GLOBAL INVESTMENT RESEARCH

MARKET MAPS

FTSE Russell

An LSEG Business

Fixed Income Insights

MONTHLY REPORT - **February 2023** | **EUROZONE EDITION**

FOR PROFESSIONAL INVESTORS ONLY

Euro high yield bonds lead credit rally in January, as economy resists recession

Europe has resisted recession to date, despite being worst hit by the 2022 energy shock and policy tightening. Inflation, while easing from 2022 highs, may persist at higher levels, if wage pressure increases. Long Bunds outperformed in January, and Euro HY credit benefited from risk appetite and low default rates.

Growth & inflation expectations – US soft landing remains intact, but European inflation is sticky

Evidence of a soft landing for US inflation increases, but European inflation is stickier, and tight labour markets remain a challenge for central banks. Recession signals strongest in the UK, while Covid fallout clouds China's outlook. (pages 2-3).

Yields, curves and spreads – The disconnect between cautious central banks and market optimism on rates widened

Curves flattened, or inverted more, as markets anticipate policy easing and 2018/19 re-run, but with tail risks? (pages 4-5).

Performance – Duration became the investor's friend in the January rally, but 12M returns remain deeply negative

Despite long Bunds January gains of 7%, losses of 34% on 12M show the extent of the 2022 drawdown (pages 6-8).

Sovereign and climate bonds – Swings in relative performance in 2022/23 were led by duration and country weights

Climate WGBI failed to sustain Q4 recovery vs WGBI, after the underperformance of (overweight) JGBs (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: Cost-push pressures from wage inflation may become an issue for the ECB, with unemployment hitting new historic lows of 6.5% in Q4.

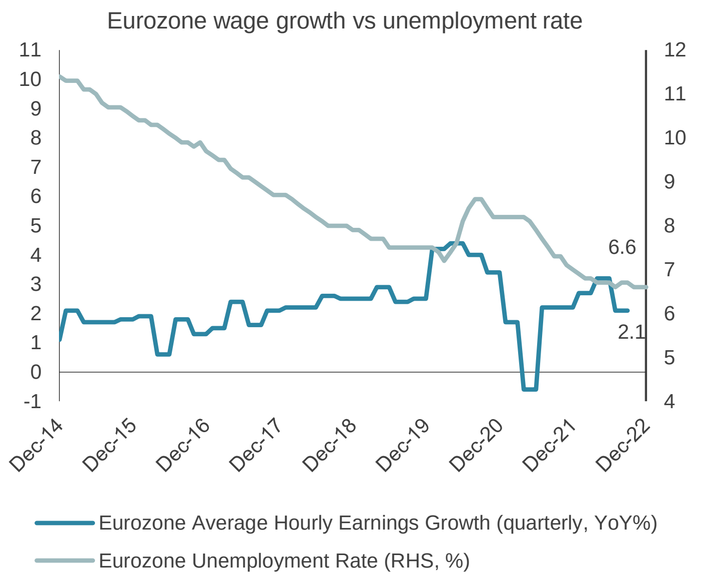
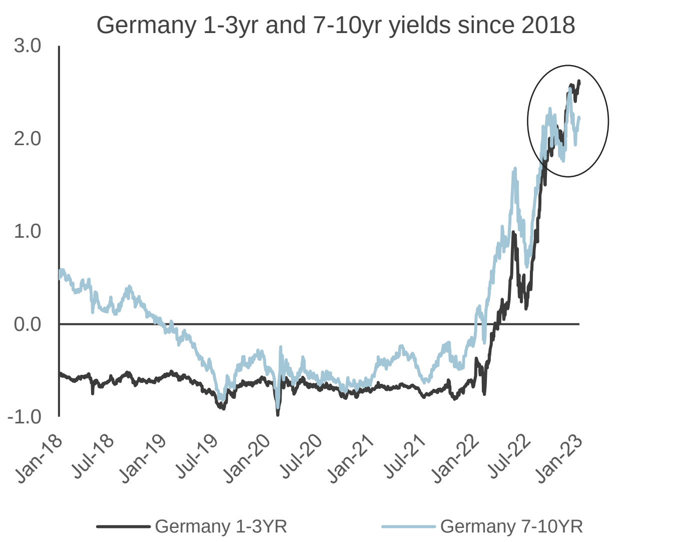


Chart 2: Despite high inflation, 7-10yr German yields have fallen faster than 1-3yr, as markets anticipate a policy pause in 2023.



Source: FTSE Russell. All data as of January 31, 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

Consensus forecasts show G7 economies suffering mild recessions at worst in 2023, with Europe the worst hit by the 2022 energy shock and tightening. Forecasters remained equivocal on recession in 2023, though the ECB expects the downturn to be shallow and of short duration. Inflation remained too high for the ECB to contemplate an imminent policy pause.

GDP growth forecasts for 2023 continue to project a soft landing for the G7 economies, with outright contraction only forecast for the UK. Chart 1 shows Eurozone growth closely avoiding a contraction in 2023, with a flat real GDP expected, before a gentle rebound in 2024.

Eurozone inflation declined modestly in December, but remained particularly sticky in Germany (8.6% y/y), where inflation was 1% below the 9.6% HCIP average, due to high food and energy prices. For 2023, consensus estimates project inflation to drop to 6%, and return close to target in 2024 (Chart 2).

Unlike the US or UK, where tight labour markets are now driving much faster wage growth, rising employment has been a welcome outcome in Europe, with rising wages set to restore some lost purchasing power and supporting consumption (Chart 3).

Lower inflation expectations, helped by declining commodity prices, are shown in breakevens in Chart 4. 7-10-year G7 breakevens declined by 40-50bp, indicating markets expect inflation to mean-revert towards pre-Covid levels in 2023-2024.

Chart 1: Consensus 2023 GDP growth expectations project a sharp slowdown, but with net contraction only in the UK, while growth in the Eurozone is expected to be flat at best.

Latest Consensus Real GDP Forecasts (%, January 2023)

	2022	**2023**	**2024**
US	2.1	**0.5**	**1.3**
UK	4.1	**-0.9**	**0.8**
Eurozone	3.3	**0.1**	**1.3**
Japan	1.6	**1.1**	**1.1**
China	3.0	**4.9**	**5.0**
Canada	3.5	**0.5**	**1.5**

Chart 2: Inflation forecasts for G7 countries remain well above target in 2023, despite steep rate increases. China and Japan are exceptions, with inflation much closer to their targets.

Consensus Inflation Forecasts (%, January 2023)

	2023	*Change Since Jan-22 (Bps)*	**2024**	*Change Since Jan-22 (Bps)*
US	**3.7**	*130*	**2.5**	*20*
UK	**7.0**	*480*	**2.5**	*40*
Eurozone	**6.0**	*430*	**2.5**	*70*
Japan	**1.8**	*110*	**1.3**	*80*
China	**2.3**	*20*	**2.3**	*30*
Canada	**3.7**	*150*	**2.2**	*0*

Chart 3. Cost-push pressures from wage inflation may become an issue for the ECB, with unemployment hitting new historic lows of 6.5% in Q4 2022.

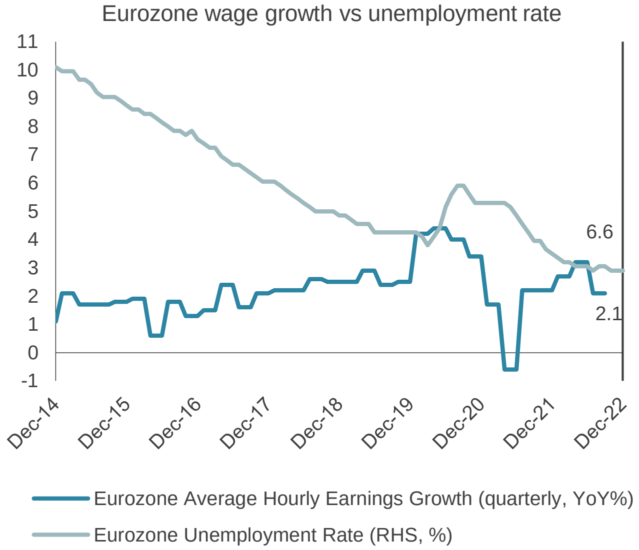
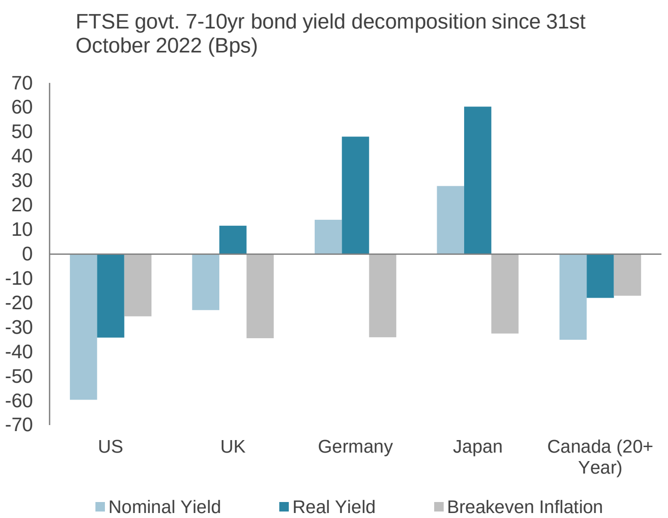


Chart 4: Inflation breakevens have fallen steadily since Q4, moving lower with nominal yields. Only the UK, Germany and Japan have positive real yields.



Financial Conditions and Monetary Policy Settings

Markets rallied further in January, as lower US inflation reinforced expectations the terminal rate for Fed funds will be 5% in 2023, and the Fed may be easing by year end, despite central bank caution on inflation. Exchange rate moves reflect the view the Fed will be first to finish tightening, contraction in the ECB balance sheet, and possible further PBOC easing.

Monetary tightening, including QT, is now having an impact on M2 growth, which has slowed sharply in the Eurozone (Chart 1).

Chart 2 shows the Euro appreciating as the ECB is expected to continue policy tightening. By contrast, the US dollar retreating further from its 2022 highs, as markets price in less Fed tightening, and risk appetite recovers. The BoJ did not widen the 10-year JGB yield band further in January, but there is still an expectation curve control will be eased again, supporting the yen.

As expected, the BoC and Fed raised rates by 0.25% and the BoE and ECB by a more aggressive 50bp each at the end of January and early February, causing further divergence with PBoC and BoJ interest rates. (Chart 3).

