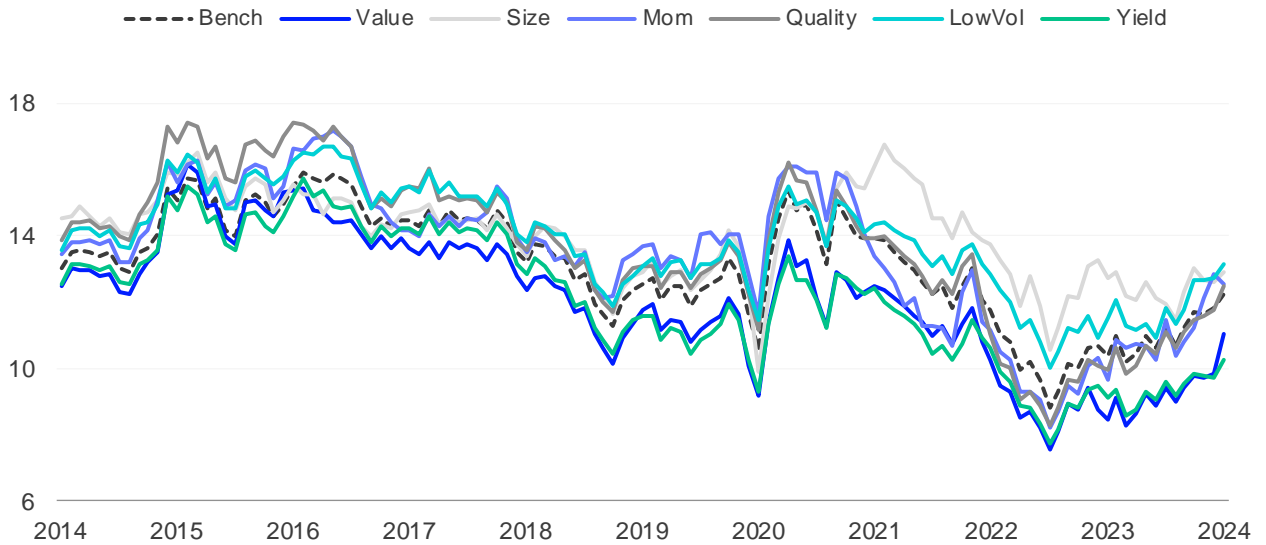


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

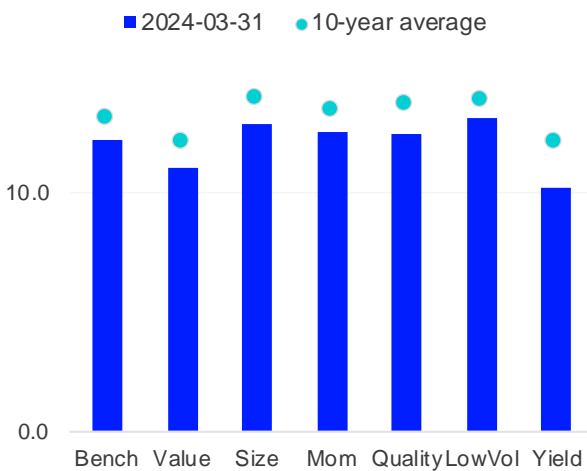
UK Factor Valuations

UK factor forward P/Es expanded in Q1, as they have since Covid-era lows, but they still remain well below their 10-year averages in absolute terms. In relative terms, Size's Q1 underperformance pulled its relative P/E below its 10-year average, and Momentum's Q1 outperformance pushed its relative P/E above its 10-year average. Low Vol remains the most expensive. The Quality-Value premium is at 13%, in line with history.

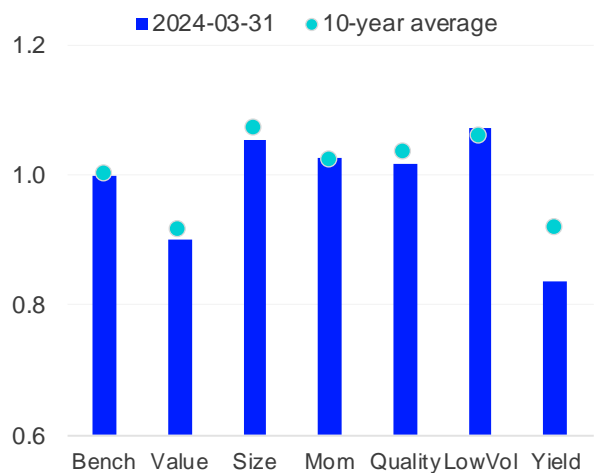
FTSE UK – Absolute 12M forward P/Es



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 March 31, 2024. Past performance is no guarantee of future results.

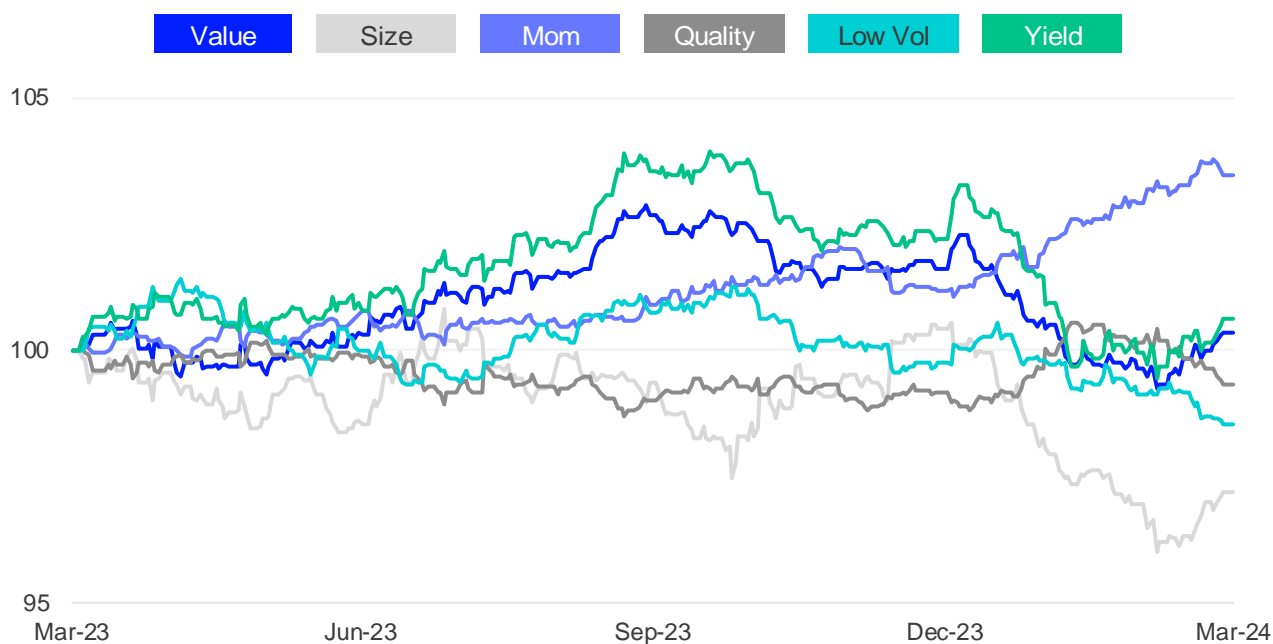
Europe ex UK Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- Size steeply underperformed the benchmark, while Momentum marched on to lead factor performance for Q1. Yield, Value and Low Vol also underperformed. Quality modestly outperformed.
- Momentum benefited broadly from its industry exposures—overweight to Tech, Industrials and Financials and underweight to Staples, Energy and Health Care. Size was hurt most by its Tech underweight.
- Factor forward P/Es continued to expand in Q1 and absolute forward P/Es for Momentum, Quality and Low Vol rose above their 10-year averages.
- In relative terms, Quality and Low Vol traded above their 10-year averages. Quality traded at a 52% premium to Value, higher than the historical premium of 37%.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

