

# Fixed Income Insights

MONTHLY REPORT - MARCH 2023 | US EDITION

FOR PROFESSIONAL INVESTORS ONLY

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

Fed concerns about inflation were vindicated by stronger January data. Expectations on rates are now more defensive, as markets adjust to “higher for longer” risks on rates, but deep curve inversion gives no reward for duration risk. HY credits outperformed, helped by short duration. Chinese bonds remained a safe haven.

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

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

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

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 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.

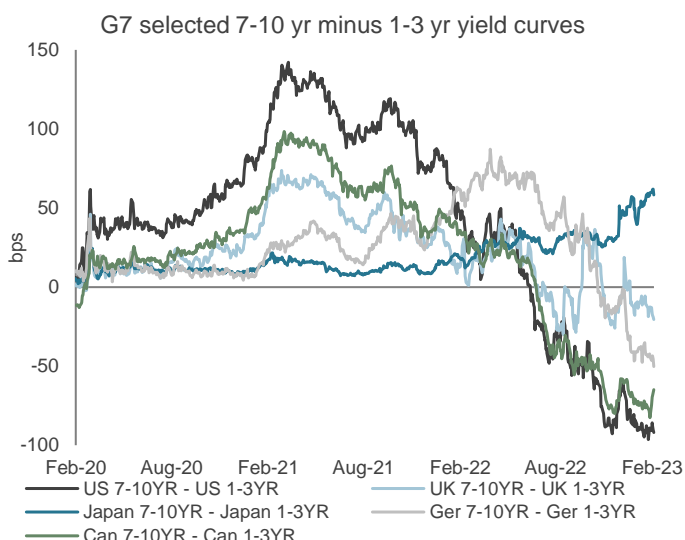
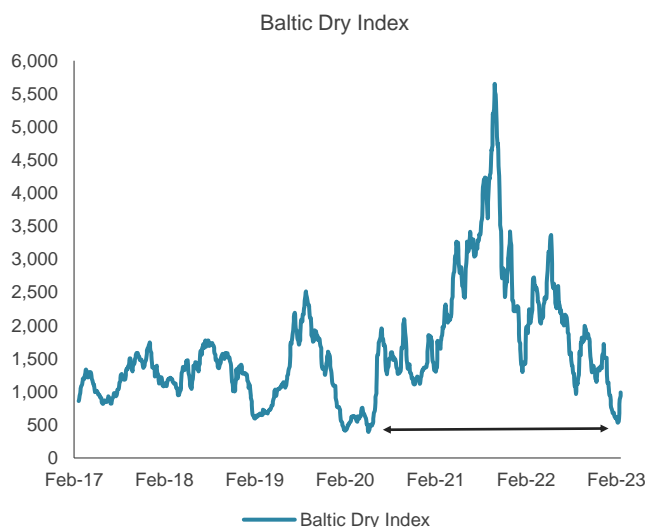


Chart 2: The Baltic Dry Index for shipping costs has returned to pre-Covid levels, as supply-chain pressures have eased sharply.



# Macroeconomic Backdrop – Growth and Inflation Expectations

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

Latest IMF growth forecasts were modestly upgraded (excluding the UK), after stronger Q4 data in most economies, despite higher policy rates. With a less severe energy shock than in Europe, US consumer spending and investment have held up well, and the Atlanta Fed’s GDP growth tracker points to Q1 growth of 2.5%, despite weakness in manufacturing.

G7 inflation rates fell, but only marginally in January, as fuel prices rebounded and strong food price inflation remains a factor. US CPI, at 6.4% y/y, is well down on the June peak of 9.1% y/y, but the pace of decline has slowed.

Chart 3 shows the transformation of the US labor market since Covid, with wage growth helping drive inflation higher. Wage growth slowed since April 2022’s peak of 5.6% y/y to 4.4% y/y and the labor market is a lagging economic indicator. But the January payrolls showed strong gains of over 500k, and with unemployment at 53-year lows, the Fed is in no hurry to pivot to a pause.

G7 7-10-year inflation breakevens remain about 20-35bp below October 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: Apart from Canada (unchanged) and a revision down to the UK, all IMF growth forecasts for 2023 from January show modest revisions higher, in response to stronger Q4 data.

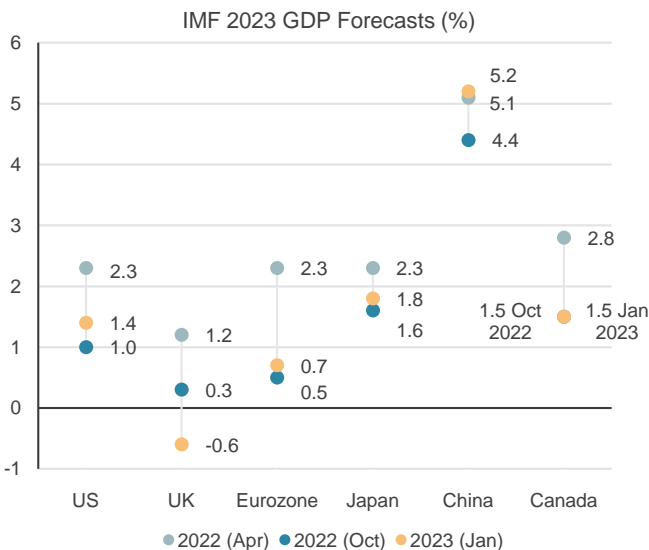


Chart 2: Anatomy of a soft landing? Market optimism on US inflation and rates falling fast to pre-Covid levels was challenged by January data, and cautious Fed messaging on rates.

	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 remain an issue for the Fed, even if it has slowed to 4.4% y/y. Note that wage inflation was only 3% pre-Covid, at similar unemployment rates.

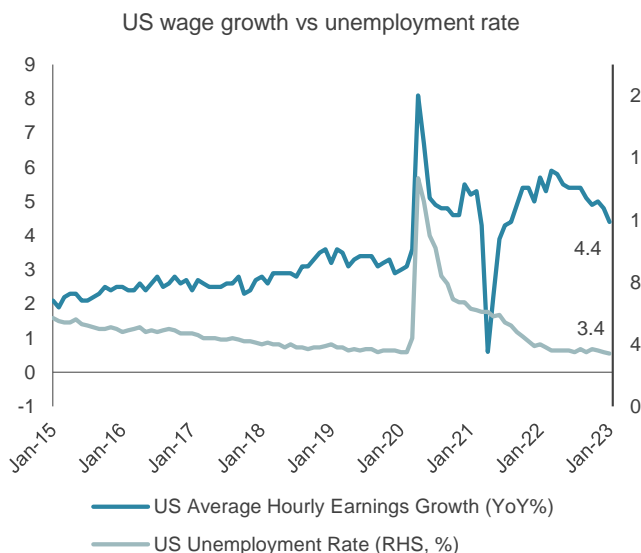
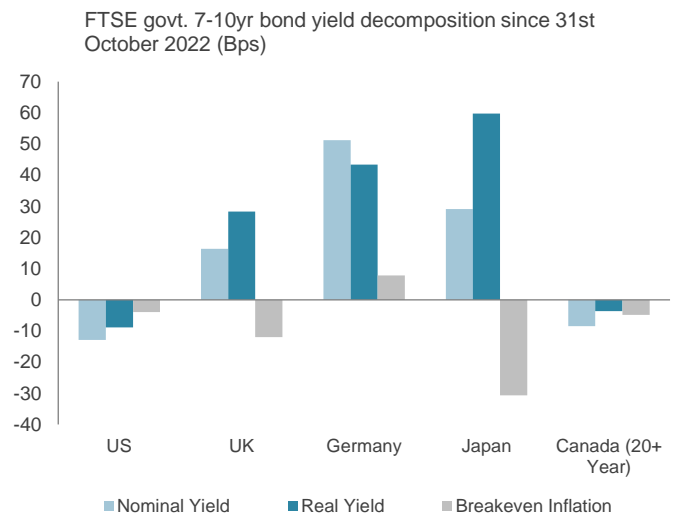


Chart 4: Despite a modest increase in February, 7-10yr inflation breakevens have fallen back across the G7 since Oct. 31, and even in Japan, where headline inflation hit a 42yr high in January.



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

**Lower bond yields and tighter credit spreads, which had offset the impact of higher rates on G7 financial conditions since October, reversed in February as stronger data drove bond yields higher, amid fears of more policy tightening. The Fed's Chairman Powell confirmed his hawkish messaging, and only the BoC signaled pausing tightening to assess its impact.**

Monetary tightening, including QT, is reducing financial conditions and impacting M2 growth, which has slowed sharply in the G7, as Chart 1 shows. However unstable velocity, particularly in the US, 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 positive correlation of a strong dollar with strong energy prices in 2022/23 increased inflation pressures in Europe and Japan, complicating inflation control.

Fed Chairman Powell showed little concern at the February FOMC about the disconnect between the easing in US financial conditions since October via lower bond yields, and hiking in rates, after the Fed raised rates BY a further 25bp (Chart 3). The disconnect eased in February, as markets re-focused on "higher for longer" risks on rates, and expectations moved closer to Fed dot plots.

