

Performance Insights

MONTHLY REPORT | JUNE 2024

Risk rally resumes amid cautious optimism

May brought a resumption of the global risk rally amid a still cautious outlook for policy rate cuts.

Global Asset Classes – Monetary outlook and Al optimism are key drivers

Equities and bonds rebounded in May after the April pullback. Stable or slightly lower yields provided relief to long-dated government and corporate bond segments in most regions. Long-dated ILBs fared better than short-dated ILBs. Both the US dollar and oil lost ground, while gold and the broad commodities index advanced.

Global Equities - FTSE 250, Europe and the US outperform

Equities rebounded across major regions. The FTSE 250, Europe and US outperformed the FTSE All-World and peers. The FTSE 100, Asia Pacific, Japan and Emerging lagged the global benchmark in that order.

Industry returns - Financials lead, Energy lags

Financials led industry returns, on average, while Energy lagged the most with the drop in oil price. Beneficiaries of AI and easing long yields drove performance.

Alternative Indices – Infrastructure outperforms

Core infrastructure outperformed globally. REITs, FTSE4Good and Environmental Opportunities posted mixed results for the month.

Factor performance - Momentum rebounds

Momentum outperformed across the board in May, indicating a continuation of 12M factor trends. Other factor performance was mixed.

Foreign exchange - USD weakens, GBP strengthens

The USD weakened versus most major currencies in May, while the British pound strengthened, including versus the USD.

Regional Index Returns Relative to FTSE All-World (Rebased, TR, GBP) 105 100 95 90 85 May-23 Nov-23 Feb-24 May-24 Aug-23 USA/AW UK/AW Developed Europe ex UK/AW Japan/AW Developed Asia Pac ex Japan/AW Emerging/AW

GBP EDITION

CONTENTS

Macro and Market Overview	2
Asset Class Returns	3
Global Equity Markets	4
Industry/Sector Contributions	5-7
Alternative Indices	8
Regional Factor Indicators	9
Foreign Exchange	10
Asset Class Risk/Return	11
Asset Class Correlations	12
Appendix	13

AUTHORS

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

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

+2.1%

FTSE 100 (TR) May 2024

+4.2%

FTSE 250 (TR) May 2024

-7.0% Move in Oil Price

May 2024

-3 bps Move in 10-year UK Gilt Yield May 2024

+16.1%

FTSE UK Telecoms (TR) May 2024

-2.8% FTSE UK Utilities (TR)

May 2024

Source: FTSE Russell and LSEG. Data as of May 31, 2024. Past performance is no guarantee of future results. Please see the end for important legal disclosures.

Macro and Market Overview — May 2024

Asset class performance in May was marked by further caution on the expected monetary policy trajectory, sustained optimism around AI technologies and the impact of a lower oil price.

Lower April inflation provided some relief in the US. In the UK, while inflation was lower it was still higher than expected. Headline inflation inched up in Germany and held steady for the Eurozone. In Japan, inflation was lower but still above the desired 2% target. In China, slightly higher inflation of 0.2% YoY was welcome news as the economy battled deflationary pressures.

US's Q1 GDP was revised down from 1.6% to 1.3% on lower consumer spending. However, this was balanced by recent indicators of higher consumer confidence, strong employment and easy financial conditions. Both the UK and the Eurozone pulled themselves out of a technical recession with growth in Q1. However, Japan posted negative Q1 growth as a weaker yen weighed on domestic demand. China's Q1 growth tracked expectations.

With this mixed bag of macro data, there were hints of monetary policy divergence among major central banks.

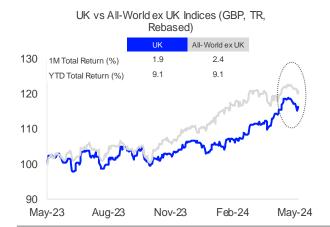
The UK underperformed global peers in May, extending the 12M performance gap.

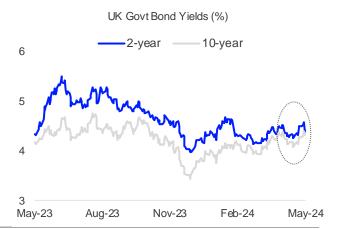
The Fed and the BoE held key policy rates in May and are expected to do so at least for the next two months. The ECB is expected to initiate a first rate cut in June, but questions remain about whether it will follow with another cut in quick succession. The BoJ may consider another rate hike to support the weak yen.

