FTSE Russell
An LSEG Business

Fixed Income Insights

MONTHLY REPORT - **APRIL 2023 | US EDITION**

FOR PROFESSIONAL INVESTORS ONLY

Banking woes drive reassessment of duration risk and Fed policy

The disconnect between market expectations on Fed rates and the dot plots has re-opened, despite the Fed downplaying systemic risks. Banking strains suggest tighter financial conditions than widely perceived. The wipe-out of AT1 bondholders in Credit Suisse signals the risks inherent in deeply subordinated bank debt.

Growth and inflation expectations – Market focus shifts to "too much tightening, too late"

US bank runs increase recession risks, as Fed's Powell conceded bank stresses may tighten credit conditions by 25-50bp. Portfolio flows into money market funds, and out of bank deposits, reflect concerns about a re-run of the GFC. (pages 2-3)

Yields, curves and spreads – Extent of curve inversion declined as 2-year yields fell sharply, bank spreads widened

Collapse in G7 2-year yields signals financial stability concerns, despite central banks downplaying systemic risks. (pages 4-5)

Performance – Safe havens and duration dominate returns in March and Q1 as banking shock unfolds

Flight to safe havens drove outperformance by government bonds in Q1, while inflation-linked bonds performed strongly, helped by duration. (pages 6-8).

Sovereign and climate bonds – "Greenium" more evident again in long climate-WGBI after March rally

Climate-WGBI outperformed in March, despite the US underweight, as JGBs and Bunds performed strongly. (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: The collapse in G7 2-year yields reflects a re-appraisal of financial stability risks, and may also reflect inflows from bank deposits.

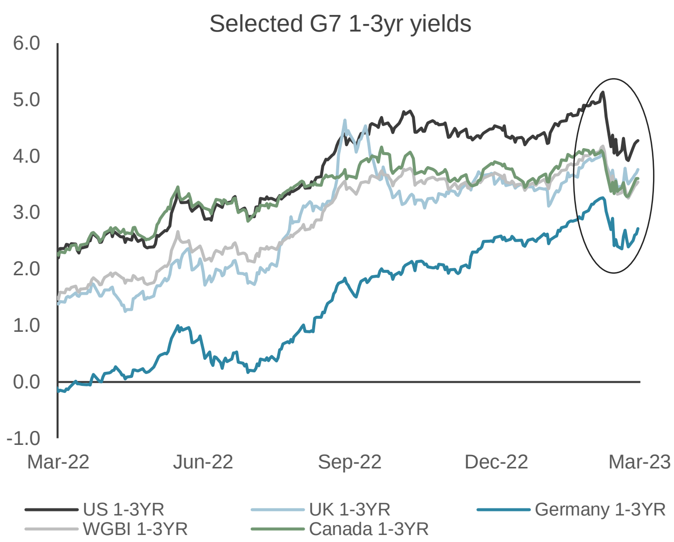
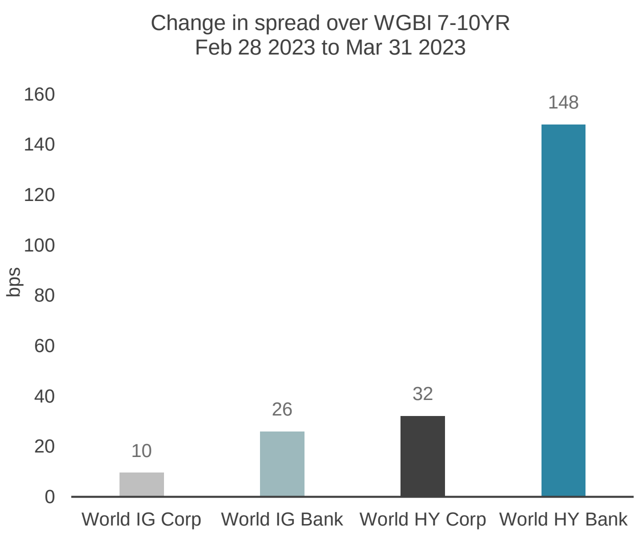


Chart 2: High yield bank spreads widened substantially after US banking woes and the bail-in of AT1 holders in Credit Suisse.



Macroeconomic Backdrop – Growth and Inflation Expectations

Market focus shifted to banking woes in the US, in March, although growth and inflation forecasts have yet to indicate downgrades and less policy tightening may result. February inflation data showed the decline slowing in the US, and labor markets remain tight. Fund flows indicate a surge in money market inflows, though flows are modest by Covid standards.

The US Atlanta Fed GDPNow forecast shows Q1 tracking at around 2.5%, and Consensus forecasts (see Chart 1) have yet to pick up the impact of the SVB, Signature and First Republic bank collapses, even if market data shows MBS spreads and financial credit spreads widening. The Fed will be watching closely for signs of tightening in credit conditions (also see page 3).

February data showed US inflation slowing to 6.0% y/y in February, on the CPI from a peak of 9.0% y/y in June 2022 (Chart 1). Shelter costs continue to contribute strongly to price gains, and were up 8.1% y/y. The Fed remains focused also on "super-core" inflation (services sector minus housing) which increased by 3.7% y/y in February.

Chart 3 shows the tightening of the US labor market since Covid, with unemployment near 50-year lows and wage growth, helping drive inflation higher (Chart 3). However, US wage inflation has been declining steadily in recent months to 4.6% y/y.

March saw sizeable capital flows into global money market funds, which came mainly from bank deposits, unsurprisingly, though the flows are small to date, compared to Covid. Central banks moved quickly to increase US dollar liquidity (March 19), offering daily dollar swaps from March 20, to ease funding strains in global markets, and prevent tightening in credit conditions (Chart 4).

Chart 1: GDP forecasts do not yet show downgrades for the tightening in credit conditions in March. This increases downside risks, with the Fed noting it could be worth at least 25bp on rates.

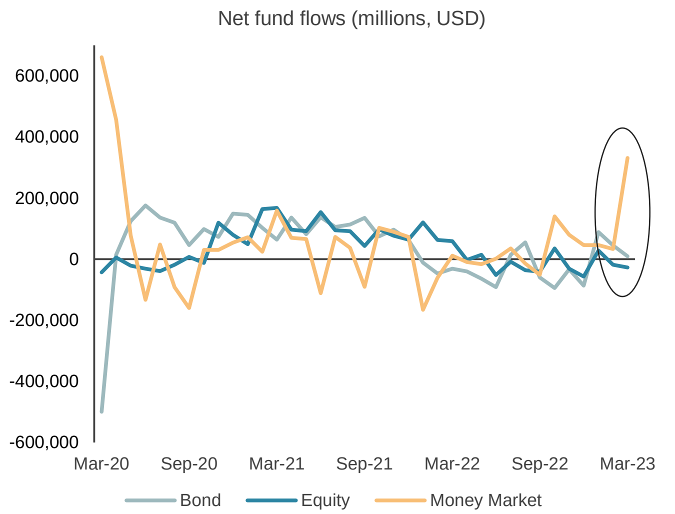
Latest Consensus Real GDP Forecasts (%, March 2023)			
	2022	**2023**	**2024**
US	2.1	**1.0**	**1.0**
UK	4.1	**-0.5**	**0.8**
Eurozone	3.3	**0.5**	**1.2**
Japan	1.6	**1.0**	**1.1**
China	3.0	**4.9**	**5.0**
Canada	3.5	**0.5**	**1.5**

Chart 2: February inflation data generally disappointed, and the fall in inflation slowed, with food prices still strong, not helped in Europe by the absence of Ukrainian grain exports.

Consensus Inflation Forecasts (%, March 2023)				
	2023	*Change Since Jan-23 (Bps)*	**2024**	*Change Since Jan-23 (Bps)*
US	**4.1**	*40*	**2.5**	*0*
UK	**6.6**	*-40*	**2.4**	*-10*
Eurozone	**5.8**	*-20*	**2.5**	*0*
Japan	**2.1**	*30*	**1.3**	*0*
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 4.6% y/y. Note that wage inflation was only 3.0% pre-Covid, at similar unemployment rates.

Chart 4: Inflows into global money market funds, mainly out of bank deposits, show the impact of US regional bank woes, though flows to date are modest by Covid standards.



Source: FTSE Russell and Refinitiv. All data as of March 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.

Financial conditions and monetary policy settings

A flight to quality drove government bond yields lower in March, after recent banking stress, even though the Fed, ECB and BoE still raised rates again. The suspicion remains financial conditions may be tighter than perceived and the bail-in of AT1 holders at Credit Suisse caused further weakness in junior bank credits. Short run inflation breakevens fell sharply.

US M2 growth continues to slow sharply, after substantial monetary tightening (475bp in the US since March 2022) (Chart 1). Bank loan terms are likely to tighten after recent regional bank collapses, tightening financial conditions further.

Chart 2 shows updated Fed dot plots, after the March 22 FOMC meeting. The median projection is one more 25bp increase in Fed funds to a peak around 5.1% at end-year. But the market projects policy easing later in 2023, and 2024,with the risk of further banking woes a key factor in the economic outlook. This is reflected in the decline in US 2-year yields in March (see page 1).

The US Fed carried through with a further 25bp rate increase in March, despite banking system strains (see Chart 3). Not raising rates in March might have hit confidence further, after March bank runs. But Fed Chairman Powell conceded tightening in credit conditions may not be captured in financial conditions indicators, and be worth at least another 25bp on rates.

Inflation breakevens fell back sharply in response to SVB's woes, as memories of the deflationary shock from the GFC were revived. Medium and longer breakevens remain more stable, on the view central banks would rapidly reverse recent tightening moves should systemic risk deepen.

Chart 1: M2 growth has slowed sharply in the US, and March's banking crisis is likely to tighten loan conditions further. Chart 1 shows M2 growth has trended lower since 2020.