Chart 4 shows that the Fed's balance sheet is contracting at about \$1.1 trillion per annum, with Fed staffers estimating that a \$2.5 trillion reduction sheet equates to an extra 50bp on Fed Funds. Lower mortgage prepayments, due to higher Treasury yields, are

Chart 1: M2 growth has slowed sharply in the US, but is a far less reliable indicator of future inflation, given unstable velocity. Chart 1 shows M2 growth has trended lower since 2020.

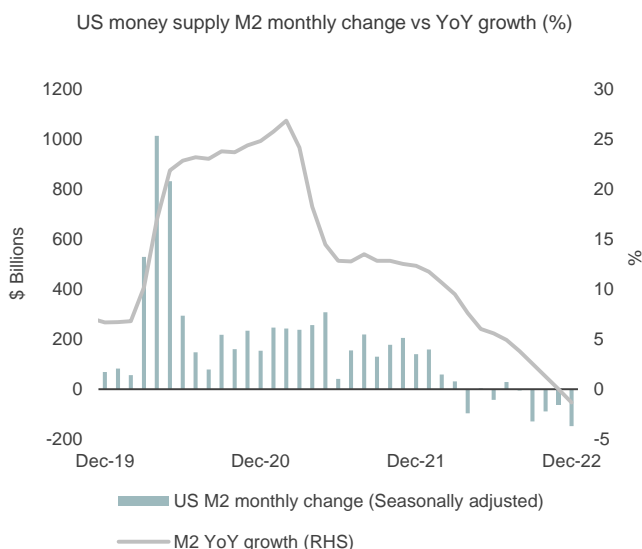


Chart 2: The US dollar's negative correlation with the oil price has weakened. The positive correlation of strong energy prices and US dollar reinforced inflation pressures on Europe & Japan in 2022.

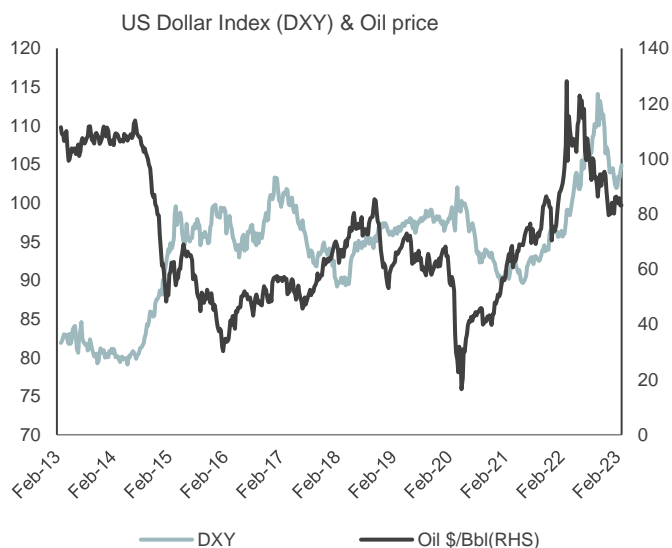


Chart 3: The Fed is less likely to pause tightening quickly after robust economic data for January. Markets priced in further Fed rate hikes, and rate differentials widened with China and Japan.

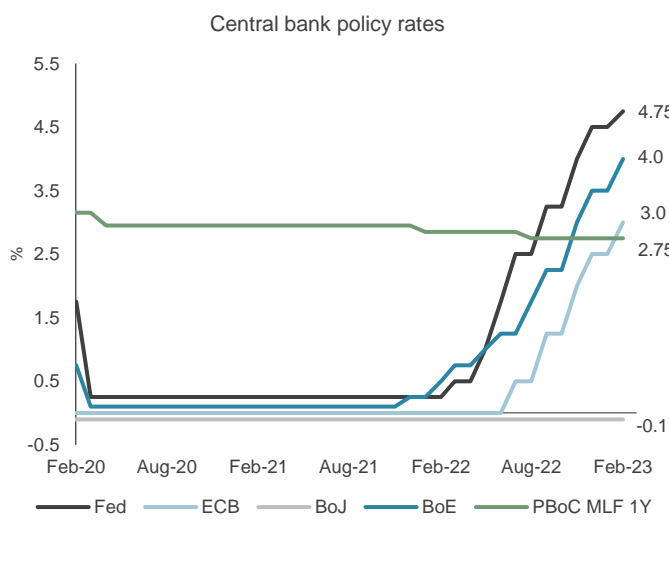
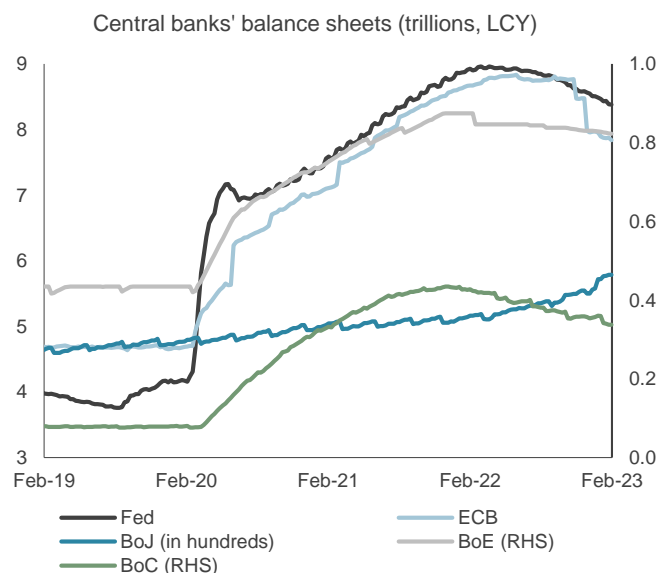


Chart 4: On a diet? The Fed's balance sheet is contracting at about \$1 trillion per annum. Fed staffers estimate a \$2.5 trillion reduction sheet equates to an extra 50bp on Fed Funds.



# 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.

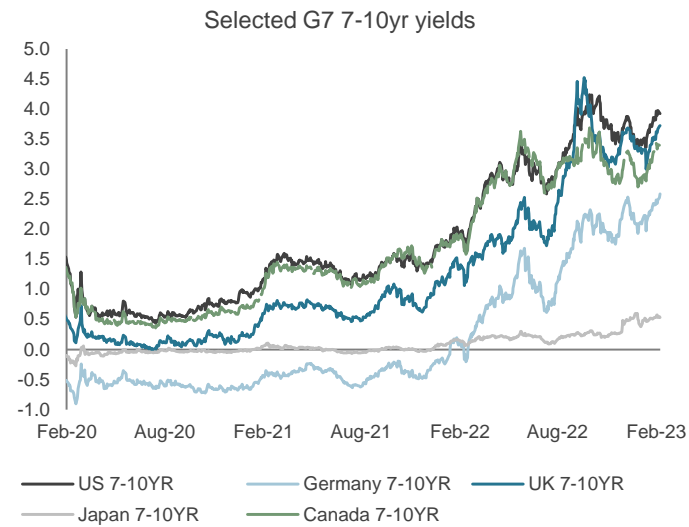


Chart 2: WGBI and US Inflation-linked yields are firmly positive, and just so in the UK and Germany. But real yields backed up less than nominal yields in February, as breakevens rose (see Charts 5 & 6).

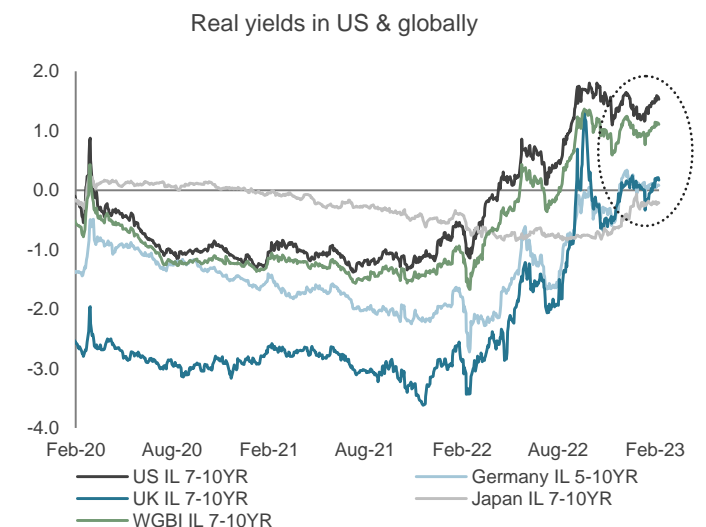


Chart 3: Deep inversion of 10s/2s yield curves continues (ex Japan) but this time a bear inversion (yields rising more in 2yrs than 10yrs). This leaves investors unrewarded for extra duration risk.