Given the outlook for central bank action it was interesting that in the US and the UK, 10-year government yields dipped during the first half of May before rising again to settle 17 and 3 bps, respectively, *lower* than at April-end, while the 10-year bund yield dipped and rose to settle 7 bps *higher* than at April-end. Japan's 10-year yield rose 20 bps to settle close to its highest level in at least five years with the easing of yield curve controls. China's 10-year yield was flat.

In this context, most major government and corporate bond segments and equity markets rebounded in May. Equities were helped by strong Q1 earnings in the US and an optimistic outlooks for chip stocks globally. Oil prices dipped. The USD eased alongside lower yields. Near-term elections added to the uncertainty and bumpiness in markets.

The UK 2-year and 10-year yields declined by 9 and 3 bps, respectively, in May.





Key Macro Indicators

	GDF	P (%)	Composite PMI		CPI (%)		CPI Core (%)		Unemployment (%)		Policy Rate (%)		10YR Y	ield (%)
	QoQ	Poll			YoY		YoY							
period	24Q1	2024	May	Apr	Apr	Mar	Apr	Mar	Apr	Mar	May	Chng	May	Apr
US	1.3	2.3	54.4	51.3	3.4	3.5	3.6	3.8	3.9	3.8	5.50	-	4.51	4.68
Canada	1.7	0.7		49.4	2.7	2.9	1.6	2.1	6.1	6.1	5.00	-	3.63	3.82
UK	2.5	0.5	52.8	54.1	2.4	3.3	3.9	4.3	4.1	4.1	5.25	-	4.32	4.35
Germany	0.9	0.1	52.2	50.6	2.2	2.1	3.0	3.3	5.9	5.9	4.50	-	2.65	2.58
Eurozone	1.3	0.7	52.3	51.7	2.4	2.4	2.7	2.9	6.4	6.5	4.50	-	-	-
Japan	-2.0	0.9	50.5	49.6	2.5	2.8	2.4	2.8	2.6	2.6	0.00	-	1.07	0.87
China	9.7	4.6		52.8	0.2	0.1	0.7	0.6	4.9	5.1	3.45	-	2.32	2.31

Important notes: GDP: QoQ GDP growth rates are annualized. Japan's poll GDP growth is for FY 2024 ending March 2025. Composite PMI: May PMI are flash composite PMI, except for Japan which is flash manufacturing PMI. Apr PMI are final composite PMI, except for Canada and Japan which are final manufacturing PMI.

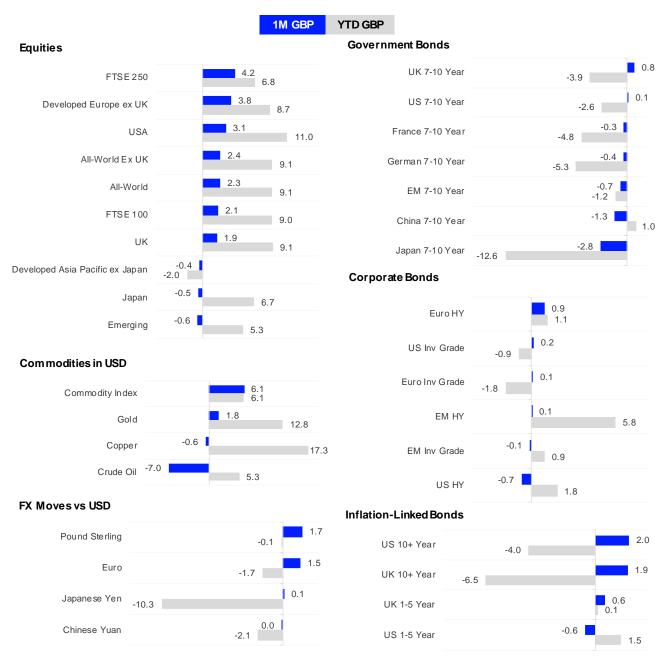
Asset Class Returns – 1M & YTD (GBP, TR %)

Equities rebounded in May. The FTSE 250, Developed Europe and the US outperformed the FTSE All-World and peers. The FTSE 100 lagged the global index and was followed by Developed Asia Pacific, Japan and Emerging. YTD, US equities still held the lead and Developed Asia Pacific equities lagged the most (page 4).

UK government 7-10 year bonds bested other developed and EM cohorts, while Japanese 7-10 year bonds performed the worst given the historic rise in Japanese long yields. Euro and EM high yield outperformed their investment grade counterparts, while US investment grade fared better than its high yield counterpart. Short-dated US and UK inflation-linked bonds underperformed their longer-dated (10yr+) counterparts, in a reversal from the YTD trend.