The ECB is fast catching up with other central banks in reducing the balance sheet. From March 2023, the asset purchase programme (APP) portfolio is set to fall even more, as the Eurosystem will not reinvest all of the principal payments from maturing securities. The decline will amount to about €15 billion per month until the end of the second quarter of 2023 (Chart 4).

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

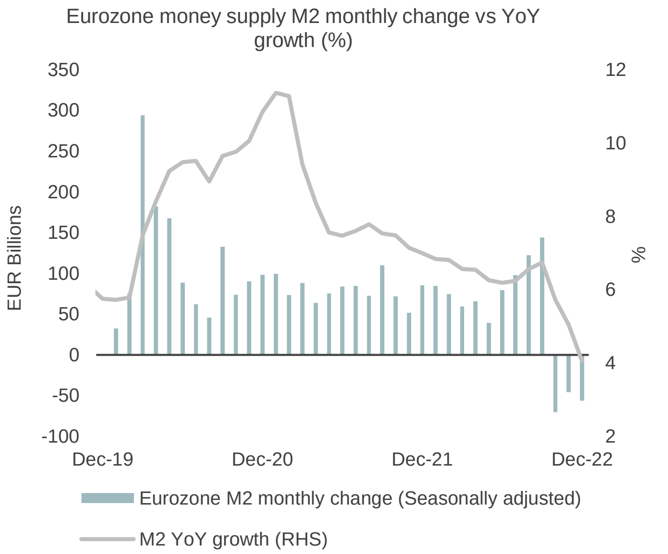


Chart 2: .The dip in the US dollar, from Q4 highs, reflects revision down to Fed tightening expectations as US inflation fell. The euro drew support from the ECB's signals of further tightening to come.

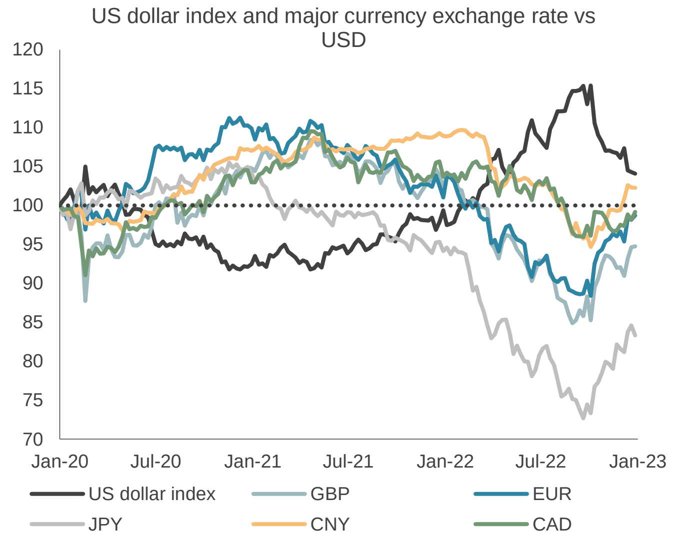


Chart 3: The ECB has signalled it is unlikely to pause policy before the BoC or Fed, which have tightened policy earlier and more aggressively, and while inflation remains persistently high.

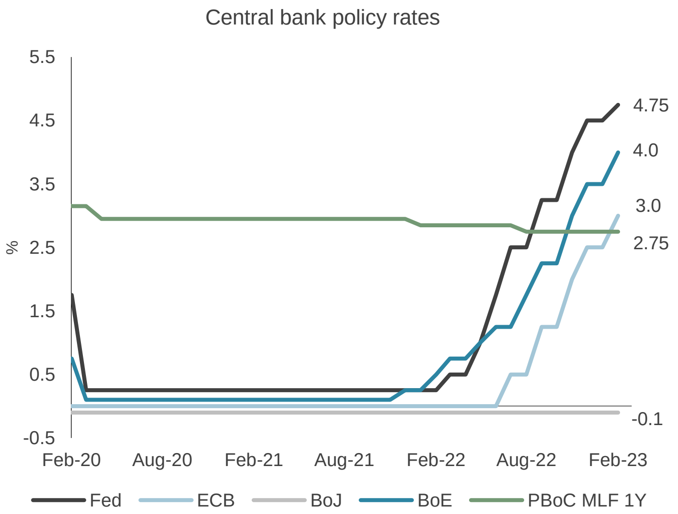
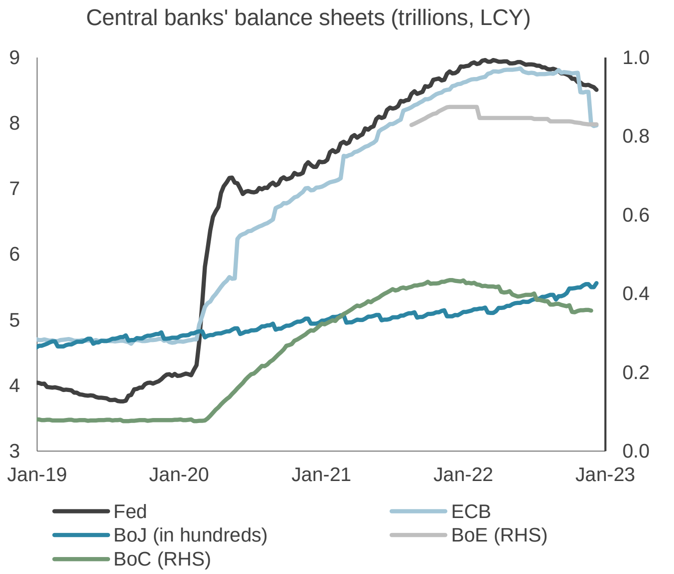


Chart 4: Getting slimmer? The ECB's balance sheet is fast reducing with the decline set to increase from March 2023 when it stops the APP principal payments of maturing securities.



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Global Yields, Curves and Spread Analysis

Chart 1: G7 conventional bond yields declined sharply in January as inflation weakened further, led by US Treasuries, and as markets anticipated a pause, or even a reversal, in policy tightening.

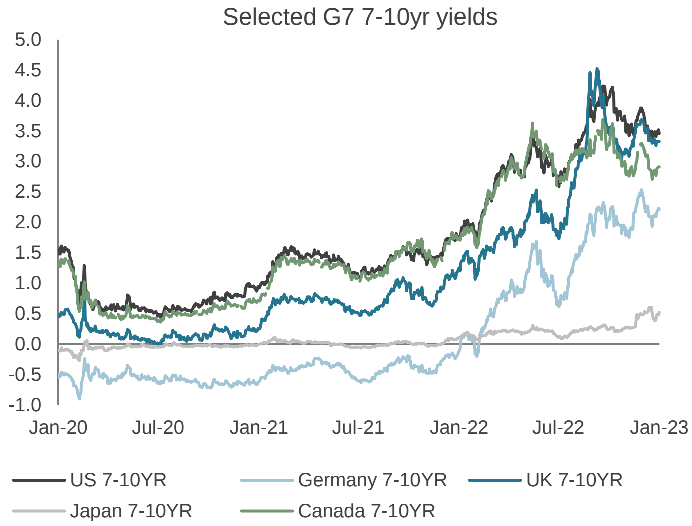


Chart 2: Inflation-linked (IL) real yields have turned positive in most G7 markets, including the UK and Germany. In Japan, inflation-linked bond yields are still just negative.

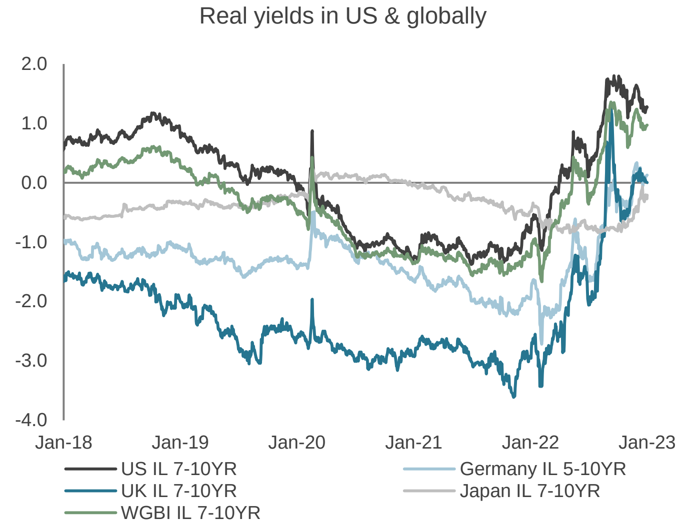


Chart 3: G7 10/2s yield curves remained inverted, or deeply inverted (except in Japan) in January, notably in the US. A bull inversion of 10s/2s (falling yields) has been a strong recession signal previously.

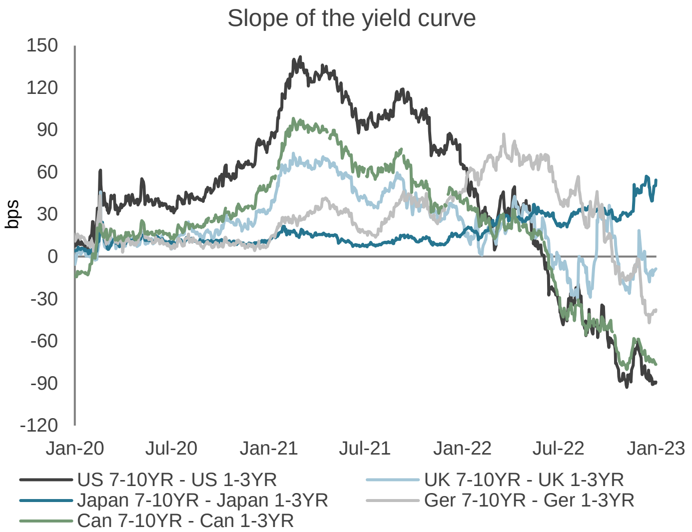


Chart 4: For 20/2s, only Japan and the UK have retained normally-shaped curves, unlike the US, Germany and Canada, which, like 10/2s in Chart 3, have deeply inverted curves.

