

Fixed Income Insights

MONTHLY REPORT - May 2023 | US EDITION

FOR PROFESSIONAL INVESTORS ONLY

End of Fed tightening cycle beckons but debt ceiling tail risk for Treasuries

Prompt action by regulators, and lower leverage, restricted banking crisis contagion, allowing the Fed to raise rates 25bp on May 3 for inflation insurance. Lower inflation allowed gov bonds and credits to retain Q1 gains in Q2, apart from the UK, but Treasuries already discount Fed easing in H2, and debt ceiling tail risk remains.

Macro and policy backdrop – Higher US IMF growth forecasts. Markets see debt ceiling as tail risk only

IMF upgrades some 2023 forecasts. Muted reaction to US debt ceiling crisis may be because of 2011 resolution (pages 2-3)

Yields, curves and spreads – Yields show further signs of a cyclical peak

US Treasury yields remained near 2023 lows in April, buoyed by a loss of growth momentum and weaker housing. (pages 4-5)

Sovereign and climate bonds – Green bond issuance recovered strongly in Q1, spreads tightened

After a tough 2022, when issuance fell back sharply, both sovereigns and corporate issuance rebounded in Q1. (page 6)

Performance – Sovereigns consolidated Q1 gains, and credit rallied on risk appetite, but JGBs and long gilts fell

Treasuries held onto Q1 gains, as inflation fell. JGBs and long gilts underperformed on weaker yen and higher UK rate threat. (pages 7-8)

Appendix (from page 10)

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

Chart 1: Both US 7-10yr nominal and real yields show signs of a cyclical peak, and inflation breakevens grind lower, towards Fed's 2% target.

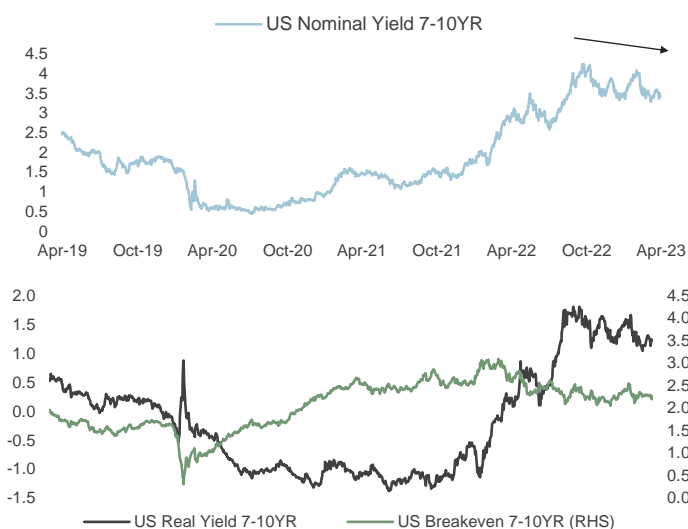
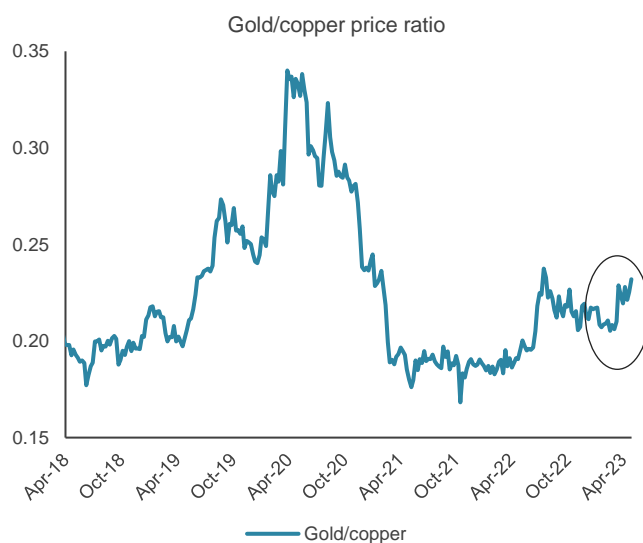


Chart 2: The gold price rallied sharply on US banking woes in March, as it did during the early risk-off stages of Covid in 2020.



Source: FTSE Russell. All data as of April 30, 2023. Past performance is no guarantee of future results. This report should not be considered 'research' for the purposes of MIFID II. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix for list of indices used for each market.

Macroeconomic Backdrop – Growth and Inflation Expectations

IMF April growth forecasts generally show modest upgrades (since January) for 2023, exc. Japan, reflecting an easing in energy prices and inflation. Food prices and wage inflation prevent faster inflation falls in Europe, though base effects are favorable in Q2. 2024 inflation forecasts are stable at pre-Covid levels, despite late-cycle pressure on unit labour costs.

US GDP growth slowed to 1.1% in Q1, as investment and inventories weakened sharply, offsetting stronger consumption (up 2.5%). The savings ratio still increased to 4.8% from 4.0% in Q1, helped by a surge in disposable income, and low unemployment. Elsewhere, Chinese growth out-turns hinge on a successful transition to domestic-led growth, with a weak property sector a key risk.

