

# Fixed Income Insights

MONTHLY REPORT - MARCH 2023 | UK EDITION

FOR PROFESSIONAL INVESTORS ONLY

## Higher for longer inflation and policy rates become more than a tail risk

BoE Governor Bailey confirmed the MPC will trade off recession for lower inflation, if necessary, but will cut rates if inflation falls as forecast. Rate expectations are defensive, as markets adjust to “higher for longer” risks, but curve inversion gives no reward for duration risk. HY credits outperformed, helped by short duration.

### Growth and inflation expectations – Doubts about soft landing for inflation and UK growth increase?

Doubts about soft landing for UK and G7 inflation re-emerge, despite easing in supply-chain pressures. (pages 2-3)

### Yields, curves and spreads – Central bank caution prevails, driving bearish inversion

Yield curves are deeply inverted, but February’s bearish inversion was driven by sharp increases in 2-year yields. (pages 4-5)

### Performance – Duration proves the unreliable friend again, in February

It was back to the negative performance of 2022 in February, as duration again proved the investor’s enemy. (pages 6-8)

### Sovereign and climate bonds – Relative performance dominated by country weights and duration

Climate-WGBI underperformed WGBI in February, reflecting the US underweight in climate-WGBI. (page 9)

### Appendix (from page 10)

Global bond market returns, historical bond yields, bond market durations and market values and foreign exchange returns.

Chart 1: Deep inversion of 10s/2s yield curves continues (exc. Japan), leaving investors unrewarded for extra duration risk in 10 years.

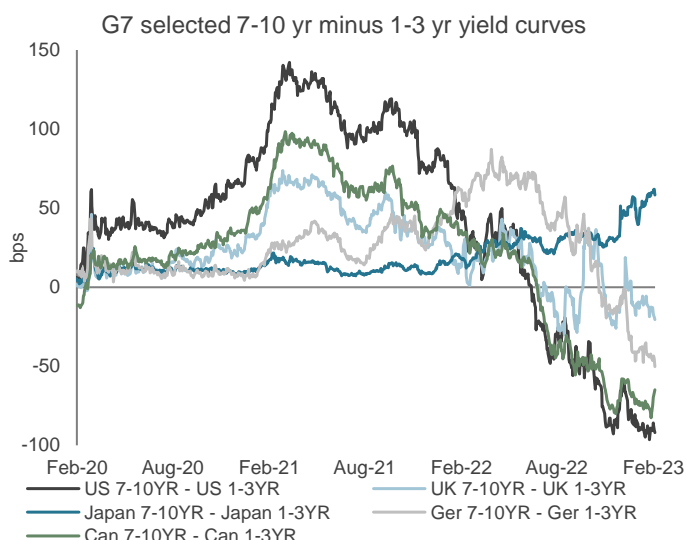
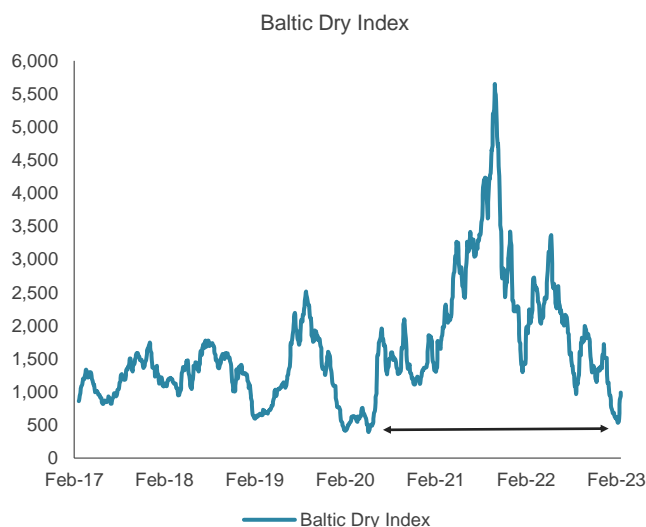


Chart 2: The Baltic Dry Index for shipping costs has returned to pre-Covid levels, as supply-chain pressures have eased sharply.



Source: FTSE Russell. All data as of February 28, 2023. Past performance is no guarantee of future results. This report should not be considered 'research' for the purposes of MIFID II. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix for list of indices used for each market.

# Macroeconomic Backdrop – Growth and Inflation Expectations

IMF growth forecasts were upgraded for 2023, and only the UK is projected to shrink in 2023. Consumer spending held up well, particularly in the US, but also capex, and the G7 “soft landing” narrative on growth is intact, even if declines in UK inflation remain gradual. The collapse in the Baltic Dry index (see cover) suggests supply-chain issues are easing.

Only the UK economy is projected to contract in 2023, in the latest IMF growth forecasts (Chart 1). Other forecasts were modestly upgraded, after stronger Q4 data, despite higher policy rates. With a less severe energy shock than Europe, US demand has held up well, and the Atlanta Fed’s GDP growth tracker points to Q1 growth of 2.5%, despite weakness in manufacturing.

Inflation rates fell, but marginally in January, and strong food price inflation remains a factor throughout the G7. Lagged increases in utility prices delay the decline in UK inflation, which has only dropped to 10.1% from a peak of 11.1% in October 2022 (Chart 2).

Chart 3 shows the transformation of the UK labour market since Covid, with unemployment near 50-year lows and wage growth, which has trended higher since early 2022, helping drive inflation higher. Increased industrial action in the public sector suggests wage growth has not yet peaked, with some evidence of action spreading to the private sector.

G7 7-10-year Inflation breakevens remain up to about 35bp below Oct 31 2022 levels, despite the modest reversal in February, as Chart 4 shows. Relative stability of medium and longer term breakevens will be of some reassurance to central banks.

Chart 1: Consensus 2023 GDP growth expectations in December project a sharp slowdown, but with net contraction only in the UK. The Covid surge increases uncertainty in China.

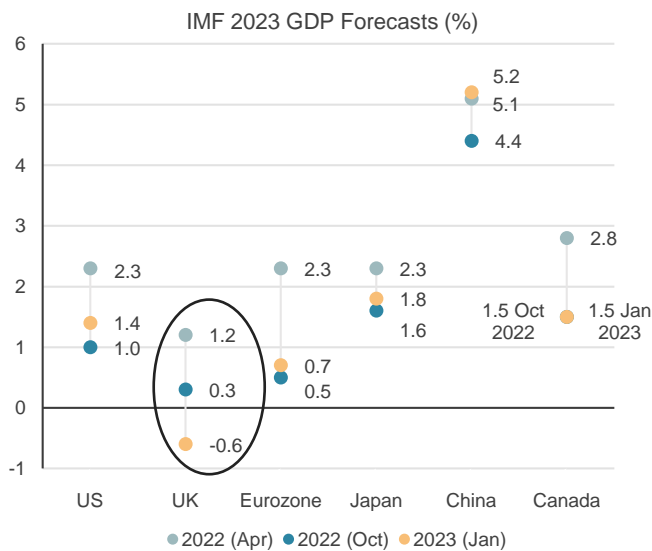


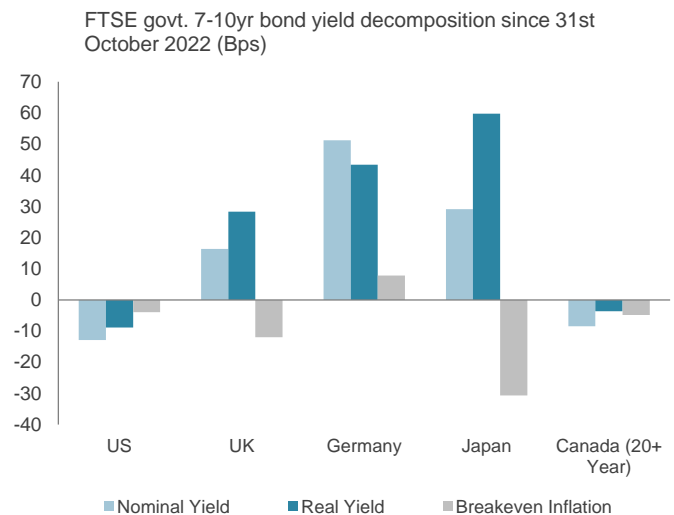
Chart 2: Inflation fell more quickly in the US, since Q3, reflecting sharp falls in fuel prices. UK and Eurozone inflation is falling slowly due to administered price increases. China remains an outlier.

	2023	Change Since Jan-23 (Bps)	2024	Change Since Jan-23 (Bps)
US	3.8	10	2.5	0
UK	7.0	0	2.6	10
Eurozone	5.6	-40	2.5	0
Japan	2.0	20	1.4	10
China	2.3	0	2.3	0
Canada	3.7	0	2.2	0

Chart 3: Cost-push pressures from wage inflation remains an issue for the BoE, with unemployment near a 50-year low, and industrial action surging in both private and public sectors.



Chart 4: 7-10yr inflation breakevens mostly fell across the G7 since Oct. 31, including the UK. After a late start, BoE tightening has been sizeable, helping reduce medium term breakevens.



Source: FTSE Russell and Refinitiv. All data as of February 28, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

# Financial Conditions and Monetary Policy Settings

Although lower bond yields, and tighter credit spreads, helped ease G7 financial conditions since October, this reversed in February as stronger data drove yields higher. The Bank of England raised rates to 4% , confirming it will trade off lower inflation for a recession, and is pursuing Quantitative Tightening (QT) at about the same pace as the Fed.

Monetary tightening, including QT, has impacted M2 growth, which has slowed sharply in the G7, as Chart 1 shows for the UK. However unstable velocity, has made M2 an unreliable indicator for future inflation.

Chart 2 shows the US dollar rebounded modestly in February, in response to the stronger data, but that the dollar's previous negative correlation with energy and commodity prices, broke down in 2022/23. The combination of a strong dollar with strong energy prices in 2022/23 increased inflation pressures in Europe and Japan, complicating inflation control.

The BoE raised rates 50bp to 4% in February, despite forecasting UK inflation below the 2% target in 2024 (and under 1% by 2026). Governor Bailey described the move as insurance against not achieving the target, and remains prepared to trade off lower inflation for a recession. However, he also hinted at willingness to ease policy, if inflation falls faster, at the Quarterly press conference.

Chart 4 shows the BoE embarked upon a similar balance sheet contraction (Quantitative Tightening) as the Fed (about 10% per annum). The programme was delayed by emergency gilt purchases of £19.3bn for financial stability in Q4 2022, (unwound by January 2023). Active gilt sales supplement redemptions to meet the £80bn target. Short rates remain the key policy instrument.

Chart 1: M2 growth has slowed sharply in the UK, but has become a less reliable indicator of future inflation, given its unstable velocity. UK M2 growth has trended lower since end-2020.