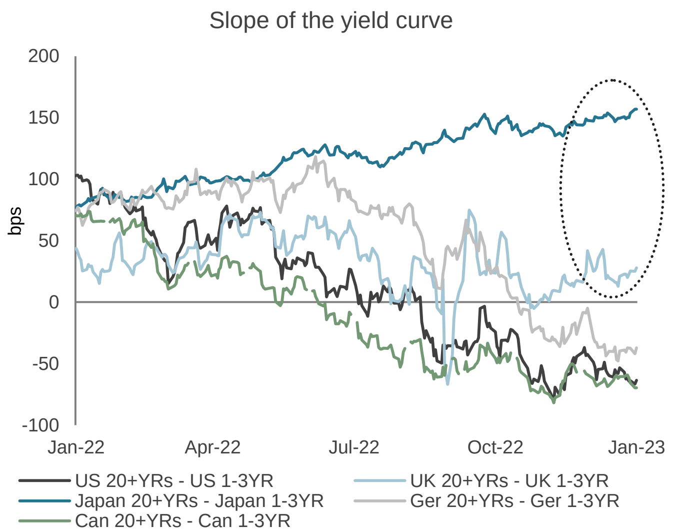


Chart 5: The rate of decline in 7-10yr breakevens has differed across regions, but the trend to lower inflation expectations appears intact globally, even in the UK where inflation is still above 10% y/y.

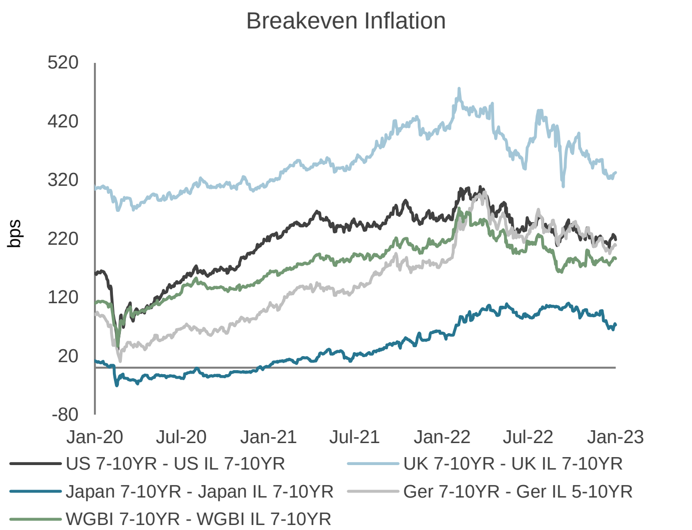
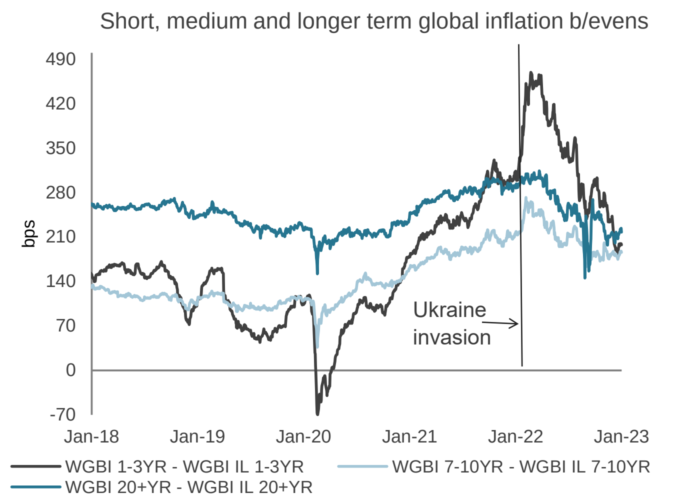


Chart 6: Short breakevens fell on lower commodity prices and policy tightening since the 2022 Ukraine spike. Note short b/evens dipped below longs in January, like the pre-Covid, low inflation era.



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Yield Spread and Credit Spread Analysis

Chart 1: US 7-10-yr spreads have narrowed pro-cyclically in most G7 markets as yields fell since the Treasury rally began in October, even against Japan, despite BoJ retaining some yield curve control.

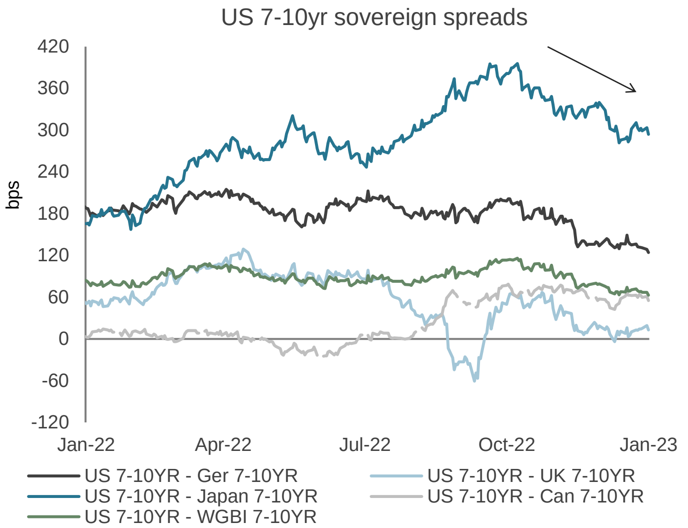


Chart 2: Increased risk appetite and lower inflation have helped Italian spreads tighten in January, though expectations of further policy tightening sent spreads higher towards month-end.

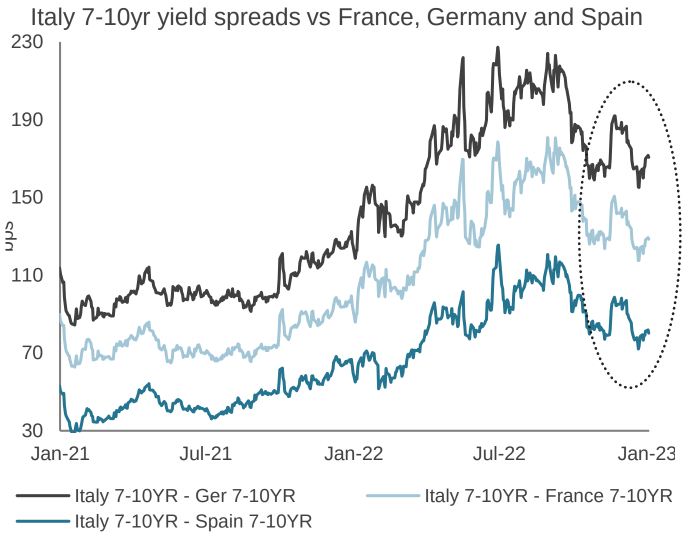


Chart 3: Crisis, what EM crisis? Spread narrowing partly reflects higher G7 yields in 2022, but at no point have EM spreads spiked since Covid, as they did in genuine crises previously.

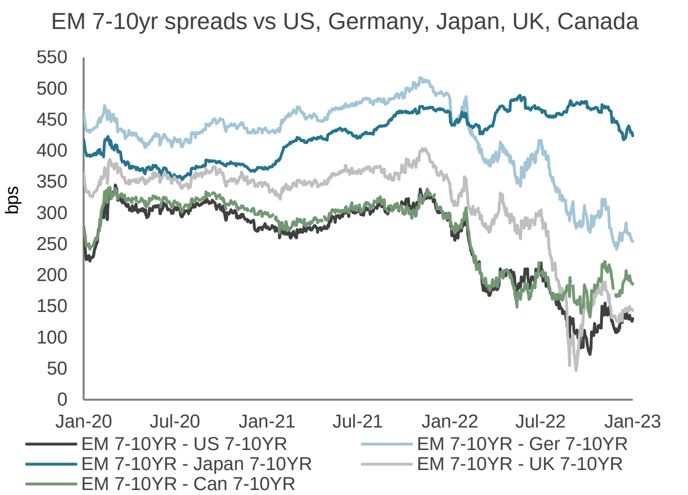


Chart 4: Low correlation of Chinese yields to G7 yields is well established, and is not directional, as the Chart shows, enhancing the portfolio diversification benefits of Chinese government bonds.

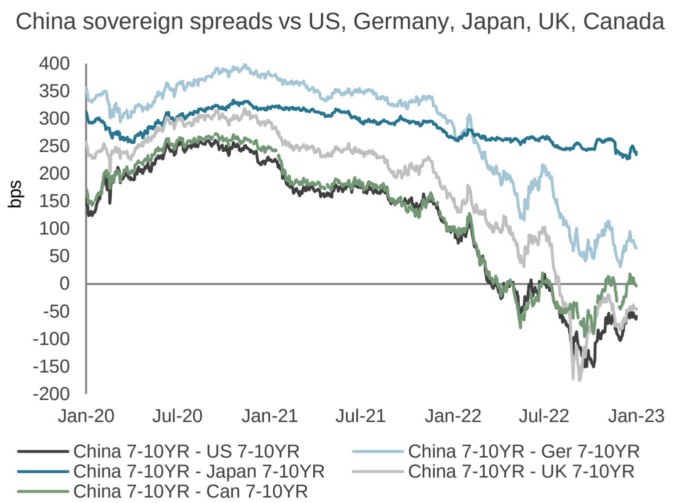


Chart 5: Credit spreads fell since the US Treasury rally began in October 2022, with Eurozone HY spreads the biggest movers. Low default rates and renewed risk appetite have helped drive the rally.

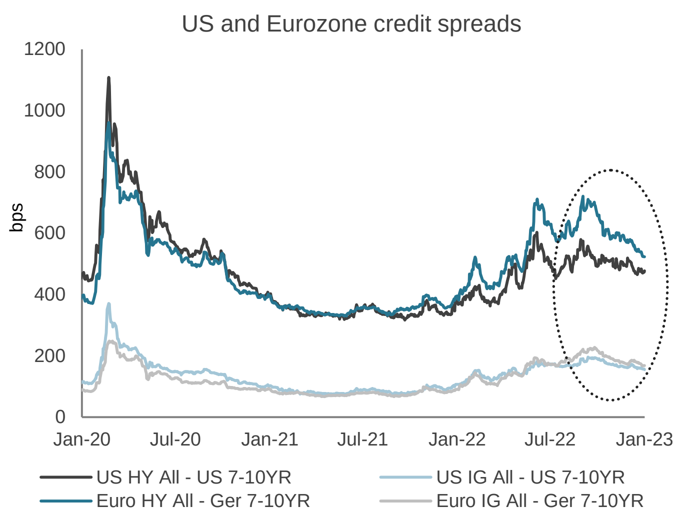
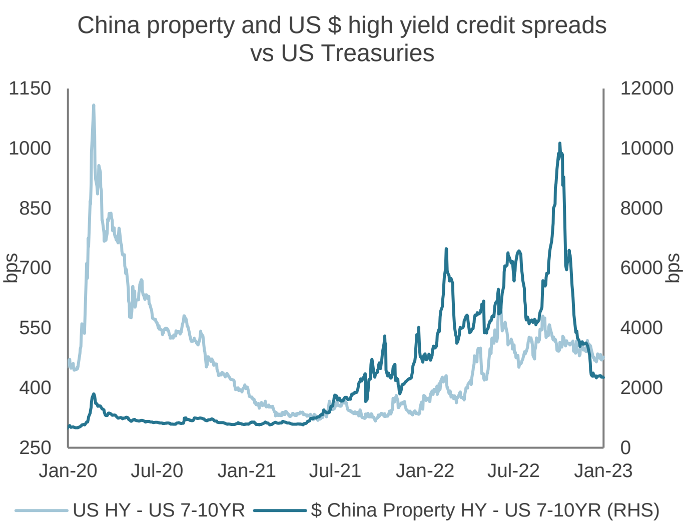


Chart 6: Chinese $ HY spreads tightened further vs Treasuries in January, to about 2300bps (last seen pre-Ukraine), helped by support measures for the property sector, and the US HY rally.