In a reversal, oil retreated in May and copper gave back some of its gains. Gold continued to rally as did the broader FTSE Commodity index.

The US dollar weakened versus several major currencies over the month, especially versus the British pound and the euro. The Japanese yen gained modestly versus the US dollar (in a reversal from 12M trends), likely helped by the rise in Japanese long yields, while the Chinese yuan weakened slightly. The British pound strengthened versus most major currencies, including the euro, Japanese yen and Chinese yuan (page 10).



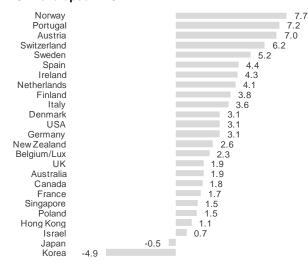
Global Equity Market Returns – 1M & YTD (GBP, TR %)

TSE Regions 1M GBP Dev eloped Europe ex UK USA Dev eloped 2.7 All-World UK Dev eloped Asia Pacific ex Japan Japan -0.4 Japan -0.5 Emerging -0.6

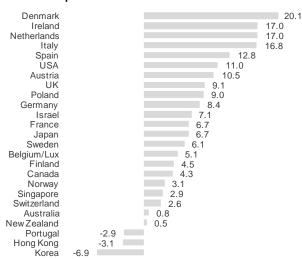
FTSE Regions YTD GBP



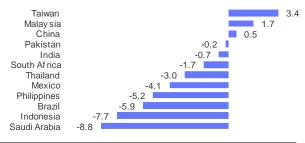
FTSE Developed 1M GBP



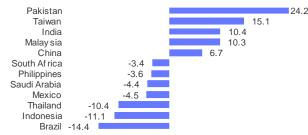
FTSE Developed YTD GBP



FTSE Emerging 1M GBP

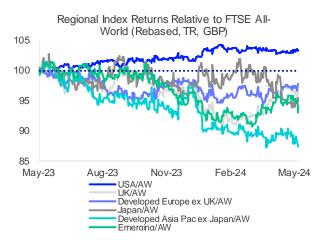


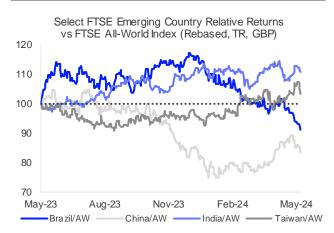
FTSE Emerging YTD GBP



The US continued to beat the global index over 12M, while Developed Asia Pacific lagged the most.

Over 12M, both Taiwan and Indian equities performed better than the global index to buoy Emerging's returns.





Regional Industry-Weighted Contributions to Returns – 1M (GBP, TR %)

Industry contributions were mostly positive in May, reflecting a resumption of the risk-on rally and more specific influences such as the spillover of AI optimism to other industries/sectors and the oil price drop.

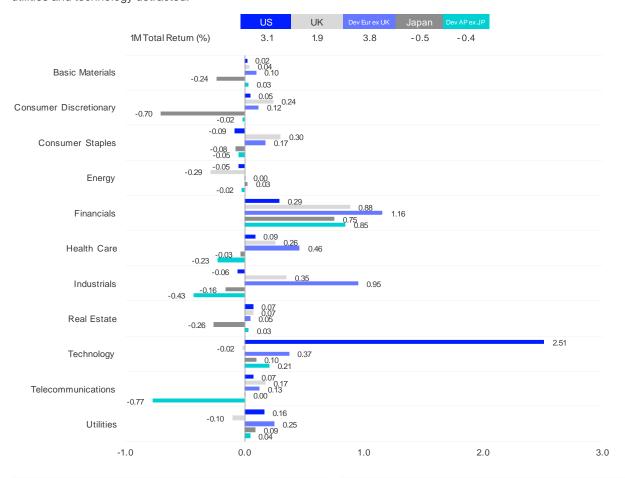
In the US, technology led, contributing over half of the index's returns, while staples and industrials detracted.

In the UK, financials was the top contributor, while energy, utilities and technology detracted.

In Europe, financials led contributions followed by industrials. Energy and real estate lagged the most.

In Japan, financials was the top contributor while discretionary detracted the most.

In Asia Pacific, financials and technology were the top two contributors, while telecoms, industrials and health care detracted meaningfully from performance.



On average, Financials topped industry performance, while Energy lagged the most with the oil price drop over May.

Tech dominates in the US; financials are largest in the UK & Asia Pacific; and industrials is top in Europe and Japan.