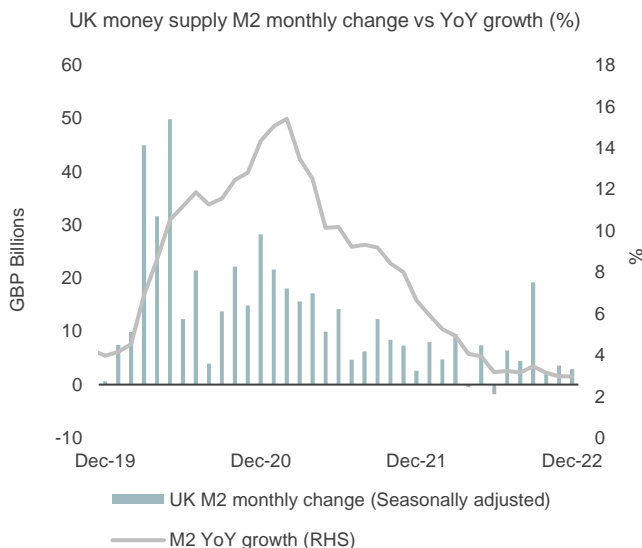


Chart 2: The US dollar's negative correlation with the oil price has weakened. The positive correlation of strong energy prices and US dollar reinforced inflation pressures on Europe & Japan in 2022.

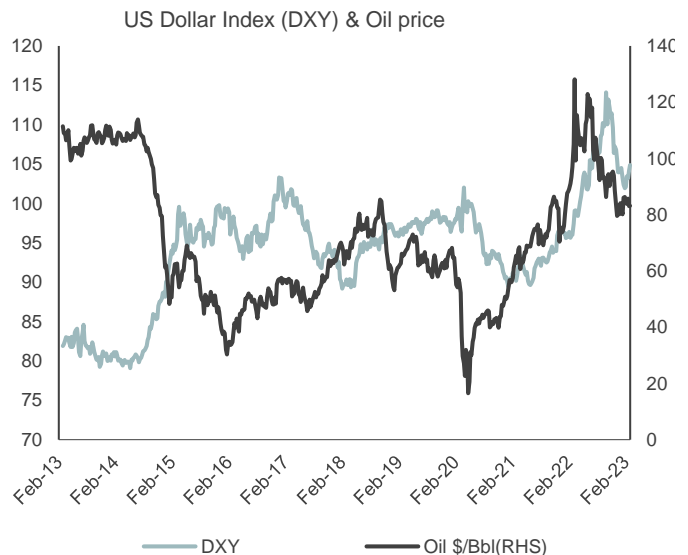


Chart 3: Steep G7 central bank rate rises were main drivers of the tightening in financial conditions in 2022. Sticky UK inflation and the tight labour market may yet cause further BoE rate increases.

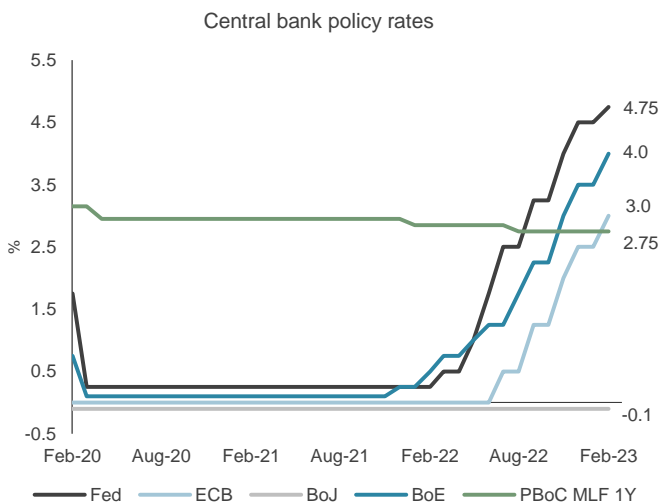
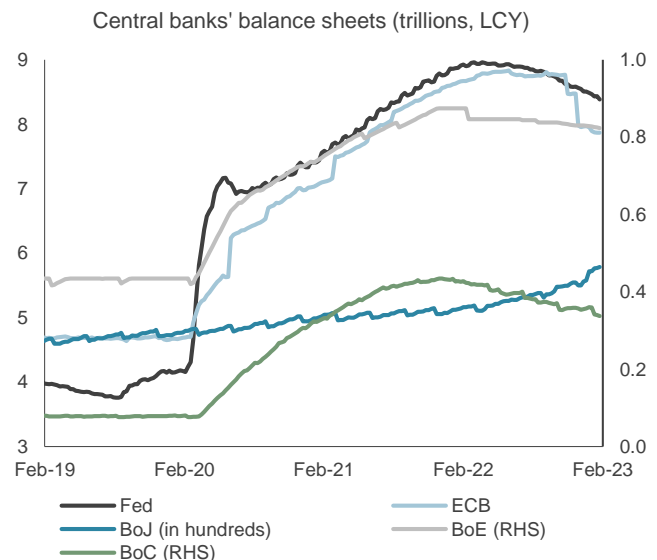


Chart 4: After a delayed start to QT, the BoE is supplementing gilt maturities with outright sales to shrink its balance sheet by £80bn per annum (about 10% of total size), a similar pace to the Fed.



# Global Yields, Curves and Spread Analysis

Chart 1: G7 bond yields reversed the January declines in February, led by Treasuries, as markets reacted to robust US employment growth, with rates now expected to peak nearer Fed dot plots.

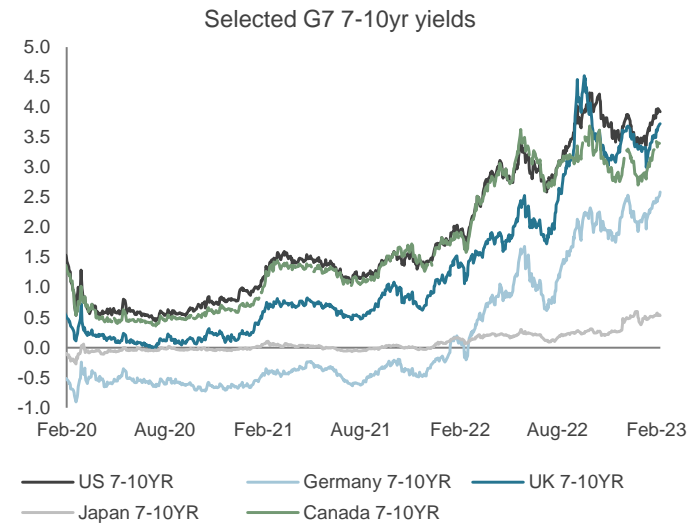


Chart 2: WGBI and US Inflation-linked yields are firmly positive, and just so in the UK and Germany. But real yields backed up less than nominal yields in February, as breakevens rose (see Charts 5 & 6).

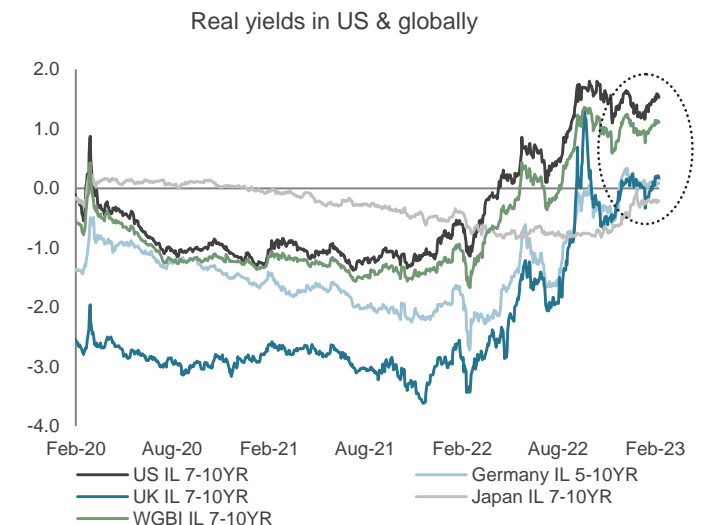


Chart 3: Deep inversion of 10s/2s yield curves continues (exc. Japan) but this time a bear inversion (yields rising more in 2yrs than 10yrs). This leaves investors unrewarded for extra duration risk.

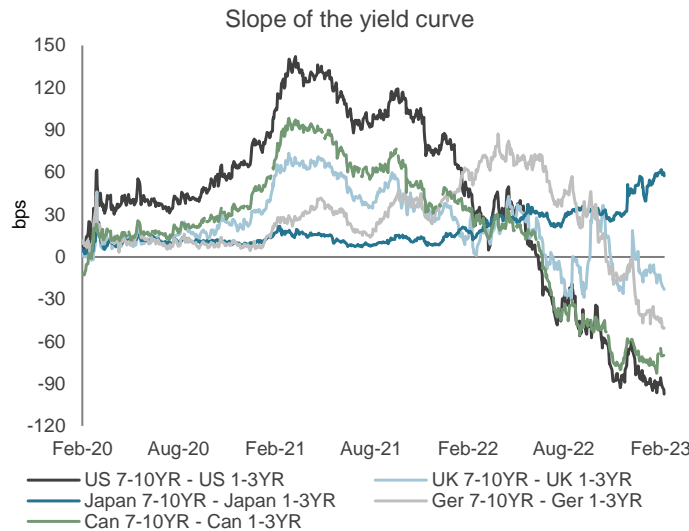


Chart 4: At the long end, only Japan and the UK have retained positively sloped yield curves, unlike the US, Germany and Canada, which, like 10/2s in Chart 3, have deeply inverted curves.

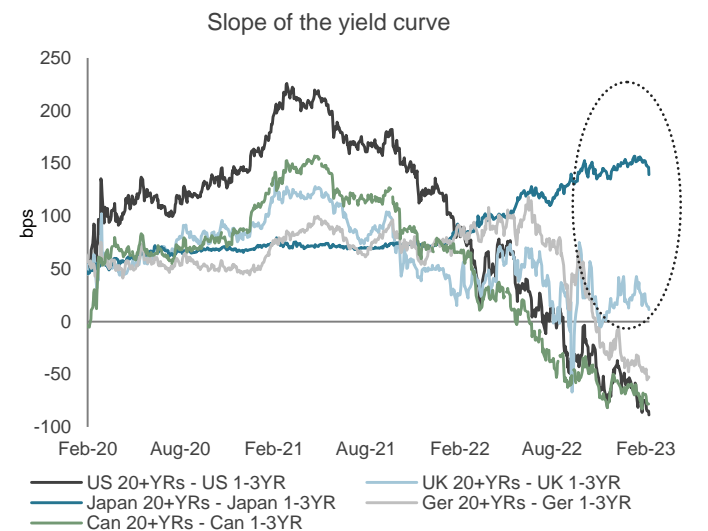


Chart 5: 7-10yr breakevens reversed their recent declines, and rose in February, as government yields rose after inflation showed little signs of easing sharply, despite monetary tightening in 2022-23.