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Global Sovereign Bond Returns – 1M and 12M % (EUR & LC, TR) as of January 31, 2023

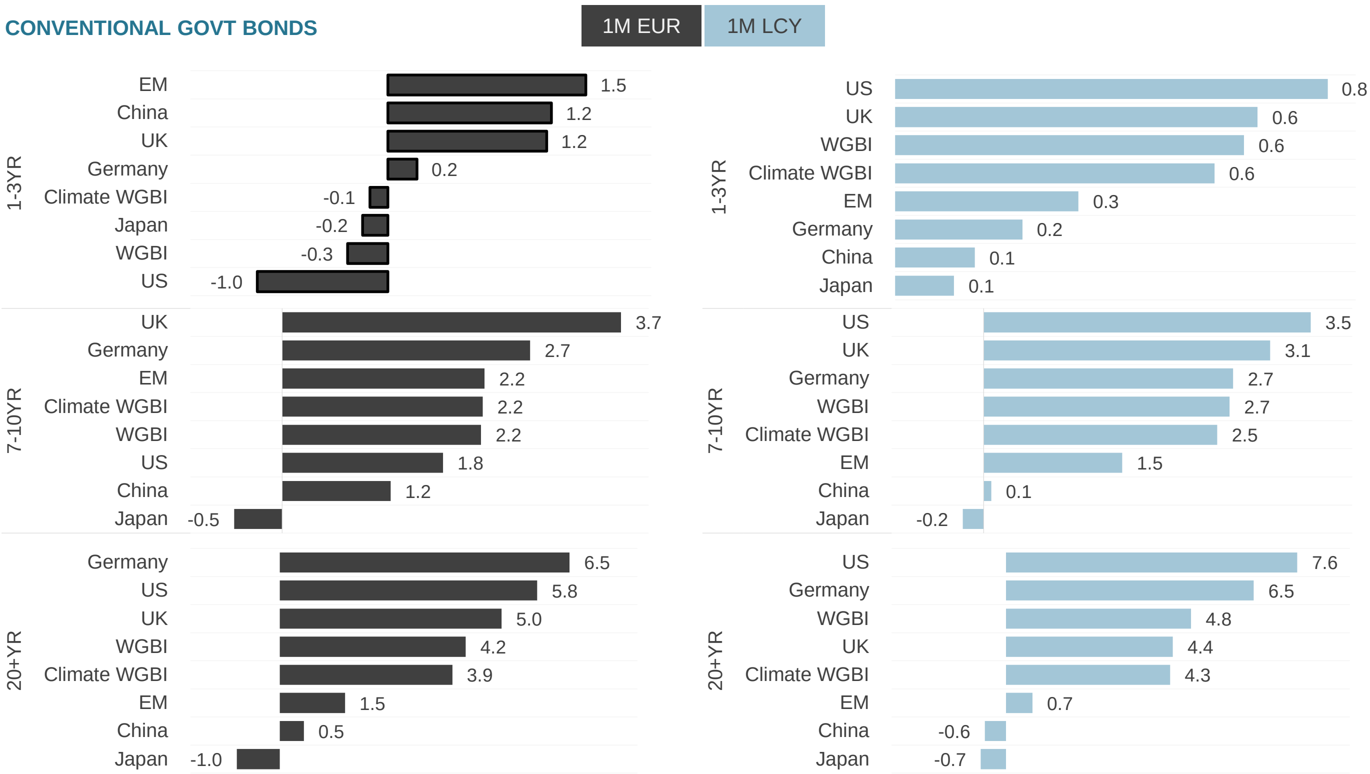
Global bond markets extended their Q4 rally into January as lower inflation reinforced expectations that policy tightening is nearing completion in the G7.

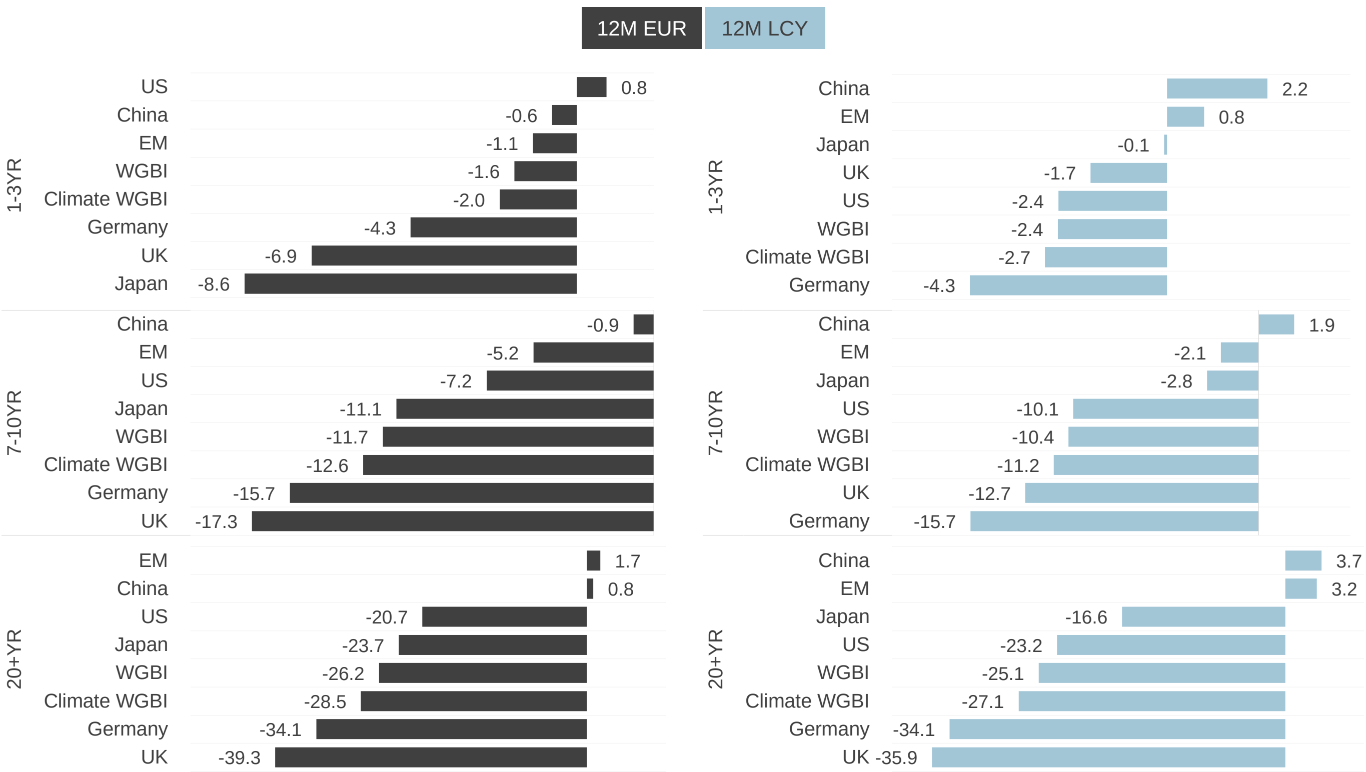
Long-duration conventional bonds benefited the most from the rally, with WGBI achieving a 4% return in January, while Bunds, up 7% in euros, outperformed. Longer Gilts also benefited from their extra duration, gaining 5% in the month.

Despite gains in Q4, 12M returns are still strongly negative, reflecting the steep rise in inflation and policy rates in 2022.

JGBs remained a laggard, as fears remained the BoJ's yield curve control might end soon, and 10yr+ yields failed to match declines elsewhere.