Inflation in North America and Asia has fallen back quickly in 2023, helped by base effects, and lower energy prices. Headline US inflation slowed to 5.0% y/y (March) from the 9.0% peak in Q3 2022, though core inflation is still 5.6% y/y, exc. food and energy prices. Consensus forecasts show inflation normalizing at pre-Covid levels, in response to US and European tightening in 2022/23.

Tightness in labor markets has increased cost-push inflation pressures in the G7, including the US (Chart 3), since Covid. US wage growth has slowed to 4.2% y/y, but weaker growth and productivity is causing faster, late-cycle growth in unit labour costs.

Inflows into money market funds, and out of bank deposits, were the main global fund flow after US banking woes in March. Chart 4 shows the impact on money market inflows. However, neither equity nor credit markets have seen major impact, and money market flows normalized in April. However, March's banking woes may have tightened credit conditions.

Chart 1: Despite signs of tighter US credit conditions, the IMF April forecasts show slightly stronger US growth. Japan downgrade, and UK recession forecast, reflect labor shortages and energy shocks.

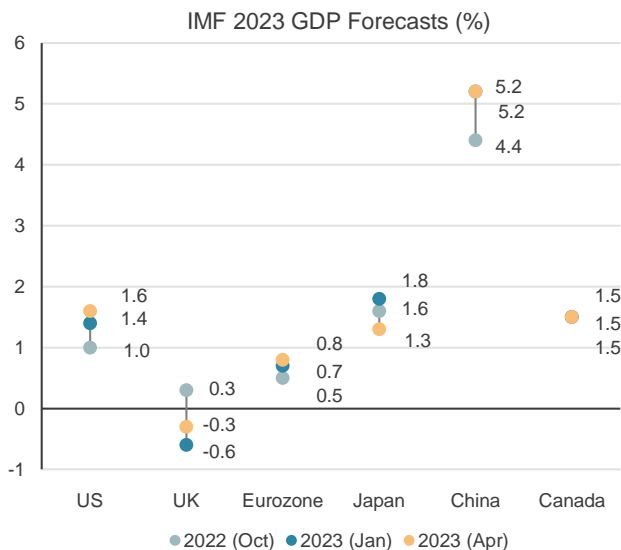


Chart 2: Sharp falls in US and Canadian inflation in Q1 2023 are at odds with sticky inflation in Europe, with UK inflation still above 10% y/y. Asian inflation remains more modest, notably in China.

	2023	Change Since Jan-23 (Bps)	2024	Change Since Jan-23 (Bps)
US	4.1	40	2.5	0
UK	6.5	-50	2.4	-10
Eurozone	5.6	-40	2.6	10
Japan	2.1	30	1.5	20
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 4.2% y/y. Weak productivity growth of late also means unit labor costs still grow strongly.

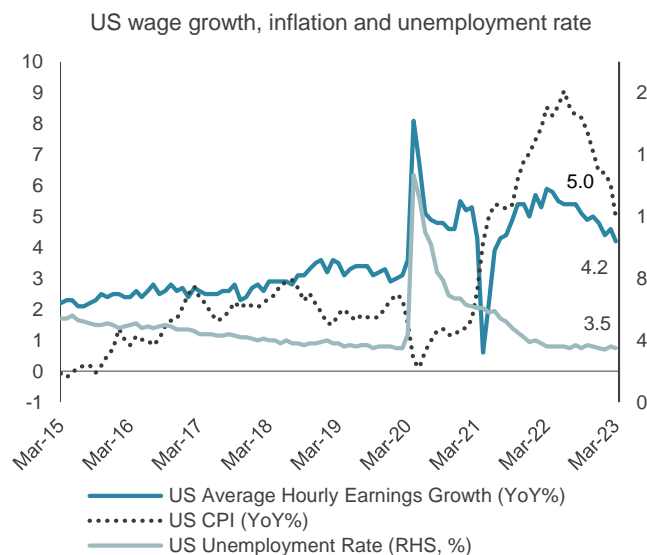
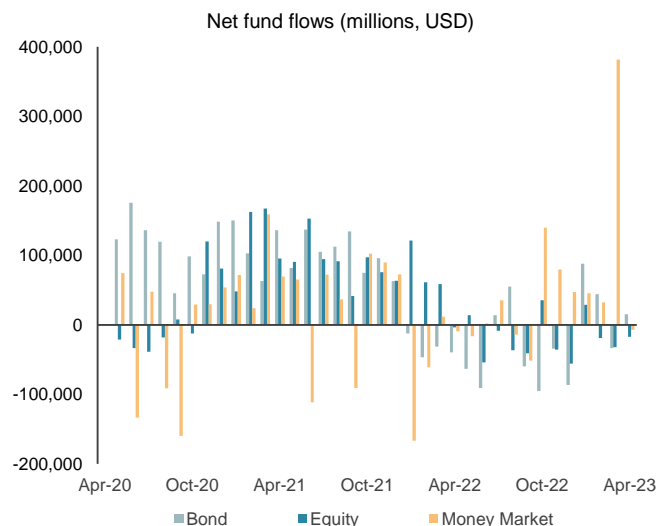


Chart 4: The main fund flow, since US banking woes emerged in March, has been out of bank deposits into money market funds. However, since March, money market flows normalized in April.