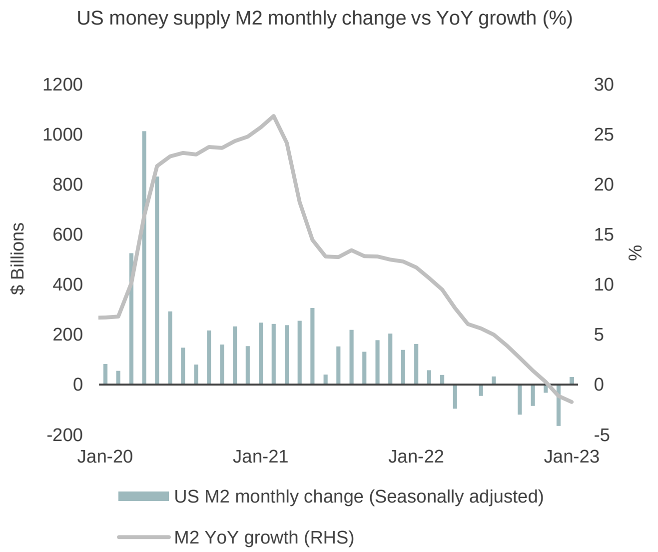


Chart 2: Updated Fed dot plots show rates peaking at 5.1% on the median, with no rate cuts until 2024. Markets project about 50bp of easing by end-2023, in response to recent banking woes.

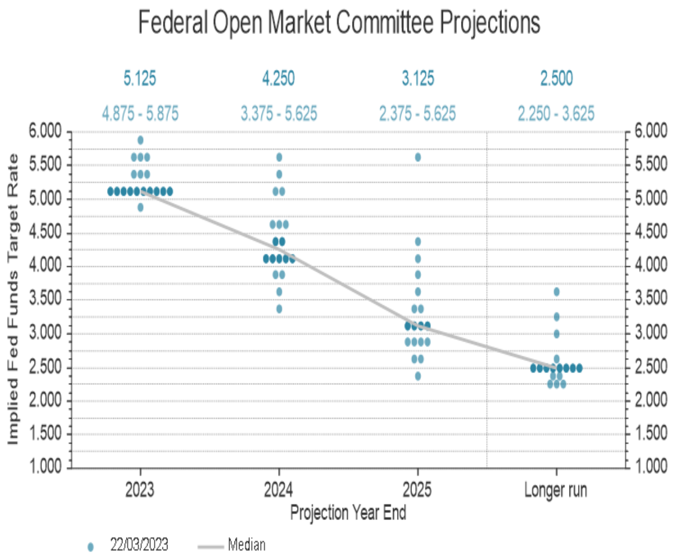


Chart 3: The Fed, BoE and ECB all tightening further in March, by 25-50bp, despite banking system woes. Central banks downplayed systemic risks, but agreed to provide liquidity if needed.

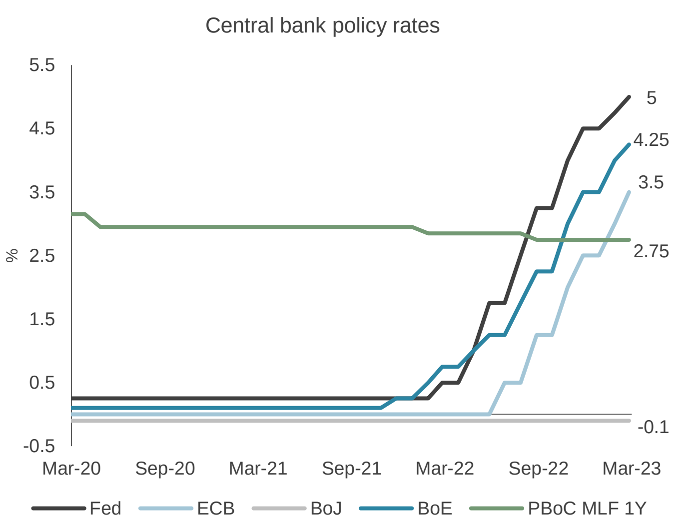
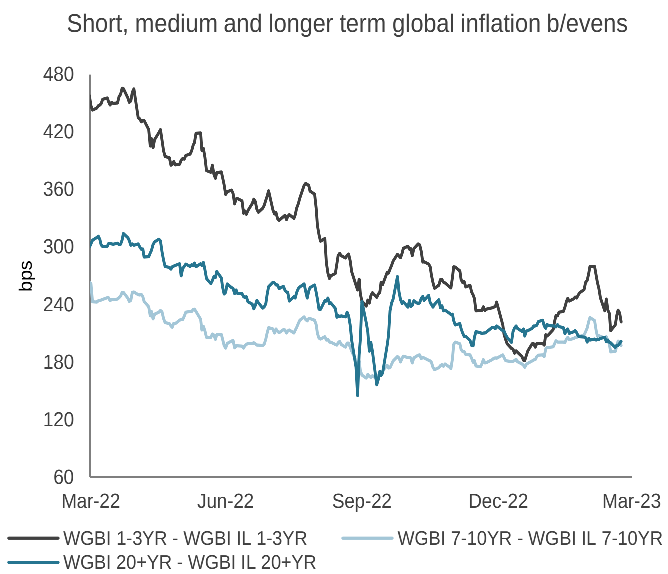


Chart 4: Global inflation breakevens show the impact of the deflationary shock from banking strains in the US and Switzerland. Medium and longer term breakevens remain more stable.



Source: FTSE Russell and Refinitiv. Chart 2 sourced from Federal Reserve. All data as of March 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.

Global Yields, Curves and Spread Analysis

Chart 1: Nominal 7-10-year yields declined sharply after the US banking crisis broke on March 8, and the flight to quality developed. Declines in US yields were broadly matched throughout the G7.

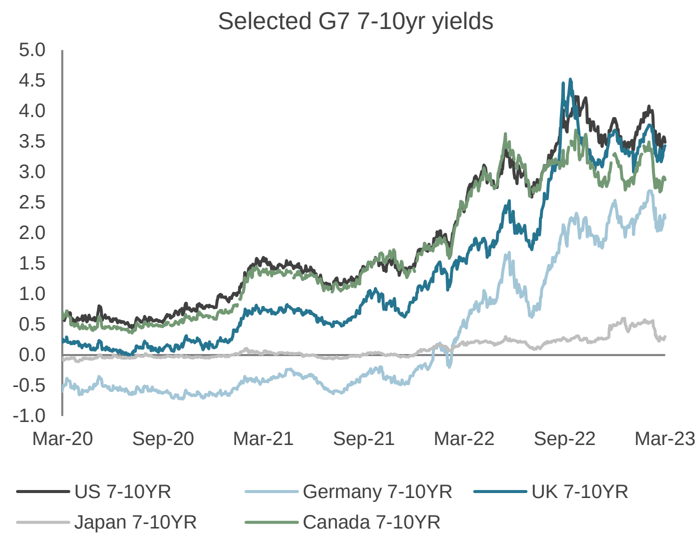


Chart 2: Real 7-10-year yields also fell sharply after the banking crisis, though not as much as conventionals, as the latter proved a safe haven of choice. Real yields remain well above 2020-22 levels.

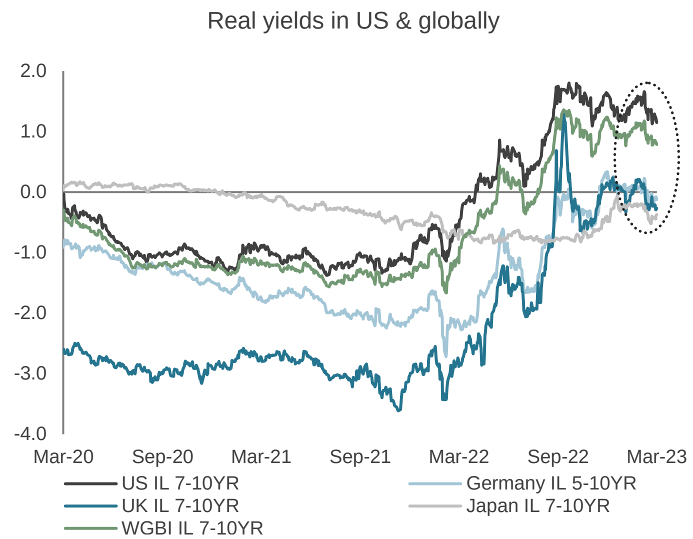


Chart 3: 10s/2s yield curves generally steepened, as 2-year yields collapsed on lower G7 rate expectations. Japan was an exception, with 2-year yields already at the lower bound, so the curve flattened.

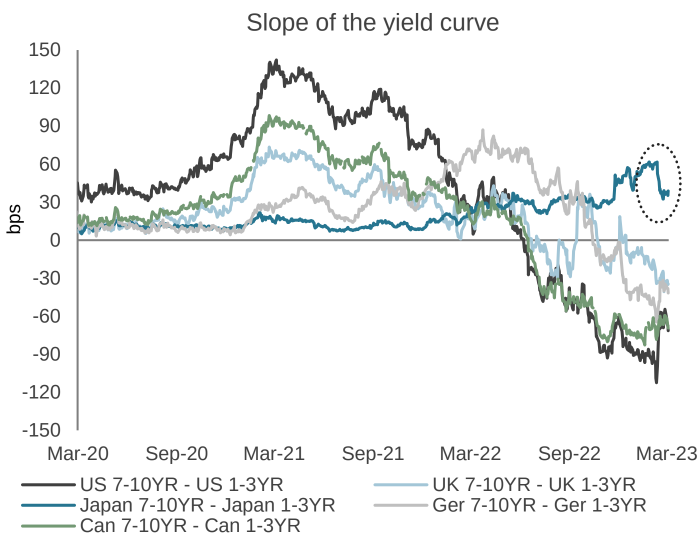


Chart 4: The 20s+/2s yield curves steepened as 2-year yields fell, excluding Japan. But note that long-dated yields also fell, as the banking crisis was seen as a deflationary event.

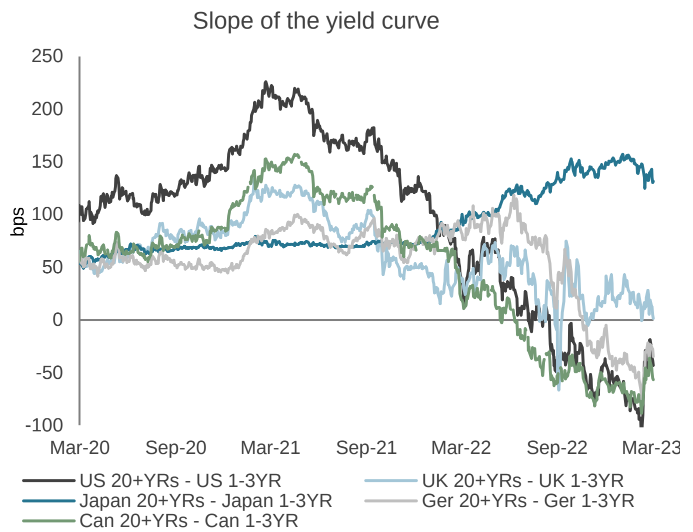


Chart 5: 7-10-year breakevens reversed their February increases, as nominal yields fell a little more than real yields, and investors scaled back inflation expectations after the deflationary banking shocks.