Regional Industry Exposures (%)

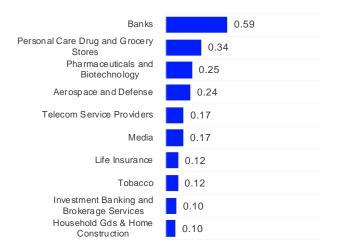
	1M Regional Industry Returns (TR, GBP)											
	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP							
Basic Materials	1.1	0.5	2.2	- 4.7	0.3							
Consumer Disc.	0.3	2.2	0.9	- 3.1	- 0.2							
Consumer Staples	- 1.8	2.1	2.3	- 1.3	- 1.5							
Energy	- 1.3	- 2.2	0.1	3.0	- 0.7							
Financials	2.7	4.8		6.0	3.0							
Health Care	0.7	1.9	2.9	- 0.5	- 3.4							
Industrials	- 0.5	2.4	5.2	- 0.6	- 4.0							
Real Estate	3.2	5.5	4.4	- 7.3	0.5							
Technology		- 2.0	3.6	0.8	3.3							
Telecoms	3.6	16.1	4.6	0.1	- 6.5							
Utilities		- 2.8			1.5							

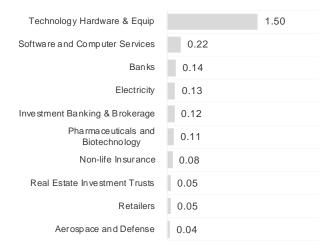
	Le	gioriai iric	usiiy ⊏xp	osures (70)
	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP
Basic Materials	1.7	7.9	4.4	4.8	11.4
Consumer Disc.	13.5	11.0	13.0	22.2	8.9
Consumer Staples	4.6	14.5	7.5	5.6	3.4
Energy	3.9	12.3	3.9	0.9	3.2
Financials	10.6	18.7	18.6	13.4	28.7
Health Care	11.5	13.5	16.1	7.1	6.5
Industrials	11.6	14.8	18.7	25.9	10.4
Real Estate	2.2	1.3	1.0	3.3	6.7
Technology	35.7	0.8	10.3	11.4	6.5
Telecoms	2.0	1.2	2.8	3.7	11.2
Utilities	2.7	3.8	3.8	1.6	3.0

FTSE UK vs AW ex UK: Sector-Weighted Return Contributions – 1M (GBP, TR %)



Top 10 Contributors





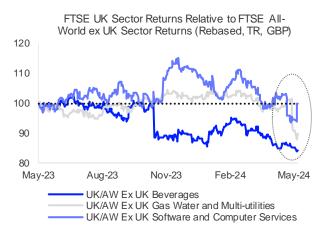
Bottom 10 Contributors

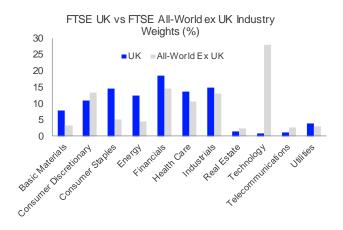




The UK underperformed peers in May by lagging in sectors like beverages, gas, water & multi-utilities and software.

The FTSE UK is tilted more to staples, energy & materials than its peers, and less to technology & discretionary.

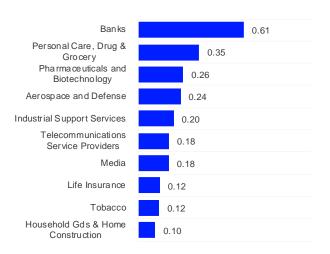




FTSE 100 vs 250: Sector-Weighted Return Contributions – 1M (GBP, TR %)