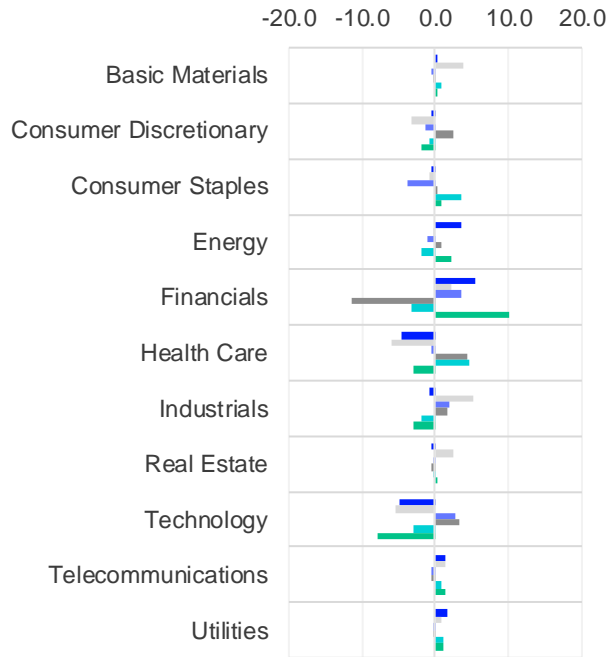
Europe ex UK Factor Performance & Industry Attribution — 3M

Momentum on top, Size steeply underperforms

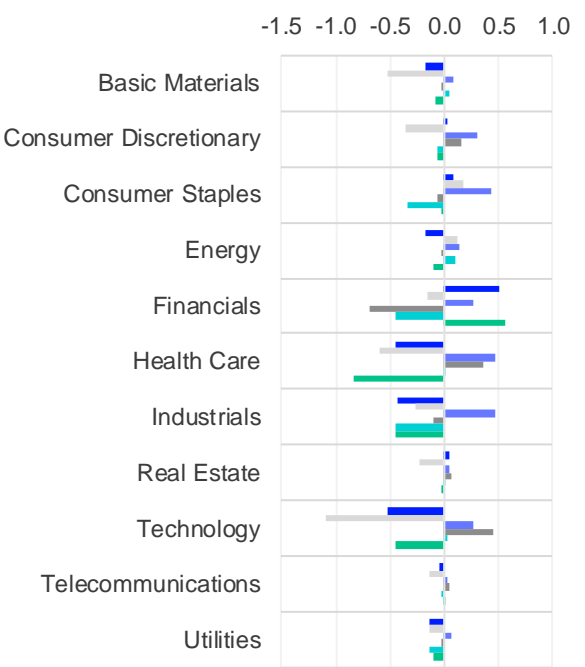
Momentum led Q1 factor performance, while Size reversed its Q4 pattern to steeply underperform the benchmark. Momentum benefited broadly from its industry exposures and positive selection within Health Care, Industrials & Discretionary, among others. Size was hurt most by negative selection in Tech & Health Care.

2024 Q1	Relative to Benchmark (TR %)					
FTSE Dev Europe ex UK	Value	Size	Mom	Quality	Low Vol	Yield
9.5%	-1.4	-3.5	2.5	0.2	-1.3	-1.7

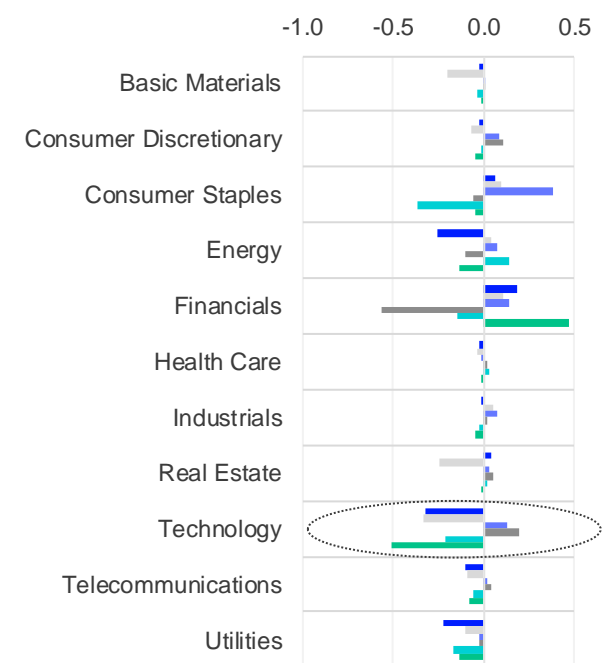
Industry active weights, 3M average



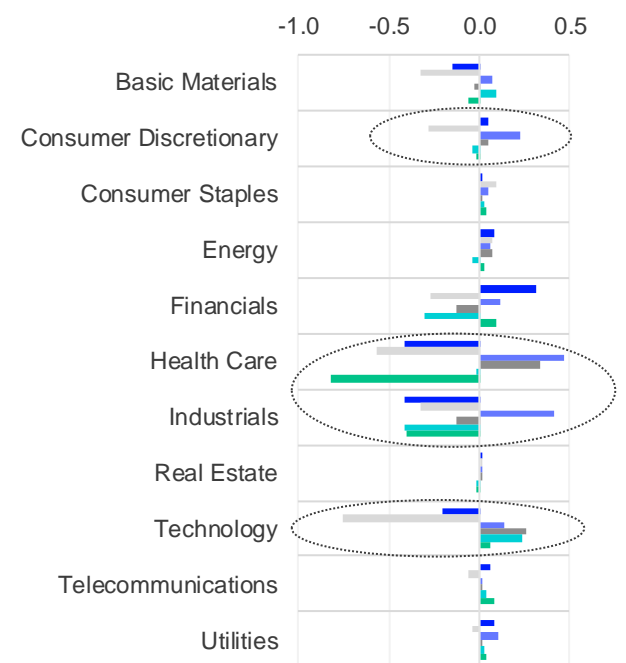
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M

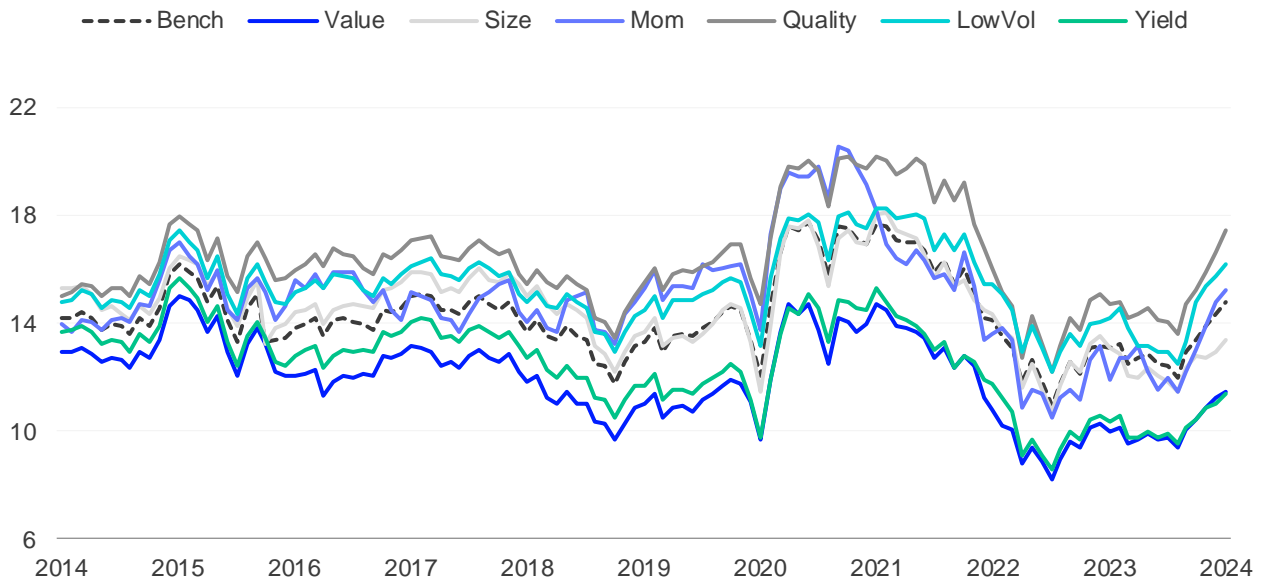


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

Europe ex UK Factor Valuations

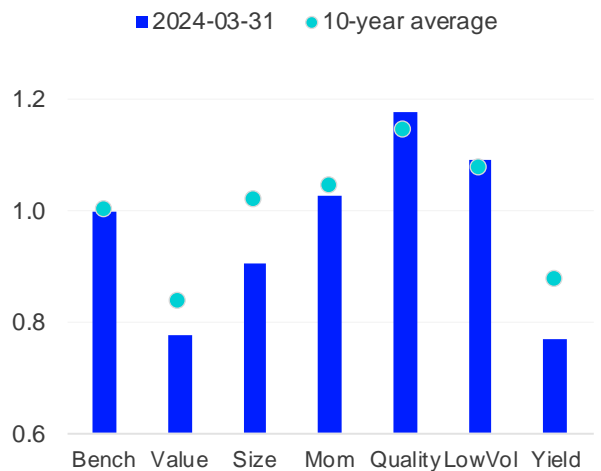
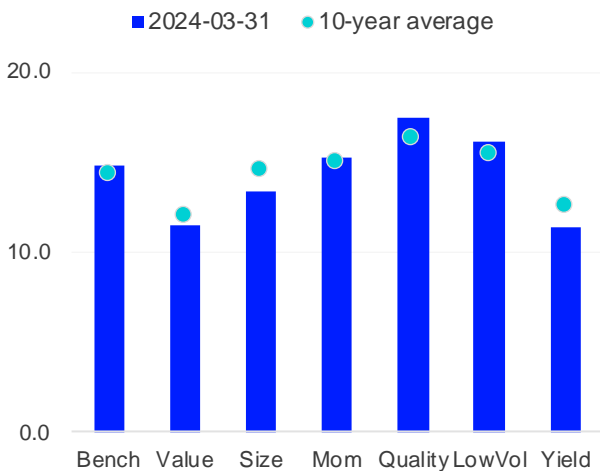
Factor forward P/Es continued to expand in Q1. Absolute forward P/Es for Momentum, Quality and Low Vol rose above their 10-year averages. In relative terms, Quality and Low Vol remained the most expensive and above their 10-year averages, while Momentum's relative P/E inched closer to its historical average. Quality traded at a 52% premium to Value, higher than the historical premium of 37%.