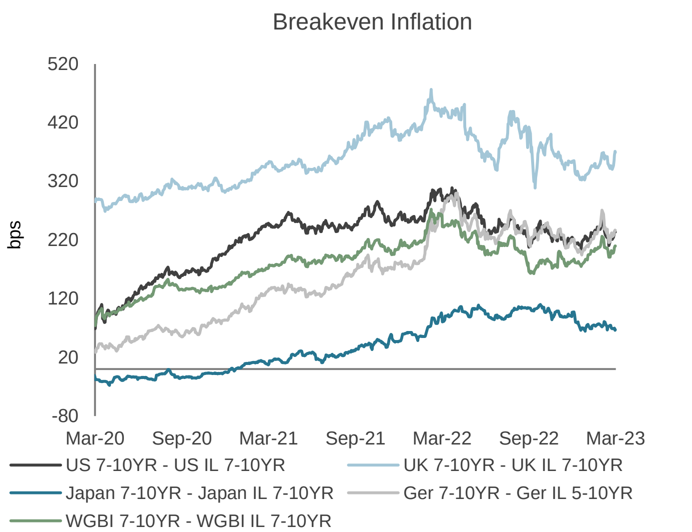
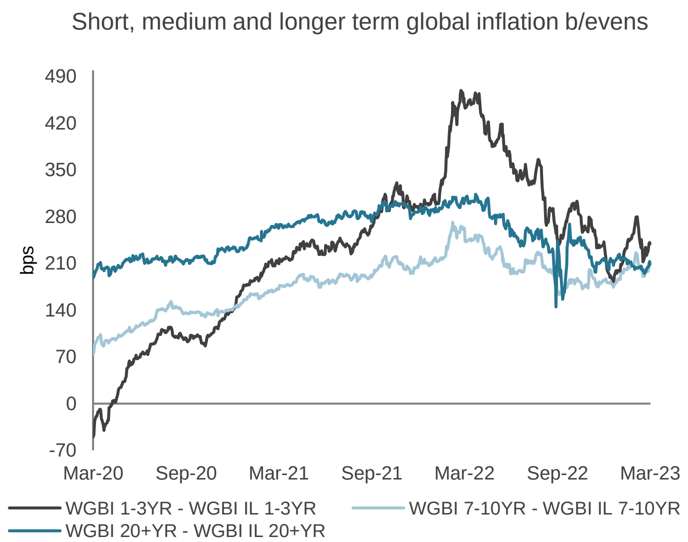


Chart 6: Short run inflation breakevens fell sharply, reflecting the collapse in 2-year nominal yields, and lower inflation prospects, if a credit crunch develops. Longer dated breakevens fell, but by less.



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Yield Spread and Credit Spread Analysis

Chart 1: G7 and global 7-10yr yields broadly fell together in March, so US spreads barely moved, despite banking woes being centered in the US. The demise of Credit Suisse in Europe may explain this.

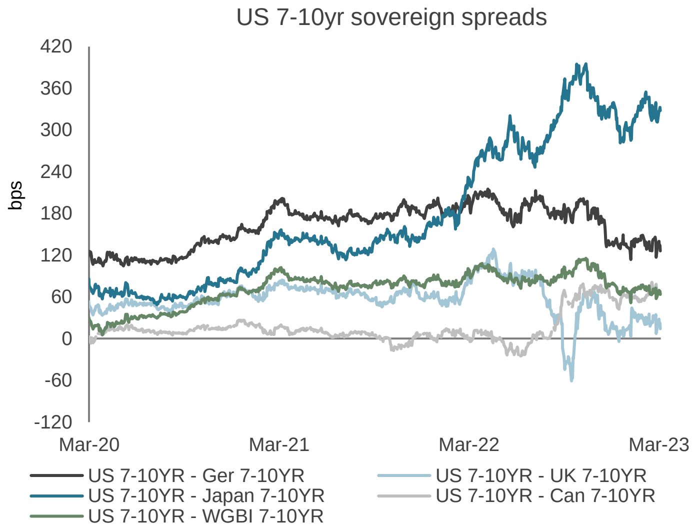

Chart 2: Peripheral Eurozone 7-10yr yield spreads were also quite stable in March, as Italian yields tracked core Eurozone yields lower. The ECB stated it would provide bank liquidity if needed.

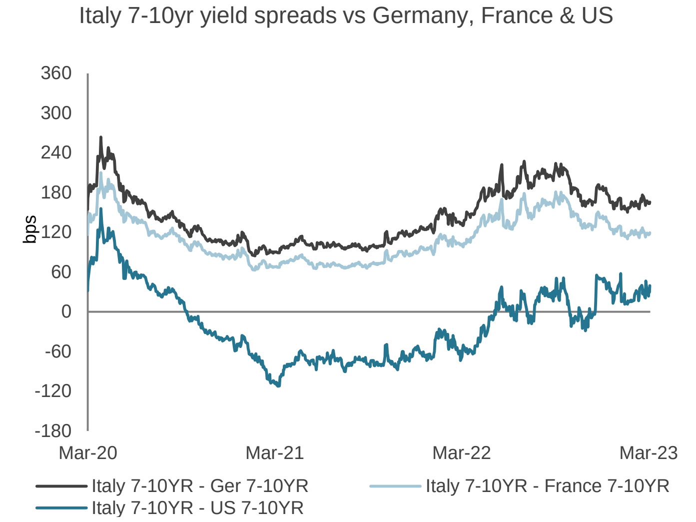

Chart 3: EM 7-10-year yield spreads widened in March, on the view cross border flows may fall in a banking crisis, but moves were modest, as the Fed agreed to offer overnight dollar swaps.

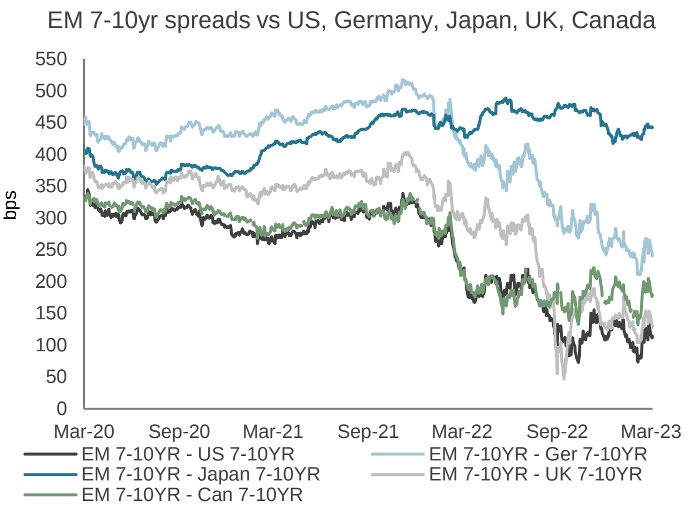

Chart 4: China 7-10-year sovereign spreads increased in March, as G7 yields fell more after the banking shocks. This demonstrates the low correlation between Chinese and G7 government bonds.

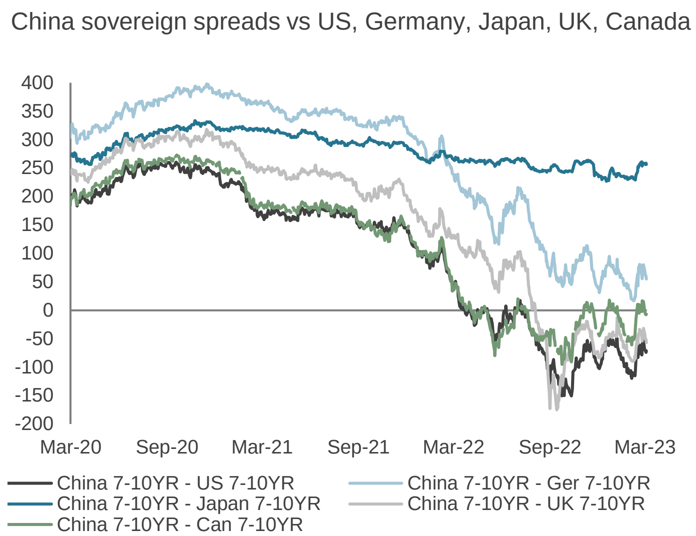

Chart 5: Unsurprisingly, high yield financial spreads spiked more than other credit spreads in the Eurozone and US, after the shock to the AT1 market from the bail-in of Credit Suisse AT1 holders.

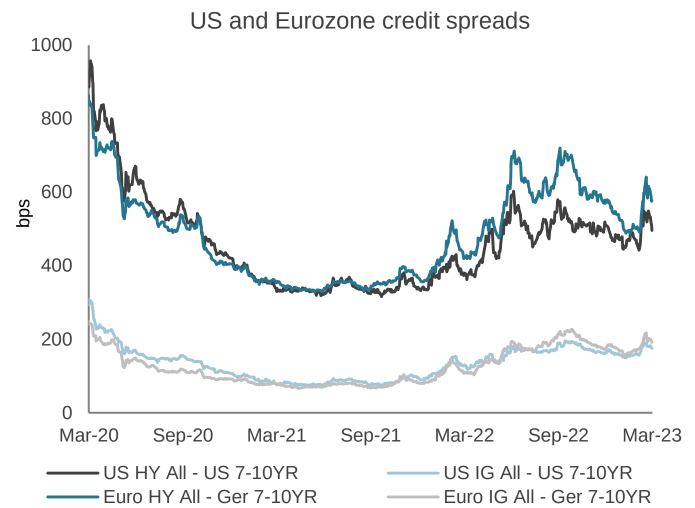

Chart 6: Chinese $ HY spreads rose above 3000bps, tracking the widening spreads of US HY in March, as the flight-to-safely drove investors from risky HY bonds to the safety of Treasuries.