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Financial conditions and monetary policy settings

Limited contagion from the US banking crisis allowed risk assets to rally again in April, despite the risk of further duration mismatches, and the ongoing crisis over raising the US debt ceiling. Regional inflation shows wide dispersion, due to differing food and energy shocks, but tight labor markets remain a global issue, extending policy tightening cycles.

US M2 growth continues to slow sharply, after substantial monetary tightening (500bp in the US since March 2022) (Chart 1). Bank loan terms are likely to tighten after recent regional bank collapses, tightening financial conditions further.

Regional inflation rates diverge widely, with Europe most affected by the 2022 food and energy shocks (Chart 2), and inflation falling more slowly in 2023. Asian inflation remains muted, notably in China. The speed of the fall in G7 inflation will also be influenced by how far weaker demand growth squeezes corporate margins in 2023, as supply-chain disruptions unwind in goods markets.

Central banks remain determined to squeeze inflation back to target quickly, despite substantially more tightening in this cycle than in 2004-07, reflecting a deeper inflation shock. Excluding Japan, only the BoC has yet paused tightening in the G7, reflecting its "flexible inflation targeting" regime. Markets expect the Fed's 25bp move on May 3, to be followed in May by the ECB and UK.

Central banks continue Quantitative Tightening (QT) programs to supplement tightening, apart from the BoJ. Uncertainty about QT's impact is high, and the Fed's emergency lending in Q1 disrupted the QT program (Chart 4). Further banking instability would likely slow QT further, if financial stability concerns pre-dominate, given the uncertainty about its impact.

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

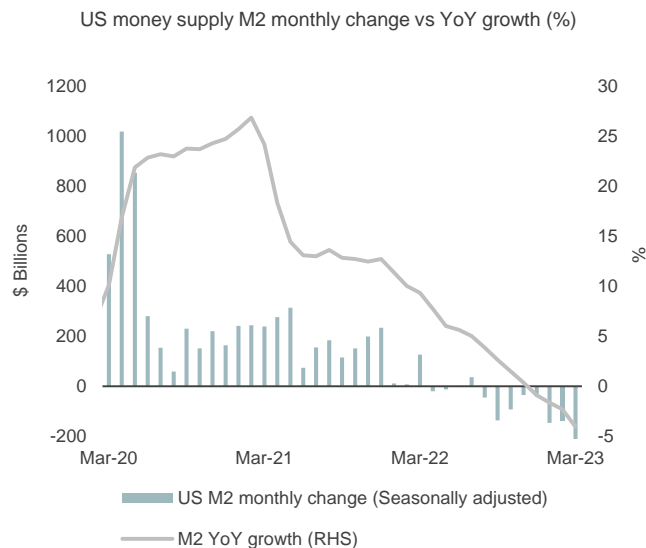


Chart 2: Wide dispersion in inflation continues. Stickiness in UK inflation at 10% y/y stands out. But the fall in G7 CPI may quicken if corporate margins are squeezed by weaker demand in 2023.

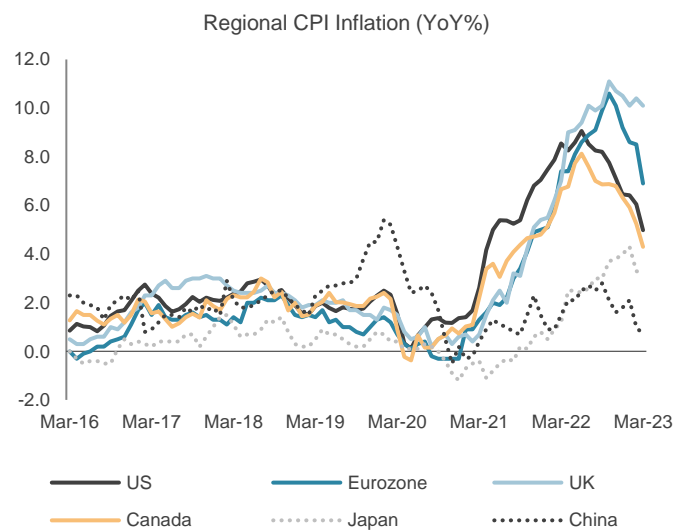


Chart 3: The Fed raised rates a further 25bp on May 3, and may be followed by the BoE and ECB in May, who remain prepared to risk recessions for inflation control. The BoJ retains negative rates.