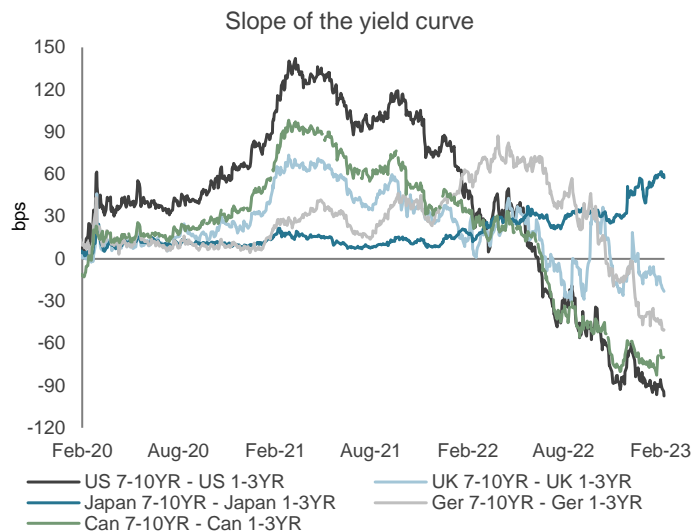


Chart 4: At the long end, only Japan and the UK have retained positively sloped yield curves, unlike the US, Germany and Canada, which, like 10/2s in Chart 3, have deeply inverted curves.

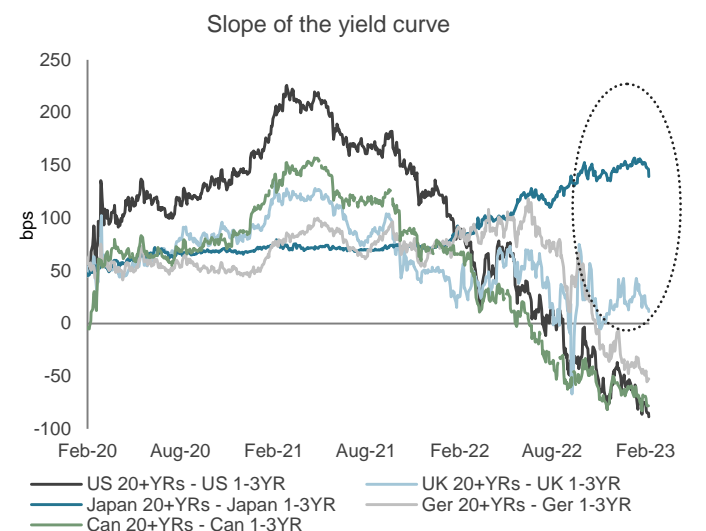


Chart 5: 7-10-year breakevens reversed their recent declines, and rose in February, as government yields rose after inflation showed little signs of easing sharply, despite monetary tightening in 2022-23.

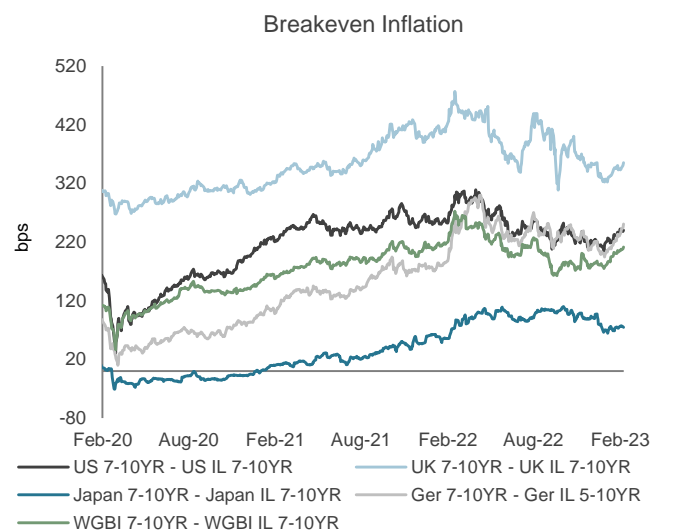


Chart 6: Short WGBI breakevens moved sharply higher in February, reversing falls since the 2022 Ukraine spike, as January data proved stronger than expected. Longer breakevens reacted less.



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# 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.

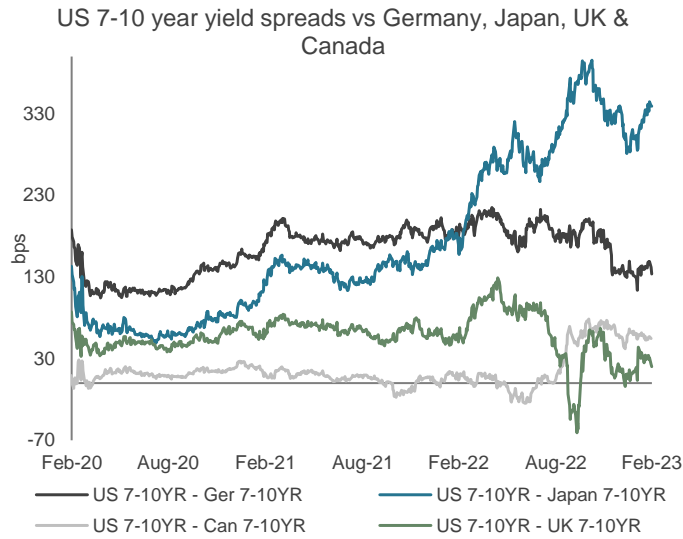


Chart 2: Italy 7-10yr spreads vs the US are a little higher than 2018-19, unlike vs Germany & France, where spreads fell sharply since Q4 2022. This may reflect the ECB's huge potential sales of Bunds.

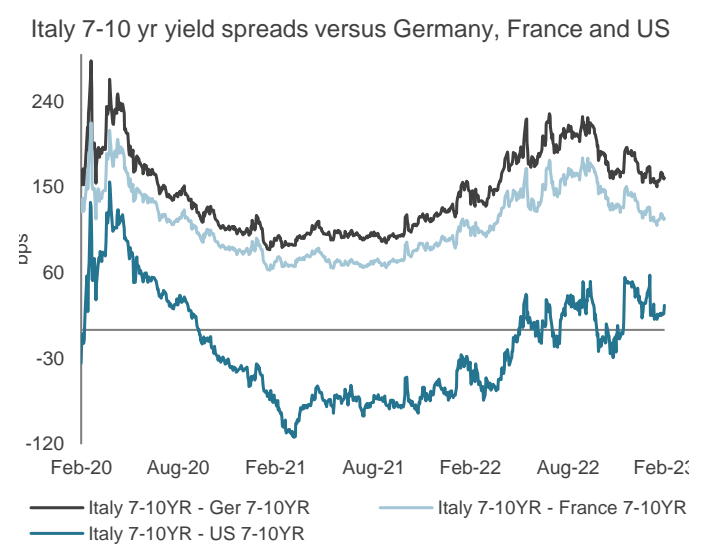


Chart 3: EM spread narrowing partly reflects higher G7 yields, but at no point have EM spreads spiked since Covid, as they did in genuine crises previously.

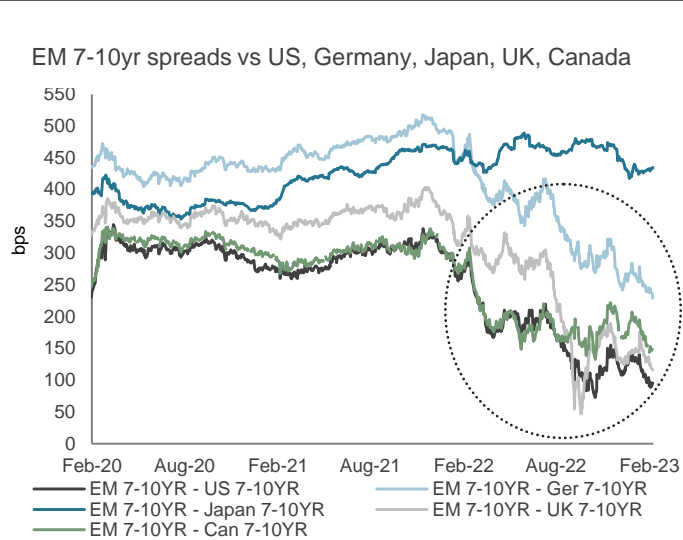


Chart 4: Low correlation of Chinese yields to G7 yields is well documented and does not appear directional, enhancing the portfolio diversification benefits of Chinese government bonds.

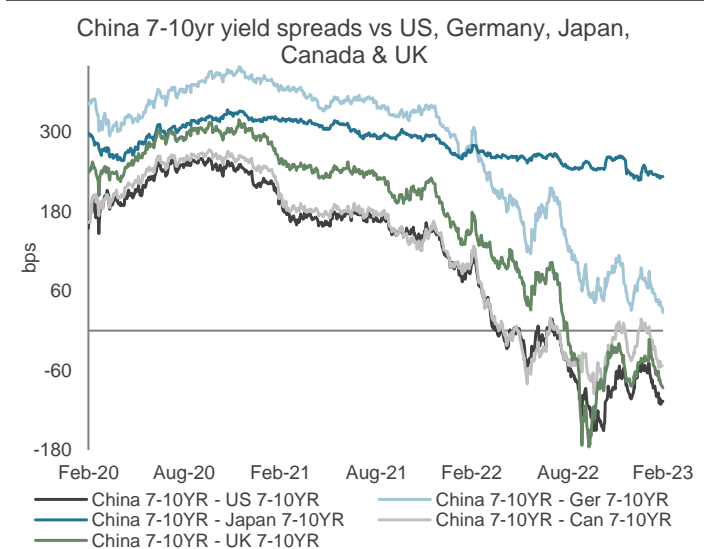


Chart 5: US and Eurozone credit spreads re-coupled in February after decoupling for much of 2022 as credit defaults remain low in both regions. The move is most noticeable in high yield credits.