CONVENTIONAL GOVT BONDS





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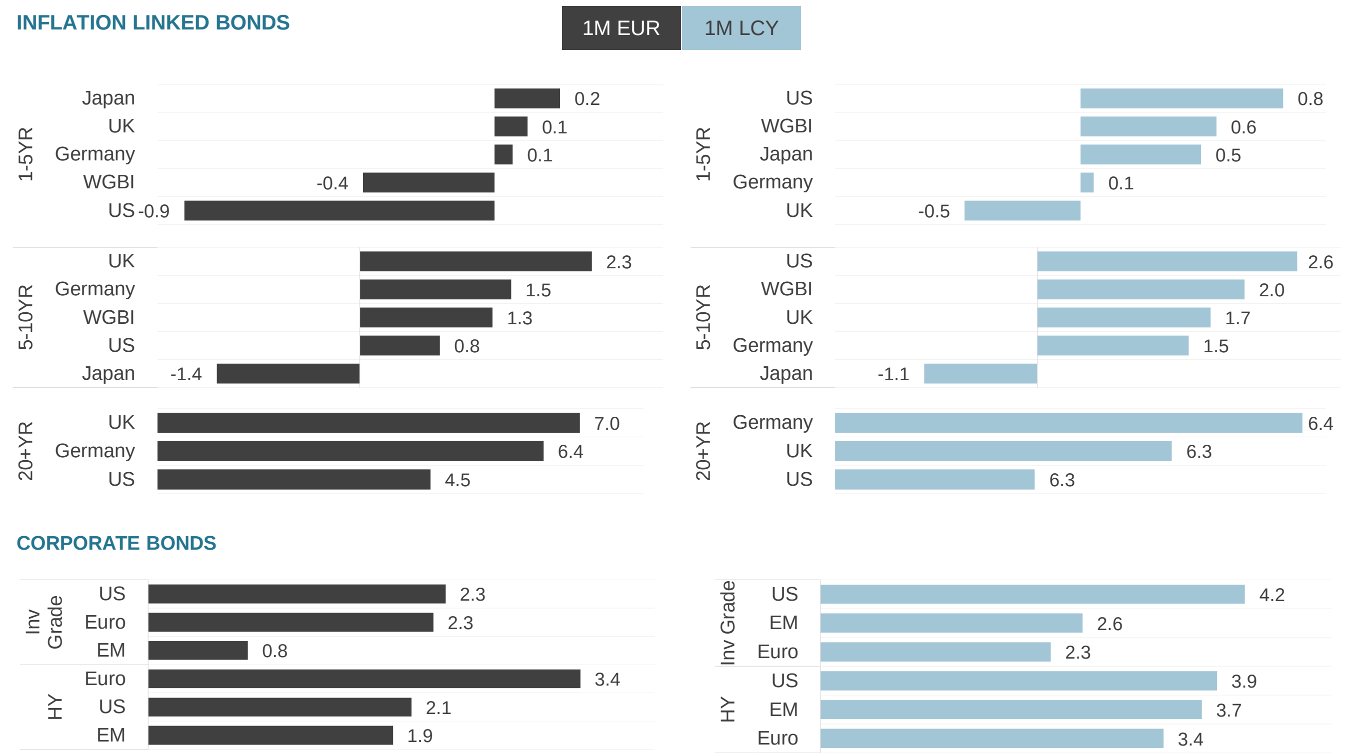
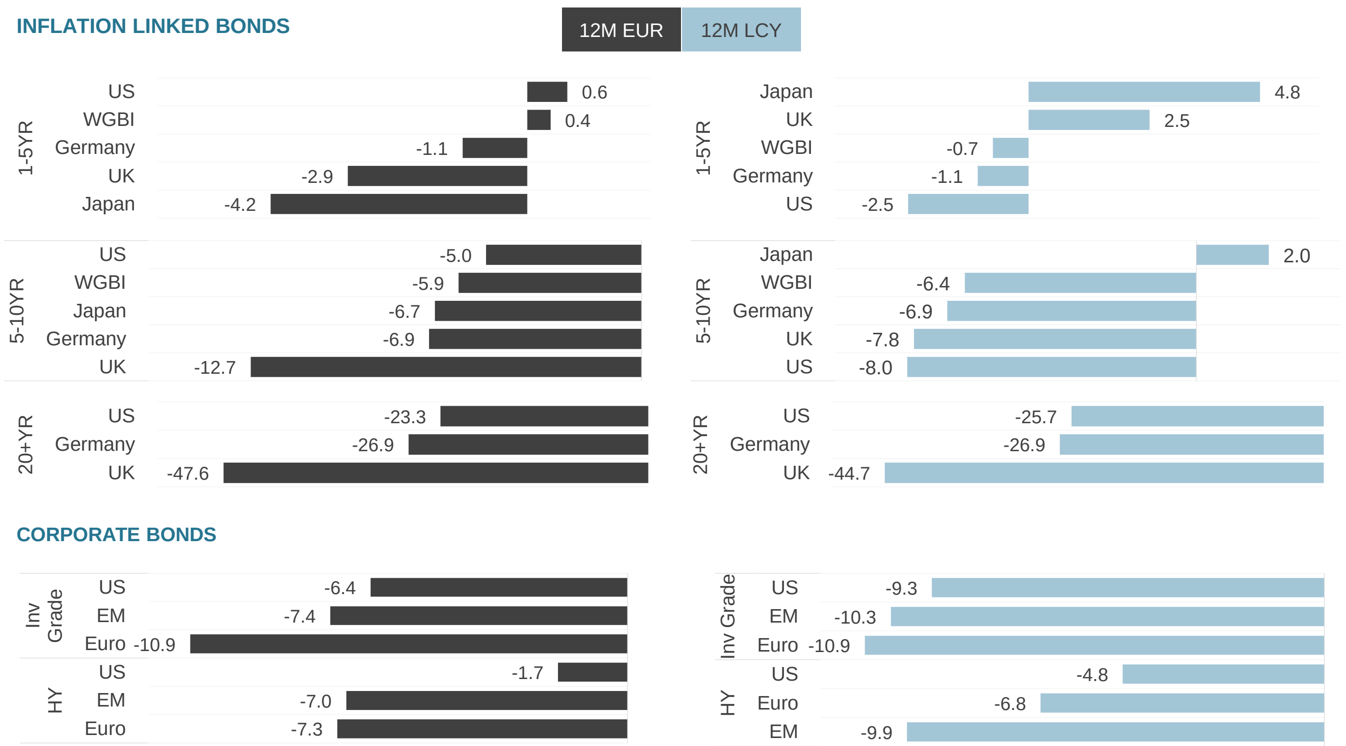
Global Inflation-Linked Bond Returns − 1M & 12M % (EUR, LC, TR) as of January 31, 2023

Long global inflation-linked bonds also rallied in January, as investors scaled back policy tightening expectations, and real yields fell. Long duration Tips, Gilts and Bund inflation-linked bonds rallied 5-7% in euro terms, as duration became the investor's friend, in a reversal of 2022's brutal sell-off. Credit markets also gained 1-3%, led by Euro high yield credit.

Inflation-linked bonds mostly gained in January, but 12M returns still show losses of 23-48% in long maturities, with higher discount rates on cashflows swamping stronger inflation accruals, notably for long inflation bonds. Lower issuance after UK fiscal consolidation has helped UK index-linked bonds recover since Q3 2022.

Credit benefited from decent spreads and outright yields, and low default rates continue, with Euro high yield credit outperforming with a gain of 3.4%.





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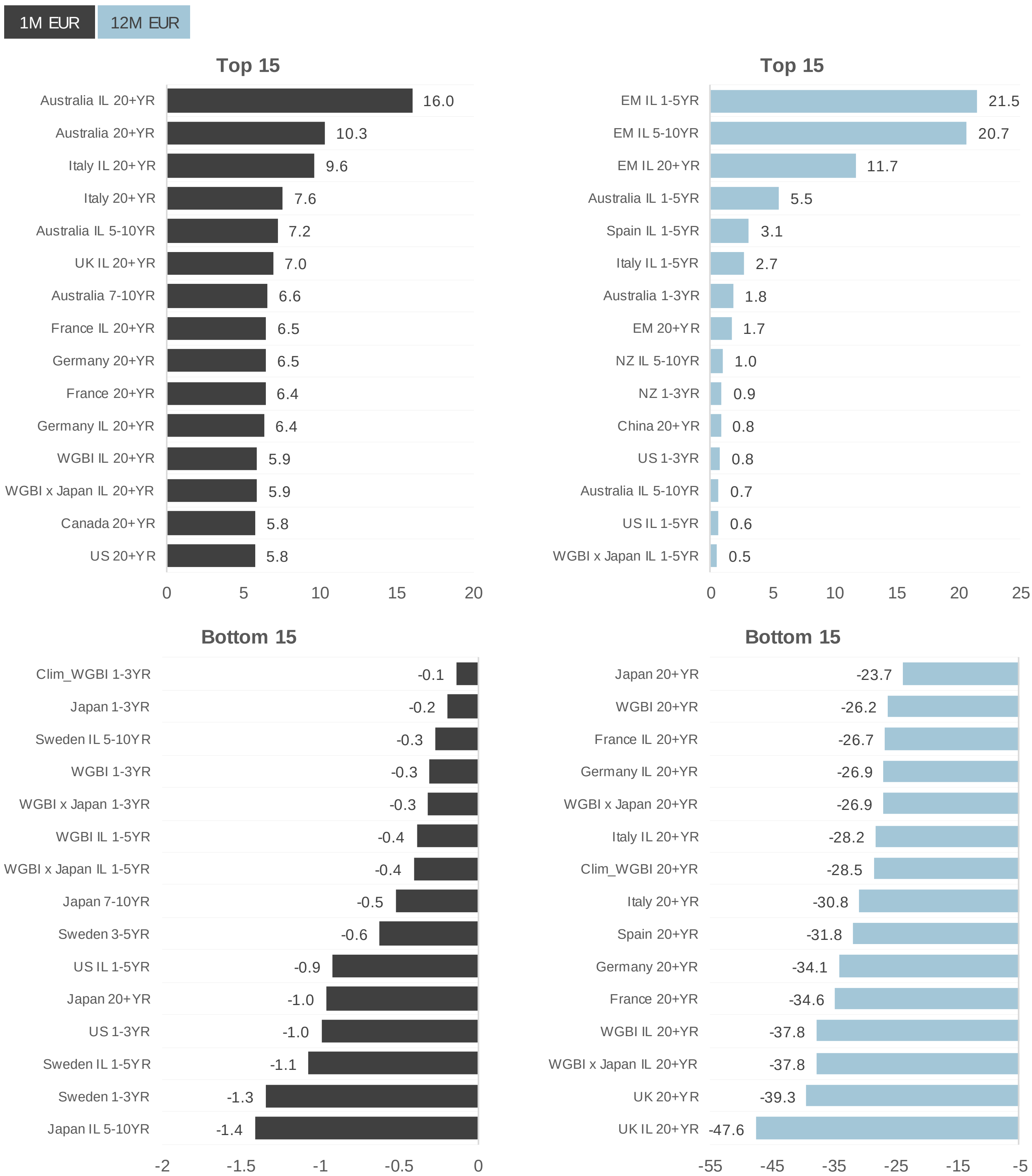
Top and Bottom Bond Returns – 1M & 12M % (EUR,TR) as of January 31, 2023

Long-dated conventional and inflation-linked (IL) bonds dominated the January rally, led by Australian IL bonds, which gained 16% in euro terms, helped by currency gains (see page 14). Short bonds and JGBs underperformed on central bank caution, and curves flattened further. EM inflation-linked bonds showed strong positive returns of 12-22% on 12M.

Despite the January rally in longs, short-dated government bonds offered modest negative returns, as cautious central banks provided little hope of early rate cuts, and increased rates again. JGBs underperformed as end of curve control fears increased.

Long conventional and inflation-linked markets still show sizeable losses of 24-48% on 12M in euros, led by long UK IL gilts.



Source: FTSE Russell. All data as of January 31, 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: Climate WGBI failed to sustain its Q4 recovery vs WGBI, after the underperformance of JGBs (given Japan's overweight).