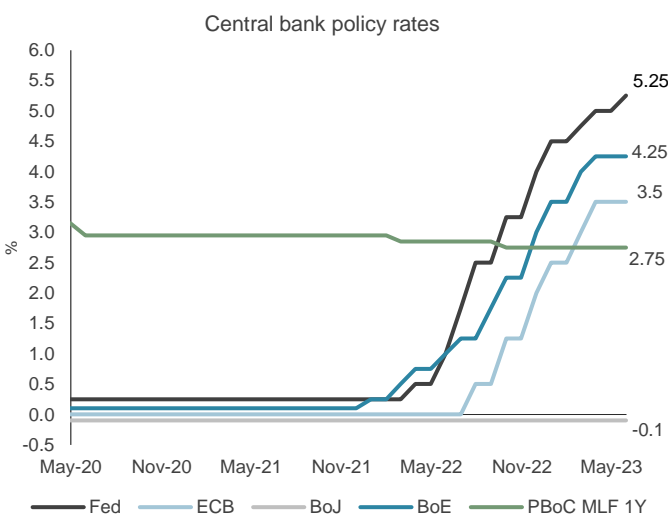
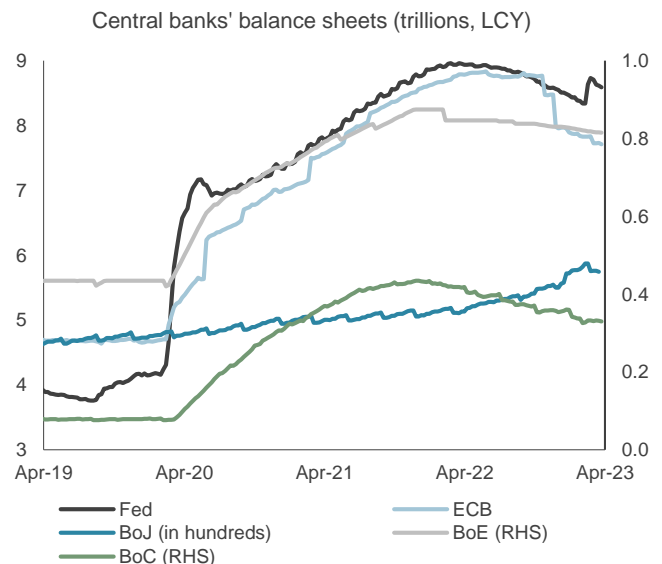


Chart 4: Central banks continue Quantitative Tightening (QT), apart from the BoJ, though the Fed's QT was interrupted by the provision of emergency liquidity to regional banks in March.



Source: FTSE Russell and Refinitiv. Chart 2 sourced from Federal Reserve. All data as of April 30, 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 banking woes in March, and a flight to quality developed. Markets stabilized in April, though the yield downtrend since October is intact.

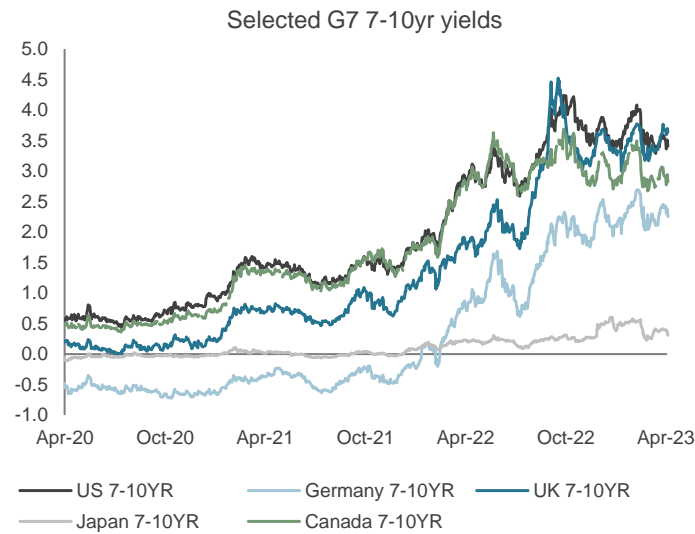


Chart 2: Real yields have also fallen since the banking crisis, though not as much as conventionals, as the latter proved a safe haven of choice. Real yields remain well above 2020/22 levels.

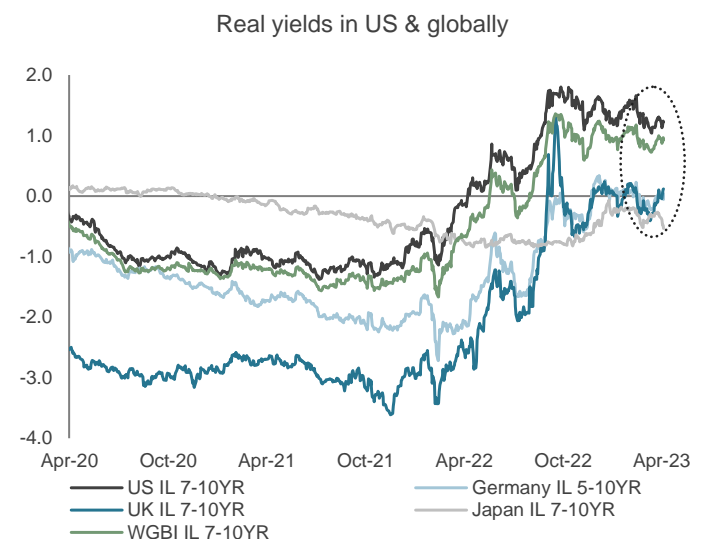


Chart 3: G7 10s/2s yield curves steepened after March's banking woes emerged, and 2-year yields collapsed. But curve inversion, or flattening in Japan, resumed in April as 2yr yields rebounded a little.