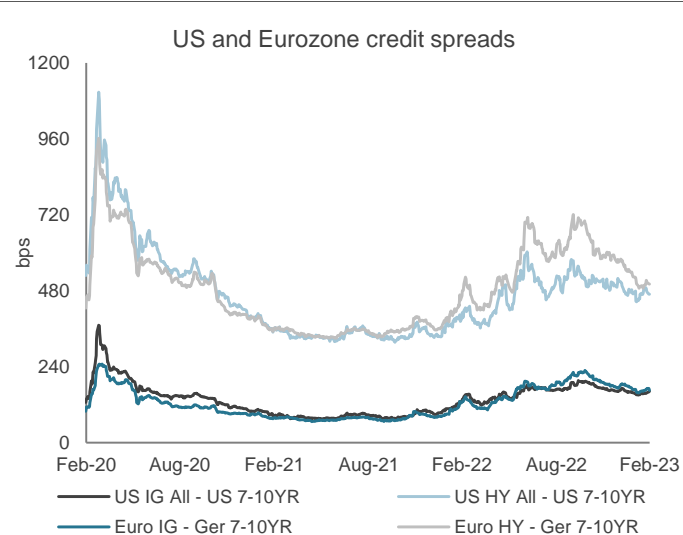


Chart 6: The sharp fall in Chinese \$ HY spreads stabilized in February, as investors reflected on property fundamentals and high yield risk appetite fell back on US inflation concerns.



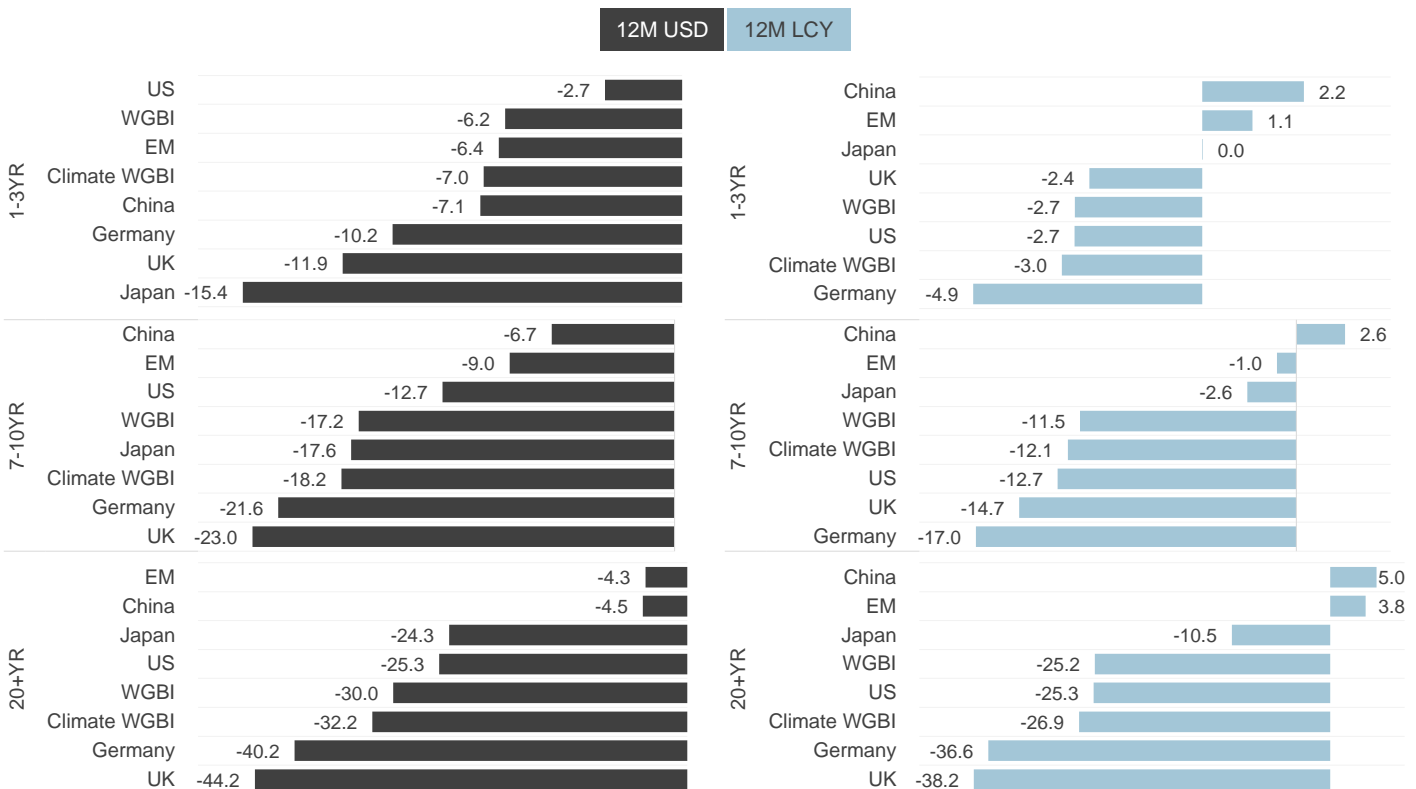
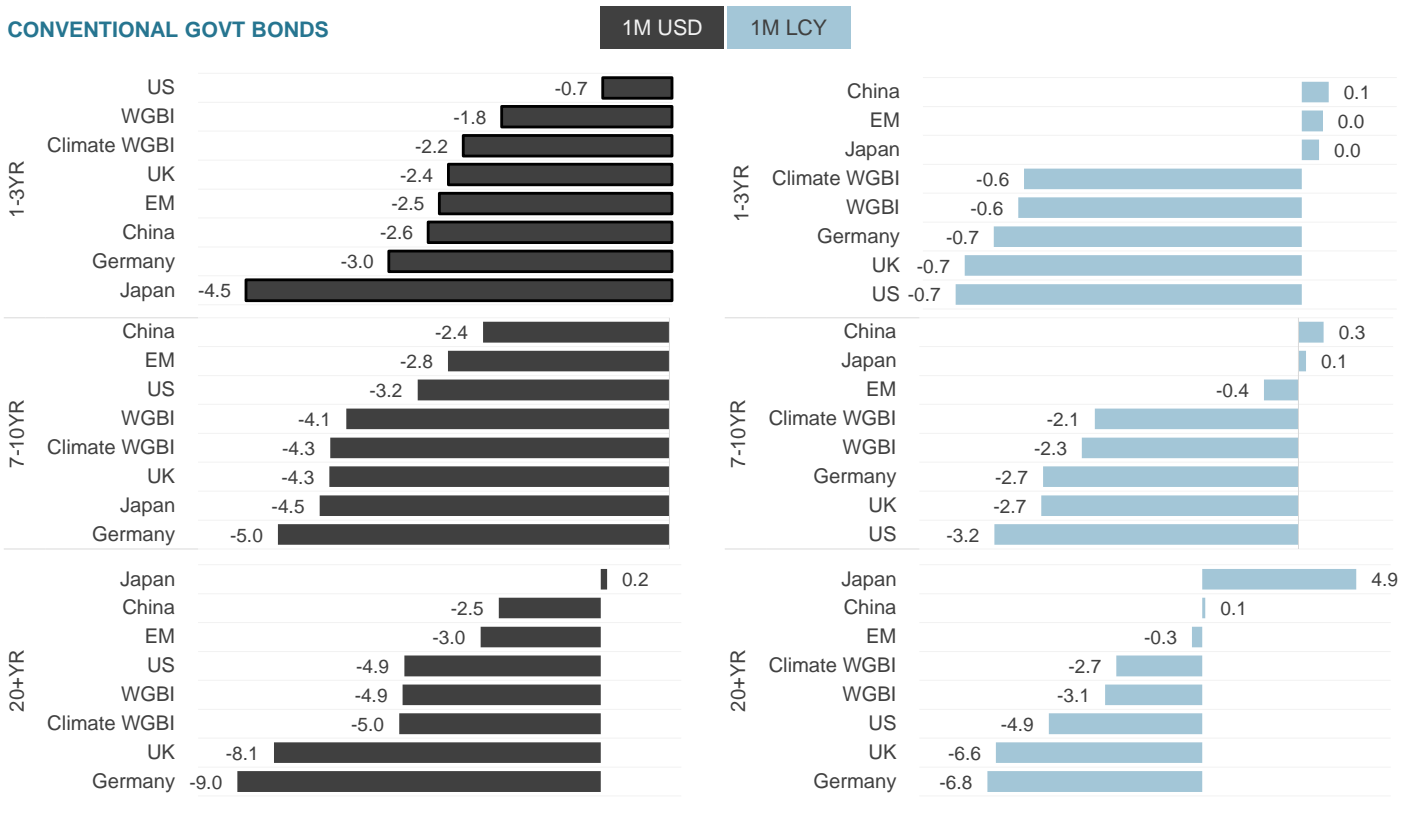
# Global Sovereign Bond Returns – 1M and 12M % (USD & LC, TR) as of February 28, 2023

Global bonds reversed their January gains in February after markets were unnerved by robust US employment and disappointing inflation data, increasing concerns about higher for longer rates. A stronger dollar hit overseas returns for a dollar-based investor. 12M returns remained very weak, led by Gilts, Bunds and climate-WGBI. China outperformed.