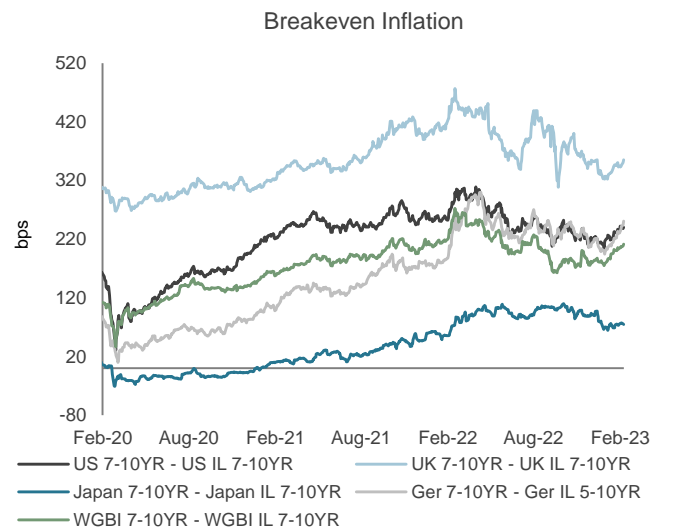
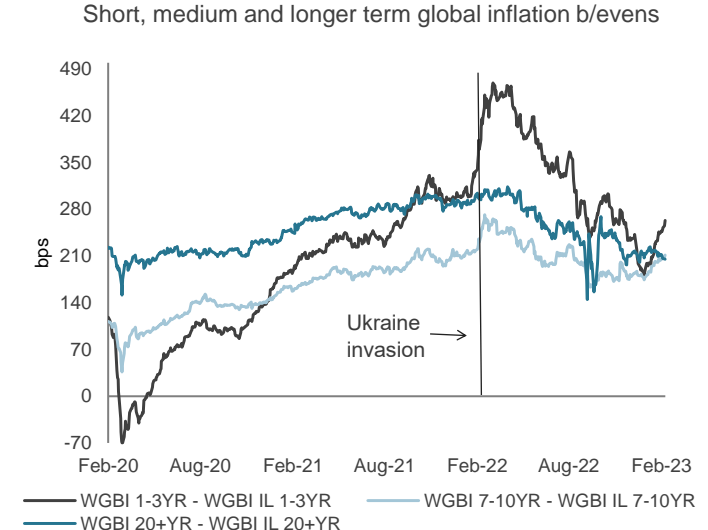


Chart 6: Short WGBI breakevens moved sharply higher in February, reversing falls since the 2022 Ukraine spike, as January data proved stronger than expected. Longer breakevens reacted less.



Source: FTSE Russell and Refinitiv. All data as of February 28, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

# Yield Spread and Credit Spread Analysis

Chart 1: US 7-10-year spreads have remained relatively flat against their G7 equivalents in February, except against Japan, where spreads widened after the BoJ kept its curve control policy.

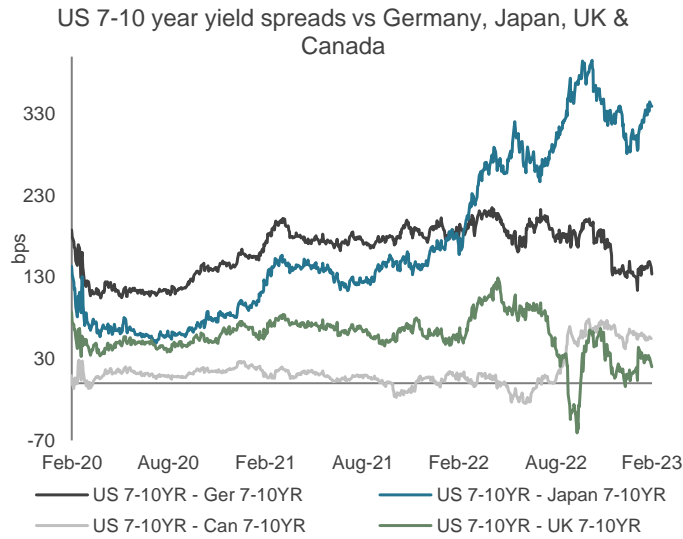


Chart 2: Italy 7-10yr spreads vs the US are a little higher than 2018-19, unlike vs Germany & France, where spreads fell sharply since Q4 2022. This may reflect the ECB's huge potential sales of Bunds.

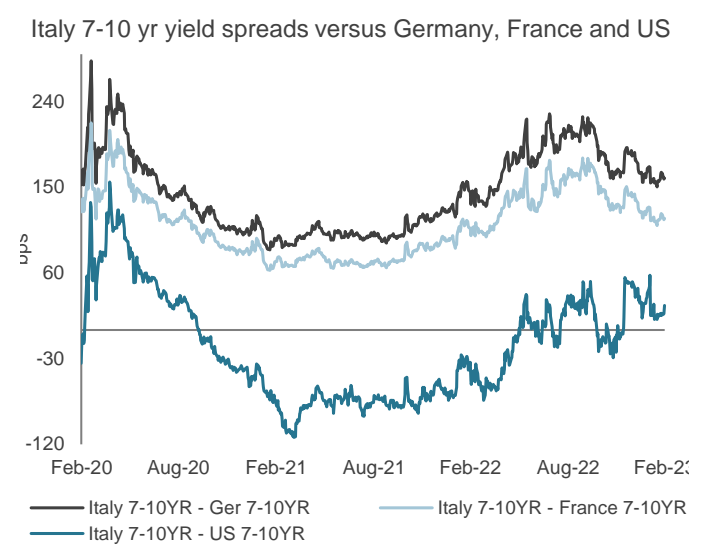


Chart 3: EM spread narrowing partly reflects higher G7 yields, but at no point have EM spreads spiked since Covid, as they did in genuine crises previously.

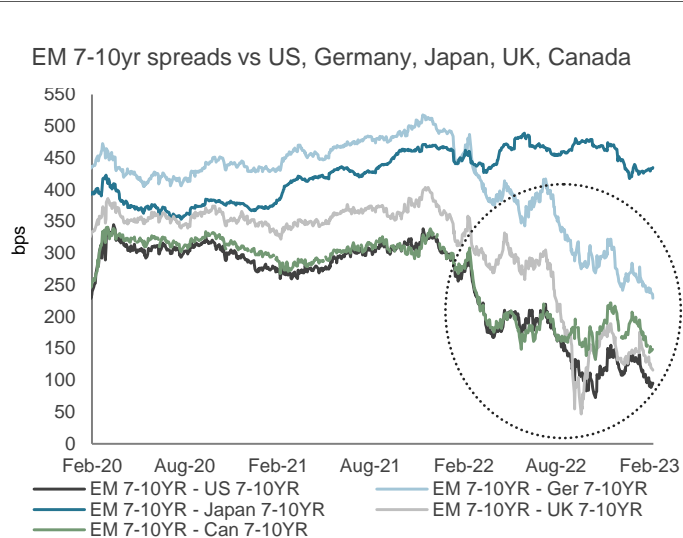


Chart 4: Low correlation of Chinese yields to G7 yields is well documented and does not appear directional, enhancing the portfolio diversification benefits of Chinese government bonds.

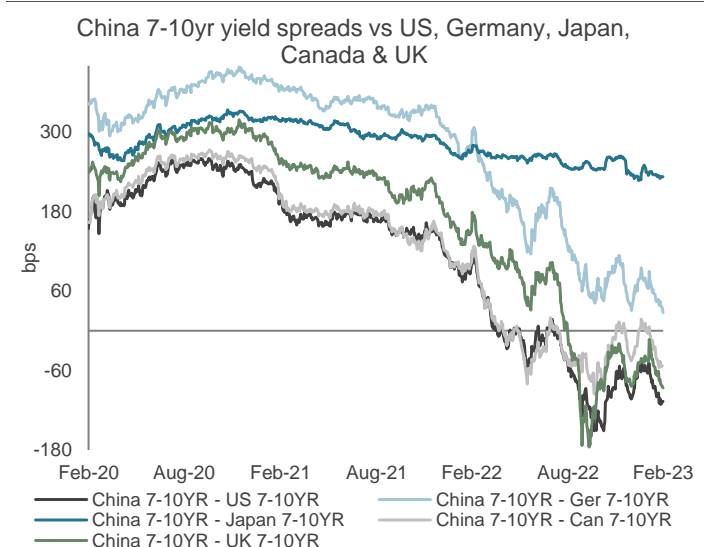


Chart 5: US and Eurozone credit spreads re-coupled in February after decoupling for much of 2022 as credit defaults remain low in both regions. The move is most noticeable in high yield credits.

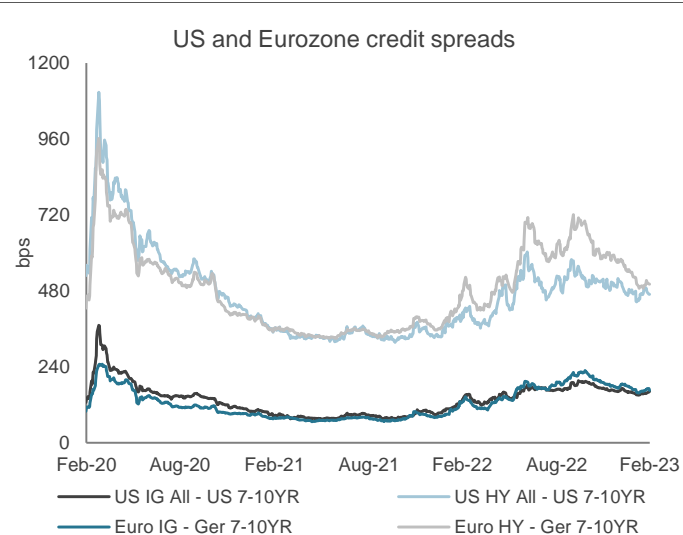


Chart 6: The sharp fall in Chinese \$ HY spreads stabilised in February, as investors reflected on property fundamentals and high yield risk appetite fell back on US inflation concerns.