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 March 31, 2024. Past performance is no guarantee of future results.

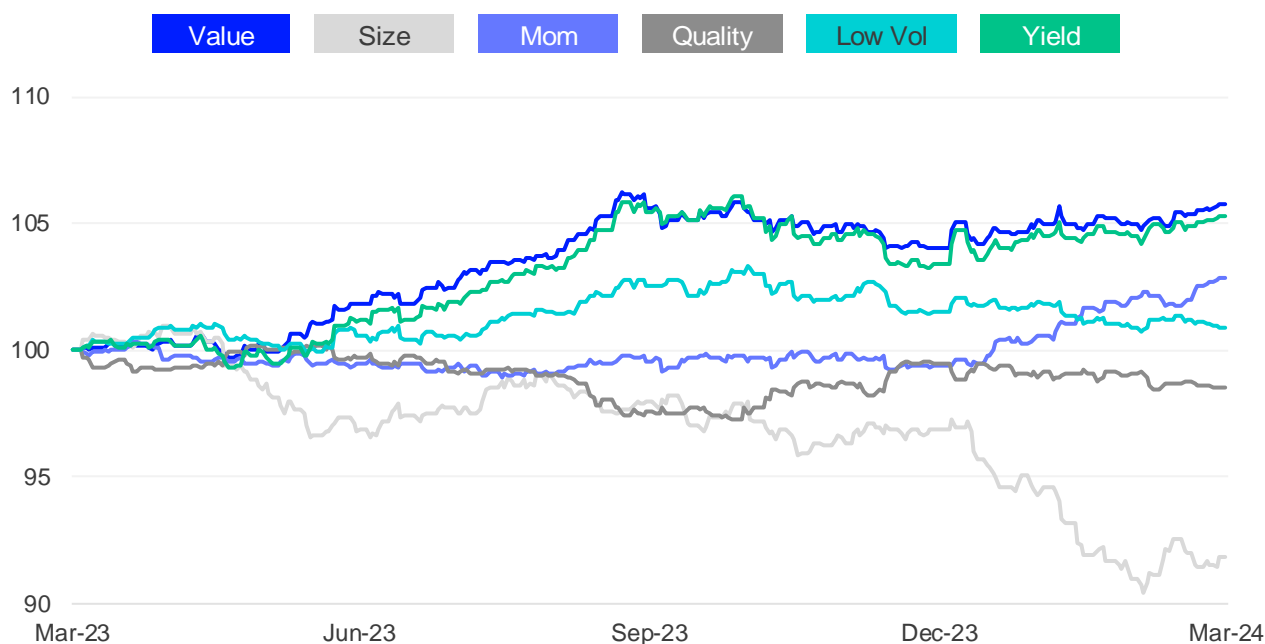
Japan Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- Momentum led factor relative performance in Q1. Size lagged the most. In a reversal from Q4, Yield & Value outperformed, while Quality lagged.
- Momentum, Yield & Value benefited from strong selection effects within Discretionary & Industrials. Size was hurt most by negative selection in Discretionary, and Quality by a negative allocation effect from an underweight in Financials.
- Factor forward P/Es contracted early in Q1 but expanded over the last two months. Absolute forward P/Es are above 10-year averages for all but Size.
- In relative terms, Value trades above its 10-year average, although Quality remains most expensive. The Quality-Value premium is lower at 27% than its historical average at 33%.

Factor returns relative to benchmark (rebased)



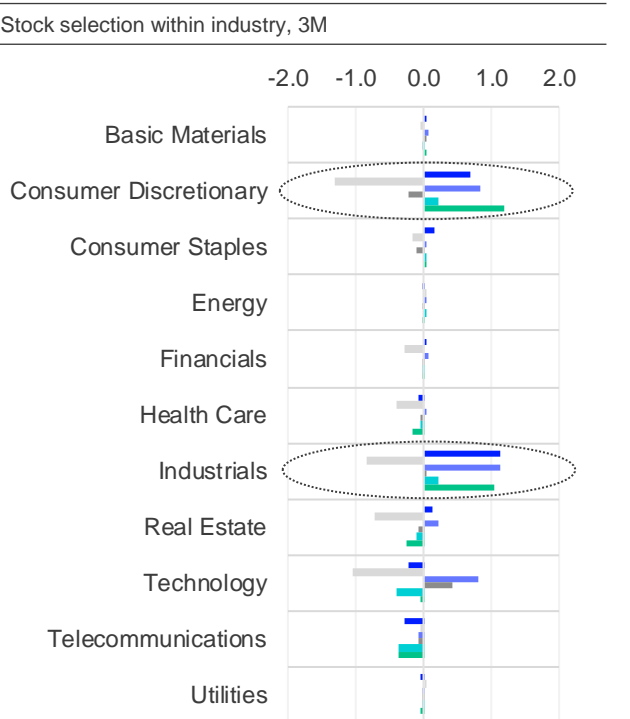
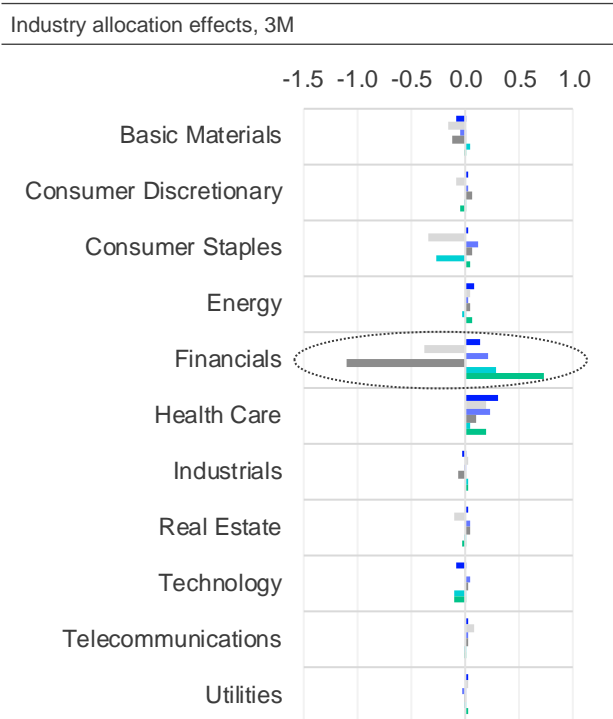
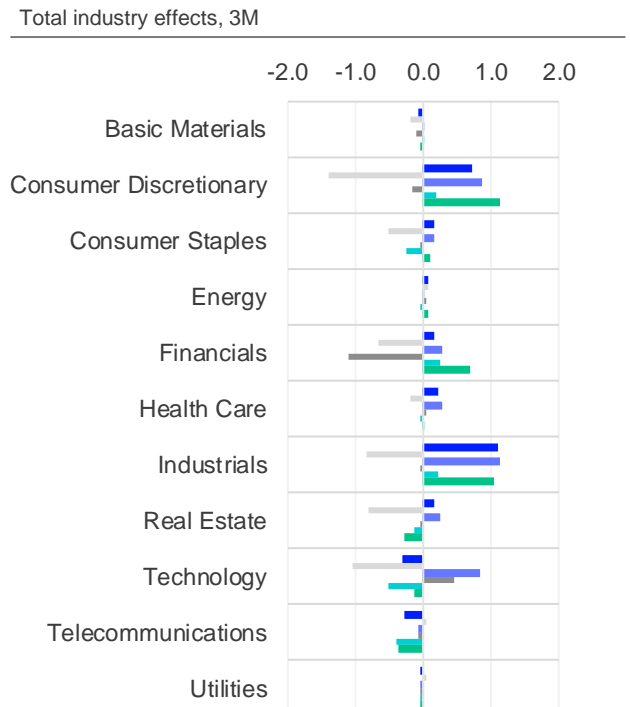
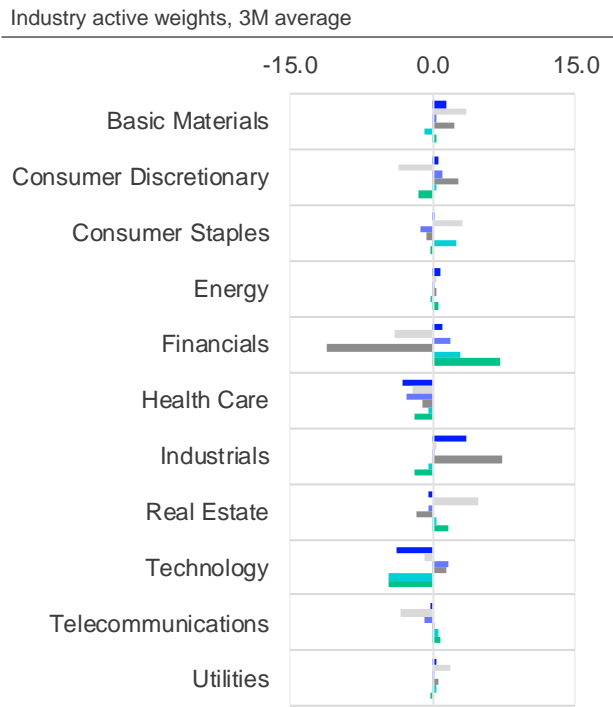
Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