Long-duration conventionals were hit hardest in February though returns were negative across all regions & durations, in dollars.

A perfect storm of policy rate increases, sterling weakness and sizeable duration drove losses of 44% in long Gilts on 12M, for a US dollar investor, but long Bunds and climate-WGBI also suffered losses of 32-40%, in US dollar terms.

## CONVENTIONAL GOVT BONDS



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# Global Inflation-Linked Bond Returns – 1M & 12M % (USD, 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 US dollars, despite BoJ curve control. Credits fell with IG underperforming high yield, and dollar strength depressed overseas returns. 12M returns remain deeply negative, though HY outperformed.

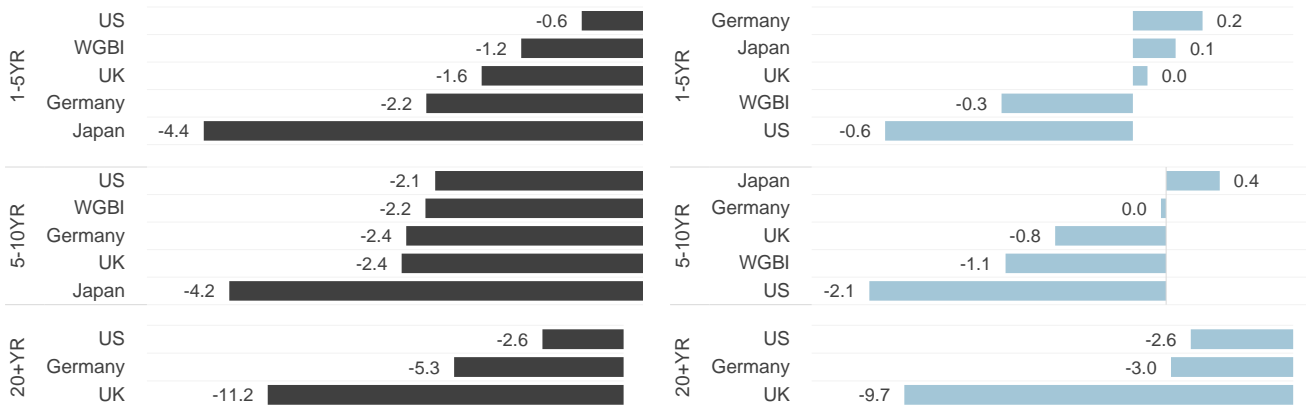
Long IL fell back sharply, as extra duration amplified losses, and long UK IL lost 11% in February in US dollar terms, as a result.

Similarly, 12-month returns still show losses of 27-54% from Tips to UK IL in long maturities, with higher discount rates on cashflows swamping stronger inflation accruals.

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

## INFLATION LINKED BONDS

1M USD 1M LCY

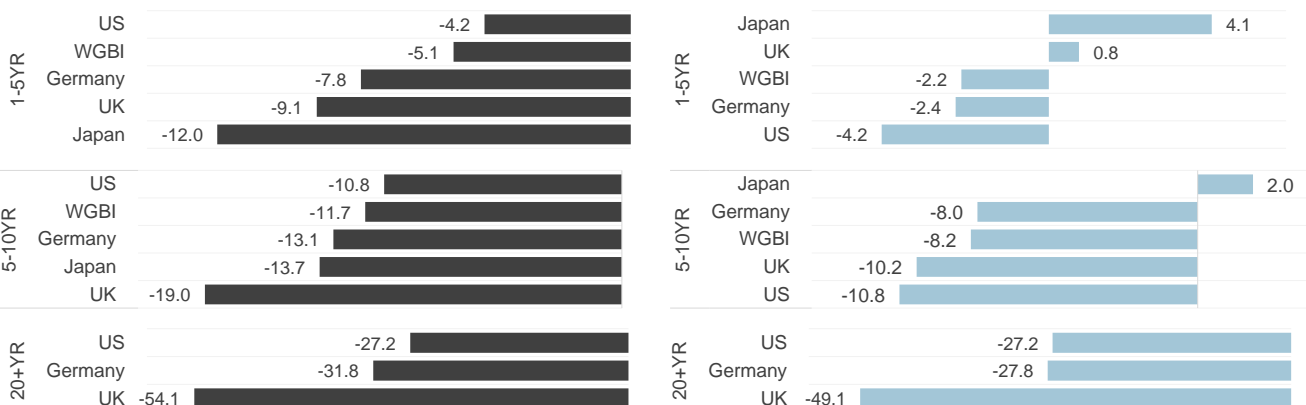


## CORPORATE BONDS



## INFLATION LINKED BONDS

12M USD 12M LCY



## CORPORATE BONDS



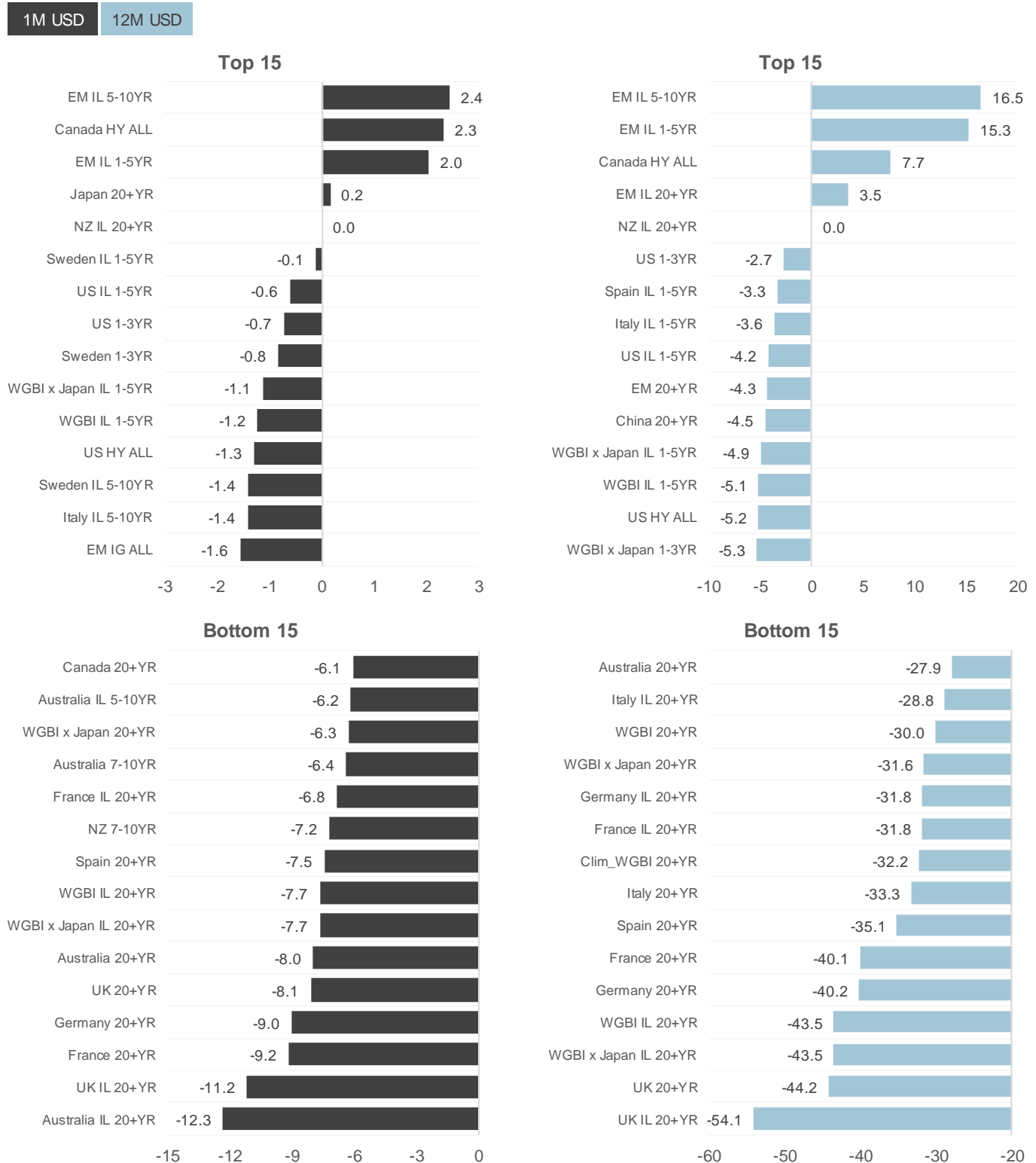
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## Top and Bottom Bond Returns – 1M & 12M % (USD,TR) as of February 28, 2023

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 11-12% in US dollar terms, reversing January's rally. Emerging market IL again proved top performers, showing gains of 2%, helped by currency strength.

Short-dated bonds held up better than long bonds in February, but still suffered small losses (apart from EM IL and Canadian high yield) as central banks raised rates again. In credit, US HY outperformed IG but fell back about 1%.

Long conventional and inflation-linked markets show sizeable losses of 40-54% on 12M in dollar terms, led by long UK IL bonds.