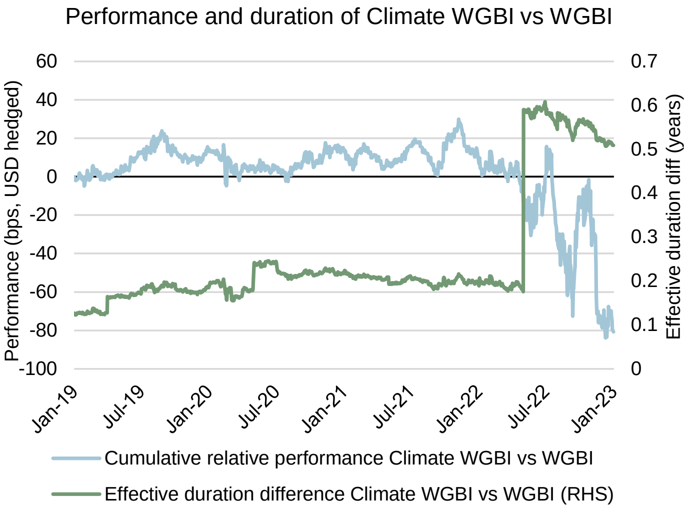


Chart 2: Japan's overweight, and the US underweight are the most significant in the climate WGBI, driving 2022/23 performance.

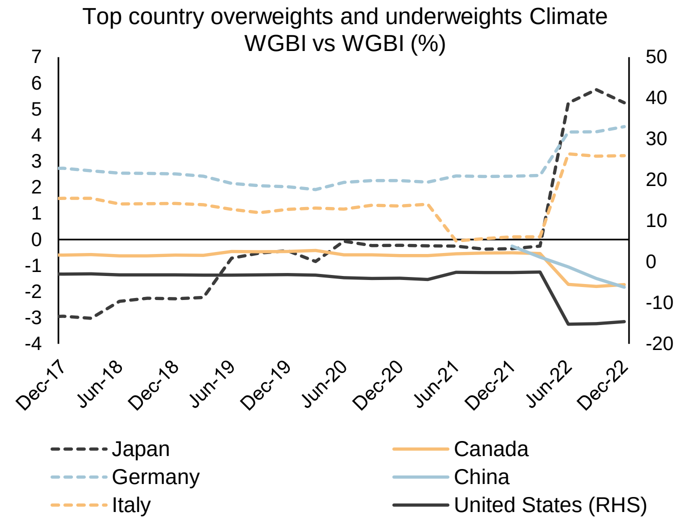


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yield Europe and Japan.

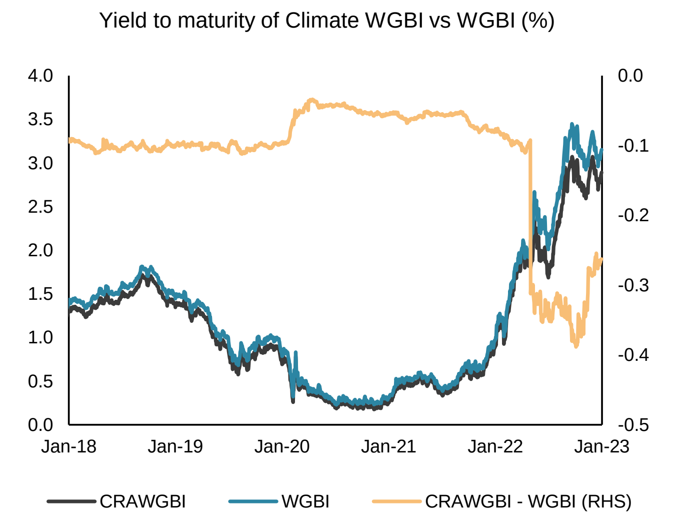


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

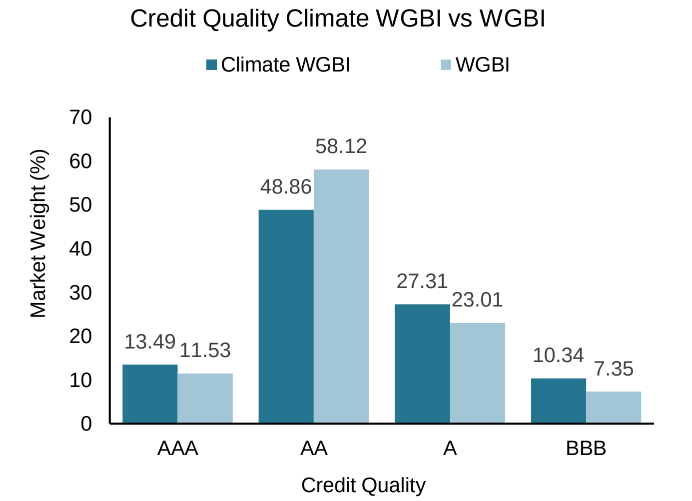


Chart 5: Yields increased more in WGBI indices in 2022, led by US, but climate WGBI's extra duration caused underperformance.

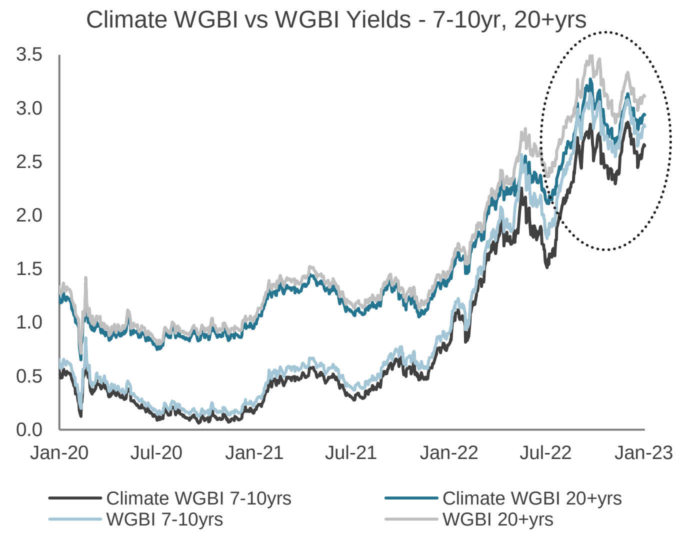
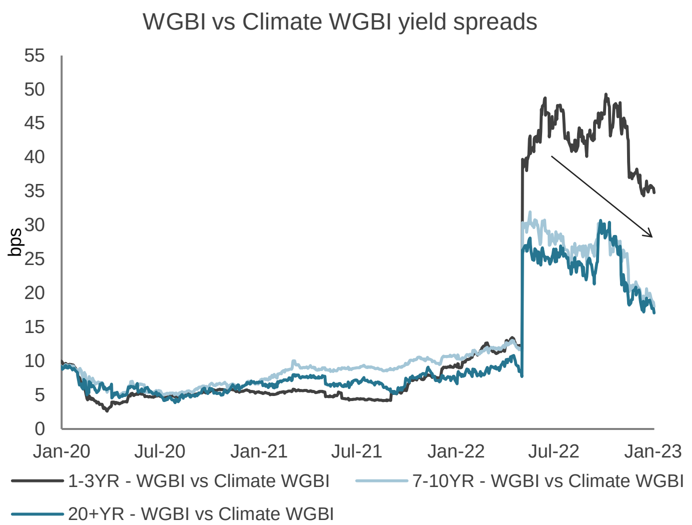


Chart 6: Yield spreads narrowed in the US rally, as US spreads have narrowed versus Europe and Japan (see Chart 1, page 5).



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Appendix − Global Bond Market Returns % (EUR & LC, TR) – January 31, 2023

Government Bond Returns

Top 15% | Bottom 15%

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

		3M		6M		YTD		12M	
		Local	EUR	Local	EUR	Local	EUR	Local	EUR
US	1-3YR	1.54	-7.59	-0.47	-6.56	0.75	-0.99	-2.37	0.77
	7-10YR	5.70	-3.81	-4.52	-10.36	3.55	1.76	-10.11	-7.22
	20+YR	12.49	2.37	-7.50	-13.16	7.62	5.76	-23.21	-20.74
	IG All	8.82	-0.97	-0.75	-6.82	4.15	2.35	-9.35	-6.43
	HY All	4.53	-4.87	1.06	-5.12	3.88	2.08	-4.80	-1.74
UK	1-3YR	0.90	-1.81	-1.14	-6.10	0.63	1.21	-1.67	-6.87
	7-10YR	2.66	-0.11	-9.91	-14.44	3.11	3.70	-12.73	-17.35
	20+YR	-1.12	-3.78	-21.85	-25.77	4.36	4.96	-35.93	-39.31
EUR	IG All	3.17	3.17	-4.36	-4.36	2.25	2.25	-10.94	-10.94
	HY All	6.53	6.23	2.64	2.09	3.36	3.41	-6.76	-7.27
Japan	1-3YR	-0.04	3.97	-0.13	-3.64	0.10	-0.19	-0.06	-8.60
	7-10YR	-2.03	1.91	-2.93	-6.34	-0.23	-0.52	-2.80	-11.11
	20+YR	-4.73	-0.91	-9.11	-12.31	-0.67	-0.96	-16.60	-23.73
China	1-3YR	0.02	-1.68	0.85	-5.59	0.14	1.24	2.19	-0.63
	7-10YR	-0.61	-2.30	0.79	-5.64	0.08	1.18	1.95	-0.87
	20+YR	-1.97	-3.64	1.45	-5.03	-0.56	0.54	3.69	0.82
EM	1-3YR	0.99	-0.78	1.68	-3.28	0.32	1.50	0.81	-1.13
	7-10YR	3.44	0.81	2.83	-2.98	1.50	2.21	-2.07	-5.20
	20+YR	1.77	-0.25	2.91	-2.81	0.69	1.46	3.21	1.69
	IG All	8.42	-1.33	1.22	-4.97	2.56	0.79	-10.32	-7.44
	HY All	15.09	4.74	9.08	2.42	3.73	1.93	-9.94	-7.04
Germany	1-3YR	-0.56	-0.56	-3.12	-3.12	0.22	0.22	-4.30	-4.30
	7-10YR	-0.53	-0.53	-10.56	-10.56	2.71	2.71	-15.72	-15.72
	20+YR	0.53	0.53	-21.44	-21.44	6.48	6.48	-34.13	-34.13
Italy	1-3YR	0.28	0.28	-1.57	-1.57	0.65	0.65	-3.61	-3.61
	7-10YR	1.59	1.59	-5.66	-5.66	3.97	3.97	-16.11	-16.11
	20+YR	2.26	2.26	-13.05	-13.05	7.59	7.59	-30.77	-30.77
Spain	1-3YR	-0.47	-0.47	-3.22	-3.22	0.42	0.42	-4.51	-4.51
	7-10YR	-0.08	-0.08	-9.59	-9.59	2.78	2.78	-15.70	-15.70
	20+YR	1.01	1.01	-18.10	-18.10	5.66	5.66	-31.79	-31.79
France	1-3YR	-0.51	-0.51	-3.39	-3.39	0.51	0.51	-4.54	-4.54
	7-10YR	-0.54	-0.54	-10.08	-10.08	2.94	2.94	-15.24	-15.24
	20+YR	0.99	0.99	-19.28	-19.28	6.44	6.44	-34.64	-34.64
Sweden	1-3YR	0.31	-3.65	-0.32	-8.87	0.88	-1.34	-2.52	-10.29
	7-10YR	1.60	-2.41	-4.65	-12.83	2.80	0.53	-11.79	-18.83
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	0.95	1.23	0.31	-4.90	0.84	2.97	-1.36	1.83
	7-10YR	2.50	2.79	-1.95	-7.04	4.38	6.58	-9.21	-6.27
	20+YR	3.66	3.95	-7.23	-12.04	8.07	10.35	-21.87	-19.35
NZ	1-3YR	0.55	1.79	-0.57	-3.79	0.99	1.41	-0.64	0.91
	7-10YR	1.63	2.88	-3.75	-6.87	3.18	3.61	-7.39	-5.94
Canada	1-3YR	1.45	-5.62	0.03	-9.81	0.97	0.75	-2.19	-3.77
	7-10YR	3.61	-3.61	-0.86	-10.62	3.25	3.03	-6.21	-7.73
	20+YR	6.64	-0.79	-2.79	-12.35	6.02	5.79	-13.80	-15.20

Source: FTSE Russell. All data as of January 31, 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.