Japan Factor Performance & Industry Attribution — 3M

Momentum leads, Size lags badly

Size struggled while Momentum led factor relative performance. In a reversal from Q4, Yield & Value outperformed, while Quality lagged. Momentum, Yield & Value benefited from strong selection effects within Discretionary & Industrials. Size was hurt most by negative selection in Discretionary and Quality by an underweight in Financials.

2024 Q1	Relative to Benchmark (TR %)					
FTSE Japan	Value	Size	Mom	Quality	Low Vol	Yield
18.7%	2.0	-6.2	4.1	-1.1	-0.8	2.2

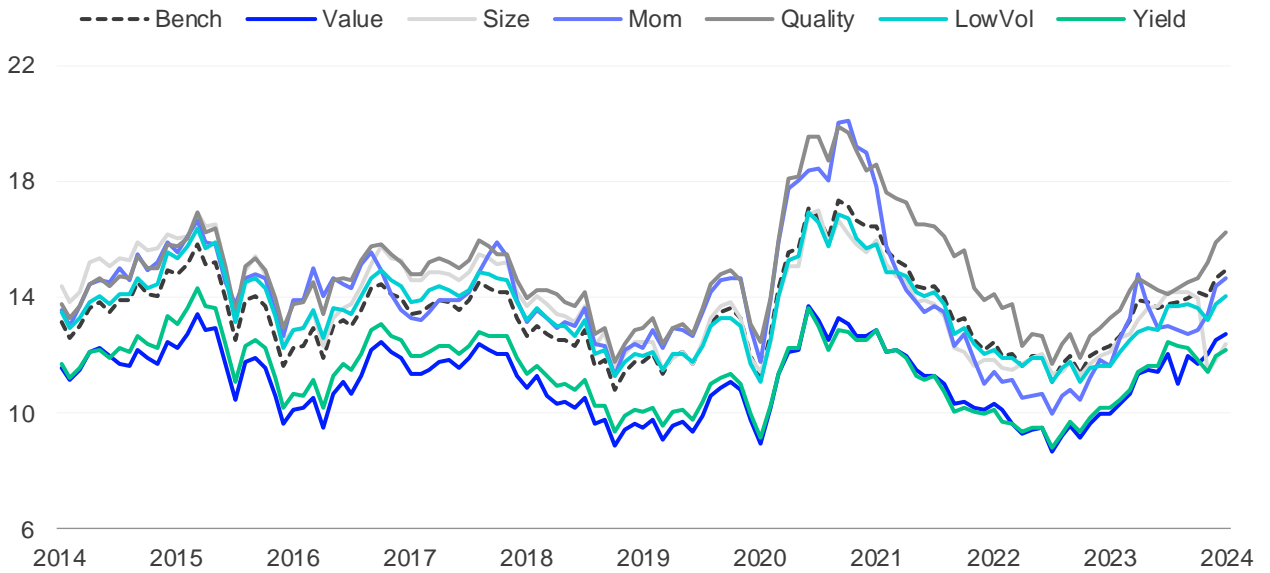


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

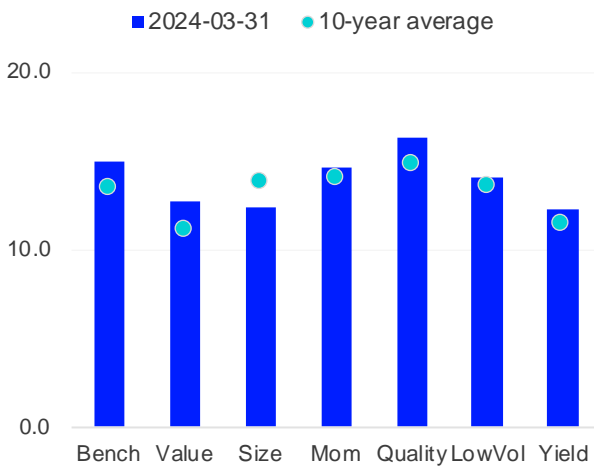
Japan Factor Valuations

Factor forward P/Es contracted early in Q1 but expanded over the last two months. Absolute forward P/Es are above 10-year averages for all but Size, which badly lagged the benchmark this quarter. In relative terms, Value is the sole factor trading above its 10-year average, although Quality remains most expensive. The Quality-Value premium is lower at 27% than its historical average at 33%.

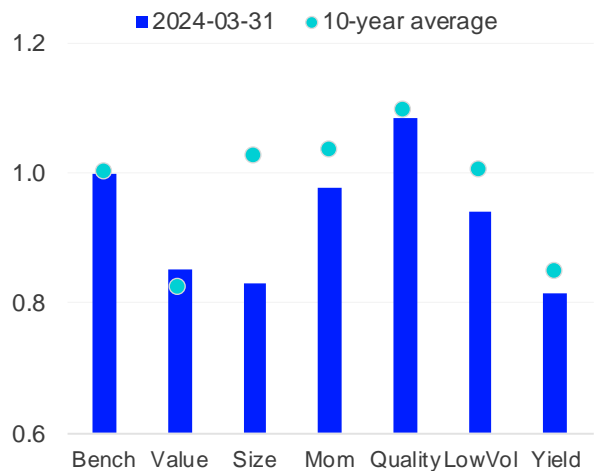
FTSE Japan – Absolute 12M forward P/Es



Current Absolute 12M P/Es vs history



Current Relative 12M P/Es vs history



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

Asia Pacific ex Japan Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- Amid mostly muted factor performance in Q1, Momentum stood out with its outperformance of the benchmark, followed by Size & Low Vol. Quality, Yield and Value modestly underperformed.
- Momentum benefited from a positive allocation effect in Technology and positive selection effects within cyclicals such as Financials, Discretionary, Industrials, Real Estate & Tech. Size was helped by an underweight to Materials and positive selection within Financials.
- Factors continued to rerate in Q1 pushing absolute forward P/Es for all but the Size factor past their 10-year averages.
- Quality continued to trade above its 10-year average in relative terms as well despite underperforming the benchmark this quarter. The Quality/Value premium at 29% was close to its 10-year average.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