# Global Sovereign Bond Returns – 1M and 12M % (GBP & LCY, TR) as of February 28, 2023

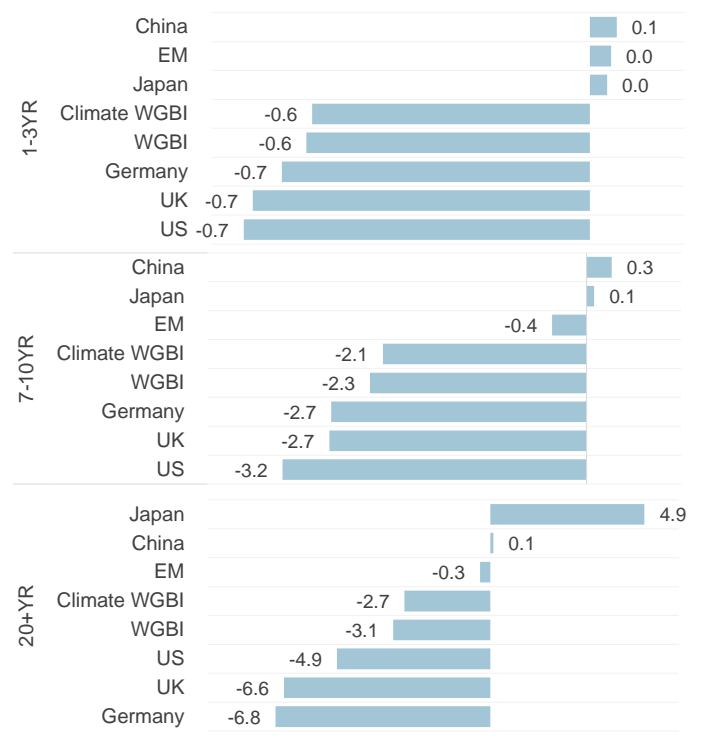
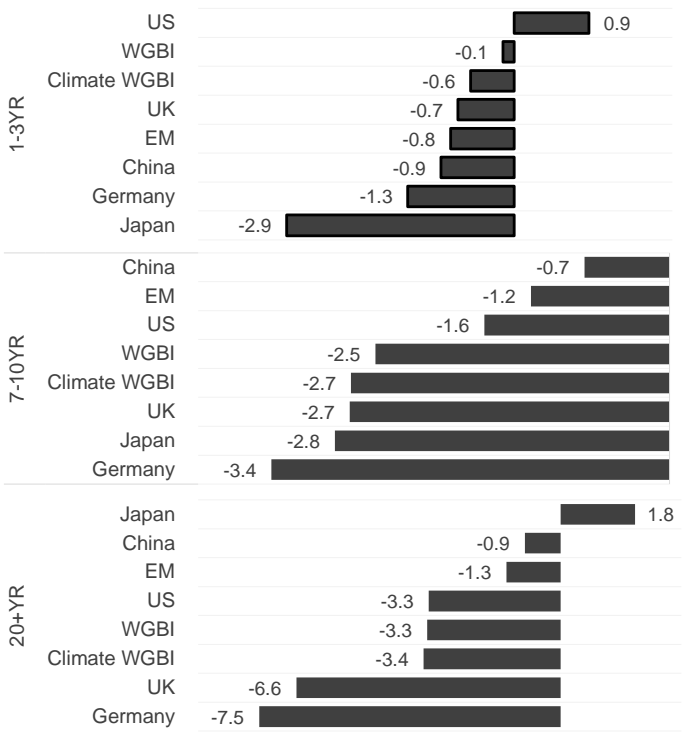
Global bonds reversed January gains in February, apart from JGBs, after markets were unnerved by robust US data. JGBs showed modest gains of 2% in sterling terms (after missing the January rally). Stronger sterling hit overseas returns. 12M returns remained very weak, led by Gilts, Bunds and climate-WGBI. China outperformed as a safe haven.

Long-duration conventional bonds were hit hardest in February though returns were negative across all regions apart from JGBs.

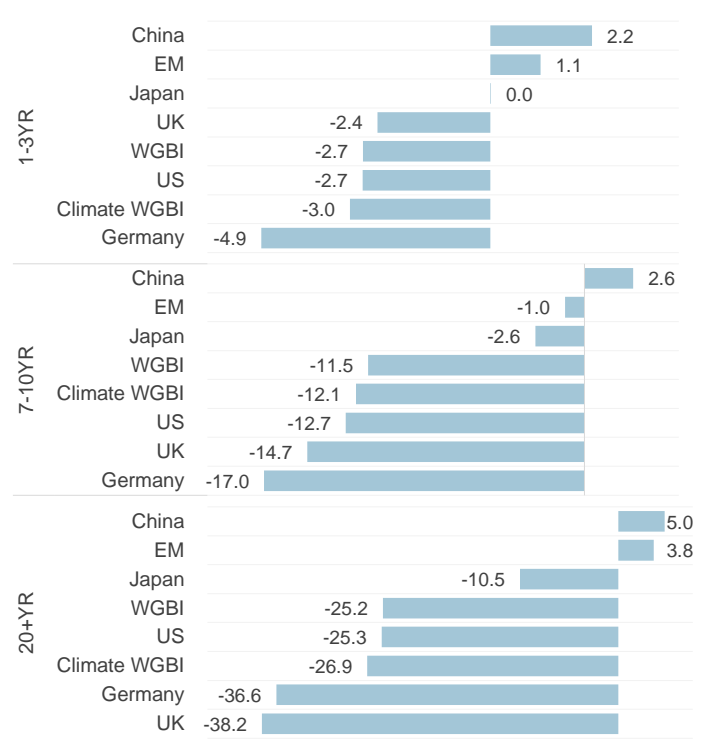
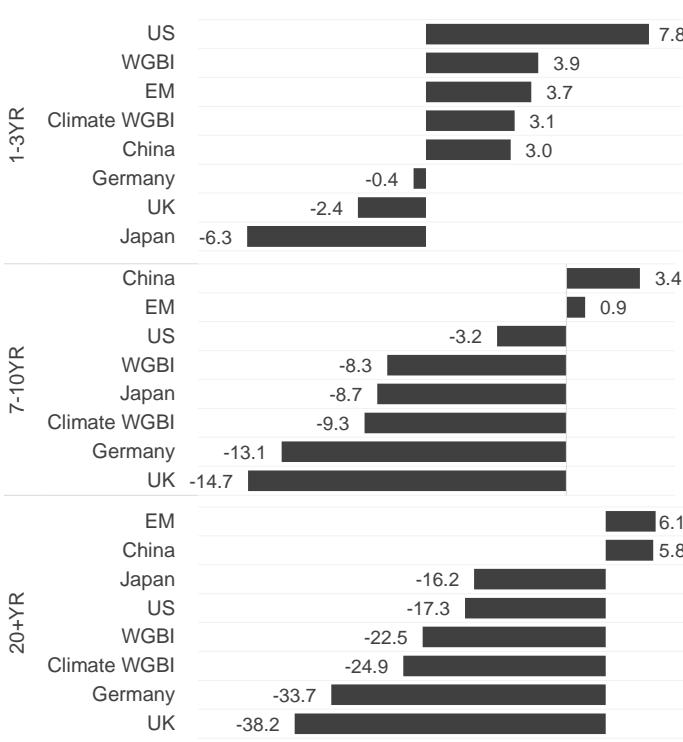
A perfect storm of policy rate increases, fiscal policy fears in September 2022, and sizeable duration drove losses of 38% in long Gilts on 12 months, for a sterling investor, but long Bunds and climate-WGBI also suffered losses of 25-34%, in sterling terms.

## CONVENTIONAL GOVT BONDS

1M GBP 1M LCY



12M GBP 12M LCY



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# Global Inflation-Linked Bond Returns – 1M & 12M % (GBP, LC, TR) as of February 28, 2023

Global inflation-linked (IL) bonds fell back with conventionals in February, though not generally as much. The weak yen pulled down returns in medium-dated JGBs in sterling, despite BoJ curve control. Credits fell with IG underperforming high yield, and sterling strength depressed overseas returns. 12M returns remain deeply negative, though HY outperformed.

Long IL fell back sharply, as extra duration amplified losses, and long UK IL lost 10% in February in sterling terms, as a result.

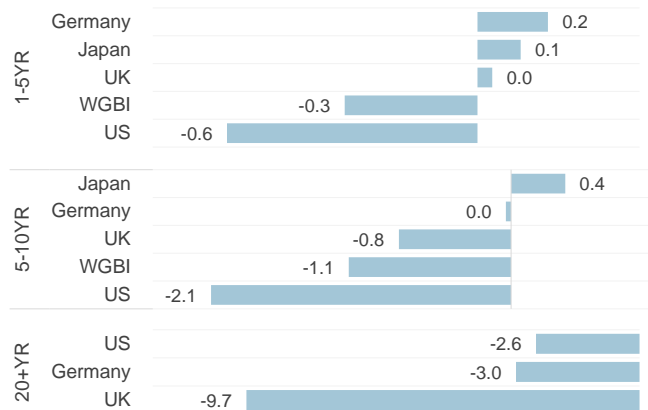
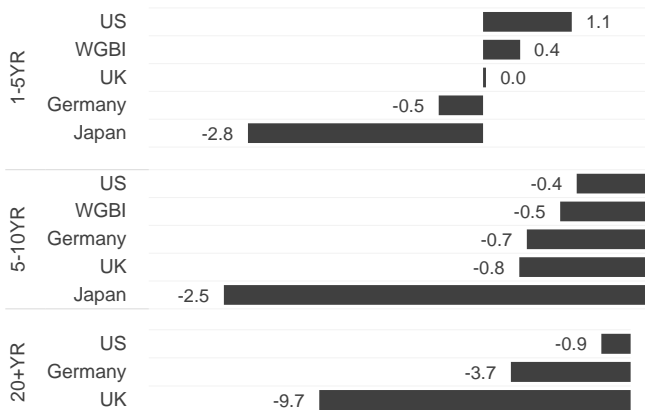
Similarly, 12-month returns still show losses of 19-49 % in long maturities, in Tips, Bunds and UK IL with high discount rates on future cashflows depressing present values. Sterling weakness on 12M increased overseas returns, particularly in US Tips and credit.

High yield credit benefited from decent spreads, lower duration than IG and low default rates, so 12-month losses were more modest.