Appendix − Global Bond Market Returns % (EUR & LC, TR) – January 31, 2023

Inflation-Linked Bond Returns

Top 15% | Bottom 15%

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

		3M		6M		YTD		12M	
		Local	EUR	Local	EUR	Local	EUR	Local	EUR
US	1-5YR	1.00	-8.09	-3.18	-9.10	0.83	-0.92	-2.49	0.65
	5-10YR	3.26	-6.03	-6.16	-11.90	2.57	0.79	-8.00	-5.04
	20+YR	7.78	-1.92	-11.66	-17.06	6.34	4.50	-25.66	-23.26
UK	1-5YR	-0.12	-2.81	-1.21	-6.16	-0.47	0.10	2.51	-2.91
	5-10YR	2.64	-0.13	-7.29	-11.94	1.71	2.30	-7.81	-12.69
	20+YR	1.55	-1.19	-24.96	-28.72	6.35	6.96	-44.66	-47.59
EUxUK	1-5YR	-1.17	-1.17	-5.70	-5.70	0.05	0.05	-1.05	-1.05
	5-10YR	-0.82	-0.82	-8.53	-8.53	1.50	1.50	-6.89	-6.89
	20+YR	0.65	0.65	-18.97	-18.97	6.36	6.36	-26.85	-26.85
Japan	1-5YR	0.67	4.71	1.64	-1.92	0.49	0.19	4.79	-4.16
	5-10YR	-2.17	1.76	-1.39	-4.86	-1.12	-1.41	2.01	-6.71
EM	1-5YR	1.47	-4.12	8.53	3.61	0.88	2.05	20.77	21.53
	5-10YR	2.16	-3.37	9.98	5.56	-0.23	0.70	21.31	20.69
	20+YR	1.71	-2.72	3.07	0.31	-0.49	1.13	4.57	11.72
Germany	1-5YR	-1.17	-1.17	-5.70	-5.70	0.05	0.05	-1.05	-1.05
	5-10YR	-0.82	-0.82	-8.53	-8.53	1.50	1.50	-6.89	-6.89
	20+YR	0.65	0.65	-18.97	-18.97	6.36	6.36	-26.85	-26.85
Italy	1-5YR	0.62	0.62	-1.21	-1.21	0.25	0.25	2.71	2.71
	5-10YR	1.75	1.75	-2.64	-2.64	2.48	2.48	-5.42	-5.42
	20+YR	3.01	3.01	-11.50	-11.50	9.64	9.64	-28.19	-28.19
Spain	1-5YR	0.06	0.06	-2.53	-2.53	0.11	0.11	3.12	3.12
	5-10YR	-0.36	-0.36	-6.86	-6.86	1.07	1.07	-5.46	-5.46
France	1-5YR	-0.86	-0.86	-4.78	-4.78	0.02	0.02	-0.68	-0.68
	5-10YR	-1.15	-1.15	-8.17	-8.17	1.32	1.32	-6.20	-6.20
	20+YR	1.24	1.24	-17.25	-17.25	6.49	6.49	-26.67	-26.67
Sweden	1-5YR	1.73	-2.29	1.21	-7.47	1.16	-1.07	3.81	-4.47
	5-10YR	1.04	-2.95	-4.72	-12.89	1.98	-0.27	-3.14	-10.87
Australia	1-5YR	2.31	2.60	1.92	-3.38	2.03	4.18	2.22	5.52
	5-10YR	4.40	4.70	2.30	-3.01	5.00	7.22	-2.48	0.67
	20+YR	9.67	9.98	1.49	-3.78	13.61	16.00	-18.52	-15.88
NZ	5-10YR	4.20	5.49	-1.08	-4.29	2.77	3.19	-0.55	1.01
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	4.08	-3.18	-2.43	-12.04	1.73	1.51	-6.79	-8.30

Source: FTSE Russell. All data as of January 31, 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.

Appendix − Historical Bond Yields % as of January 31, 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	4.35	3.74	3.46	3.71	1.85	1.32	1.54	5.01	8.23
	3M Ago	4.58	4.37	4.05	4.34	1.76	1.65	1.84	5.97	8.97
	6M Ago	2.93	2.78	2.66	3.19	-0.23	0.06	0.87	4.39	7.63
	12M Ago	1.10	1.52	1.76	2.13	-1.84	-0.94	-0.13	2.83	5.55
UK	Current	3.42	3.26	3.33	3.70	0.31	0.00	0.30		
	3M Ago	3.38	3.55	3.56	3.62	-2.33	-0.13	0.24		
	6M Ago	1.78	1.66	1.79	2.39	-3.22	-2.08	-0.92		
	12M Ago	1.00	1.27	1.36	1.46	-3.26	-2.78	-2.05		
Japan	Current	-0.02	0.11	0.52	1.55	-1.33	-0.34			
	3M Ago	-0.06	0.02	0.24	1.31	-1.37	-0.81			
	6M Ago	-0.11	-0.07	0.11	1.09	-1.17	-0.80			
	12M Ago	-0.06	0.00	0.16	0.80	-0.54	-0.43			
China	Current	2.30	2.57	2.87	3.31					
	3M Ago	1.93	2.30	2.68	3.15					
	6M Ago	2.05	2.42	2.78	3.30					
	12M Ago	2.14	2.44	2.81	3.40					
EM	Current	3.59	4.30	4.76	4.57	3.11	3.37	5.25	5.52	10.25
	3M Ago	3.67	4.37	5.03	4.77	1.66	3.00	5.23	6.70	13.96
	6M Ago	3.45	4.27	4.77	4.77	3.54	3.65	5.21	4.99	12.42
	12M Ago	3.37	3.95	4.68	4.79	3.02	3.34	4.85	3.14	8.81
Germany	Current	2.59	2.31	2.21	2.22	0.38	0.13	-0.09		
	3M Ago	1.94	1.95	2.07	2.22	-0.76	-0.35	-0.17		
	6M Ago	0.20	0.36	0.67	1.04	-2.37	-1.60	-1.16		
	12M Ago	-0.58	-0.28	0.03	0.32	-3.33	-2.07	-1.69		
Italy	Current	3.17	3.42	3.92	4.29	1.18	1.87	1.85		
	3M Ago	2.82	3.30	3.95	4.36	0.25	1.64	1.84		
	6M Ago	1.37	2.00	2.80	3.35	-2.34	0.45	1.23		
	12M Ago	-0.14	0.46	1.26	2.18	-3.53	-1.23	0.14		
France	Current	2.71	2.58	2.64	3.01	0.24	0.30	0.52		
	3M Ago	2.15	2.20	2.44	3.02	-0.91	-0.16	0.46		
	6M Ago	0.40	0.67	1.13	1.95	-3.30	-1.52	-0.38		
	12M Ago	-0.50	0.12	0.50	1.24	-3.49	-2.08	-1.06		
Sweden	Current	2.50	2.27	2.05		-0.17	0.14			
	3M Ago	2.34	2.38	2.25		-0.59	-0.17			
	6M Ago	1.71	1.57	1.39		-1.66	-1.45			
	12M Ago	-0.06	0.69	0.83		-2.26	-1.91			
Australia	Current	3.17	3.24	3.51	3.96	0.23	0.92	1.37		
	3M Ago	3.21	3.35	3.70	4.10	-0.01	1.05	1.67		
	6M Ago	2.56	2.76	3.03	3.44	-0.75	0.40	1.24		
	12M Ago	0.86	2.31	2.68	3.16	-0.81	-0.02	0.87		
NZ	Current	4.67	4.18	4.11	4.41	1.28	1.79			
	3M Ago	4.31	4.28	4.18	4.44	1.43	2.04			
	6M Ago	3.28	3.28	3.40	3.75	0.07	1.03			
	12M Ago	1.96	3.07	3.33	3.56	0.06	0.82			
Canada	Current	3.68		2.91	3.00			1.20	4.83	6.99
	3M Ago	3.81		3.29	3.35			1.38	5.42	7.60
	6M Ago	2.87		2.60	2.77			0.80	4.44	6.84
	12M Ago	1.34		1.73	2.05			0.12	2.93	4.55

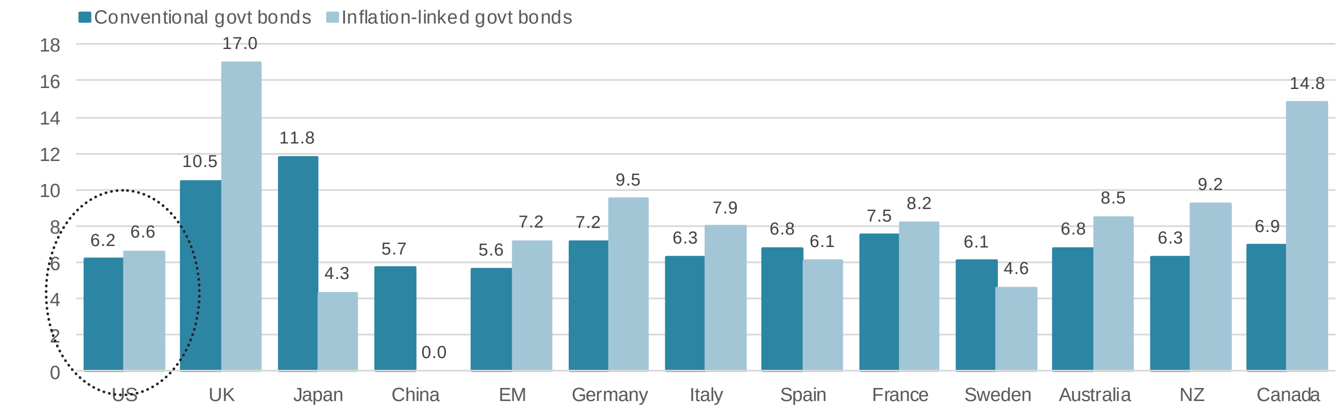
Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix – Duration and Market Value (USD, Bn) as of January 31, 2023