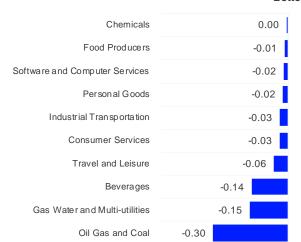


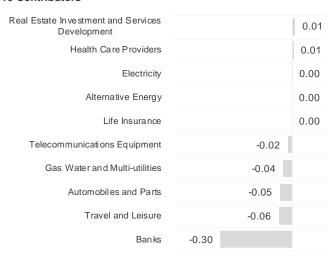
Top 10 Contributors



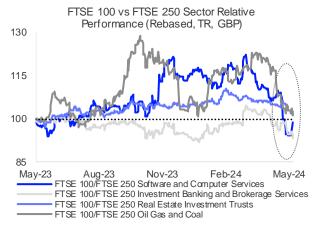


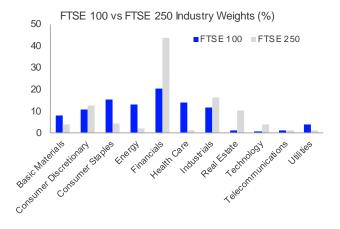
Bottom 10 Contributors



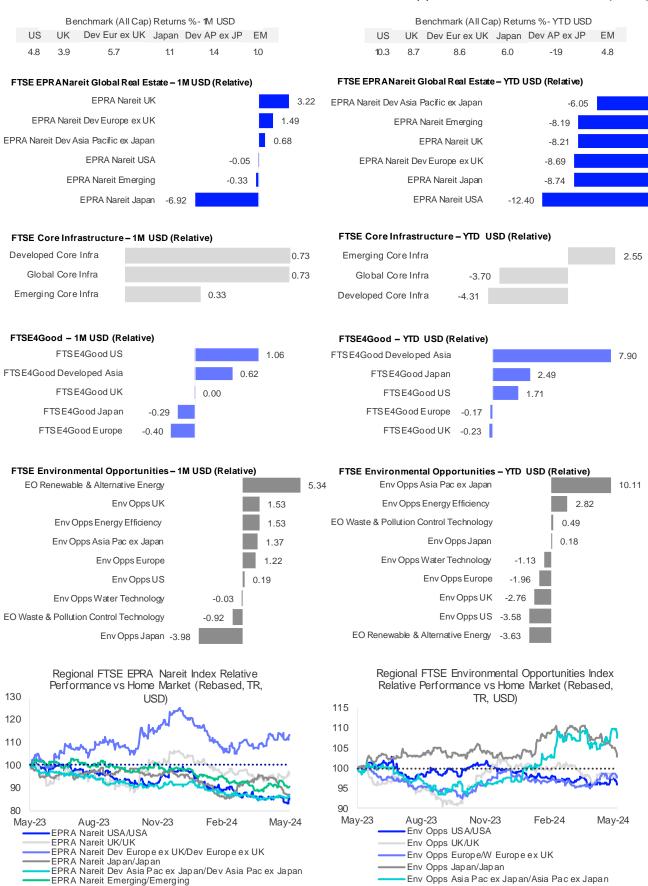


FTSE 100 underperformed FTSE 250 in May, lagging in software, investment banking, REITs and oil, gas & coal. FTSE 100 is more tilted to staples, energy & health care than FTSE 250, and less to financials, real estate & industrials.

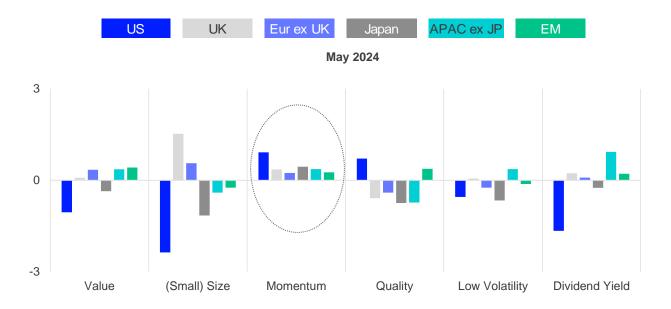




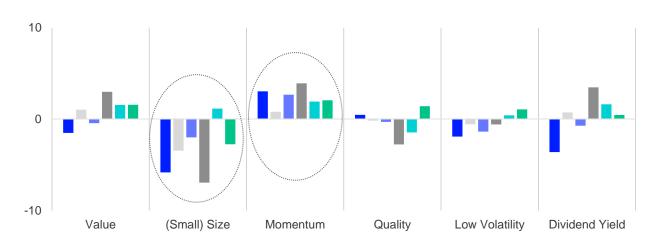
Alternative Indices – REITs, FTSE4Good, Environmental Opportunities, Infrastructure (USD)



Regional Factor Indicator Relative Returns – 1M & YTD (Local Currency, TR %)



Year-to-Date



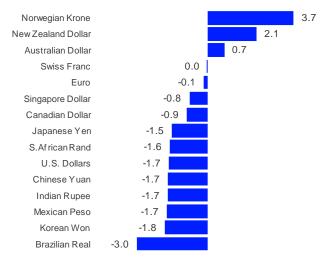
Momentum rebounded in May and has outperformed over 12M, indicating a continuation of long-term trends.

Size underperformed over 12M, suggesting that larger stocks may have participated more in the latest risk rally.