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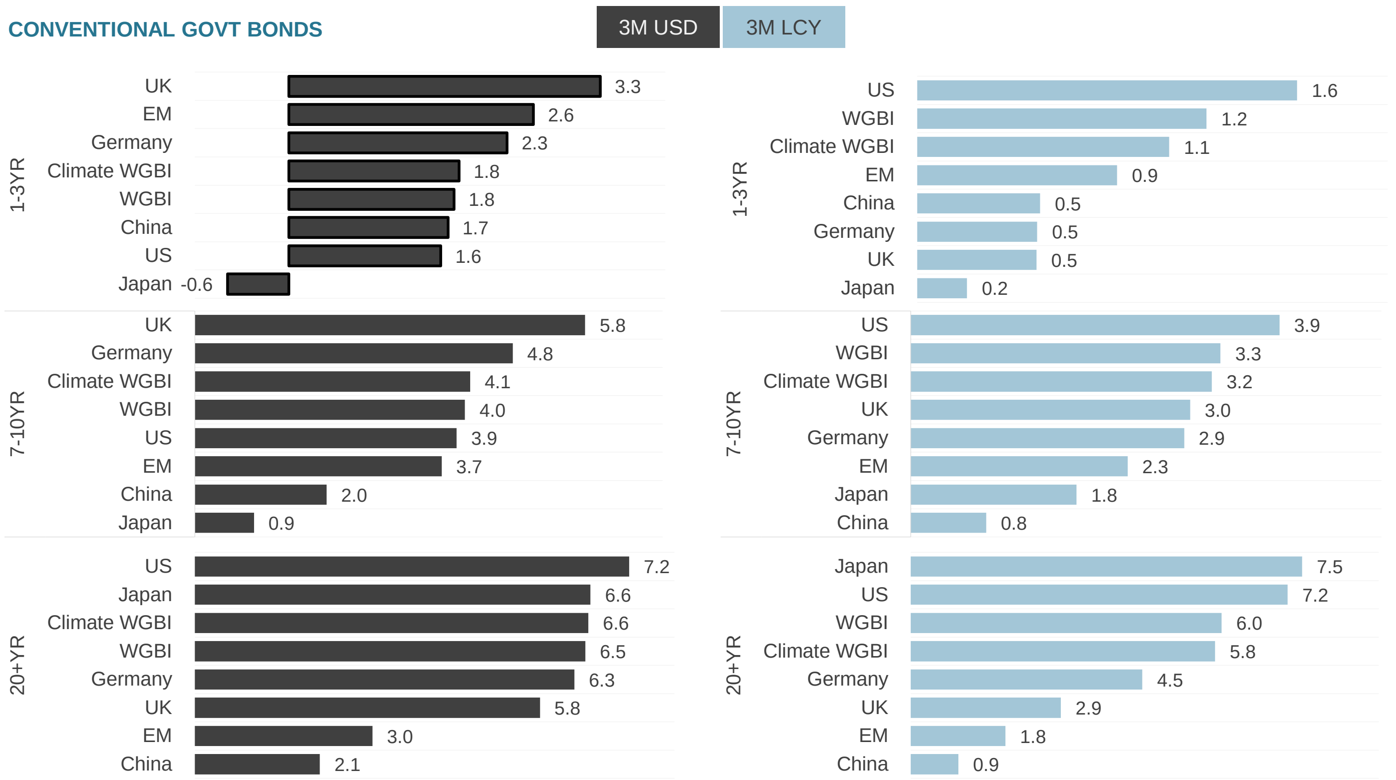
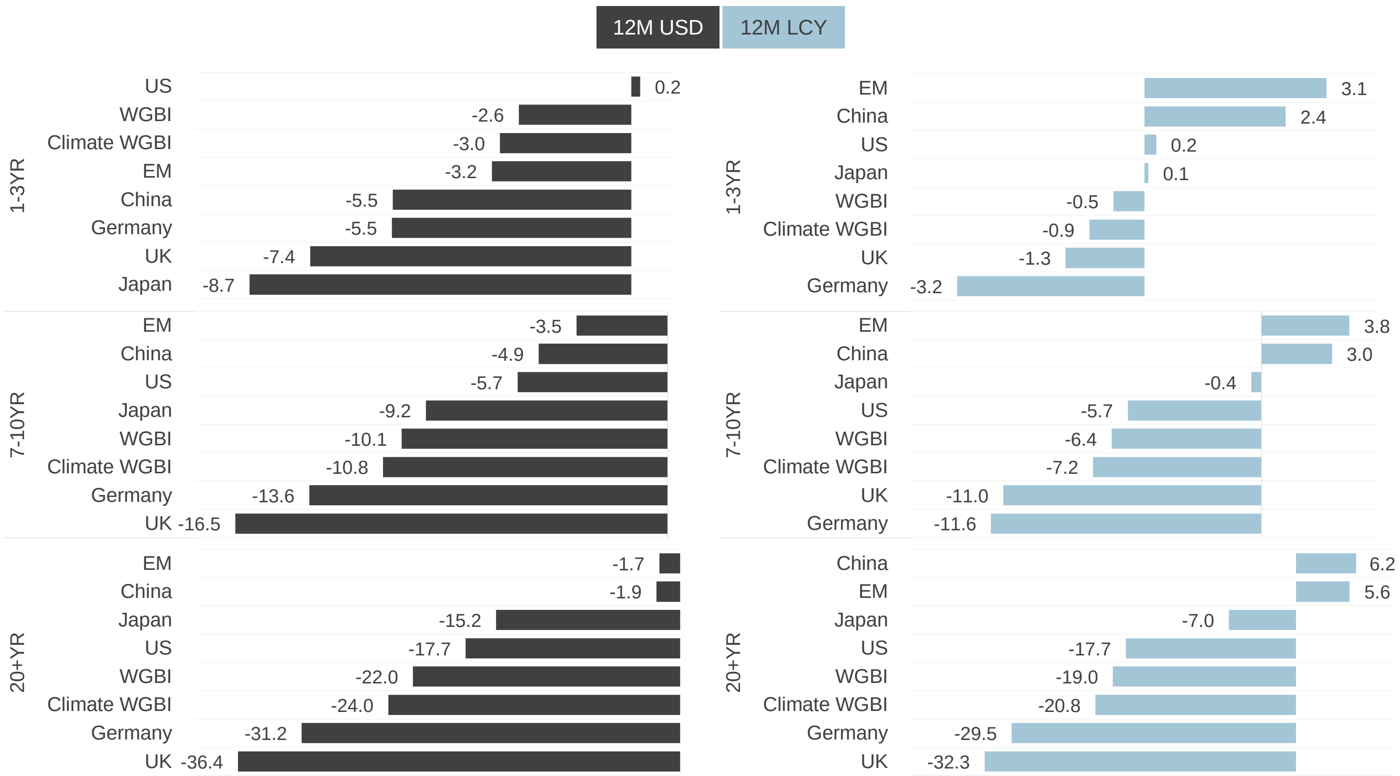
Global Sovereign Bond Returns – 3M and 12M % (USD & LC, TR) as of March 31, 2023

The March rally on banking woes meant Q1 returns turned positive for government bonds globally, led by longs, as markets lowered implied future tightening. Long JGBs, climate-WGBI and UK gilts offered the best returns of 6-7%, in dollar terms. 12M returns remained deeply negative, with losses of 18-36% in long Treasuries, Bunds, WGBI and gilts.

All government bonds offered positive returns in Q1 in dollar terms, excluding short JGB losses of 0.6%. Long China and EM bonds underperformed in the Q1 rally but made positive returns of 2-3%, and outperformed on 12M, only losing 2%.

Duration proved the investor's friend in the Q1 rally, but an enemy on 12 months, as longs were hit more by higher interest rates. The strong US dollar and higher cash rates also drove 1-3-year bond returns negative, by up to 8.7% in short JGBs and gilts.





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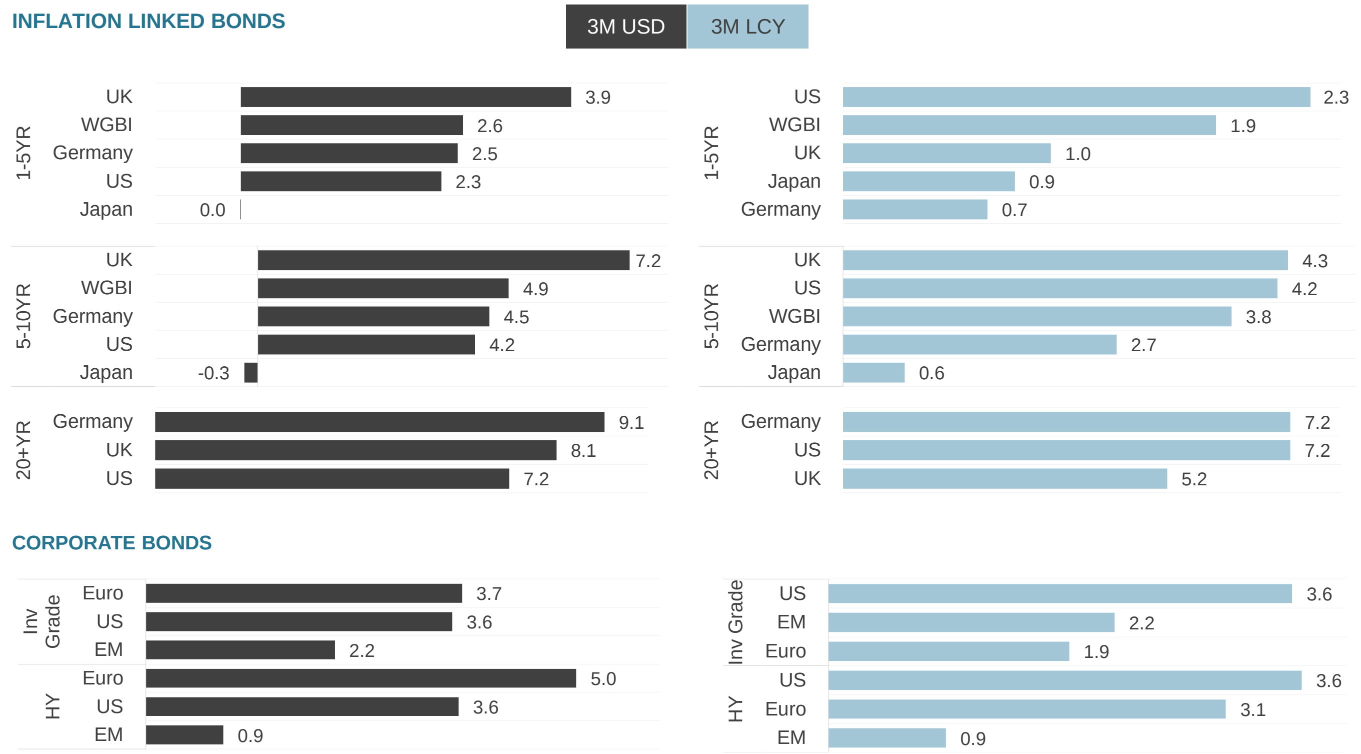
Global Inflation-Linked Bond Returns – 3M & 12M % (USD, LC, TR) as of March 31, 2023