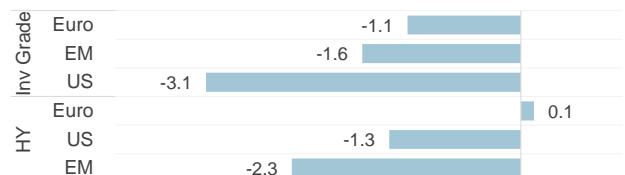
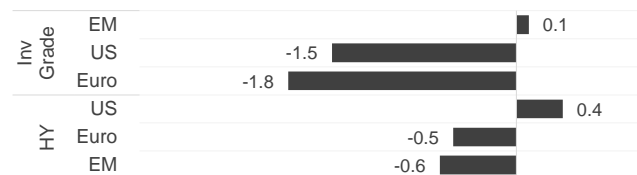
## INFLATION LINKED BONDS

1M GBP

1M LCY



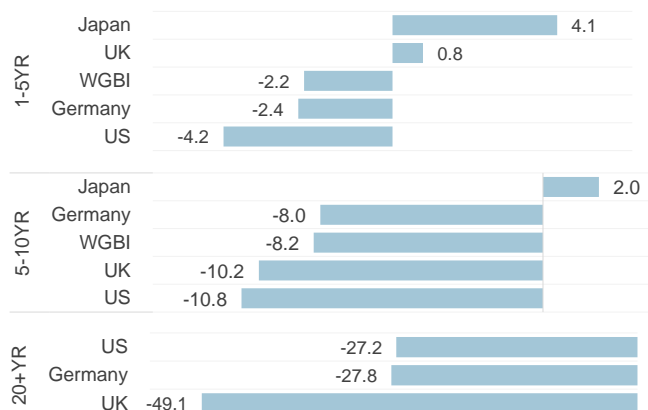
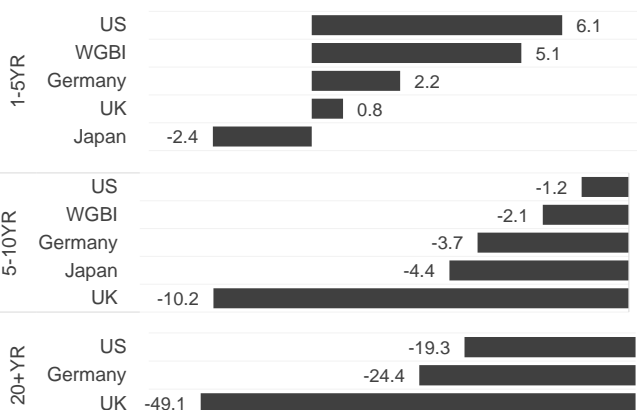
## CORPORATE BONDS



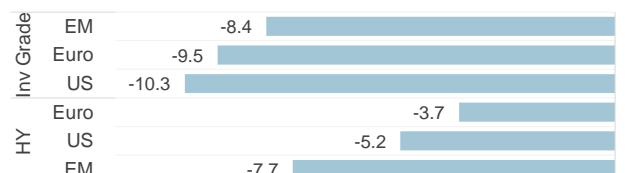
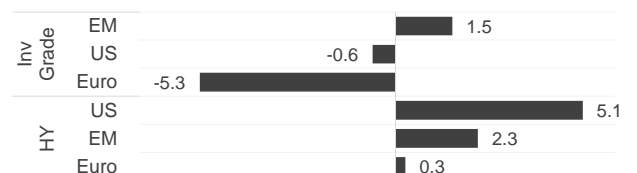
## INFLATION LINKED BONDS

12M GBP

12M LCY



## CORPORATE BONDS

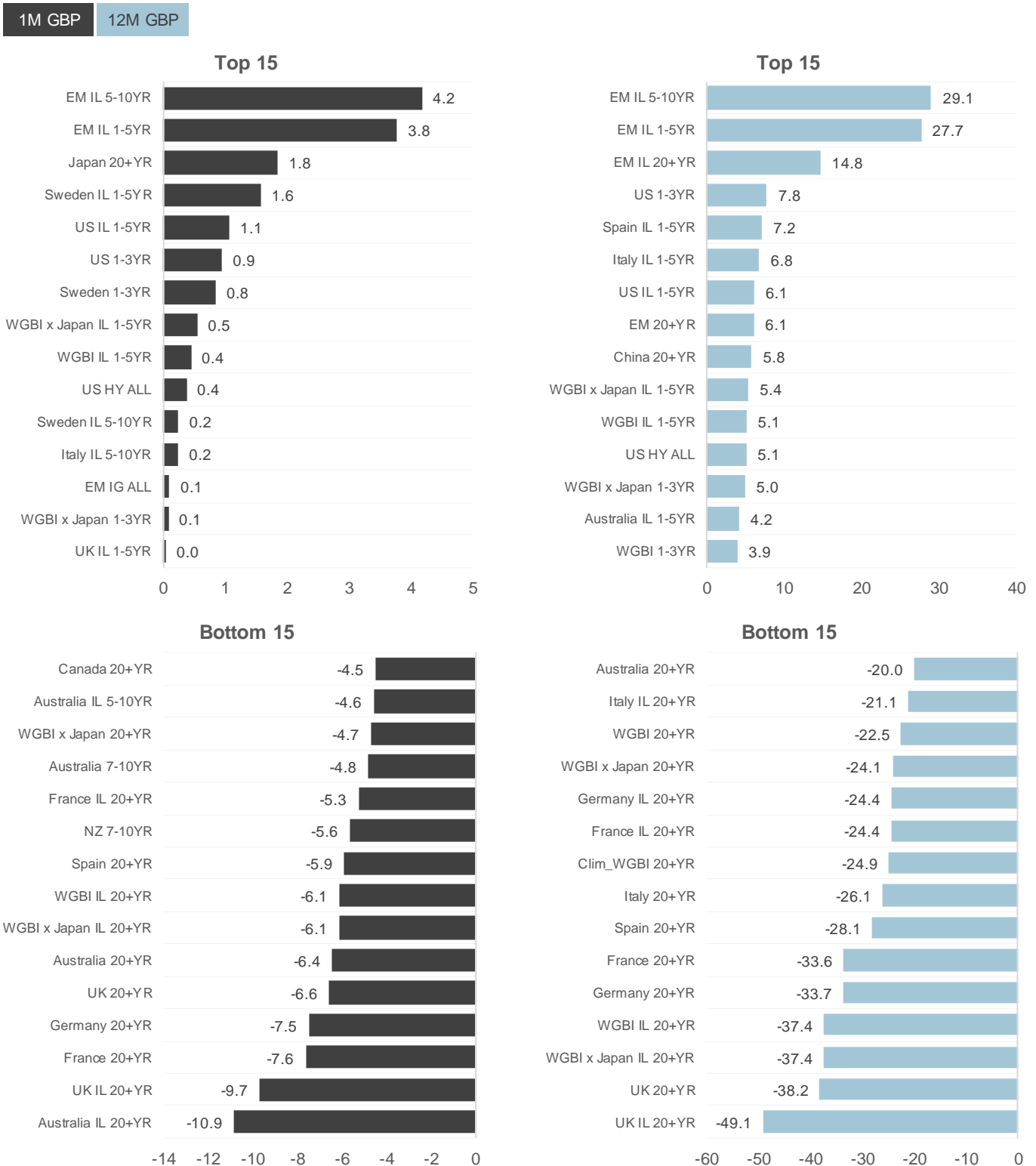


# Top and Bottom Bond Returns – 1M & 12M % (GBP,TR) as of February 28, 2023

The bottom 15 performers show February's sell-off was most acute in long duration inflation-linked (IL) bonds and conventionals, repeating the pattern of the last 12M. Australian and UK long IL lost 10-11% sterling terms, reversing January's rally. Emerging market IL again proved top performers, showing gains of 4%, helped by currency strength.

Short-dated bonds outperformed in February, but suffered small losses (apart from EM IL and Canadian high yield) as central banks raised rates. Long JGBs rallied 2% in sterling terms after missing the January rally. In credit, US HY outperformed IG.

Long conventional and inflation-linked markets show sizeable losses of 20-49% on 12M in sterling terms, led by long UK IL bonds.



Source: FTSE Russell. All data as of February 28, 2023. This analysis is taken from 100+ FTSE Russell sub-indices. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors only.



# Sovereign and Climate Bonds Analysis

Chart 1: Extra duration in the climate WGBI, since 2022's re-weighting, caused underperformance vs WGBI as yields increased.

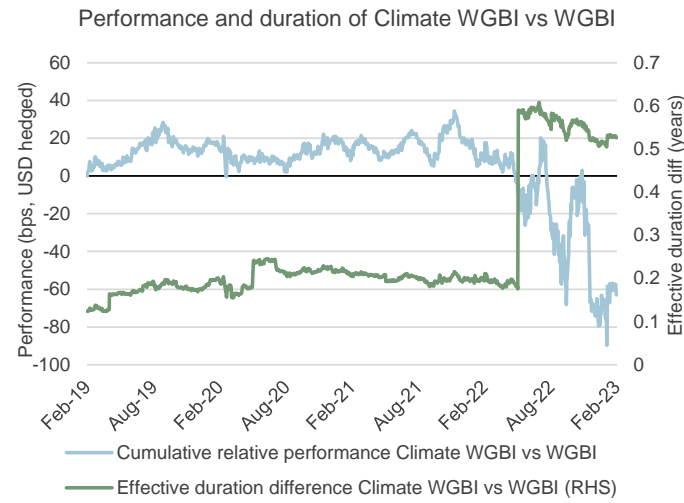


Chart 2: Japan's overweight, and the US underweight, are the most significant in the climate WGBI, driving 2022/23 performance.

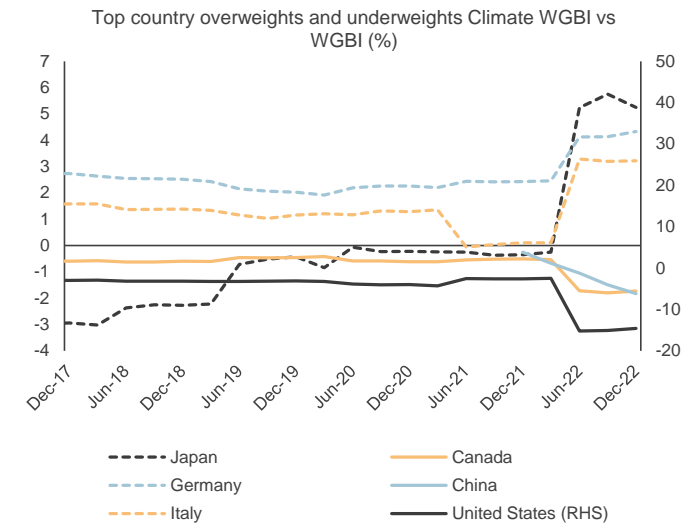


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yielding Europe and Japan.