# 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.

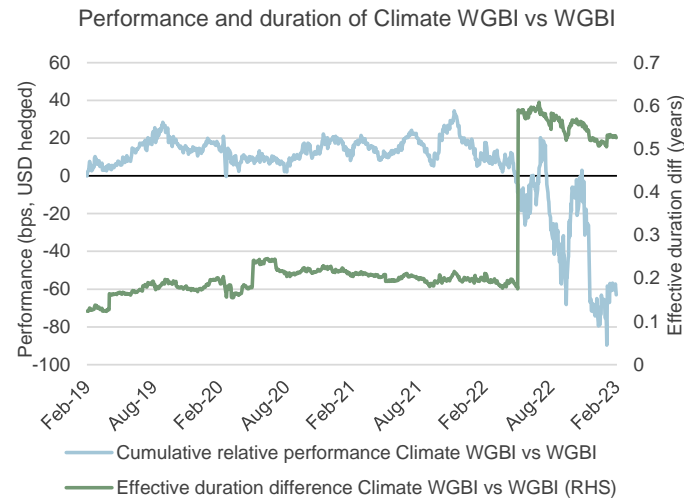


Chart 2: Japan's overweight, and the US underweight, are the most significant in the climate WGBI, driving 2022/23 performance.

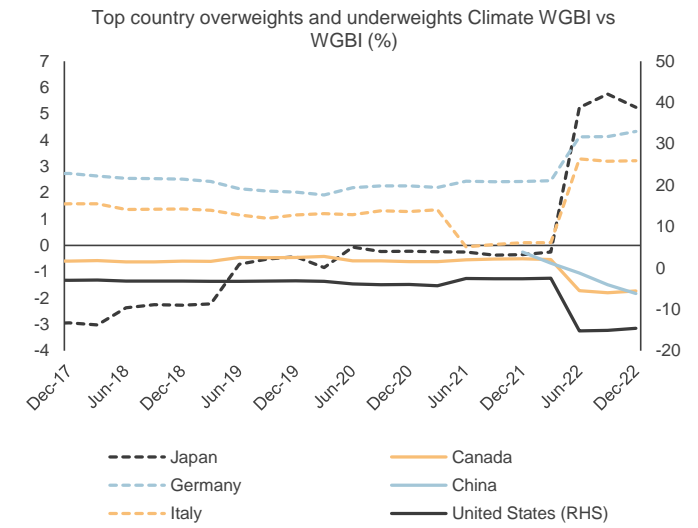


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yielding Europe and Japan.

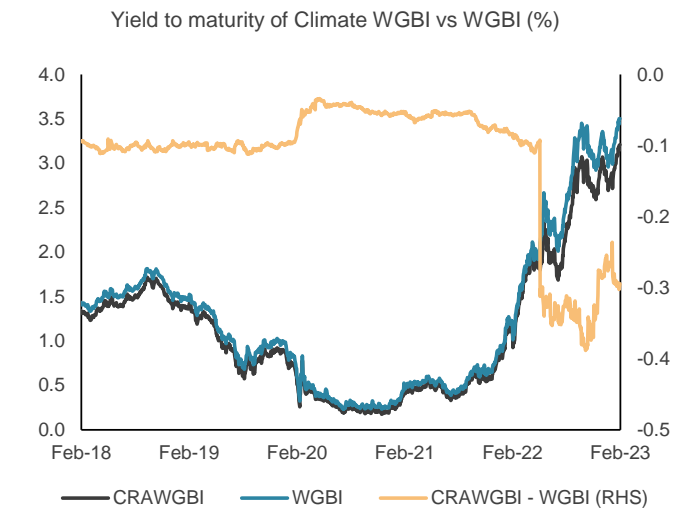


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

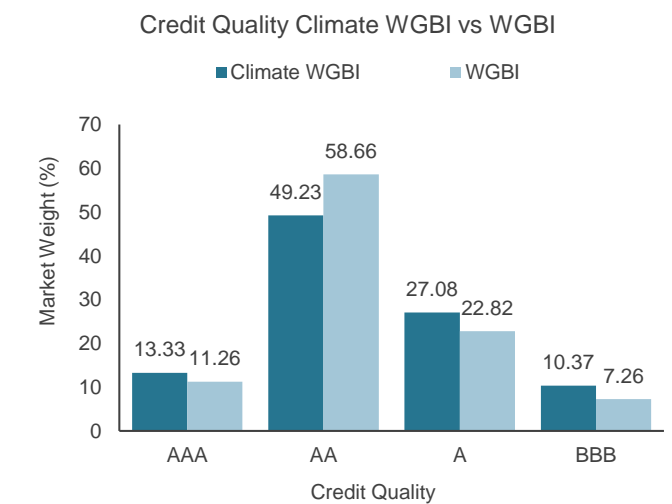


Chart 5: Despite yields increasing more in WGBI indices in 2022, led by US, climate WGBI's extra duration drove underperformance.

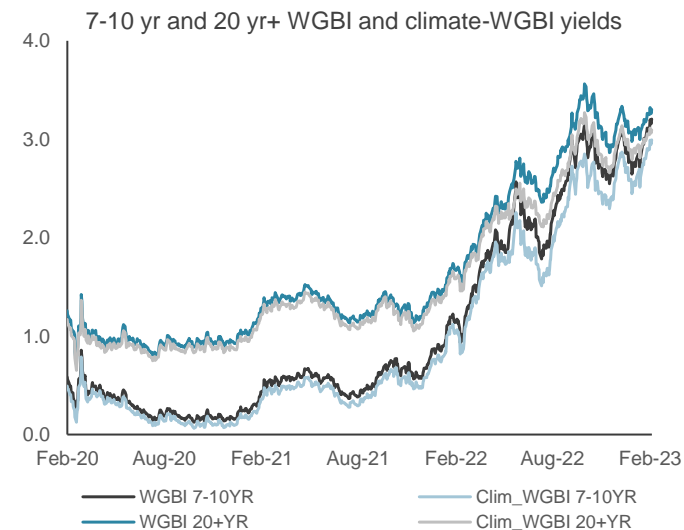
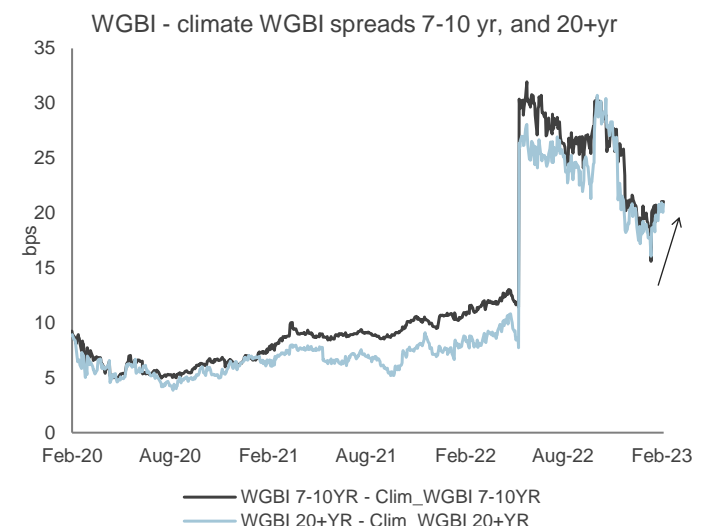


Chart 6: There was some reversal of recent spread narrowing in WGBI as US yields rose more in February (see Chart 1, page 5).