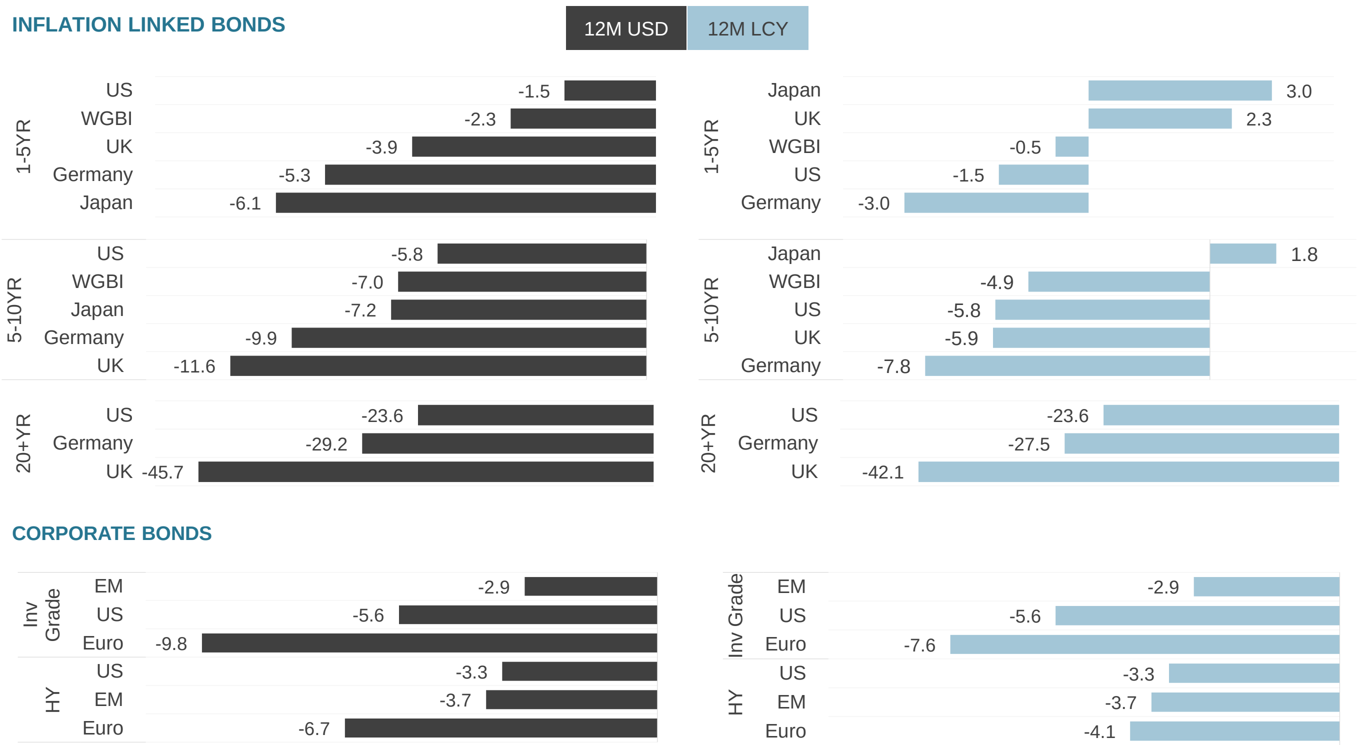
Global inflation-linked (IL) bonds joined the rally in conventionals in Q1, with the strongest returns in long IL of 8-9% in Bunds and the gilts, for a dollar investor, helped by the extra duration. 12M returns remain strongly negative for IL however, led by long term bonds. Credit rallied on 3M. HY returns were reduced by recent bank woes, but outperformed IG on 12M.

Inflation-linked markets with most depressed end-2022 valuations rallied more in Q1, led by the UK, Bunds and Tips. US and Euro credit returned 4-5% in Q1 in dollar terms, even if March's banking crisis squeezed HY financials.

Losses of 24-46 % in long US Tips, Bund and UK IL bonds on 12M for a dollar-based investor show the risks in long duration assets, when discount rates on future cash flows rise sharply. JGB IL returns were squeezed hard by the weak yen.

IG credits tracked conventional govts more closely than HY on both 3 and 12 months, as higher duration also squeezed IG returns.





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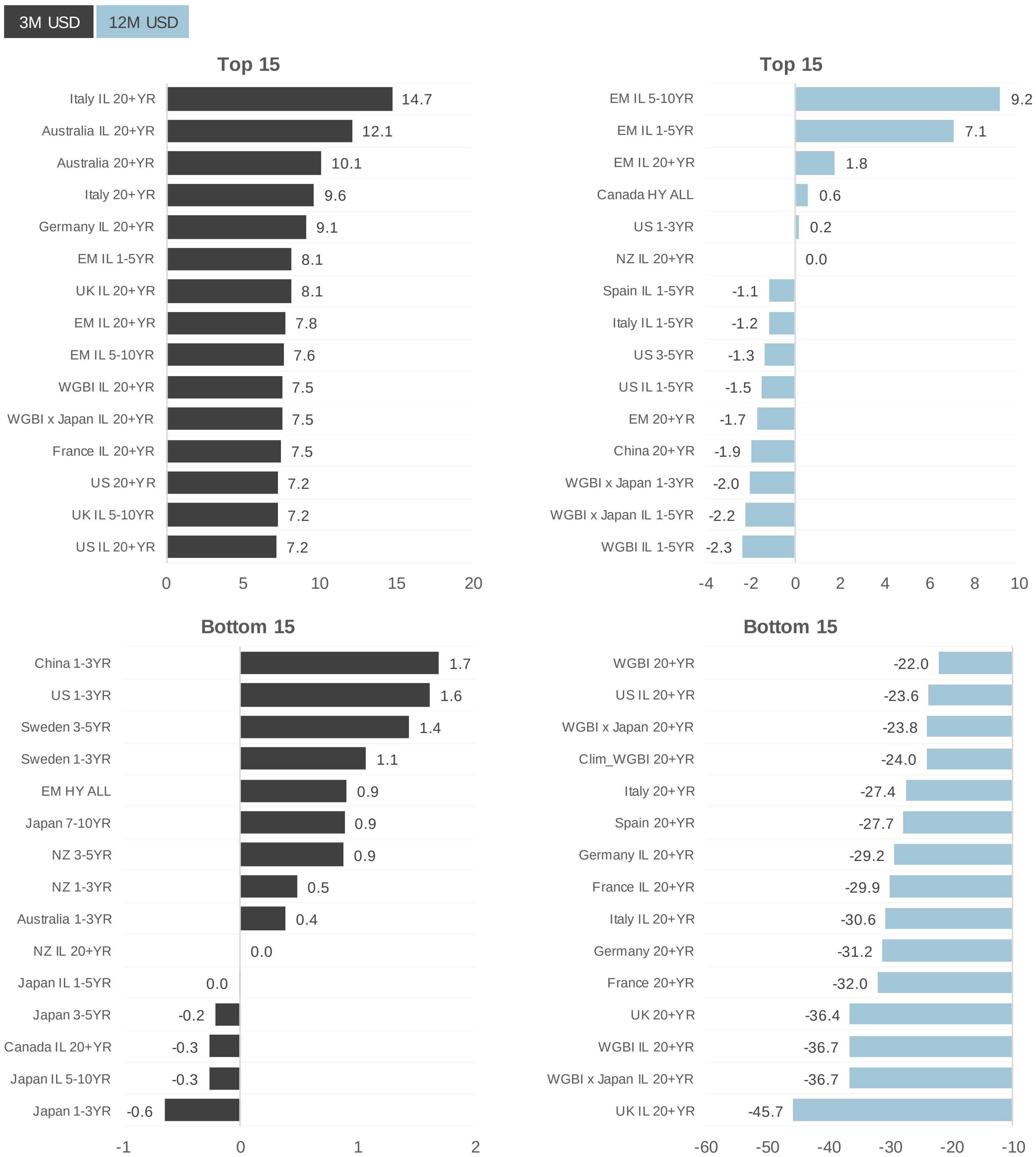
Top and Bottom Bond Returns – 3M & 12M % (USD,TR) as of March 31, 2023

The rally in March reversed February losses in long duration assets, and left govt bond returns strongly positive for Q1, with long inflation-linked bonds showing returns of 7-15% in Italy, Australia and the UK in dollars. Some of the strongest Q1 performers were weakest on 12M, like long gilts, UK and Italian IL bonds. EM IL bonds offered the best 12M returns.

Long conventional and inflation-linked markets still show sizeable losses of 22-46% on 12M in dollar terms, led by long UK index-linked bonds, but the Q1 rally reduced these losses, helped by the flight to quality on banking woes.

Few bonds showed positive returns on 12M, apart from EM inflation-linked bonds, in dollar terms, helped by strong currencies. Canadian HY managed a tiny gain, helped by short duration, and the high energy weighting.



Source: FTSE Russell. All data as of March 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 performed strongly in Q1, as extra duration boosted returns, after the marked 2022 underperformance.