Foreign Exchange Returns %

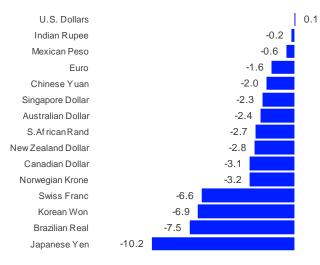
FX Moves vs GBP - 1M



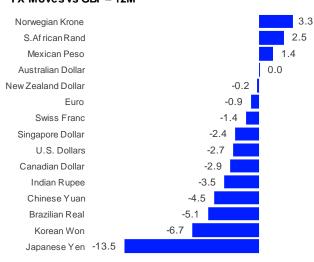
FX Moves vs GBP - 3M



FX Moves vs GBP - YTD

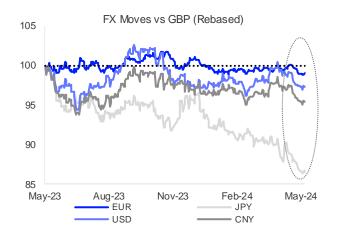


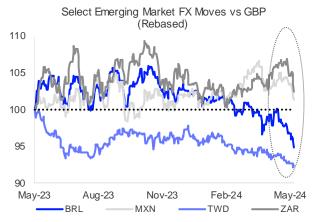
FX Moves vs GBP - 12M



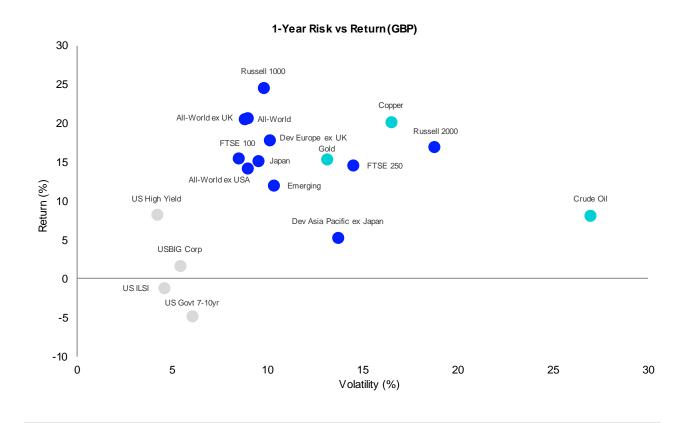
The GBP strengthened further in May vs the USD, EUR, JPY and CNY, as it has over 12 months.

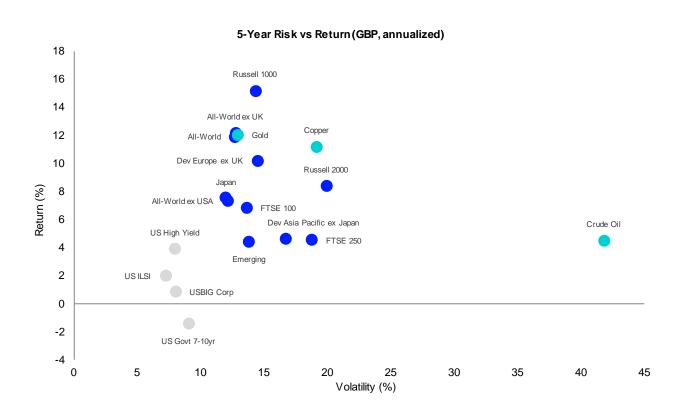
12M EM currency performance versus the GBP was mixed. The S. African rand and Mexican peso outperformed





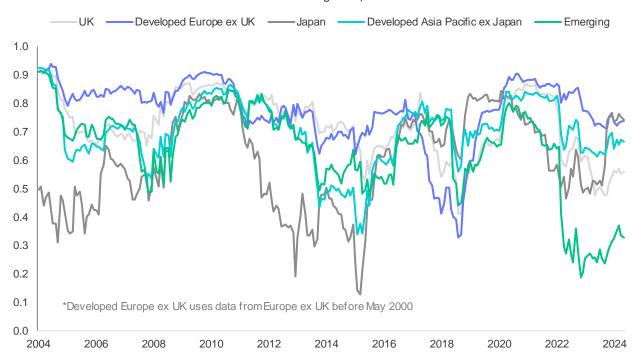
Asset Class Risk/Return – 1-Year and 5-Year (GBP)





Correlations

Regional Equity Market Correlations with Russell 1000 Index (GBP, Monthly Returns, Rolling 24M)



Three-Year Correlation Matrix (GBP)