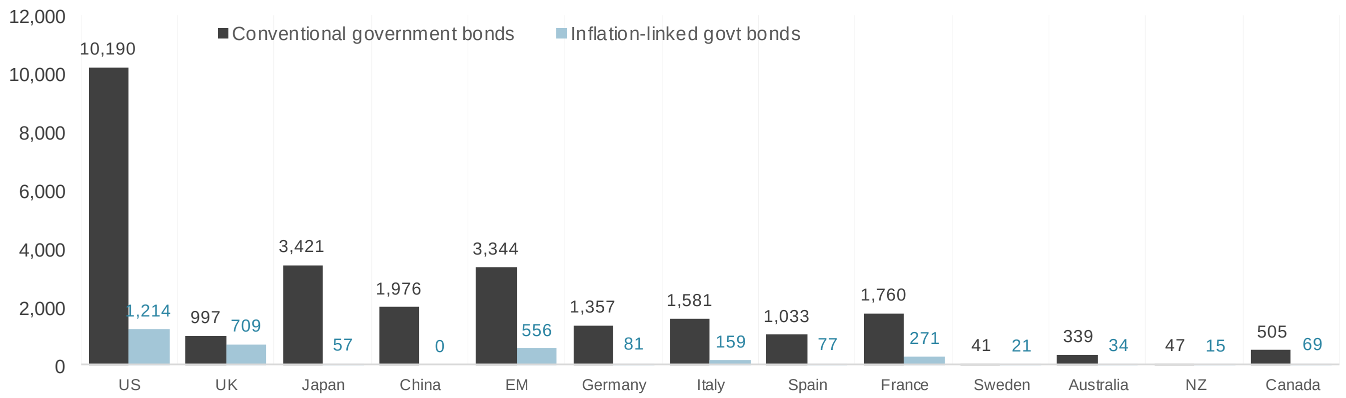
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.7	**6.2**	2,197.8	1,036.7	1,295.4	**10,189.6**	6.8	21.5	**6.6**	424.7	129.8	**1214.3**
UK	3.7	7.8	19.8	**10.5**	112.7	129.5	288.0	**996.8**	7.1	29.1	**17.0**	124.2	276.9	**708.5**
Japan	4.0	8.0	23.7	**11.8**	388.7	462.8	700.8	**3,420.7**	6.7		**4.3**	25.6		**57.1**
China	3.7	7.5	17.4	**5.7**	462.2	322.3	234.9	**1,976.0**						
EM	3.6	7.0	15.7	**5.6**	739.00	597.42	333.42	**3,344.5**	5.4	13.5	**7.2**	113.5	138.3	**556.1**
Germany	3.8	7.7	20.8	**7.2**	277.25	229.92	143.13	**1,356.6**	6.9	22.4	**9.5**	30.2	17.8	**81.2**
Italy	3.6	7.4	16.7	**6.3**	319.81	242.45	134.74	**1,581.0**	6.9	26.9	**7.9**	54.0	5.4	**159.4**
Spain	3.6	7.6	17.9	**6.8**	196.05	184.62	100.12	**1,033.3**	7.3		**6.1**	21.3		**76.7**
France	3.6	7.8	20.5	**7.5**	327.64	316.80	208.29	**1,760.0**	6.9	24.8	**8.2**	113.2	20.3	**271.2**
Sweden	3.6	8.2		**6.1**	7.66	9.23		**41.4**	6.4		**4.6**	9.8		**20.9**
Australia	3.7	7.9	18.1	**6.8**	58.38	93.04	16.73	**339.1**	7.7	23.1	**8.5**	9.9	3.0	**34.5**
NZ	3.5	7.9	17.7	**6.3**	8.95	6.79	2.36	**47.1**	6.7		**9.2**	3.3		**14.6**
Canada		7.4	18.4	**6.9**		170.90	91.60	**505.4**		14.8	**14.8**		69.2	**69.2**

	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.1	8.8	7.4	7.0	**7.3**	78.5	447.7	2,402.8	3,384.9	**6,313.9**	4.3	1,158.0
Euro	6.5	5.0	4.7	4.4	**4.6**	8.8	179.0	1,067.1	1,445.9	**2,700.8**	3.2	435.8
EM		5.7	4.9	5.2	**5.1**		37.64	219.55	358.1	**615.3**	3.6	213.1

Average Duration



Total Market Value (USD Billions)

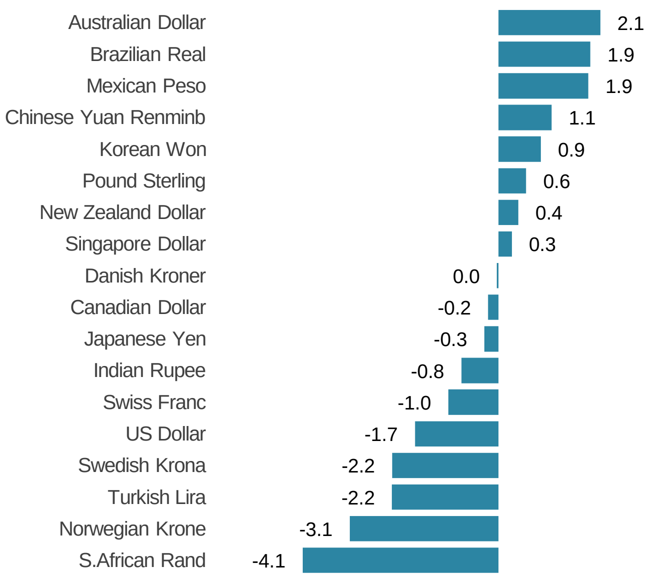


Data as of 2023-01-31

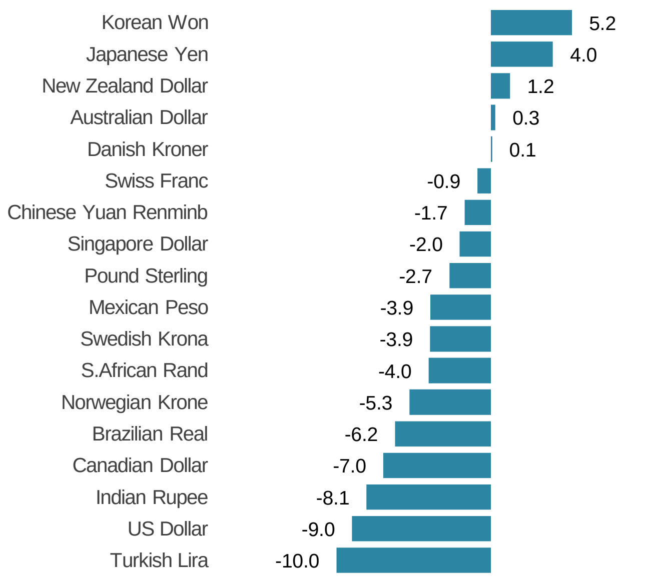
Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix − Foreign Exchange Returns % as of January 31, 2023

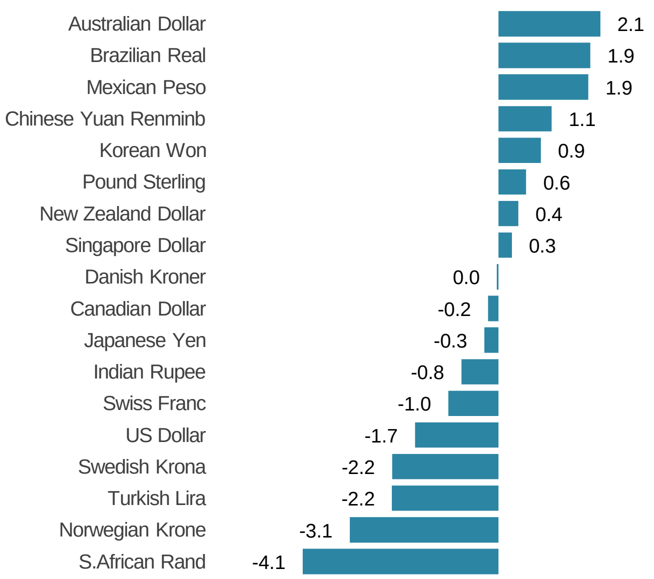
FX Moves vs EUR - 1M



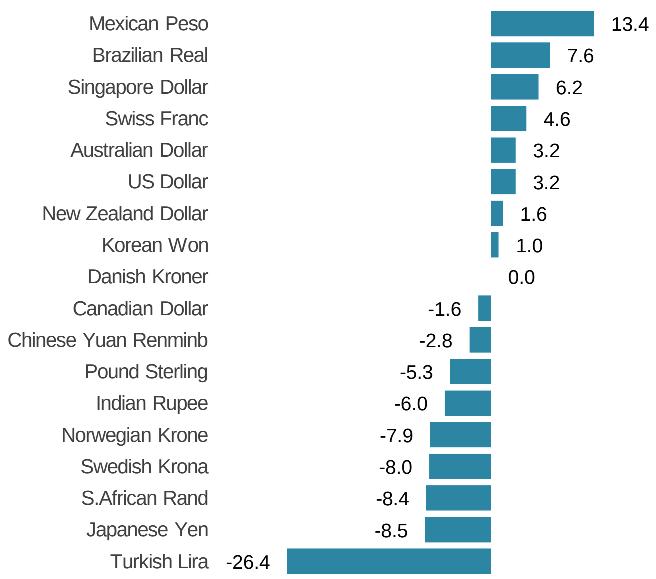
FX Moves vs EUR - 3M



FX Moves vs EUR - YTD



FX Moves vs EUR - 12M



Source: FTSE Russell and Refinitiv. All data as of January 31, 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.

Appendix − Glossary

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