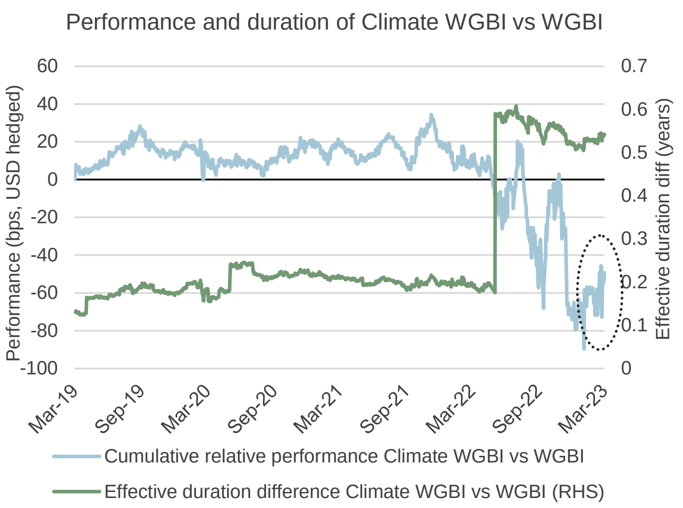


Chart 2: Japan's overweight, and the US underweight, are the most significant in the climate WGBI, driving 2022-23 performance.

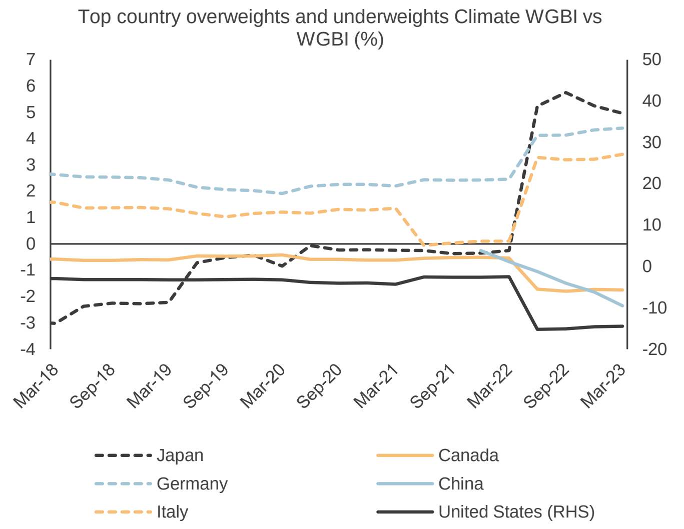


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yielding Europe and Japan.

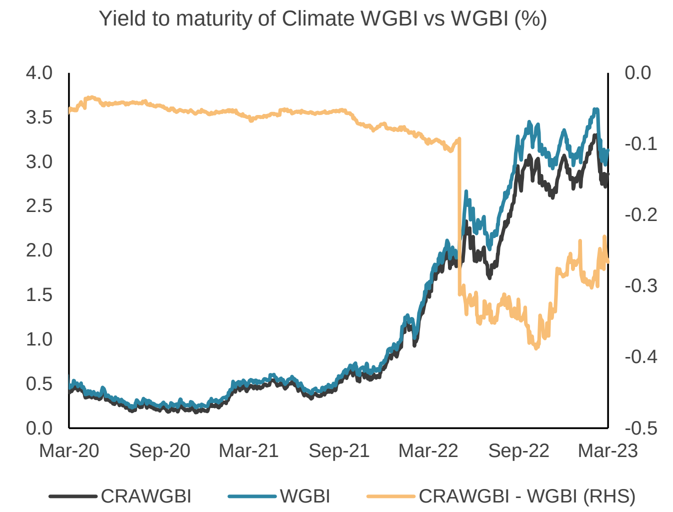


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

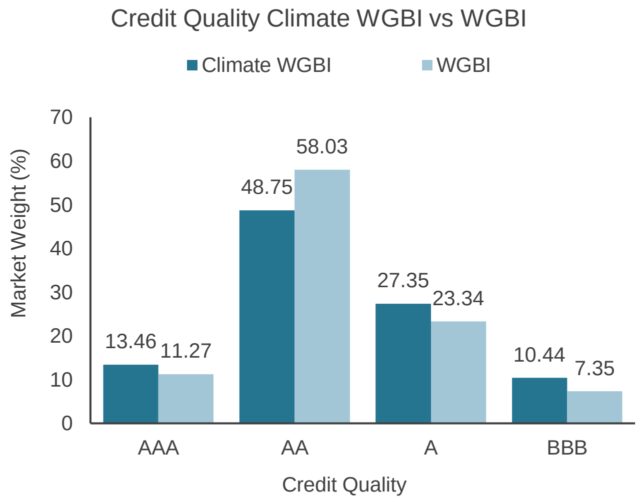


Chart 5: The "greenium" is more evident again in climate-WGBI after the March rally, and tends to be cyclical, increasing in rallies.

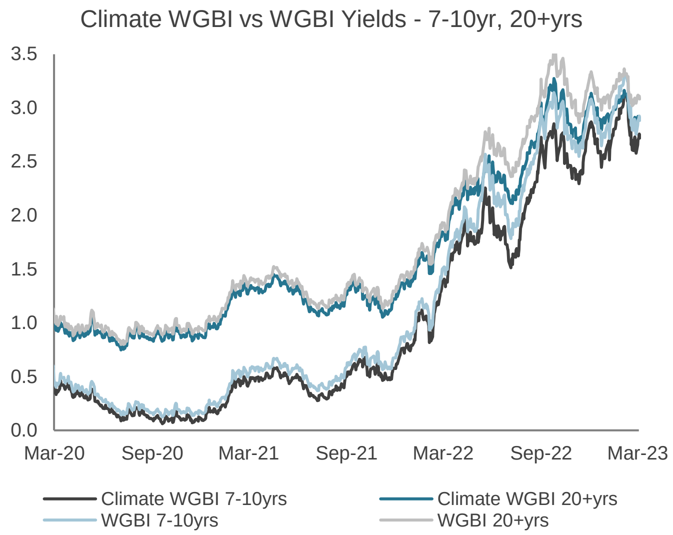
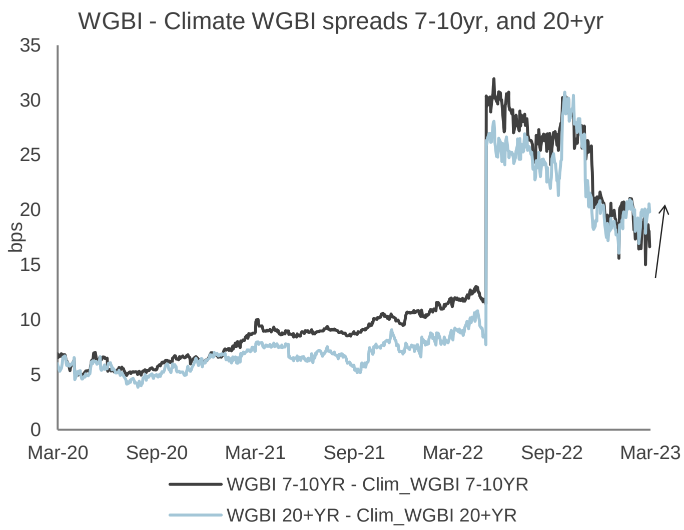


Chart 6: Long WGBI yields trade above long climate-WGBI yields, after the March rallies, after trading through for a protracted period.



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Appendix − Global Bond Market Returns % (USD & LC, TR) – March 31, 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	1.61	1.61	2.32	2.32	1.61	1.61	0.20	0.20
	7-10YR	3.92	3.92	4.55	4.55	3.92	3.92	-5.71	-5.71
	20+YR	7.25	7.25	5.08	5.08	7.25	7.25	-17.67	-17.67
	IG All	3.58	3.58	7.07	7.07	3.58	3.58	-5.56	-5.56
	HY All	3.65	3.65	7.58	7.58	3.65	3.65	-3.34	-3.34
UK	1-3YR	0.51	3.31	3.16	14.26	0.51	3.31	-1.35	-7.36
	7-10YR	2.97	5.84	7.71	19.30	2.97	5.84	-11.04	-16.46
	20+YR	2.89	5.76	-0.44	10.27	2.89	5.76	-32.32	-36.44
EUR	IG All	1.86	3.69	2.93	14.15	1.86	3.69	-7.62	-9.79
	HY All	3.06	5.02	8.09	19.85	3.06	5.02	-4.10	-6.72
Japan	1-3YR	0.21	-0.65	0.05	8.81	0.21	-0.65	0.07	-8.74
	7-10YR	1.76	0.89	0.14	8.91	1.76	0.89	-0.43	-9.20
	20+YR	7.52	6.60	2.57	11.56	7.52	6.60	-6.97	-15.16
China	1-3YR	0.52	1.69	0.83	4.05	0.52	1.69	2.42	-5.46
	7-10YR	0.80	1.97	1.15	4.38	0.80	1.97	3.02	-4.91
	20+YR	0.91	2.09	0.75	3.96	0.91	2.09	6.23	-1.94
EM	1-3YR	0.85	2.60	1.83	6.65	0.85	2.60	3.11	-3.19
	7-10YR	2.30	3.69	4.38	8.49	2.30	3.69	3.76	-3.46
	20+YR	1.82	2.96	3.63	7.57	1.82	2.96	5.58	-1.70
	IG All	2.21	2.21	5.71	5.71	2.21	2.21	-2.85	-2.85
	HY All	0.91	0.91	9.47	9.47	0.91	0.91	-3.68	-3.68
Germany	1-3YR	0.51	2.32	-0.58	10.26	0.51	2.32	-3.20	-5.48
	7-10YR	2.90	4.76	-0.53	10.31	2.90	4.76	-11.56	-13.64
	20+YR	4.45	6.33	-3.27	7.28	4.45	6.33	-29.52	-31.18
Italy	1-3YR	1.06	2.88	1.09	12.11	1.06	2.88	-2.40	-4.70
	7-10YR	5.19	7.08	4.73	16.15	5.19	7.08	-10.62	-12.73
	20+YR	7.70	9.64	2.78	13.98	7.70	9.64	-25.68	-27.43
Spain	1-3YR	0.87	2.69	0.03	10.94	0.87	2.69	-3.24	-5.52
	7-10YR	3.29	5.15	1.05	12.07	3.29	5.15	-11.15	-13.24
	20+YR	4.39	6.27	-0.46	10.39	4.39	6.27	-25.96	-27.71
France	1-3YR	0.83	2.65	-0.42	10.43	0.83	2.65	-3.41	-5.69
	7-10YR	2.90	4.75	-0.24	10.64	2.90	4.75	-11.46	-13.55
	20+YR	3.49	5.35	-2.14	8.53	3.49	5.35	-30.32	-31.96
Sweden	1-3YR	0.59	1.07	0.21	7.25	0.59	1.07	-1.60	-11.57
	7-10YR	1.57	2.05	0.31	7.35	1.57	2.05	-6.74	-16.19
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	1.64	0.38	2.50	6.78	1.64	0.38	0.97	-9.95
	7-10YR	6.97	5.65	6.72	11.17	6.97	5.65	-0.04	-10.85
	20+YR	11.51	10.13	7.30	11.78	11.51	10.13	-6.20	-16.35
NZ	1-3YR	1.58	0.48	1.29	12.03	1.58	0.48	0.73	-9.39
	7-10YR	2.90	1.80	2.66	13.55	2.90	1.80	-3.60	-13.28
Canada	1-3YR	1.60	1.72	2.05	3.41	1.60	1.72	0.31	-7.42
	7-10YR	4.07	4.19	3.96	5.35	4.07	4.19	-0.87	-8.51
	20+YR	5.68	5.80	2.60	3.97	5.68	5.80	-8.64	-15.68