## Appendix – Global Bond Market Returns % (USD & 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	USD	Local	USD	Local	USD	Local	USD
US	1-3YR	0.17	0.17	-0.44	-0.44	0.02	0.02	-2.71	-2.71
	7-10YR	-1.23	-1.23	-3.89	-3.89	0.23	0.23	-12.66	-12.66
	20+YR	-0.25	-0.25	-7.94	-7.94	2.37	2.37	-25.34	-25.34
	IG All	0.45	0.45	-1.17	-1.17	0.92	0.92	-10.33	-10.33
	HY All	1.75	1.75	1.95	1.95	2.53	2.53	-5.15	-5.15
UK	1-3YR	-0.16	1.49	0.32	4.37	-0.09	0.56	-2.39	-11.93
	7-10YR	-3.15	-1.55	-5.49	-1.67	0.31	0.96	-14.70	-23.04
	20+YR	-11.69	-10.23	-16.44	-13.06	-2.48	-1.86	-38.17	-44.21
EUR	IG All	-0.75	2.22	-1.24	4.16	1.11	0.47	-9.55	-14.60
	HY All	2.72	5.66	4.06	9.60	3.49	2.97	-3.75	-9.53
Japan	1-3YR	0.03	2.47	-0.09	1.68	0.14	-3.00	0.01	-15.44
	7-10YR	-1.70	0.70	-2.23	-0.50	-0.15	-3.28	-2.60	-17.65
	20+YR	1.87	4.36	-4.59	-2.90	4.21	0.94	-10.53	-24.35
China	1-3YR	0.40	3.35	0.53	-0.13	0.20	0.37	2.16	-7.09
	7-10YR	0.90	3.86	0.02	-0.63	0.35	0.52	2.58	-6.71
	20+YR	1.21	4.18	-1.21	-1.86	-0.46	-0.28	4.98	-4.52
EM	1-3YR	0.78	3.50	1.26	1.64	0.36	0.76	1.06	-6.44
	7-10YR	1.84	3.68	1.57	1.02	1.13	1.08	-1.03	-8.99
	20+YR	1.80	3.75	0.48	0.07	0.36	0.16	3.79	-4.26
	IG All	2.13	2.13	0.15	0.15	0.96	0.96	-8.37	-8.37
	HY All	4.87	4.87	4.34	4.34	1.39	1.39	-7.74	-7.74
Germany	1-3YR	-1.17	1.80	-2.47	2.86	-0.43	-1.06	-4.86	-10.17
	7-10YR	-4.61	-1.76	-7.77	-2.73	-0.06	-0.69	-17.00	-21.63
	20+YR	-14.37	-11.81	-17.23	-12.71	-0.79	-1.42	-36.61	-40.15
Italy	1-3YR	-0.75	2.23	-0.97	4.44	0.07	-0.56	-3.89	-9.26
	7-10YR	-2.93	-0.02	-2.32	3.02	2.34	1.69	-14.86	-19.61
	20+YR	-9.82	-7.12	-7.73	-2.68	3.64	2.99	-29.34	-33.28
Spain	1-3YR	-1.07	1.89	-2.14	3.21	-0.15	-0.78	-4.73	-10.04
	7-10YR	-4.45	-1.58	-5.96	-0.82	0.41	-0.22	-15.56	-20.27
	20+YR	-11.68	-9.03	-11.44	-6.60	0.14	-0.49	-31.29	-35.13
France	1-3YR	-1.13	1.83	-2.46	2.87	-0.12	-0.75	-5.03	-10.34
	7-10YR	-4.93	-2.09	-7.03	-1.95	0.22	-0.41	-16.16	-20.84
	20+YR	-14.33	-11.77	-14.94	-10.29	-0.99	-1.62	-36.51	-40.06
Sweden	1-3YR	-0.92	1.31	-0.69	1.26	-0.36	-0.44	-3.69	-12.84
	7-10YR	-5.57	-3.44	-4.94	-3.07	-1.88	-1.97	-14.78	-22.88
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	-0.19	0.51	0.59	-1.05	0.17	-0.39	-1.62	-8.57
	7-10YR	-1.65	-0.97	-0.21	-1.84	2.10	1.53	-9.37	-15.78
	20+YR	-3.91	-3.24	-4.27	-5.83	3.91	3.32	-22.37	-27.86
NZ	1-3YR	0.54	0.29	0.03	1.08	0.70	-1.36	-0.74	-9.13
	7-10YR	-2.48	-2.72	-2.66	-1.64	-0.13	-2.17	-9.40	-17.05
Canada	1-3YR	0.09	-0.33	0.69	-3.15	0.24	-0.24	-2.85	-9.49
	7-10YR	-2.12	-2.53	-0.07	-3.87	0.23	-0.25	-8.67	-14.91
	20+YR	-3.38	-3.79	-2.36	-6.08	1.60	1.11	-16.39	-22.11

## Appendix – Global Bond Market Returns % (USD & 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	USD	Local	USD	Local	USD	Local	USD
US	1-5YR	-0.17	-0.17	-2.11	-2.11	0.20	0.20	-4.23	-4.23
	5-10YR	-1.05	-1.05	-4.97	-4.97	0.42	0.42	-10.81	-10.81
	20+YR	-0.96	-0.96	-10.02	-10.02	3.62	3.62	-27.20	-27.20
UK	1-5YR	-0.77	0.87	-1.71	2.26	-0.44	0.21	0.76	-9.08
	5-10YR	-1.82	-0.19	-5.84	-2.04	0.92	1.57	-10.20	-18.97
	20+YR	-12.16	-10.70	-22.71	-19.58	-3.96	-3.34	-49.13	-54.10
EUxUK	1-5YR	-1.55	1.40	-3.48	1.80	0.23	-0.41	-2.36	-7.81
	5-10YR	-2.44	0.49	-4.74	0.47	1.46	0.82	-7.99	-13.12
	20+YR	-11.38	-8.73	-12.73	-7.96	3.12	2.46	-27.77	-31.80
Japan	1-5YR	0.46	2.92	1.58	3.37	0.60	-2.55	4.12	-11.96
	5-10YR	-1.85	0.55	-1.27	0.47	-0.75	-3.86	2.01	-13.75
EM	1-5YR	5.68	6.72	9.50	9.59	4.74	5.98	22.04	15.26
	5-10YR	4.91	6.47	10.30	11.60	3.26	4.97	23.27	16.47
	20+YR	-0.95	0.87	0.69	2.45	-0.88	0.90	3.74	3.54
Germany	1-5YR	-1.55	1.40	-3.48	1.80	0.23	-0.41	-2.36	-7.81
	5-10YR	-2.44	0.49	-4.74	0.47	1.46	0.82	-7.99	-13.12
	20+YR	-11.38	-8.73	-12.73	-7.96	3.12	2.46	-27.77	-31.80
Italy	1-5YR	-0.55	2.43	-0.21	5.24	0.70	0.06	2.08	-3.62
	5-10YR	-1.09	1.87	1.42	6.96	3.45	2.80	-4.06	-9.42
	20+YR	-12.49	-9.87	-0.61	4.82	8.07	7.38	-24.63	-28.84
Spain	1-5YR	-0.23	2.76	-1.71	3.66	0.62	-0.01	2.40	-3.32
	5-10YR	-1.99	0.95	-2.40	2.93	1.48	0.83	-4.54	-9.87
France	1-5YR	-1.38	1.58	-2.68	2.63	0.36	-0.27	-1.53	-7.02
	5-10YR	-3.09	-0.19	-3.58	1.69	1.50	0.86	-6.69	-11.90
	20+YR	-13.20	-10.59	-9.98	-5.06	1.61	0.97	-27.78	-31.81
Sweden	1-5YR	0.67	2.94	1.28	3.27	0.64	0.55	1.39	-8.24
	5-10YR	-2.88	-0.69	-4.05	-2.17	0.13	0.04	-7.14	-15.96
Australia	1-5YR	1.03	1.73	2.66	0.99	1.62	1.05	1.15	-6.00
	5-10YR	0.65	1.35	2.28	0.61	2.95	2.38	-3.52	-10.34
	20+YR	-5.81	-5.15	-0.59	-2.21	4.07	3.48	-21.30	-26.86
NZ	5-10YR	1.68	1.43	2.97	4.06	1.57	-0.50	-2.48	-10.73
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	-1.68	-2.09	-0.63	-4.41	-1.01	-1.49	-8.99	-15.21

# 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%.

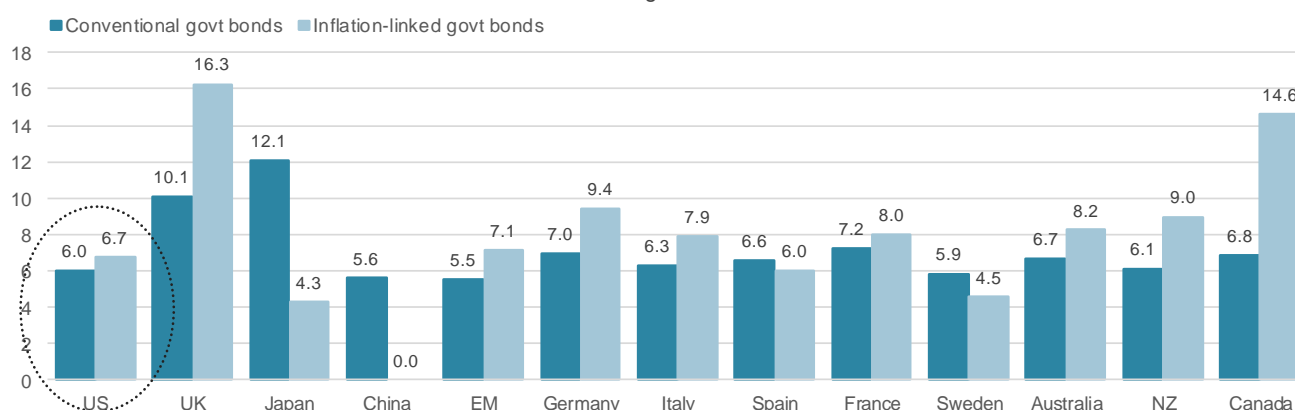
		Conventional government bonds				Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.90	4.34	3.93	4.01	1.82	1.57	1.65	5.55	8.62
	3M Ago	4.47	3.97	3.64	3.95	1.76	1.40	1.59	5.38	8.81
	6M Ago	3.49	3.44	3.19	3.46	0.87	0.75	1.14	4.86	8.37
	12M Ago	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		
	3M Ago	3.36	3.26	3.20	3.39	-1.95	-0.58	0.10		
	6M Ago	3.04	2.82	2.77	3.06	-3.47	-1.62	-0.45		
	12M Ago	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			
	3M Ago	-0.04	0.05	0.28	1.40	-1.44	-0.76			
	6M Ago	-0.10	-0.04	0.20	1.10	-1.23	-0.83			
	12M Ago	-0.04	0.00	0.11	0.80	-1.11	-0.83			
China	Current	2.38	2.62	2.86	3.32					
	3M Ago	2.26	2.54	2.87	3.34					
	6M Ago	1.96	2.30	2.68	3.16					
	12M Ago	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
	3M Ago	3.72	4.51	4.89	4.89	2.45	3.14	5.10	6.08	12.18
	6M Ago	3.49	4.16	4.76	4.65	2.45	3.50	5.09	5.25	11.65
	12M Ago	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		
	3M Ago	2.04	1.95	1.91	1.81	-0.59	-0.41	-0.54		
	6M Ago	0.97	1.25	1.41	1.62	-1.62	-0.97	-0.68		
	12M Ago	-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		
	3M Ago	2.73	3.09	3.59	3.86	0.12	1.32	1.35		
	6M Ago	2.11	2.78	3.53	3.93	-1.97	1.08	1.73		
	12M Ago	-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		
	3M Ago	2.25	2.19	2.27	2.59	-0.94	-0.39	0.09		
	6M Ago	1.21	1.53	1.88	2.52	-1.84	-0.60	0.15		
	12M Ago	-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			
	3M Ago	2.52	2.21	1.93		-0.29	-0.26			
	6M Ago	2.24	2.22	1.96		-1.11	-0.90			
	12M Ago	-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		
	3M Ago	3.12	3.22	3.49	3.92	-0.08	0.90	1.43		
	6M Ago	3.11	3.30	3.56	3.84	-0.19	0.81	1.56		
	12M Ago	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			
	3M Ago	4.67	4.39	4.12	4.28	1.49	1.97			
	6M Ago	3.85	3.87	3.97	4.33	0.72	1.84			
	12M Ago	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
	3M Ago	3.70		2.96	3.02			1.20	5.07	7.37
	6M Ago	3.56		3.14	3.06			1.23	4.96	6.97
	12M Ago	1.44		1.79	2.12			0.07	3.13	4.93