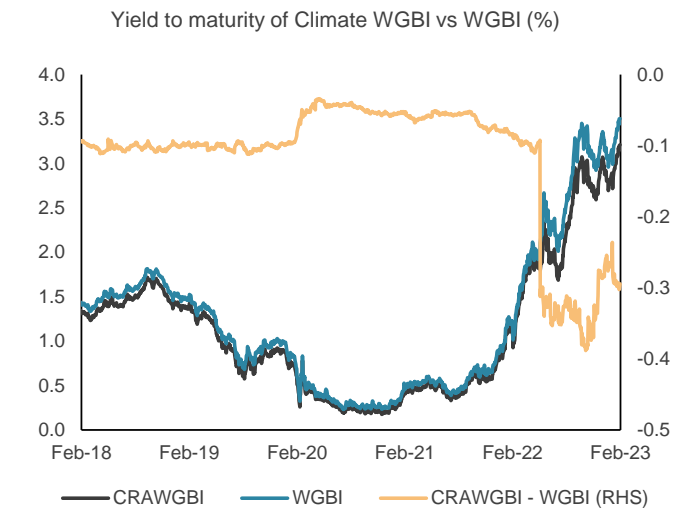


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

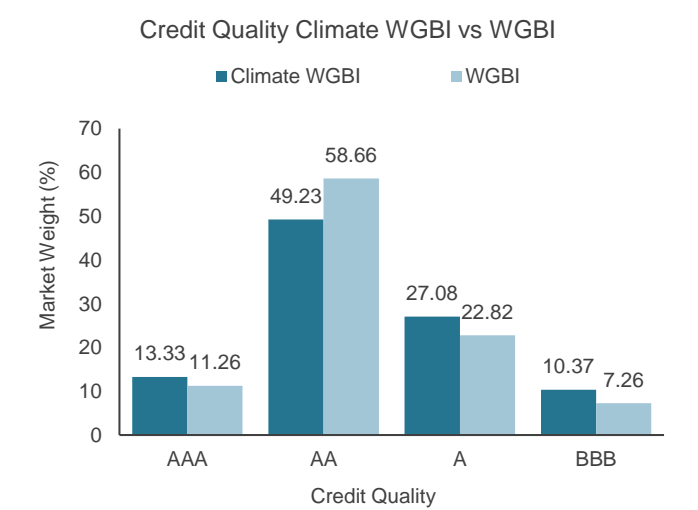


Chart 5: Despite yields increasing more in WGBI indices in 2022, led by US, climate WGBI's extra duration drove underperformance.

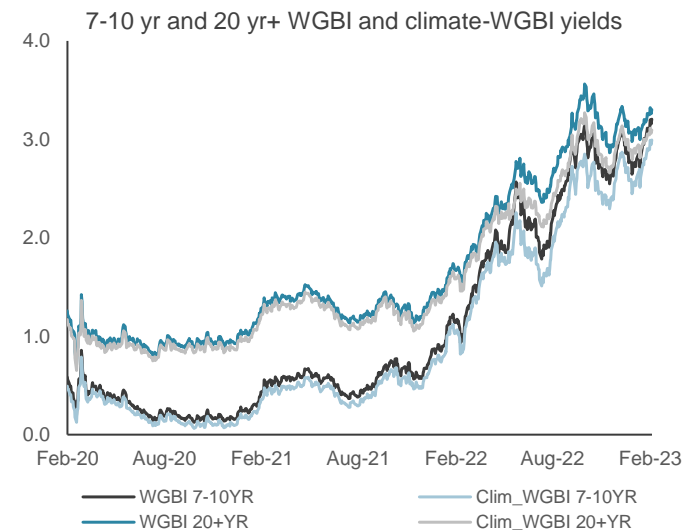
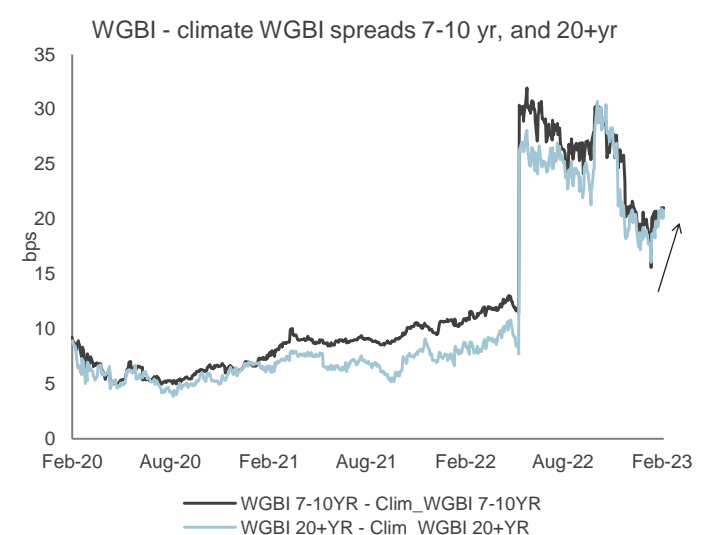


Chart 6: There was some reversal of recent spread narrowing in WGBI as US yields rose more in February (see Chart 1, page 5).



## Appendix – Global Bond Market Returns % (GBP & LC, TR) – February 28, 2023

### Government Bond Returns

Top 15% Bottom 15%

Green highlight indicates highest 15%, red indicates lowest 15%.

		3M		6M		YTD		12M	
		Local	GBP	Local	GBP	Local	GBP	Local	GBP
US	1-3YR	0.17	-1.46	-0.44	-4.31	0.02	-0.62	-2.71	7.83
	7-10YR	-1.23	-2.84	-3.89	-7.63	0.23	-0.41	-12.66	-3.20
	20+YR	-0.25	-1.88	-7.94	-11.51	2.37	1.72	-25.34	-17.26
	IG All	0.45	-1.19	-1.17	-5.01	0.92	0.27	-10.33	-0.62
	HY All	1.75	0.09	1.95	-2.01	2.53	1.87	-5.15	5.12
UK	1-3YR	-0.16	-0.16	0.32	0.32	-0.09	-0.09	-2.39	-2.39
	7-10YR	-3.15	-3.15	-5.49	-5.49	0.31	0.31	-14.70	-14.70
	20+YR	-11.69	-11.69	-16.44	-16.44	-2.48	-2.48	-38.17	-38.17
EUR	IG All	-0.75	0.56	-1.24	0.11	1.11	-0.17	-9.55	-5.35
	HY All	2.72	3.94	4.06	5.34	3.49	2.31	-3.75	0.27
Japan	1-3YR	0.03	0.80	-0.09	-2.27	0.14	-3.62	0.01	-6.28
	7-10YR	-1.70	-0.94	-2.23	-4.36	-0.15	-3.90	-2.60	-8.73
	20+YR	1.87	2.65	-4.59	-6.67	4.21	0.30	-10.53	-16.15
China	1-3YR	0.40	1.66	0.53	-4.01	0.20	-0.27	2.16	2.97
	7-10YR	0.90	2.16	0.02	-4.49	0.35	-0.12	2.58	3.39
	20+YR	1.21	2.48	-1.21	-5.67	-0.46	-0.92	4.98	5.82
EM	1-3YR	0.78	1.81	1.26	-2.31	0.36	0.11	1.06	3.70
	7-10YR	1.84	1.99	1.57	-2.90	1.13	0.43	-1.03	0.86
	20+YR	1.80	2.06	0.48	-3.82	0.36	-0.48	3.79	6.10
	IG All	2.13	0.46	0.15	-3.74	0.96	0.31	-8.37	1.55
	HY All	4.87	3.16	4.34	0.28	1.39	0.74	-7.74	2.25
Germany	1-3YR	-1.17	0.13	-2.47	-1.14	-0.43	-1.69	-4.86	-0.44
	7-10YR	-4.61	-3.36	-7.77	-6.51	-0.06	-1.33	-17.00	-13.14
	20+YR	-14.37	-13.25	-17.23	-16.10	-0.79	-2.05	-36.61	-33.67
Italy	1-3YR	-0.75	0.56	-0.97	0.38	0.07	-1.20	-3.89	0.57
	7-10YR	-2.93	-1.65	-2.32	-0.99	2.34	1.04	-14.86	-10.90
	20+YR	-9.82	-8.64	-7.73	-6.47	3.64	2.33	-29.34	-26.06
Spain	1-3YR	-1.07	0.23	-2.14	-0.81	-0.15	-1.42	-4.73	-0.30
	7-10YR	-4.45	-3.19	-5.96	-4.68	0.41	-0.86	-15.56	-11.64
	20+YR	-11.68	-10.52	-11.44	-10.23	0.14	-1.13	-31.29	-28.10
France	1-3YR	-1.13	0.17	-2.46	-1.12	-0.12	-1.39	-5.03	-0.63
	7-10YR	-4.93	-3.68	-7.03	-5.76	0.22	-1.05	-16.16	-12.27
	20+YR	-14.33	-13.21	-14.94	-13.77	-0.99	-2.25	-36.51	-33.56
Sweden	1-3YR	-0.92	-0.34	-0.69	-2.68	-0.36	-1.08	-3.69	-3.40
	7-10YR	-5.57	-5.01	-4.94	-6.84	-1.88	-2.59	-14.78	-14.53
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	-0.19	-1.13	0.59	-4.90	0.17	-1.03	-1.62	1.33
	7-10YR	-1.65	-2.59	-0.21	-5.65	2.10	0.88	-9.37	-6.66
	20+YR	-3.91	-4.82	-4.27	-9.49	3.91	2.66	-22.37	-20.05
NZ	1-3YR	0.54	-1.34	0.03	-2.85	0.70	-1.99	-0.74	0.71
	7-10YR	-2.48	-4.31	-2.66	-5.46	-0.13	-2.80	-9.40	-8.07
Canada	1-3YR	0.09	-1.96	0.69	-6.91	0.24	-0.88	-2.85	0.31
	7-10YR	-2.12	-4.12	-0.07	-7.61	0.23	-0.89	-8.67	-5.70
	20+YR	-3.38	-5.35	-2.36	-9.73	1.60	0.47	-16.39	-13.67

## Appendix – Global Bond Market Returns % (GBP & LC, TR) – February 28, 2023

### Inflation-Linked Bond Returns

Top 15% Bottom 15%

Green highlight indicates top 15%, red indicates bottom 15%.