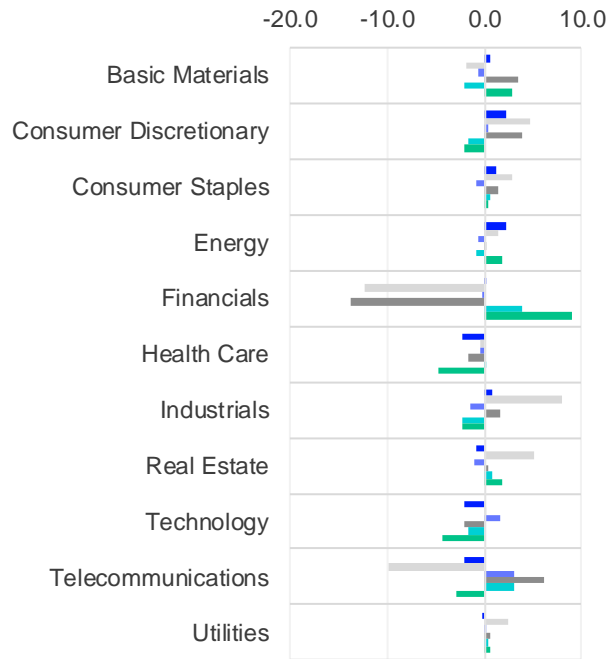
Asia Pac ex Japan Factor Performance & Industry Attribution — 3M

Momentum stands out amid mostly muted factor performance

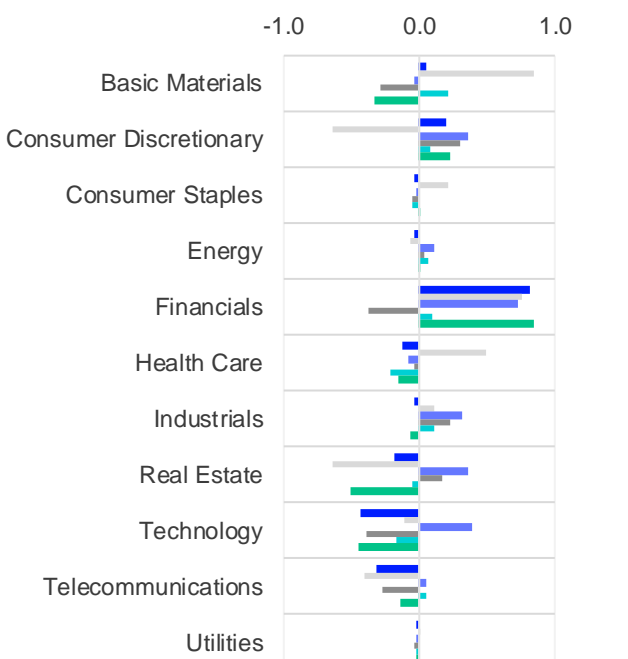
Momentum outperformed, followed by Size & Low Vol. Quality, Yield & Value underperformed modestly. Momentum benefited from positive allocation from its Tech overweight and selection within Financials, Discretionary, Industrials, Real Estate & Tech. Size was helped by its Materials underweight and positive selection within Financials. Yield was helped by its Materials underweight and positive selection within Financials.

2024 Q1	Relative to Benchmark (TR%)					
FTSE Dev Asia Pacific ex JP	Value	Size	Mom	Quality	Low Vol	Yield
3.2%	-0.1	0.7	2.0	-0.4	0.2	-0.3

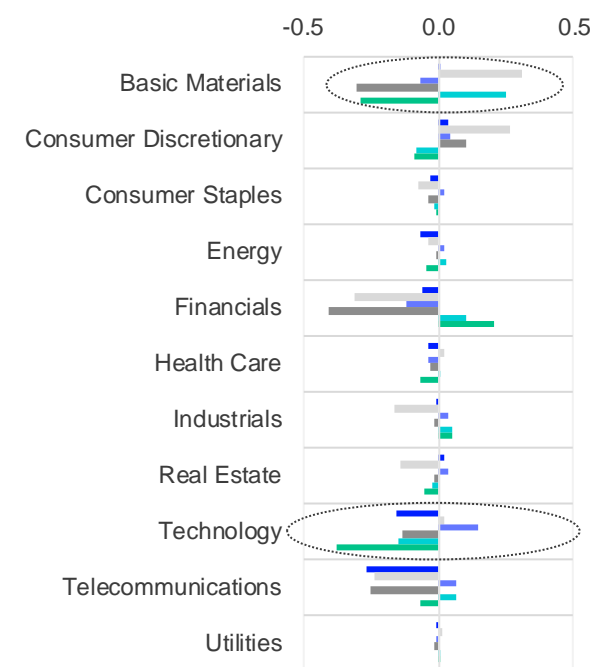
Industry active weights, 3M average



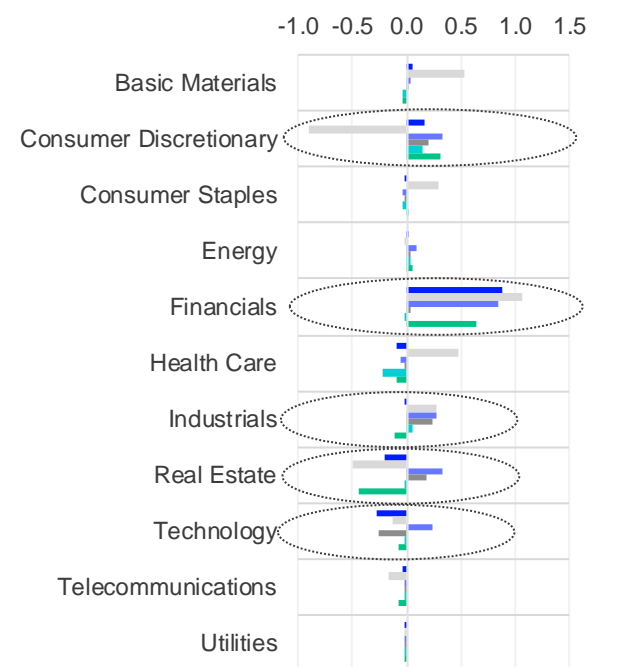
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M

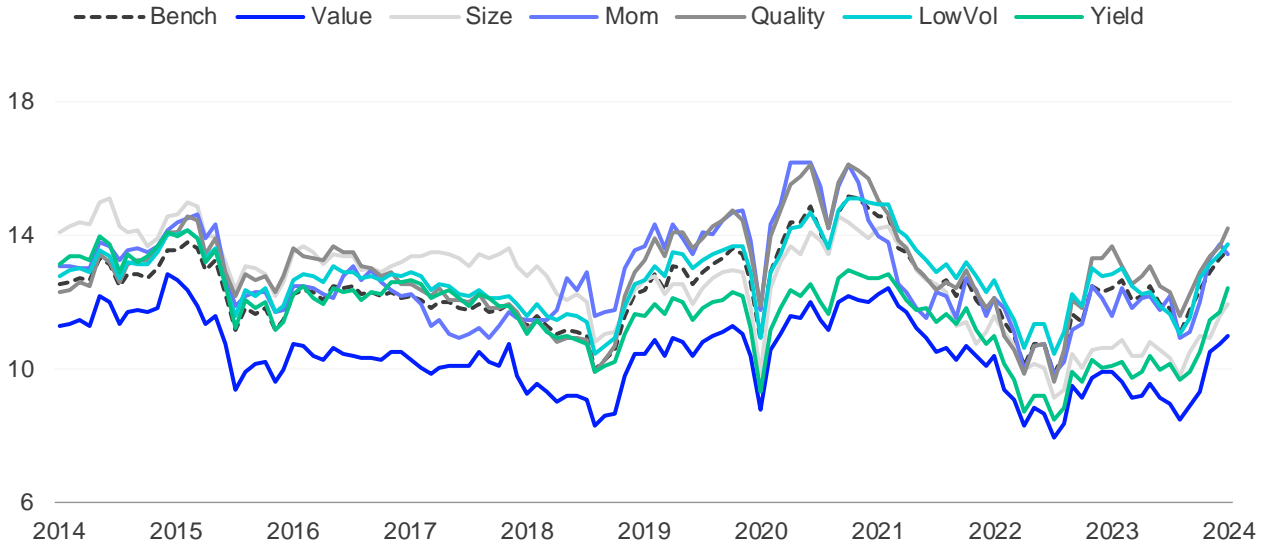


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

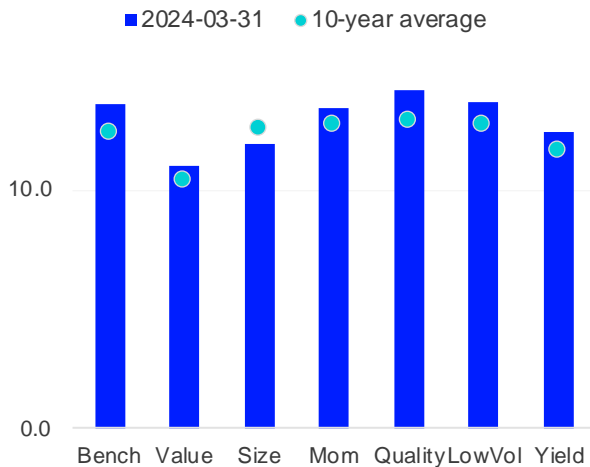
Asia Pacific ex Japan Factor Valuations

Asia Pacific ex Japan factors continued to re-rate in Q1 pushing absolute forward P/Es for all but the Size factor past their 10-year averages. Quality continues to trade above its 10-year average in relative terms as well despite underperforming the benchmark this quarter. The Quality/Value premium at 29% was close to its 10-year average of 24% at quarter-end.