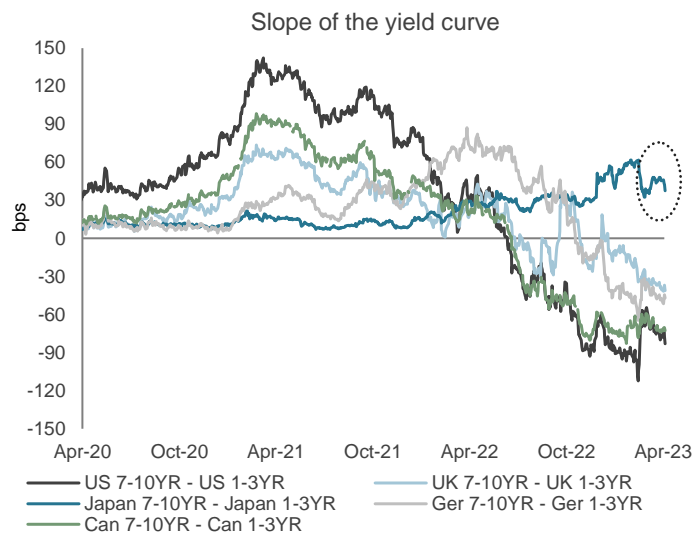


Chart 4: Like 10s/2s, the 20s+/2s yield curves resumed the 2021/23 flattening/inversion trend in April, after the brief March steepening. 2yr yields recovered as central banks signaled more tightening.

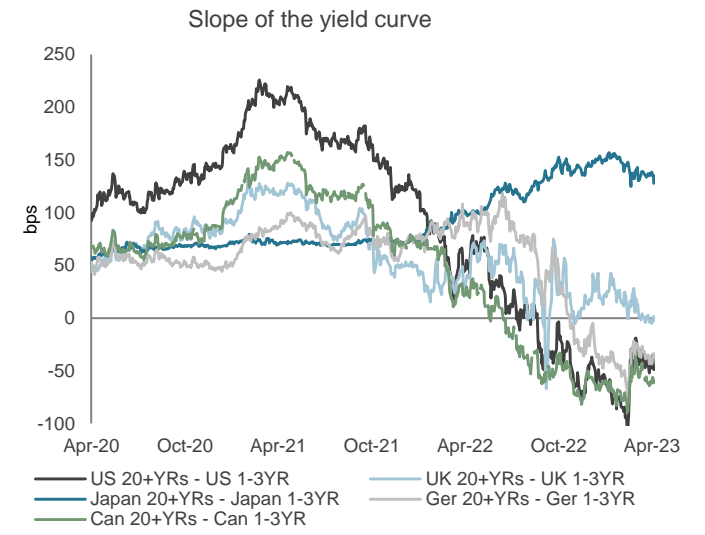


Chart 5: 7-10yr inflation breakevens stabilized near 2%, apart from the UK (due to the different RPI inflation index for accruals) & Japan. There has been little persisting impact from March's banking woes.

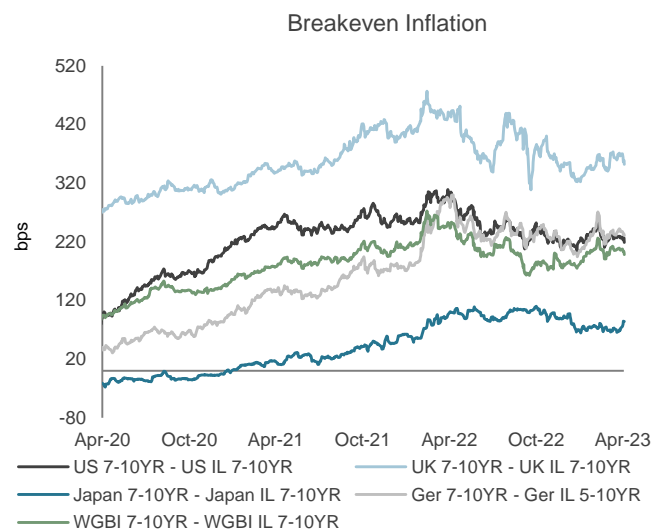
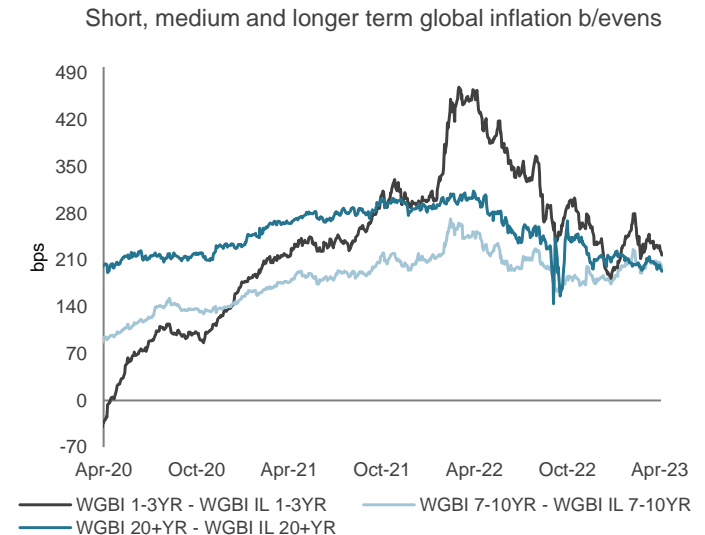


Chart 6: Short run inflation breakevens reacted more to March banking woes, and lower inflation prospects, if a credit crunch develops, though lower inflation rates in 2023 are also a factor.