		3M		6M		YTD		12M	
		Local	GBP	Local	GBP	Local	GBP	Local	GBP
US	1-5YR	-0.17	-1.80	-2.11	-5.91	0.20	-0.44	-4.23	6.14
	5-10YR	-1.05	-2.66	-4.97	-8.67	0.42	-0.22	-10.81	-1.16
	20+YR	-0.96	-2.57	-10.02	-13.52	3.62	2.96	-27.20	-19.31
UK	1-5YR	-0.77	-0.77	-1.71	-1.71	-0.44	-0.44	0.76	0.76
	5-10YR	-1.82	-1.82	-5.84	-5.84	0.92	0.92	-10.20	-10.20
	20+YR	-12.16	-12.16	-22.71	-22.71	-3.96	-3.96	-49.13	-49.13
EUxUK	1-5YR	-1.55	-0.25	-3.48	-2.16	0.23	-1.04	-2.36	2.17
	5-10YR	-2.44	-1.15	-4.74	-3.44	1.46	0.17	-7.99	-3.71
	20+YR	-11.38	-10.22	-12.73	-11.54	3.12	1.81	-27.77	-24.41
Japan	1-5YR	0.46	1.24	1.58	-0.64	0.60	-3.18	4.12	-2.43
	5-10YR	-1.85	-1.09	-1.27	-3.43	-0.75	-4.47	2.01	-4.40
EM	1-5YR	5.68	4.98	9.50	5.33	4.74	5.30	22.04	27.74
	5-10YR	4.91	4.73	10.30	7.26	3.26	4.30	23.27	29.08
	20+YR	-0.95	-0.77	0.69	-1.53	-0.88	0.25	3.74	14.75
Germany	1-5YR	-1.55	-0.25	-3.48	-2.16	0.23	-1.04	-2.36	2.17
	5-10YR	-2.44	-1.15	-4.74	-3.44	1.46	0.17	-7.99	-3.71
	20+YR	-11.38	-10.22	-12.73	-11.54	3.12	1.81	-27.77	-24.41
Italy	1-5YR	-0.55	0.76	-0.21	1.15	0.70	-0.58	2.08	6.82
	5-10YR	-1.09	0.21	1.42	2.80	3.45	2.14	-4.06	0.39
	20+YR	-12.49	-11.34	-0.61	0.75	8.07	6.70	-24.63	-21.13
Spain	1-5YR	-0.23	1.09	-1.71	-0.37	0.62	-0.65	2.40	7.15
	5-10YR	-1.99	-0.70	-2.40	-1.07	1.48	0.19	-4.54	-0.11
France	1-5YR	-1.38	-0.08	-2.68	-1.36	0.36	-0.91	-1.53	3.04
	5-10YR	-3.09	-1.82	-3.58	-2.27	1.50	0.22	-6.69	-2.36
	20+YR	-13.20	-12.05	-9.98	-8.75	1.61	0.32	-27.78	-24.43
Sweden	1-5YR	0.67	1.26	1.28	-0.75	0.64	-0.09	1.39	1.70
	5-10YR	-2.88	-2.31	-4.05	-5.97	0.13	-0.60	-7.14	-6.86
Australia	1-5YR	1.03	0.08	2.66	-2.94	1.62	0.40	1.15	4.18
	5-10YR	0.65	-0.30	2.28	-3.30	2.95	1.72	-3.52	-0.63
	20+YR	-5.81	-6.70	-0.59	-6.01	4.07	2.82	-21.30	-18.94
NZ	5-10YR	1.68	-0.23	2.97	0.01	1.57	-1.14	-2.48	-1.06
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	-1.68	-3.69	-0.63	-8.13	-1.01	-2.12	-8.99	-6.03

## Appendix – Historical Bond Yields % as of February 28, 2023

### Global Bond Yields

Top 15% Bottom 15%

Green highlight indicates top 15%, red indicates bottom 15%.

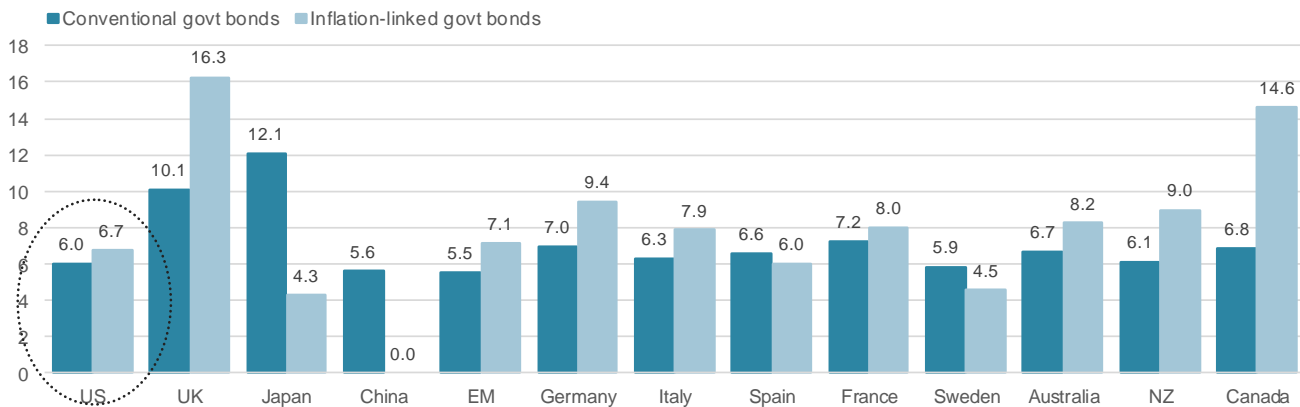
		Conventional government bonds				Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.90	4.34	3.93	4.01	1.82	1.57	1.65	5.55	8.62
	3MAgo	4.47	3.97	3.64	3.95	1.76	1.40	1.59	5.38	8.81
	6MAgo	3.49	3.44	3.19	3.46	0.87	0.75	1.14	4.86	8.37
	12MAgo	1.38	1.71	1.82	2.26	-2.12	-1.01	-0.09	3.13	5.77
UK	Current	3.95	3.79	3.72	4.07	0.45	0.18	0.67		
	3MAgo	3.36	3.26	3.20	3.39	-1.95	-0.58	0.10		
	6MAgo	3.04	2.82	2.77	3.06	-3.47	-1.62	-0.45		
	12MAgo	1.02	1.01	1.11	1.41	-4.71	-3.55	-2.18		
Japan	Current	-0.04	0.11	0.53	1.35	-1.25	-0.36			
	3MAgo	-0.04	0.05	0.28	1.40	-1.44	-0.76			
	6MAgo	-0.10	-0.04	0.20	1.10	-1.23	-0.83			
	12MAgo	-0.04	0.00	0.11	0.80	-1.11	-0.83			
China	Current	2.38	2.62	2.86	3.32					
	3MAgo	2.26	2.54	2.87	3.34					
	6MAgo	1.96	2.30	2.68	3.16					
	12MAgo	2.18	2.49	2.86	3.45					
EM	Current	3.71	4.48	4.88	4.57	1.46	3.33	5.35	5.95	10.85
	3MAgo	3.72	4.51	4.89	4.89	2.45	3.14	5.10	6.08	12.18
	6MAgo	3.49	4.16	4.76	4.65	2.45	3.50	5.09	5.25	11.65
	12MAgo	3.39	4.03	4.58	4.90	2.17	3.01	4.91	4.00	10.39
Germany	Current	3.09	2.78	2.59	2.57	0.22	0.08	0.03		
	3MAgo	2.04	1.95	1.91	1.81	-0.59	-0.41	-0.54		
	6MAgo	0.97	1.25	1.41	1.62	-1.62	-0.97	-0.68		
	12MAgo	-0.57	0.23	0.48	0.60	-4.13	-2.15	-1.83		
Italy	Current	3.65	3.81	4.18	4.55	0.84	1.69	1.90		
	3MAgo	2.73	3.09	3.59	3.86	0.12	1.32	1.35		
	6MAgo	2.11	2.78	3.53	3.93	-1.97	1.08	1.73		
	12MAgo	-0.01	1.12	1.87	2.52	-3.56	-0.84	0.26		
France	Current	3.18	3.03	3.01	3.37	-0.05	0.24	0.69		
	3MAgo	2.25	2.19	2.27	2.59	-0.94	-0.39	0.09		
	6MAgo	1.21	1.53	1.88	2.52	-1.84	-0.60	0.15		
	12MAgo	-0.46	0.61	1.01	1.62	-3.85	-2.03	-0.92		
Sweden	Current	3.18	2.96	2.65		0.64	0.72			
	3MAgo	2.52	2.21	1.93		-0.29	-0.26			
	6MAgo	2.24	2.22	1.96		-1.11	-0.90			
	12MAgo	-0.05	1.26	1.45		-2.05	-1.61			
Australia	Current	3.66	3.65	3.83	4.19	0.50	1.26	1.78		
	3MAgo	3.12	3.22	3.49	3.92	-0.08	0.90	1.43		
	6MAgo	3.11	3.30	3.56	3.84	-0.19	0.81	1.56		
	12MAgo	1.05	2.60	3.00	3.50	-0.46	0.31	1.01		
NZ	Current	5.06	4.68	4.57	4.67	1.40	2.07			
	3MAgo	4.67	4.39	4.12	4.28	1.49	1.97			
	6MAgo	3.85	3.87	3.97	4.33	0.72	1.84			
	12MAgo	2.16	3.43	3.57	3.81	0.32	1.13			
Canada	Current	4.04		3.35	3.26			1.34	5.16	7.19
	3MAgo	3.70		2.96	3.02			1.20	5.07	7.37
	6MAgo	3.56		3.14	3.06			1.23	4.96	6.97
	12MAgo	1.44		1.79	2.12			0.07	3.13	4.93