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

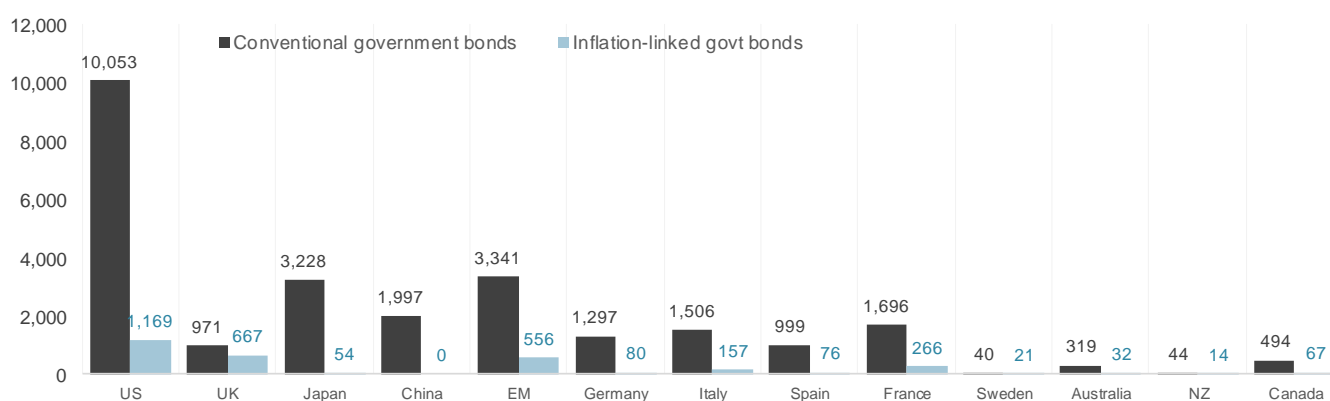
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.5	6.0	2,171.5	1,031.7	1,240.4	10,052.7	7.1	21.5	6.7	383.1	126.0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

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

Average Duration



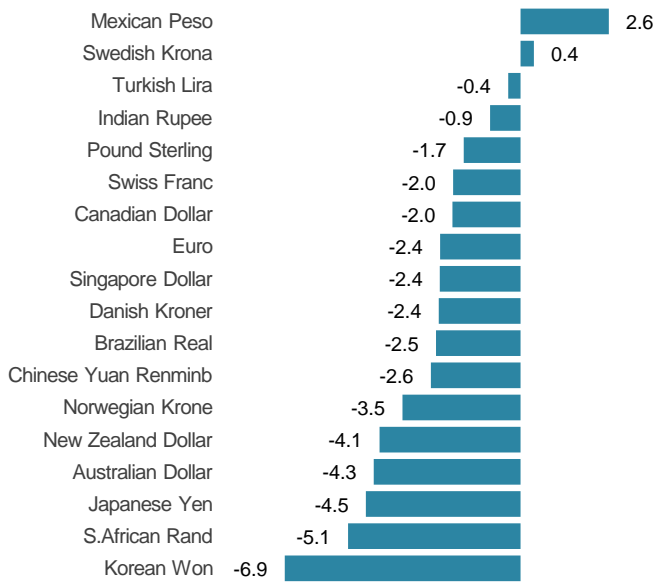
Total Market Value (USD Billions)



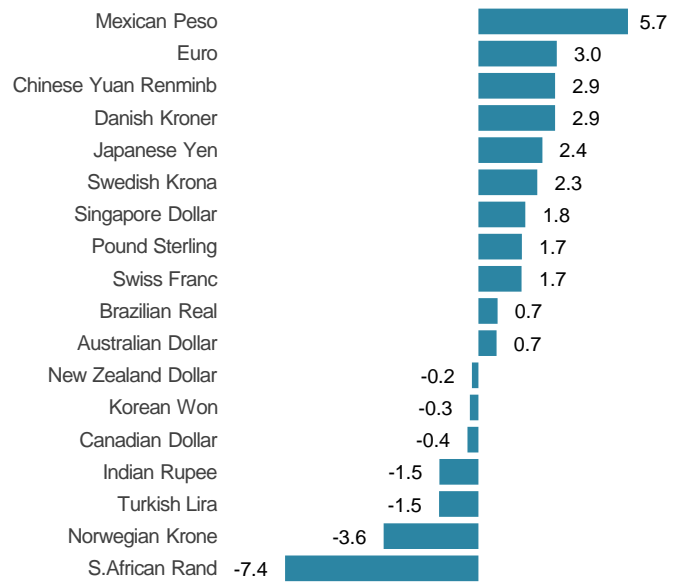
Data as of 2023-02-28

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

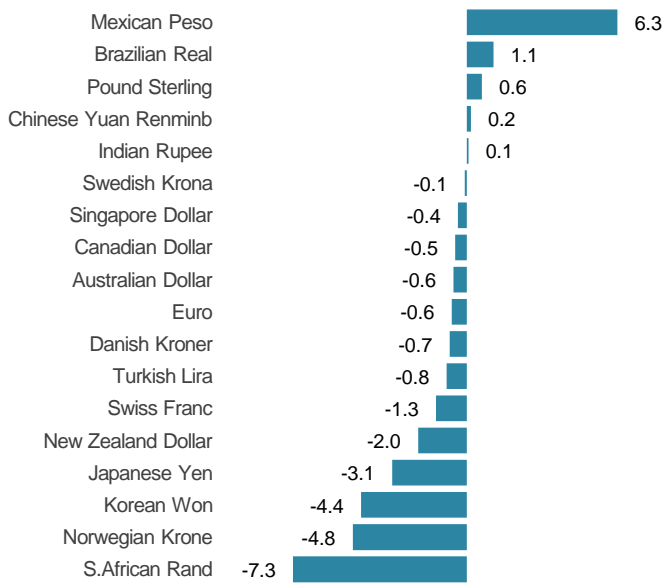
FX Moves vs USD - 1M



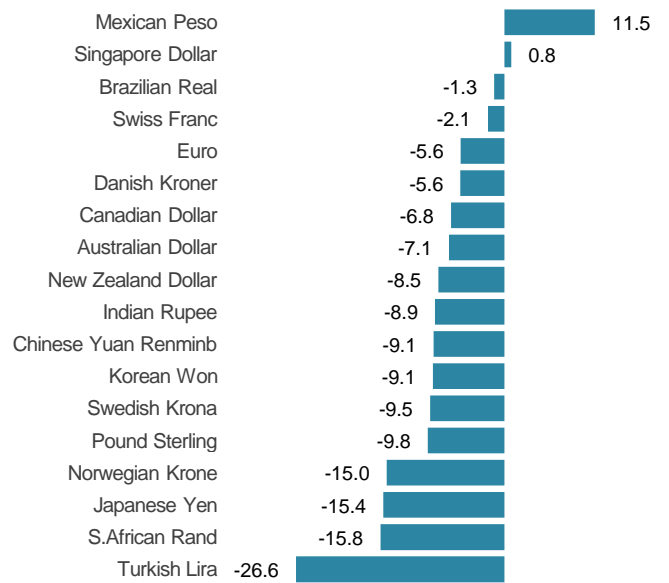
FX Moves vs USD - 3M



FX Moves vs USD - YTD



FX Moves vs USD - 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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