Source: FTSE Russell. All data as of March 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 % (USD & LC, TR) – March 31, 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	2.34	2.34	3.61	3.61	2.34	2.34	-1.46	-1.46
	5-10YR	4.23	4.23	6.20	6.20	4.23	4.23	-5.85	-5.85
	20+YR	7.18	7.18	11.20	11.20	7.18	7.18	-23.62	-23.62
UK	1-5YR	1.04	3.86	4.42	15.65	1.04	3.86	2.34	-3.90
	5-10YR	4.33	7.24	7.26	18.80	4.33	7.24	-5.92	-11.65
	20+YR	5.20	8.14	-10.19	-0.52	5.20	8.14	-42.15	-45.67
EUxUK	1-5YR	0.72	2.54	0.89	11.89	0.72	2.54	-3.00	-5.29
	5-10YR	2.66	4.51	2.78	13.99	2.66	4.51	-7.76	-9.93
	20+YR	7.18	9.11	4.53	15.92	7.18	9.11	-27.52	-29.22
Japan	1-5YR	0.86	-0.01	1.30	10.17	0.86	-0.01	2.99	-6.07
	5-10YR	0.60	-0.27	0.09	8.85	0.60	-0.27	1.81	-7.15
EM	1-5YR	4.70	8.14	8.20	14.27	4.70	8.14	16.33	7.12
	5-10YR	3.75	7.63	9.31	16.25	3.75	7.63	17.12	9.18
	20+YR	2.94	7.75	5.34	14.22	2.94	7.75	5.33	1.80
Germany	1-5YR	0.72	2.54	0.89	11.89	0.72	2.54	-3.00	-5.29
	5-10YR	2.66	4.51	2.78	13.99	2.66	4.51	-7.76	-9.93
	20+YR	7.18	9.11	4.53	15.92	7.18	9.11	-27.52	-29.22
Italy	1-5YR	1.42	3.25	4.02	15.36	1.42	3.25	1.21	-1.17
	5-10YR	4.70	6.58	8.60	20.44	4.70	6.58	-4.55	-6.79
	20+YR	12.66	14.69	14.30	26.76	12.66	14.69	-28.96	-30.63
Spain	1-5YR	1.21	3.03	2.12	13.25	1.21	3.03	1.24	-1.15
	5-10YR	2.73	4.58	4.53	15.93	2.73	4.58	-5.32	-7.55
France	1-5YR	0.89	2.71	1.70	12.79	0.89	2.71	-2.04	-4.34
	5-10YR	2.81	4.66	3.52	14.81	2.81	4.66	-6.52	-8.72
	20+YR	5.58	7.48	5.61	17.13	5.58	7.48	-28.24	-29.93
Sweden	1-5YR	1.33	1.82	3.21	10.45	1.33	1.82	3.70	-6.80
	5-10YR	1.80	2.29	2.07	9.24	1.80	2.29	-2.29	-12.19
Australia	1-5YR	3.94	2.66	7.36	11.83	3.94	2.66	5.92	-5.53
	5-10YR	7.22	5.89	10.89	15.51	7.22	5.89	4.20	-7.06
	20+YR	13.53	12.12	19.73	24.72	13.53	12.12	-6.44	-16.56
NZ	5-10YR	4.80	3.67	7.73	19.16	4.80	3.67	2.58	-7.73
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	-0.38	-0.27	2.57	3.94	-0.38	-0.27	-5.99	-13.23

Source: FTSE Russell. All data as of March 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 March 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	4.20	3.72	3.49	3.76	1.44	1.17	1.53	5.25	8.45
	3M Ago	4.54	4.13	3.88	4.11	2.09	1.68	1.82	5.50	9.00
	6M Ago	4.31	4.18	3.83	3.95	2.11	1.82	1.95	5.72	9.55
	12M Ago	2.20	2.49	2.35	2.54	-1.68	-0.66	0.01	3.64	6.10
UK	Current	3.79	3.55	3.43	3.80	0.00	-0.27	0.35		
	3M Ago	3.50	3.65	3.69	3.92	-0.68	0.15	0.49		
	6M Ago	4.39	4.44	4.16	3.72	-0.88	0.08	-0.16		
	12M Ago	1.38	1.52	1.66	1.80	-4.36	-2.98	-1.84		
Japan	Current	-0.09	0.02	0.30	1.22	-1.30	-0.51			
	3M Ago	0.03	0.15	0.48	1.50	-1.22	-0.54			
	6M Ago	-0.07	0.01	0.26	1.27	-1.37	-0.78			
	12M Ago	-0.06	-0.01	0.21	0.94	-1.22	-0.74			
China	Current	2.31	2.56	2.84	3.25					
	3M Ago	2.28	2.53	2.85	3.26					
	6M Ago	2.06	2.42	2.79	3.21					
	12M Ago	2.24	2.50	2.86	3.40					
EM	Current	3.62	4.37	4.69	4.52	2.59	3.67	5.15	5.77	11.18
	3M Ago	3.78	4.38	4.95	4.61	2.79	3.04	5.15	5.92	11.40
	6M Ago	3.70	4.31	5.05	4.78	2.51	3.42	5.19	6.09	13.35
	12M Ago	3.39	4.16	4.63	4.91	2.28	2.91	4.93	4.09	10.46
Germany	Current	2.69	2.36	2.24	2.33	-0.02	-0.12	-0.15		
	3M Ago	2.56	2.53	2.54	2.51	0.40	0.34	0.18		
	6M Ago	1.66	1.82	2.03	2.11	-0.52	-0.10	-0.07		
	12M Ago	-0.17	0.52	0.81	1.00	-4.17	-2.12	-1.62		
Italy	Current	3.27	3.43	3.88	4.34	0.45	1.50	1.74		
	3M Ago	3.34	3.72	4.38	4.72	1.16	2.19	2.18		
	6M Ago	2.87	3.45	4.16	4.37	-0.14	2.02	2.10		
	12M Ago	0.31	1.84	2.68	3.19	-3.37	-0.33	0.78		
France	Current	2.83	2.66	2.70	3.17	-0.29	0.05	0.53		
	3M Ago	2.85	2.82	2.97	3.30	0.15	0.44	0.77		
	6M Ago	1.91	2.12	2.46	2.99	-0.58	0.21	0.63		
	12M Ago	-0.08	0.77	1.32	1.93	-3.64	-1.60	-0.47		
Sweden	Current	2.85	2.56	2.25		0.09	0.32			
	3M Ago	2.80	2.65	2.37		-0.24	0.25			
	6M Ago	2.31	2.41	2.22		-0.72	-0.23			
	12M Ago	0.70	1.59	1.72		-1.55	-1.08			
Australia	Current	3.03	3.00	3.27	3.82	0.01	0.82	1.43		
	3M Ago	3.43	3.62	4.01	4.37	0.60	1.45	1.88		
	6M Ago	3.44	3.64	3.87	4.10	0.80	1.58	2.01		
	12M Ago	1.66	2.97	3.27	3.72	-0.38	0.63	1.30		
NZ	Current	4.78	4.37	4.23	4.37	1.04	1.72			
	3M Ago	5.00	4.62	4.46	4.54	1.54	2.06			
	6M Ago	4.20	4.25	4.30	4.62	1.21	2.13			
	12M Ago	2.68	3.39	3.47	3.85	0.35	1.41			
Canada	Current	3.58		2.87	3.03			1.28	5.00	7.37
	3M Ago	3.90		3.30	3.31			1.33	5.27	7.34
	6M Ago	3.65		3.19	3.13			1.43	5.20	7.38
	12M Ago	2.24		2.38	2.40			0.34	3.76	5.39

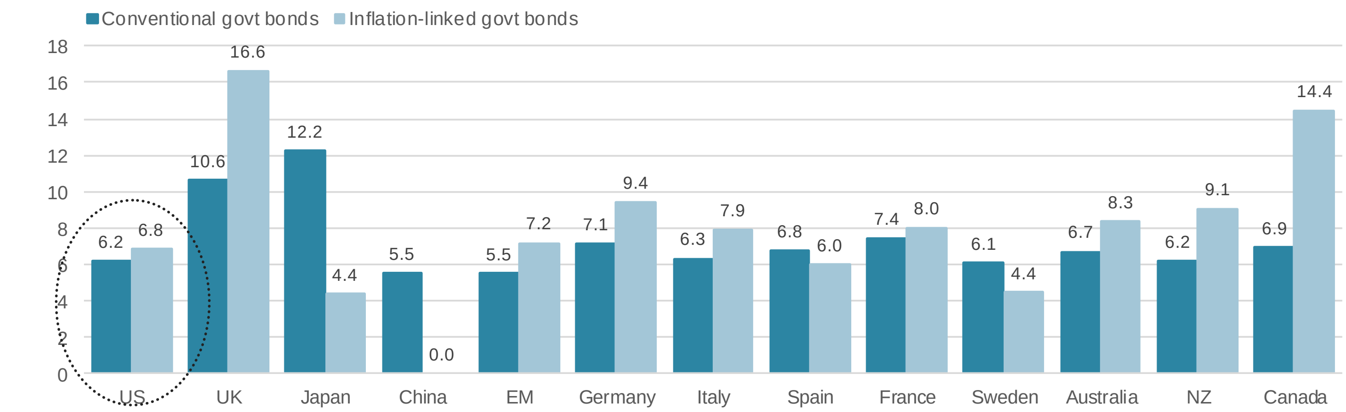
Source: FTSE Russell. All data as of March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