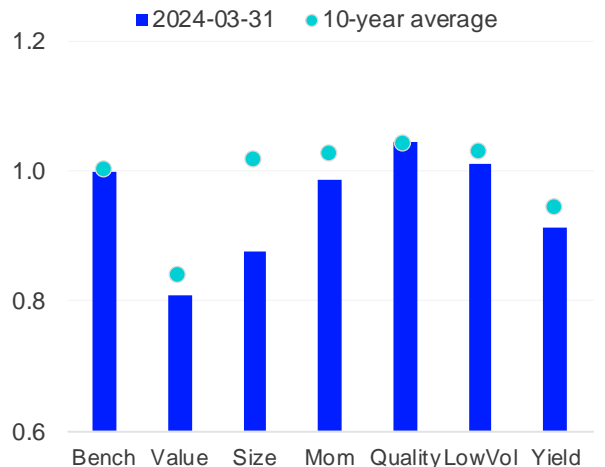
FTSE Asia Pacific ex Japan – Absolute 12M forward P/Es



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 March 31, 2024. Past performance is no guarantee of future results.

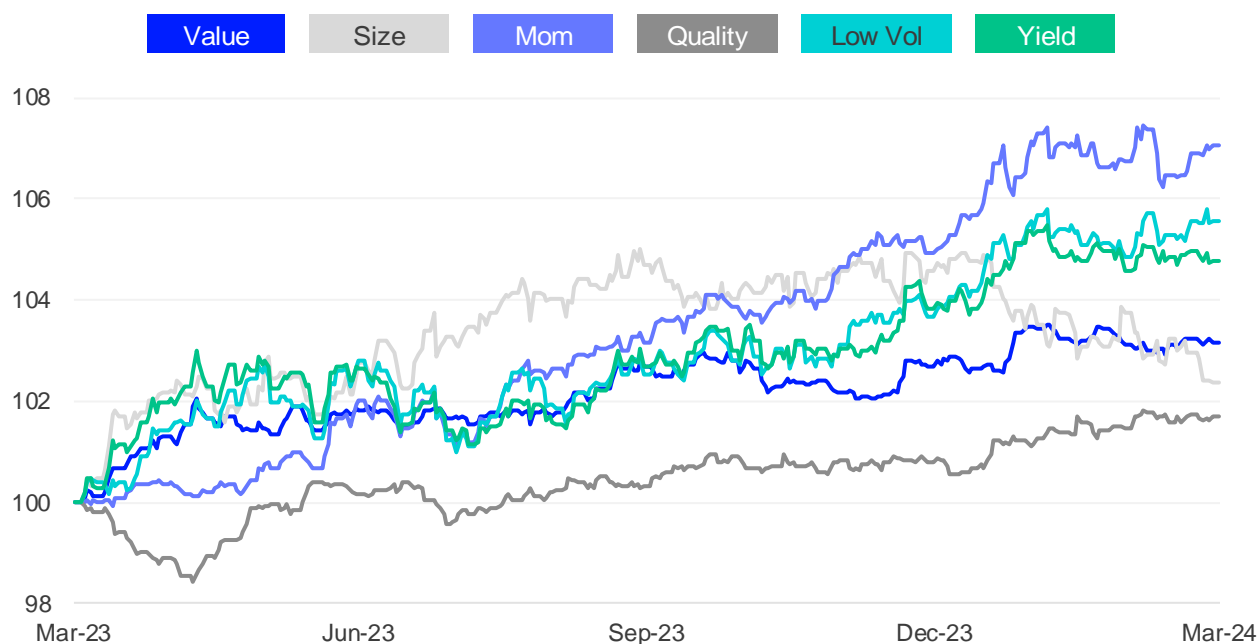
Emerging Markets Equity Factor Insights

FIRST QUARTER | 2024

Key Observations

- EM factor patterns from last quarter continued into Q1 2024, with Momentum leading, followed by Low Vol, Yield, Quality & Value. Size lagged the most.
- Low Vol, Yield & Value's outperformance meant that EM factor patterns remained distinct from most developed markets in Q1.
- Allocation effects from Tech overweights and underweights, and selection effects within Technology drove the bulk of EM factor performance.
- EM factor forward P/Es expanded during the quarter, pushing absolute valuations above their 10-year averages, except for Value.
- In relative terms. Momentum, Quality and Low Vol traded above long-term averages. The Quality/Value premium at 46% was slightly above its long-term average of 42%.

Factor returns relative to benchmark (rebased)



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

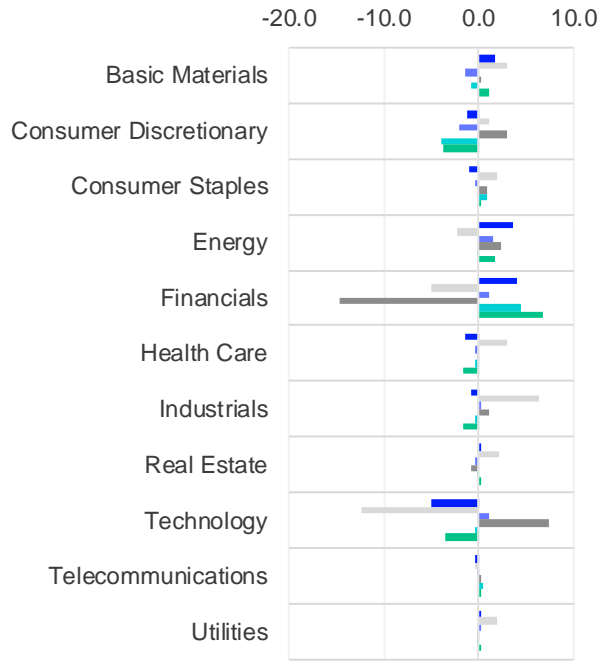
Emerging Markets Factor Performance & Industry Attribution — 3M

EM factor patterns remain distinct from DMs

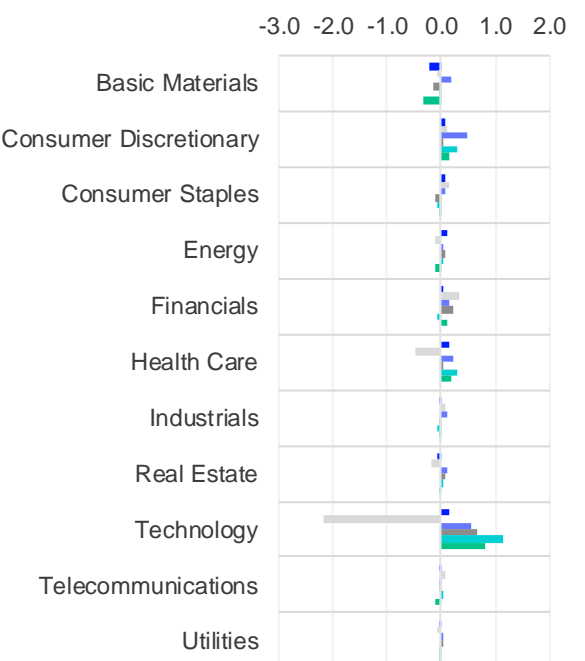
EM factor patterns from Q4 continued into Q1, with Momentum leading, followed by Low Vol, Yield, Quality & Value. Size lagged the most. Allocation and selection effects within Tech drove the bulk of EM factor performance. Momentum also benefited from strong selection within Discretionary.