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Yield Spread and Credit Spread Analysis

Chart 1: US sovereign spreads have shown the typical pro-cyclical pattern in 2022/23, falling as growth slows, after increasing in the post-Covid reflation trade. Spreads versus the UK tightened most.

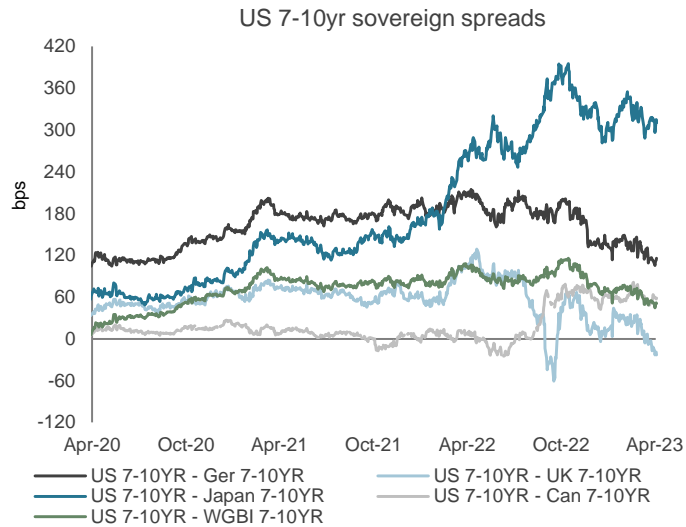


Chart 2: Peripheral Eurozone 7-10-year yield spreads reacted little to March's banking woes, though Italian spreads have widened since the ECB began signaling higher rates in Q2 2022.

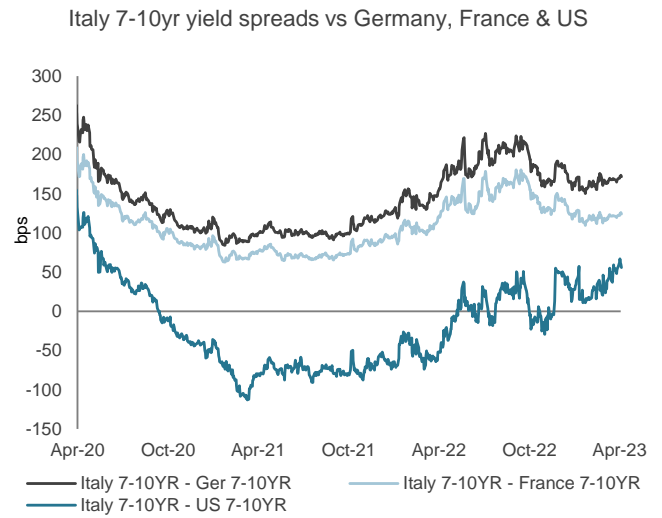


Chart 3: EM 7-10-year yield spreads widened a little in March, on fears cross-border flows may fall in a banking crisis, but moves were modest, and fell since, helped by a Fed offer of dollar swaps.

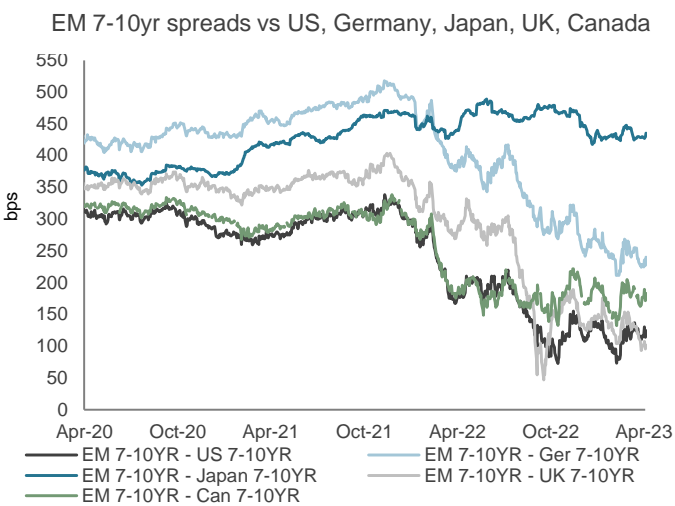


Chart 4: The modest spread widening in China 7-10-year sovereigns in March reversed in April, as Chinese inflation fell further, and nominal yields declined as a result.