Appendix − Duration and Market Value (USD, Bn) as of March 31, 2023

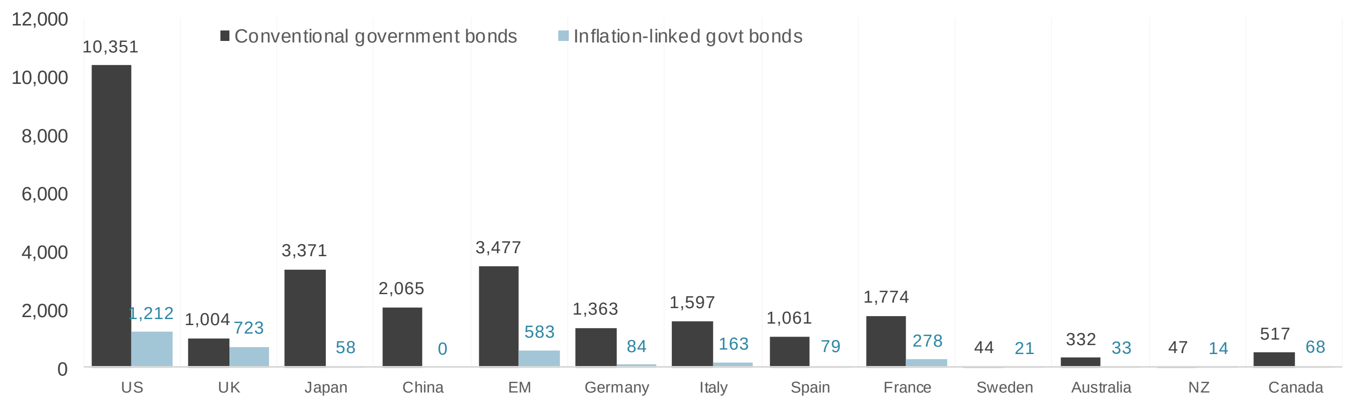
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.7	**6.2**	2,245.2	1,053.2	1,303.1	**10,351.1**	7.0	22.0	**6.8**	397.6	126.3	**1211.8**
UK	3.8	7.6	19.4	**10.6**	121.3	139.2	298.2	**1,004.0**	6.9	28.9	**16.6**	130.4	274.9	**722.6**
Japan	3.9	7.9	24.0	**12.2**	367.3	402.5	753.5	**3,370.8**	6.8		**4.4**	26.9		**57.6**
China	3.6	7.4	17.5	**5.5**	467.4	330.4	239.6	**2,064.5**						
EM	3.4	6.9	15.8	**5.5**	755.22	605.26	333.30	**3,477.0**	5.5	13.6	**7.2**	114.9	145.6	**583.2**
Germany	3.9	7.8	20.6	**7.1**	292.80	199.08	145.33	**1,362.7**	6.7	22.2	**9.4**	30.5	18.9	**84.3**
Italy	3.6	7.3	16.6	**6.3**	315.08	274.48	145.63	**1,597.0**	6.7	26.7	**7.9**	55.1	5.5	**163.4**
Spain	3.7	7.5	17.6	**6.8**	203.35	189.57	102.51	**1,061.5**	7.2		**6.0**	22.4		**79.3**
France	3.7	7.6	20.1	**7.4**	328.23	338.37	212.79	**1,774.1**	6.7	24.6	**8.0**	118.0	20.2	**278.1**
Sweden	3.5	8.0		**6.1**	7.69	9.21		**43.7**	6.2		**4.4**	9.9		**21.2**
Australia	3.5	7.8	18.2	**6.7**	56.56	90.63	16.39	**331.8**	7.5	23.0	**8.3**	9.8	2.9	**33.4**
NZ	3.4	7.7	17.6	**6.2**	8.92	6.63	2.37	**46.9**	6.6		**9.1**	3.2		**14.2**
Canada		7.4	17.1	**6.9**		160.20	104.50	**517.1**		14.4	**14.4**		67.7	**67.7**

	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.3	8.7	7.2	6.9	**7.2**	75.2	454.2	2,437.4	3,362.5	**6,329.3**	4.1	1,161.3
Euro	6.2	5.0	4.7	4.3	**4.5**	10.3	180.2	1,095.2	1,453.7	**2,739.4**	3.1	426.1
EM		5.6	4.8	5.0	**5.0**		37.91	219.94	350.3	**608.1**	3.5	203.3

Average Duration



Total Market Value (USD Billions)

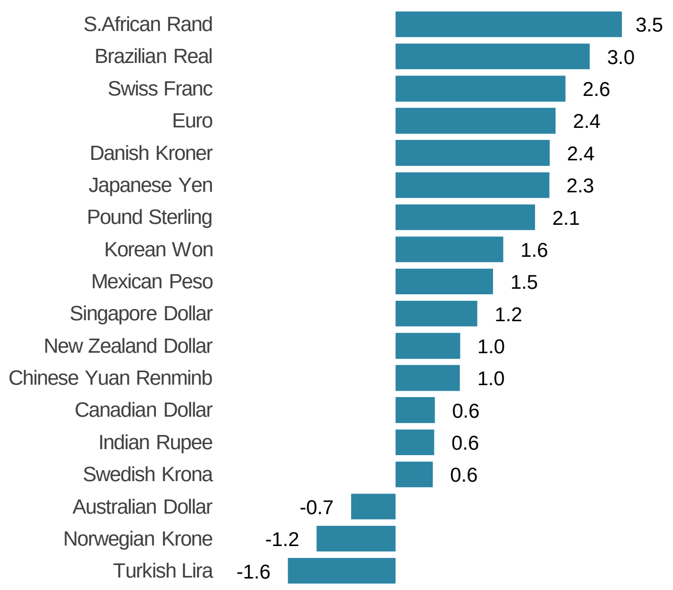


Data as of 2023-03-31

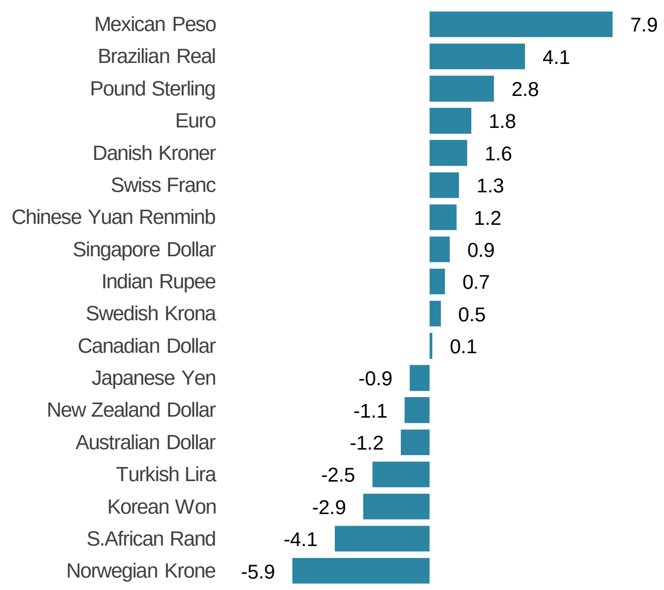
Source: FTSE Russell. All data as of March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

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

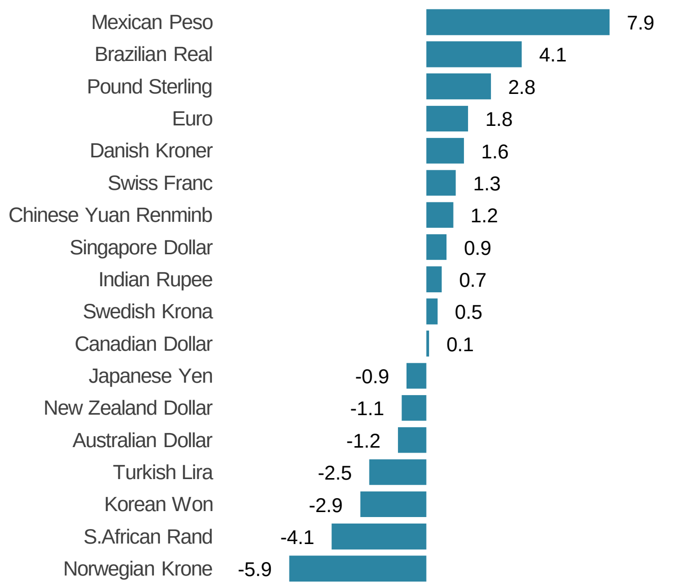
FX Moves vs USD - 1M



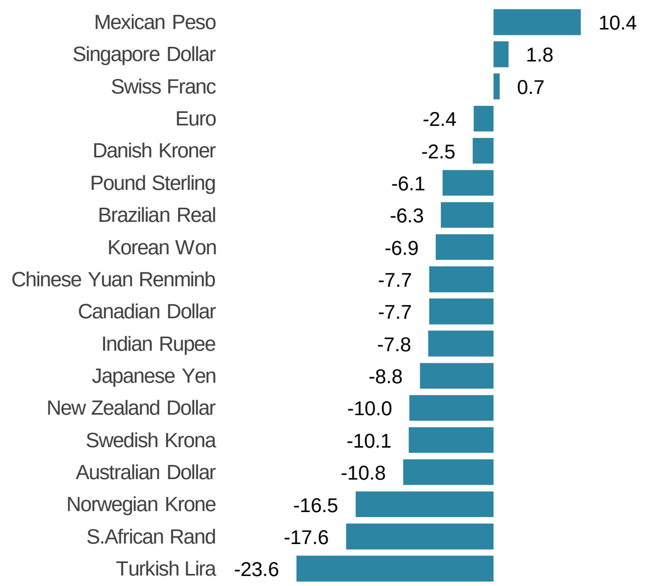
FX Moves vs USD - 3M



FX Moves vs USD - YTD



FX Moves vs USD - 12M



Source: FTSE Russell and Refinitiv. All data as of March 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