2024 Q1	Relative to Benchmark (TR %)					
FTSE Emerging	Value	Size	Mom	Quality	Low Vol	Yield
4.1%	0.5	-2.2	2.1	0.9	1.9	0.9

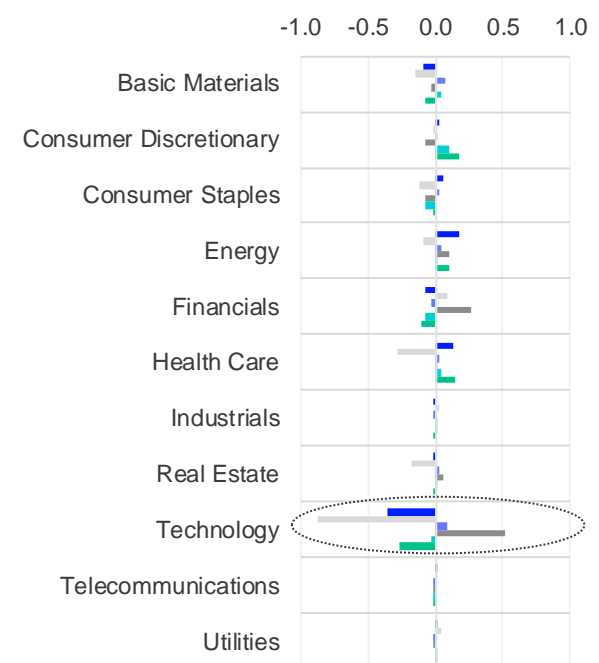
Industry active weights, 3M average



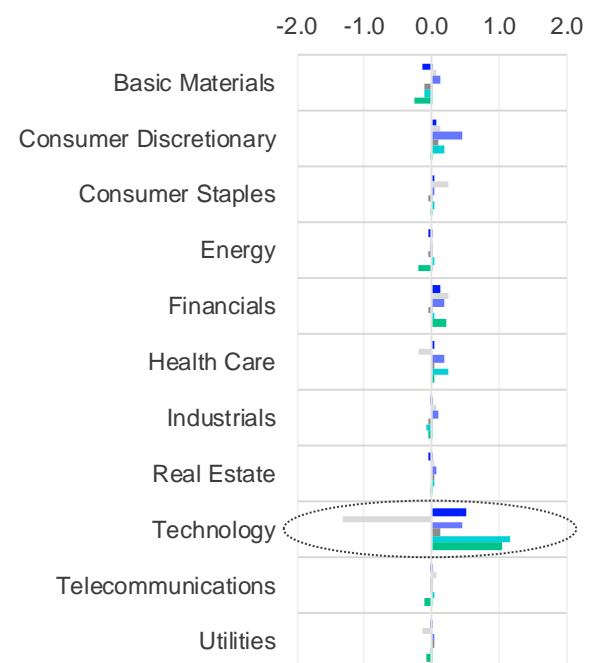
Total industry effects, 3M



Industry allocation effects, 3M



Stock selection within industry, 3M

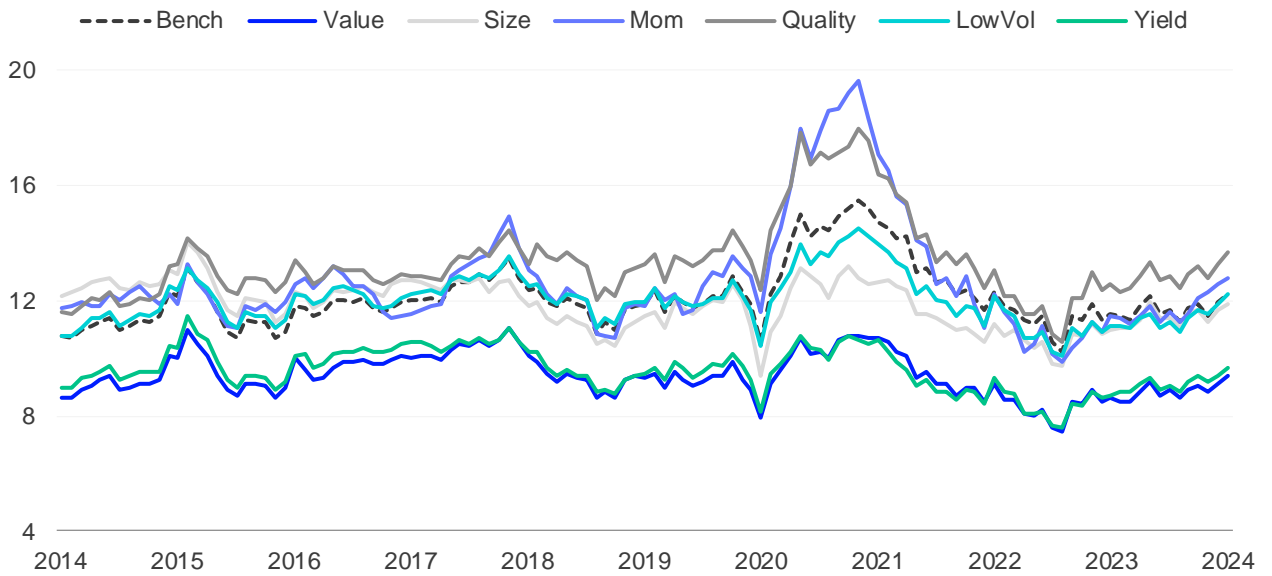


Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

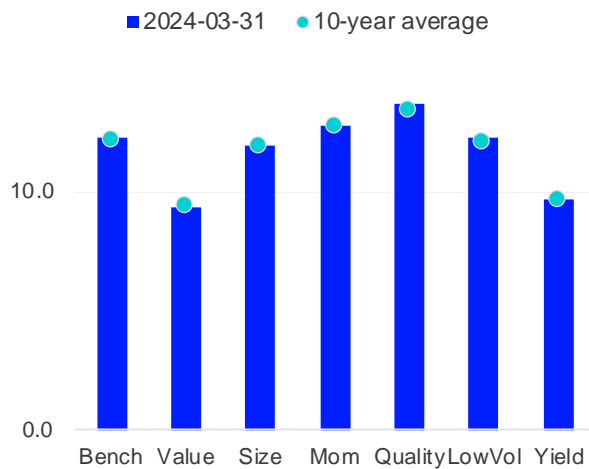
Emerging Markets Factor Valuations

After contracting in January, EM factor forward P/Es expanded during the quarter, pushing absolute valuations above their 10-year averages, except for Value. In relative terms, Momentum, Quality and Low Vol traded above long-term averages, while Size's underperformance this quarter made it cheaper relative to its history. The Quality/Value premium at 46% was slightly above its long-term average of 42%.

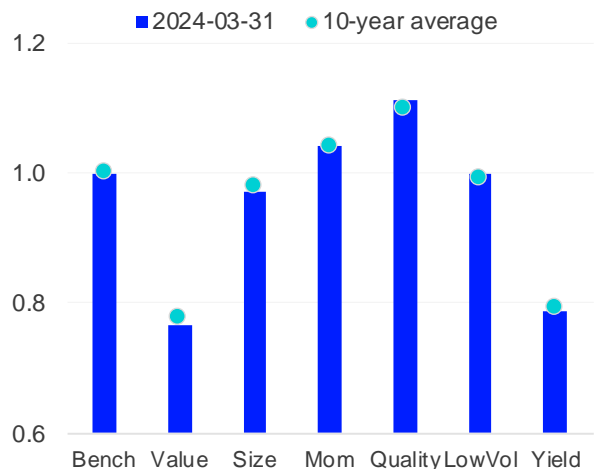
FTSE Emerging – Absolute 12M forward P/Es