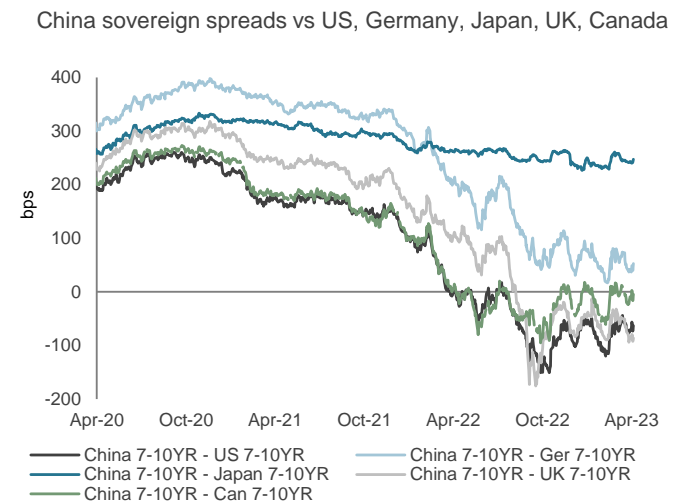


Chart 5: Lack of contagion, and prompt US regional bank takeovers, helped financial spreads stabilize in April, after the March spike on initial fears of a broader banking crisis.

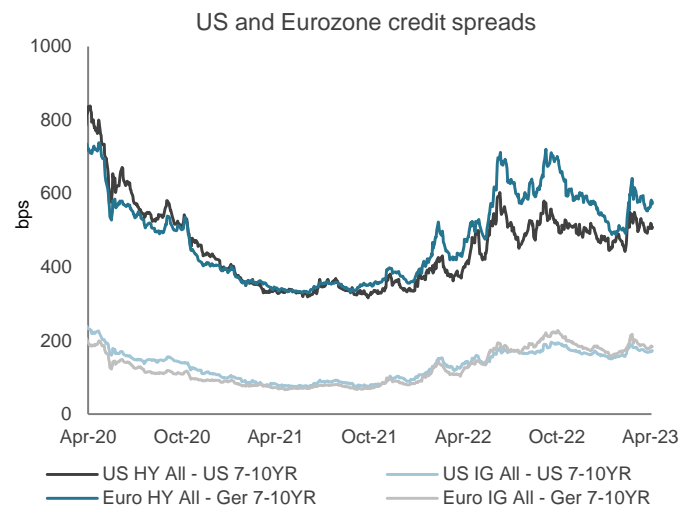


Chart 6: Although Chinese HY dollar spreads are well below the October 2022 peaks, helped by property sector support in China, they have widened sharply since March's US banking woes.



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Sovereign and Climate Bonds Analysis

Chart 1: After a major stress test of green bonds in 2022, when US green spreads widened sharply, led by HY, spreads have mean-reverted in 2023 to more normal spread levels, near 500bp in HY.

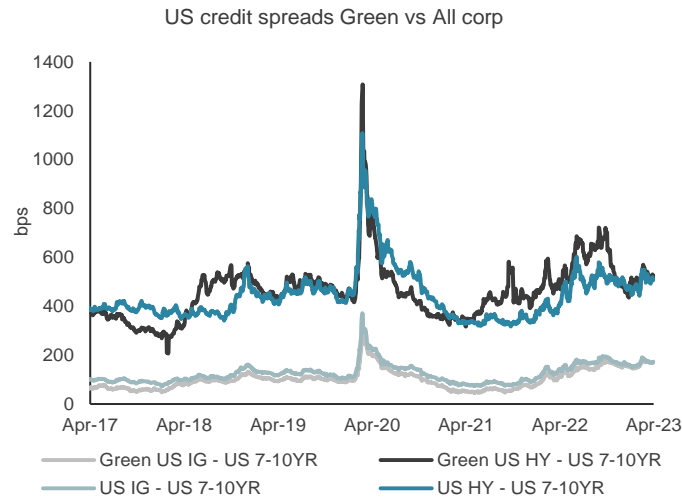


Chart 2: Unlike the US, the spread widening in HY Green Eurozone credits versus Bunds was modest in 2022, and there was no major spike. Spreads narrowed since the bond rally began in Q4 2022.

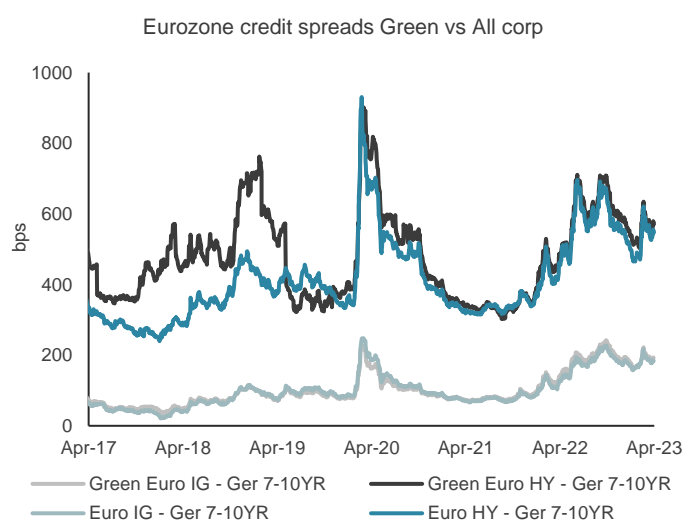


Chart 3: Overall, Green bond issuance fell more than other bonds in 2022, as yields and spreads rose. But Green issuance has rebounded in Q1 2023, and is at a new high versus total issuance.