Russell 1000	-	0.83	0.97	0.70	0.47	0.76	0.59	0.63	0.32	0.13	0.23	0.48	0.33	-0.23
Russell 2000	0.83		0.83	0.68	0.50	0.65	0.57	0.69	0.34			0.53	0.30	-0.29
All-World	0.97	0.83		0.86	0.61	0.85	0.69	0.78	0.51			0.45	0.37	-0.16
All-World ex USA	0.70	0.68	0.86	-	0.79	0.86	0.74	0.92	0.77		0.02	0.32	0.37	-0.01
UK	0.47	0.50	0.61	0.79		0.80	0.38	0.70	0.45	-0.17	-0.12		0.02	-0.09
Developed Europe ex UK	0.76	0.65	0.85	0.86	0.80	-	0.54	0.75	0.40	-0.06	-0.11	0.20		-0.11
Japan	0.59	0.57	0.69	0.74	0.38	0.54		0.66	0.55	0.30	0.23	0.50	0.54	-0.09
Developed Asia Pacific ex Japan	0.63	0.69	0.78	0.92	0.70	0.75	0.66	-	0.71			0.32	0.32	0.12
Emerging	0.32	0.34	0.51	0.77	0.45	0.40	0.55	0.71			0.05		0.39	0.17
US Govt 7-10yr				80.0	-0.17	-0.06	0.30				0.78	0.49	0.91	0.13
US ILSI	0.23			0.02	-0.12	-0.11	0.23		0.05	0.78		0.69	0.71	0.10
US High Yield	0.48	0.53	0.45	0.32		0.20	0.50	0.32		0.49	0.69		0.63	-0.22
USBIG Corp	0.33	0.30	0.37	0.37	0.02	0.18	0.54	0.32	0.39	0.91	0.71	0.63		0.02
Gold	-0.23	-0.29	-0.16	-0.01	-0.09	-0.11	-0.09	0.12				-0.22	0.02	٠.
	Russell 1000	Russell 2000	All-World	All-World ex USA	UK	Developed Europe ex UK	Japan	Developed Asia Pacific ex Japan	Emerging	US Govt 7- 10yr	US ILSI	US High Yield	USBIG Corp	Gold

Appendix

	Wgt (%)	Mkt Cap		1	M			Υ	TD		12M				
		(USD bn)	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	
All-World	100.0	73,179	3.7	4.1	2.3	2.5	10.6	8.9	9.1	10.9	24.6	23.9	20.6	21.7	
Developed	90.4	66,157	4.0	4.4	2.7	2.8	10.9	9.4	9.5	11.3	25.4	24.9	21.5	22.6	
USA	62.1	45,464	4.8	4.8	3.1	3.2	10.9	10.9	11.0	12.8	28.2	28.2	24.8	25.9	
Developed Europe ex UK	12.0	8,759	3.6	5.5	3.8	3.9	11.8	8.6	8.7	10.5	18.7	21.1	17.9	18.9	
Emerging	9.6	7,022	1.0	1.1	-0.6	-0.4	7.5	5.2	5.3	7.0	17.2	15.1	12.1	13.1	
Japan	6.1	4,464	1.0	1.2	-0.5	-0.4	18.8	6.6	6.7	8.4	33.0	18.3	15.1	16.1	
Developed Asia Pacific ex Japan	4.0	2,897	0.1	1.3	-0.4	-0.2	1.6	-2.1	-2.0	-0.4	8.2	8.2	5.3	6.3	
UK	3.7	2,722	1.9	3.6	1.9	2.0	9.1	9.0	9.1	10.9	16.4	19.6	16.4	17.5	

Developed - Top 20 by % weight (TR)