Current Absolute 12M forward P/Es vs history

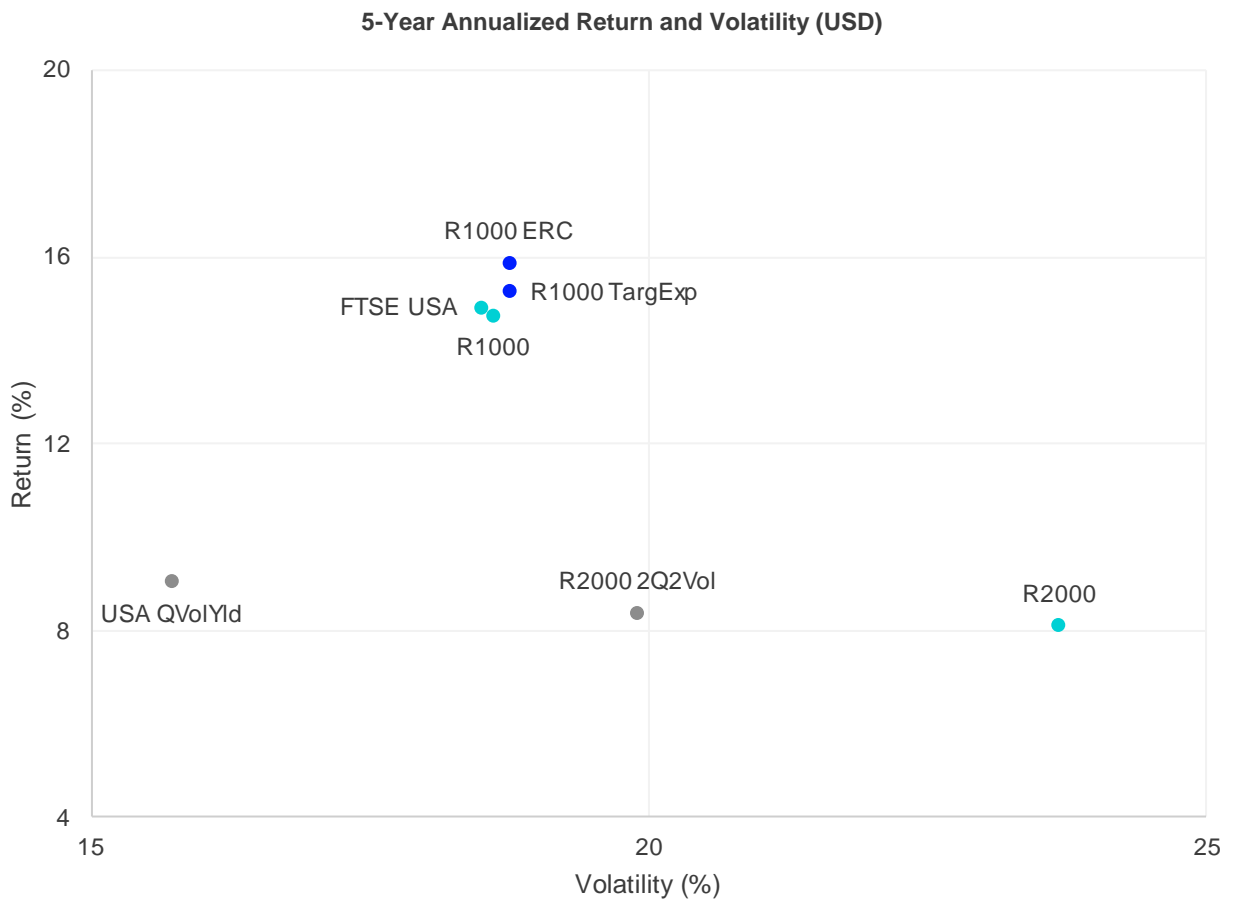


Current Relative 12M forward P/Es vs history



Source: FTSE Russell and LSEG. All data as of March 31, 2024. Past performance is no guarantee of future results.

FTSE Russell US Factor Index Risk/Return Performance



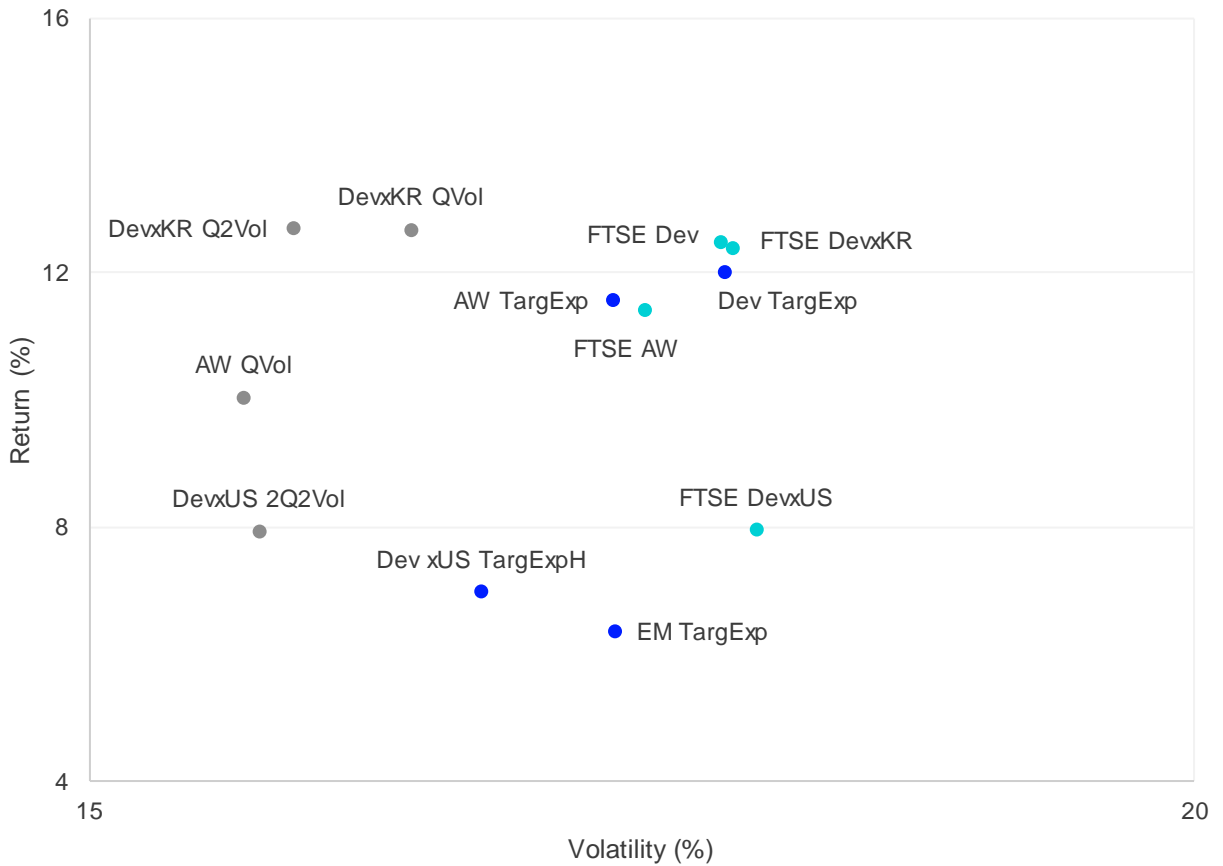
Annualized Returns and Volatility (USD %)

Label	Index	1-yr return	5-yr return	5-yr volatility
Diversified Indices				
● R1000 ERC	Russell 1000 Comprehensive Equal Factor Risk Contribution	31.1	15.9	18.7
● R1000 TargExp	Russell 1000 Comprehensive Target Exposure Factor Index	27.5	15.3	18.7
Defensive Indices				
● R2000 2Q2Vol	Russell 2000 2Qual/2Vol 3% Capped Factor Index	16.8	8.4	19.9
● USA QVolYld	FTSE USA Qual/Vol/Yield Factor Index	8.9	9.1	15.7
Benchmarks				
● FTSE USA	FTSE USA Index	30.1	14.9	18.5
● R1000	Russell 1000® Index	29.9	14.8	18.6
● R2000	Russell 2000® Index	19.7	8.1	23.7

Source: FTSE Russell and LSEG. All data as of March 31, 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	24.3	11.6	17.4
• Dev TargExp	FTSE Developed Comprehensive Target Exposure Factor Index	24.9	12.0	17.9
• Dev xUS TargExpH	FTSE Developed ex US Comprehensive High Target Exposure	20.7	7.0	16.8
• EM TargExp	FTSE Emerging Comprehensive Target Exposure Factor Index	12.0	6.4	17.4
Defensive Indices				
• AW QVol	FTSE All-World Target Exposure Qual Vol Factor Index	19.5	10.0	15.7
• DevxKR Q2Vol	FTSE Developed ex Korea Qual/2 Vol Factor Index	18.4	12.7	15.9
• DevxKR QVol	FTSE Developed ex Korea Qual/Vol Factor Index	18.2	12.7	16.5
• DevxUS 2Q2Vol	FTSE Developed ex US 2Qual/2Vol 5% Capped Factor Index	13.5	7.9	15.8
Benchmarks				
• FTSE AW	FTSE All-World Index	23.6	11.4	17.5
• FTSE DevxKR	FTSE Developed ex Korea Index	25.5	12.5	17.9
• FTSE DevxUS	FTSE Developed Ex US Index	16.1	8.0	18.0
• FTSE Dev	FTSE Developed Index	25.4	12.4	17.9
• FTSE EM	FTSE Emerging Index	8.5	3.2	18.0

Source: FTSE Russell and LSEG. All data as of March 31, 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.



ABOUT FTSE RUSSELL

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner, we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

CONTACT US

To learn more, visit lseg.com/ftse-russell; email info@ftserussell.com; or call your regional Client Service team office:

EMEA +44 (0) 20 7866 1810

North America +1 877 503 6437

Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 6441 1430

Sydney +61 (0) 2 7228 5659

© 2024 London Stock Exchange Group plc and its applicable group undertakings ("LSEG"). LSEG includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights re-served.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of LSEG or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by LSEG, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of LSEG nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to indexes, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of LSEG nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of LSEG is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of LSEG nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of LSEG nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indexes cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of LSEG nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of LSEG. Use and distribution of LSEG data requires a licence from FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.