# Appendix – Duration and Market Value (USD, Bn) as of February 28, 2023

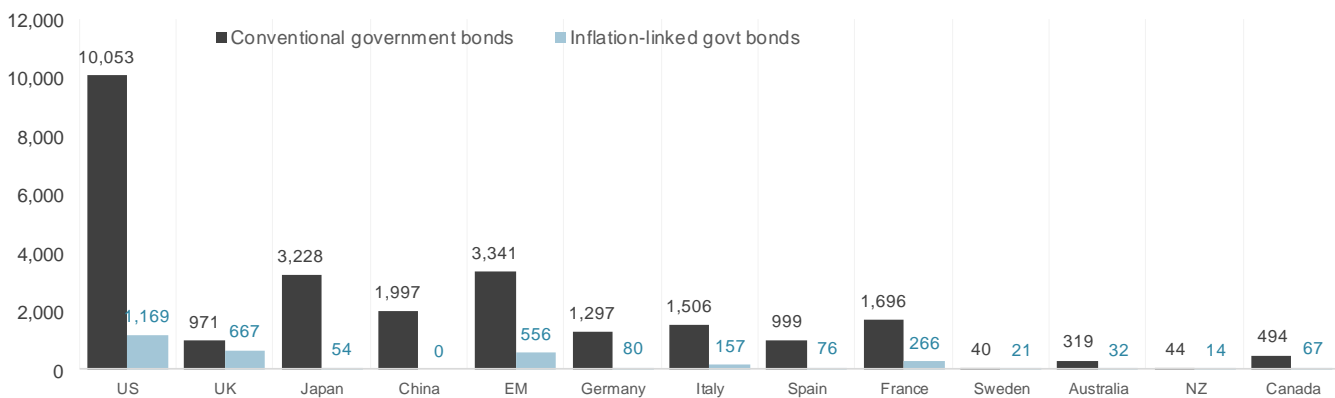
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
<b>US</b>	3.7	7.6	17.5	<b>6.0</b>	2,171.5	1,031.7	1,240.4	<b>10,052.7</b>	7.1	21.5	<b>6.7</b>	383.1	126.0	<b>1169.4</b>
<b>UK</b>	3.7	7.7	19.1	<b>10.1</b>	98.0	124.6	275.3	<b>971.1</b>	7.0	28.7	<b>16.3</b>	123.5	245.9	<b>667.1</b>
<b>Japan</b>	3.9	7.9	23.8	<b>12.1</b>	357.0	383.5	705.7	<b>3,227.8</b>	6.7		<b>4.3</b>	24.4		<b>54.3</b>
<b>China</b>	3.6	7.5	17.3	<b>5.6</b>	462.0	326.1	232.2	<b>1,997.0</b>						
<b>EM</b>	3.5	7.0	15.8	<b>5.5</b>	744.42	596.98	321.79	<b>3,341.4</b>	5.5	13.5	<b>7.1</b>	110.9	135.2	<b>555.9</b>
<b>Germany</b>	3.8	7.7	20.5	<b>7.0</b>	286.68	203.20	132.11	<b>1,296.9</b>	6.8	22.3	<b>9.4</b>	29.5	17.5	<b>80.0</b>
<b>Italy</b>	3.6	7.3	16.1	<b>6.3</b>	298.46	232.85	134.04	<b>1,506.1</b>	6.8	26.8	<b>7.9</b>	53.2	5.2	<b>156.6</b>
<b>Spain</b>	3.5	7.5	17.5	<b>6.6</b>	191.89	177.51	93.99	<b>999.0</b>	7.2		<b>6.0</b>	20.8		<b>75.8</b>
<b>France</b>	3.5	7.7	20.0	<b>7.2</b>	315.47	308.87	192.07	<b>1,695.9</b>	6.8	24.7	<b>8.0</b>	112.3	18.9	<b>265.8</b>
<b>Sweden</b>	3.5	8.0		<b>5.9</b>	7.52	8.85		<b>40.1</b>	6.3		<b>4.5</b>	9.7		<b>20.8</b>
<b>Australia</b>	3.6	7.8	17.8	<b>6.7</b>	55.19	87.10	15.39	<b>318.6</b>	7.6	22.8	<b>8.2</b>	9.3	2.7	<b>32.2</b>
<b>NZ</b>	3.4	7.8	17.3	<b>6.1</b>	8.46	6.37	2.17	<b>44.4</b>	6.6		<b>9.0</b>	3.1		<b>13.6</b>
<b>Canada</b>		7.2	17.3	<b>6.8</b>		165.90	95.40	<b>494.2</b>		14.6	<b>14.6</b>		67.3	<b>67.3</b>

	Investment grade bonds					High Yield						
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
<b>US</b>	10.8	8.5	7.1	6.8	<b>7.1</b>	74.7	444.9	2,351.4	3,285.9	<b>6,156.8</b>	4.2	1,146.1
<b>Euro</b>	6.3	4.9	4.7	4.3	<b>4.5</b>	8.4	172.2	1,045.3	1,420.3	<b>2,646.1</b>	3.1	422.3
<b>EM</b>		5.7	4.8	5.0	<b>5.0</b>		36.40	217.15	351.2	<b>604.7</b>	3.6	203.6

Average Duration



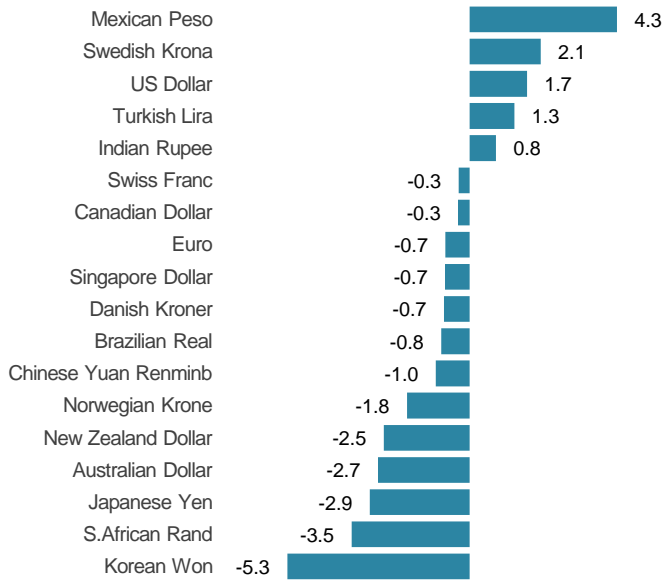
Total Market Value (USD Billions)



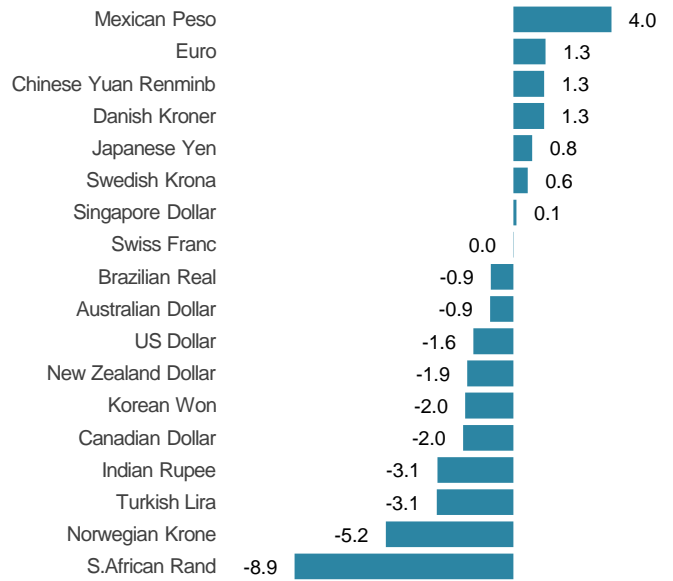
Data as of 2023-02-28

# Appendix – Foreign Exchange Returns % as of February 28, 2023

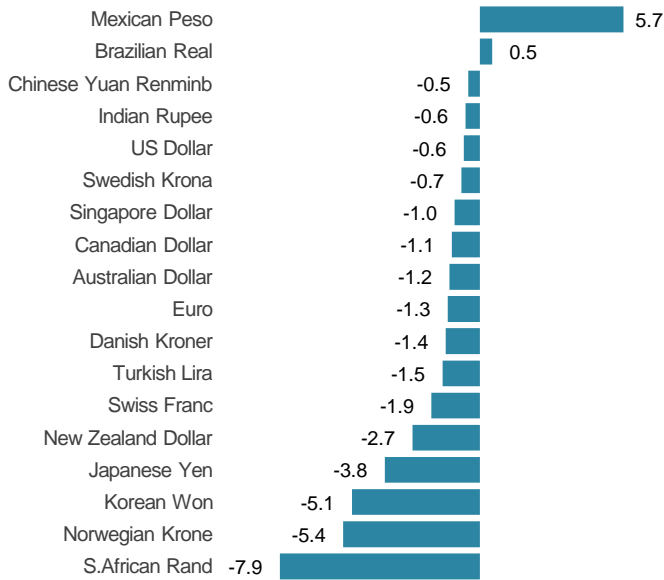
### FX Moves vs GBP - 1M



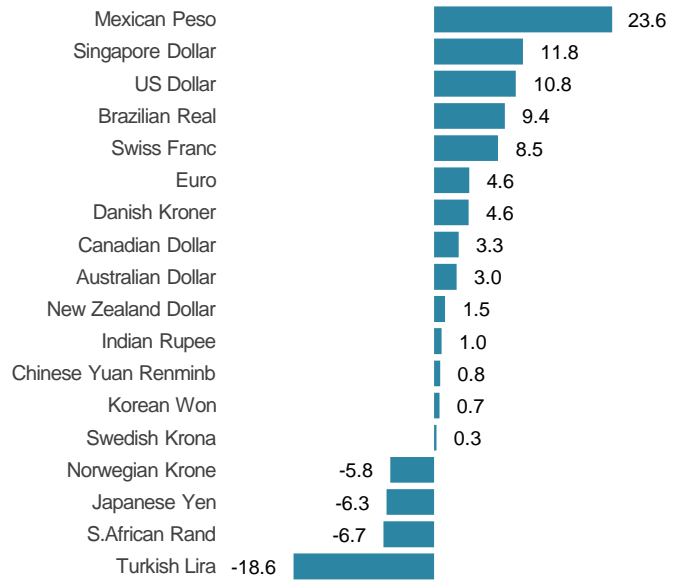
### FX Moves vs GBP - 3M



### FX Moves vs GBP - YTD



### FX Moves vs GBP - 12M



## Appendix – Glossary

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### **Bond markets are based on the following indices:**

FTSE World Government Bond Index (WGBI) for all global government bond markets

FTSE World Inflation-Linked Securities Index (WorldILSI) for all global inflation-linked bond markets

FTSE US Broad Investment-Grade Bond Index (USBIG®) for the US corporate bond market

FTSE US High-Yield Market Index for the US high yield bond market

FTSE Euro Broad Investment-Grade Bond Index (EuroBIG®) for the Euro-denominated corporate bond market

FTSE European High-Yield Market Index for the European high yield market

FTSE Chinese Government and Policy Bank Bond Index (CNGPBI) for the Chinese government bond market

FTSE Emerging Markets Inflation-Linked Securities Index (EMILSI) for the emerging markets inflation-linked bond market

FTSE Emerging Markets Government Bond Index (EMGBI) for the emerging markets government bond market. Please note that over 50% of this index is invested in China

FTSE Emerging Markets Broad Bond Index (EMUSDBBI) for the emerging markets corporate bond market

FTSE ESG World Government Bond Index for the global government bond markets with an ESG tilt

FTSE Climate Risk-Adjusted World Government Bond Index (Climate WGBI) and FTSE Advanced Climate Risk-Adjusted World Government Bond Index (Advanced Climate WGBI) for each country's relative exposure to climate risk, with respect to resilience and preparedness to the risks of climate change

### **List of Abbreviations used in charts:**

IL = Inflation-linked bonds

IG = Investment-grade bonds

HY = High-yield bonds

BPS = Basis points

EM = Emerging market

LC = Local currency



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