	Wgt (%)	Mkt Cap		1	M			Y	ΓD		12M				
	-	(USD bn)	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	
Developed	100.0	66,157	4.0	4.4	2.7	2.8	10.9	9.4	9.5	11.3	25.4	24.9	21.5	22.6	
USA	68.7	45,464	4.8	4.8	3.1	3.2	10.9	10.9	11.0	12.8	28.2	28.2	24.8	25.9	
Japan	6.7	4,464	1.0	1.2	-0.5	-0.4	18.8	6.6	6.7	8.4	33.0	18.3	15.1	16.1	
UK	4.1	2,722	1.9	3.6	1.9	2.0	9.1	9.0	9.1	10.9	16.4	19.6	16.4	17.5	
France	3.0	1,977	1.9	3.4	1.7	1.9	8.5	6.6	6.7	8.5	14.8	16.9	13.8	14.8	
Canada	2.6	1,740	2.7	3.5	1.8	2.0	7.7	4.2	4.3	6.0	19.8	19.5	16.3	17.3	
Switzerland	2.4	1,605	6.2	8.0	6.2	6.4	9.8	2.5	2.6	4.3	8.0	9.4	6.5	7.4	
Germany	2.2	1,469	3.2	4.8	3.1	3.2	10.1	8.2	8.4	10.1	17.5	19.6	16.4	17.5	
Australia	2.1	1,360	1.2	3.6	1.9	2.0	3.3	0.7	0.8	2.5	14.0	17.1	14.0	15.0	
Korea	1.3	876	-3.1	-3.3	-4.9	-4.7	0.0	-7.0	-6.9	-5.4	6.5	2.1	-0.6	0.2	
Netherlands	1.3	865	4.3	5.9	4.1	4.3	18.9	16.8	17.0	18.9	23.8	26.1	22.7	23.8	
Denmark	0.9	613	3.2	4.8	3.1	3.2	22.1	19.9	20.1	22.0	37.5	39.8	36.1	37.3	
Sweden	0.9	578	2.5	7.0	5.2	5.4	10.6	5.9	6.1	7.8	21.2	25.5	22.1	23.2	
Italy	0.8	513	3.8	5.4	3.6	3.8	18.7	16.7	16.8	18.7	41.1	43.7	39.9	41.1	
Spain	0.7	490	4.5	6.1	4.4	4.5	14.6	12.7	12.8	14.6	30.9	33.3	29.8	30.9	
Hong Kong	0.6	379	2.8	2.8	1.1	1.2	-3.1	-3.2	-3.1	-1.5	-6.2	-6.2	-8.7	-7.9	
Singapore	0.3	228	2.3	3.2	1.5	1.7	5.3	2.8	2.9	4.6	12.1	12.4	9.4	10.4	
Finland	0.3	179	4.0	5.5	3.8	4.0	6.2	4.4	4.5	6.2	10.1	12.1	9.1	10.1	
Belgium/Lux	0.3	173	2.5	4.0	2.3	2.5	6.8	4.9	5.1	6.8	14.3	16.4	13.3	14.3	
Norway	0.2	114	3.9	9.5	7.7	7.9	6.5	3.0	3.1	4.8	18.5	25.7	22.4	23.4	
Israel	0.2	111	2.1	2.4	0.7	0.9	10.5	7.0	7.1	8.9	19.9	20.3	17.1	18.2	

Emerging - Top 10 by % weight (TR)

	Wgt (%)	Mkt Cap		1	M			Y	ΓD		12M				
	<u> </u>	(USD bn)	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	LOCAL	USD	GBP	EUR	
Emerging	100.0	7,022	1.0	1.1	-0.6	-0.4	7.5	5.2	5.3	7.0	17.2	15.1	12.1	13.1	
China	29.6	2,078	2.3	2.2	0.5	0.7	6.8	6.6	6.7	8.5	3.3	3.4	0.6	1.5	
India	22.4	1,572	1.0	1.0	-0.7	-0.5	10.6	10.3	10.4	12.2	38.7	37.5	33.8	35.0	
Taiwan	19.3	1,355	4.6	5.2	3.4	3.6	21.4	15.0	15.1	17.0	35.1	28.2	24.8	25.9	
Brazil	5.4	378	-3.0	-4.3	-5.9	-5.8	-7.5	-14.5	-14.4	-13.0	16.1	13.1	10.1	11.1	
Saudi Arabia	4.3	303	-7.3	-7.3	-8.8	-8.7	-4.5	-4.5	-4.4	-2.8	3.4	3.4	0.6	1.5	
South Africa	3.1	215	-0.1	-0.1	-1.7	-1.6	-0.7	-3.5	-3.4	-1.8	8.7	14.4	11.4	12.4	
Mexico	3.0	210	-2.4	-2.5	-4.1	-4.0	-4.0	-4.6	-4.5	-3.0	7.0	11.4	8.4	9.4	
Thailand	1.9	131	-2.1	-1.4	-3.0	-2.9	-3.5	-10.5	-10.4	-8.9	-7.2	-12.2	-14.5	-13.8	
Malaysia	1.8	129	2.0	3.5	1.7	1.9	12.8	10.1	10.3	12.1	21.3	19.0	15.8	16.8	
Indonesia	1.8	125	-6.2	-6.2	-7.7	-7.6	-6.3	-11.2	-11.1	-9.7	-4.6	-12.0	-14.3	-13.6	



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 Iseg.com/en/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.