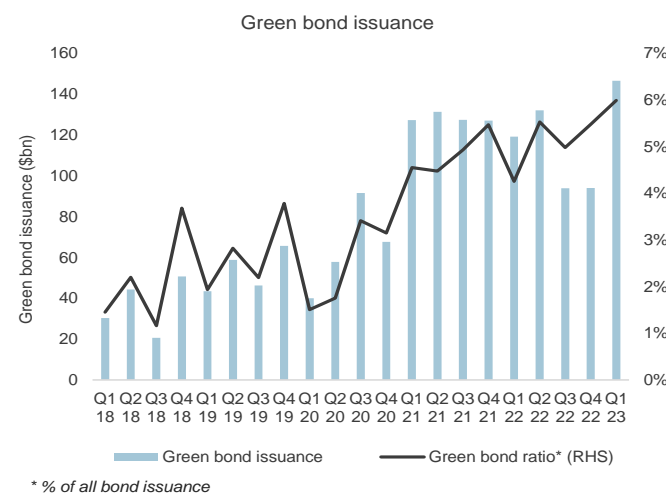


Chart 4: Within total Green bond issuance, Green corporates fell sharply, though issuance has recovered in Q1 2023, to an all-time high in absolute terms, as yields stabilized and spreads narrowed.

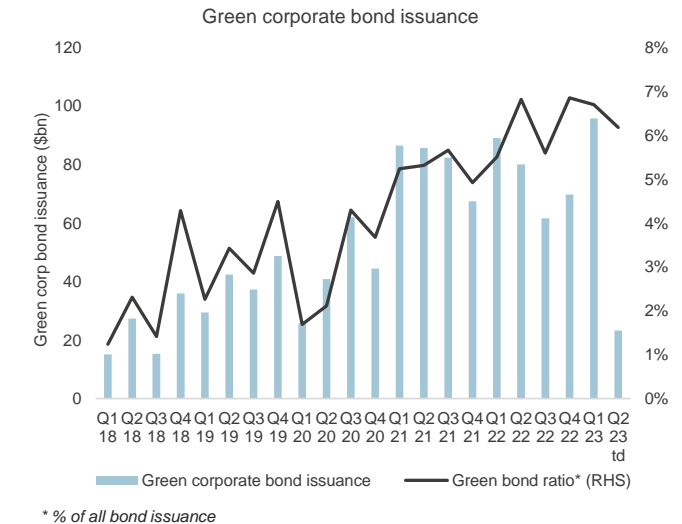


Chart 5: The currency composition of the FTSE Global Green index shows the high weighting of the Euro green bonds, at 68%, and the low US weighting, in contrast to the FTSE World BIG index.

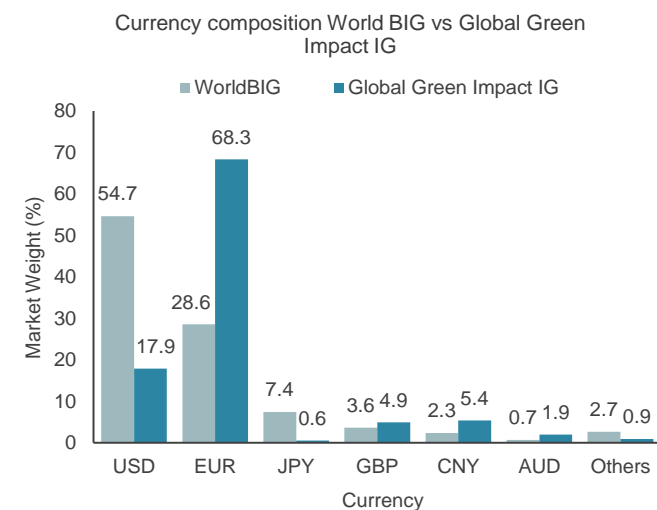
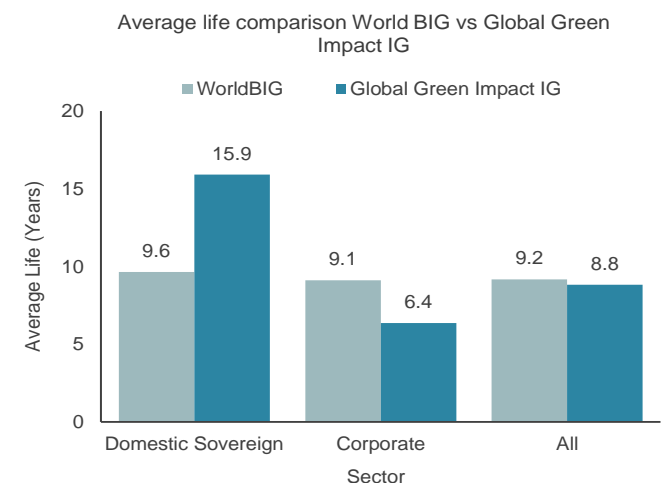


Chart 6: The higher Eurozone sovereign weighting in the Global Green (GG) index increases average life relative to World BIG, but this is offset by shorter average life of GG corporates.



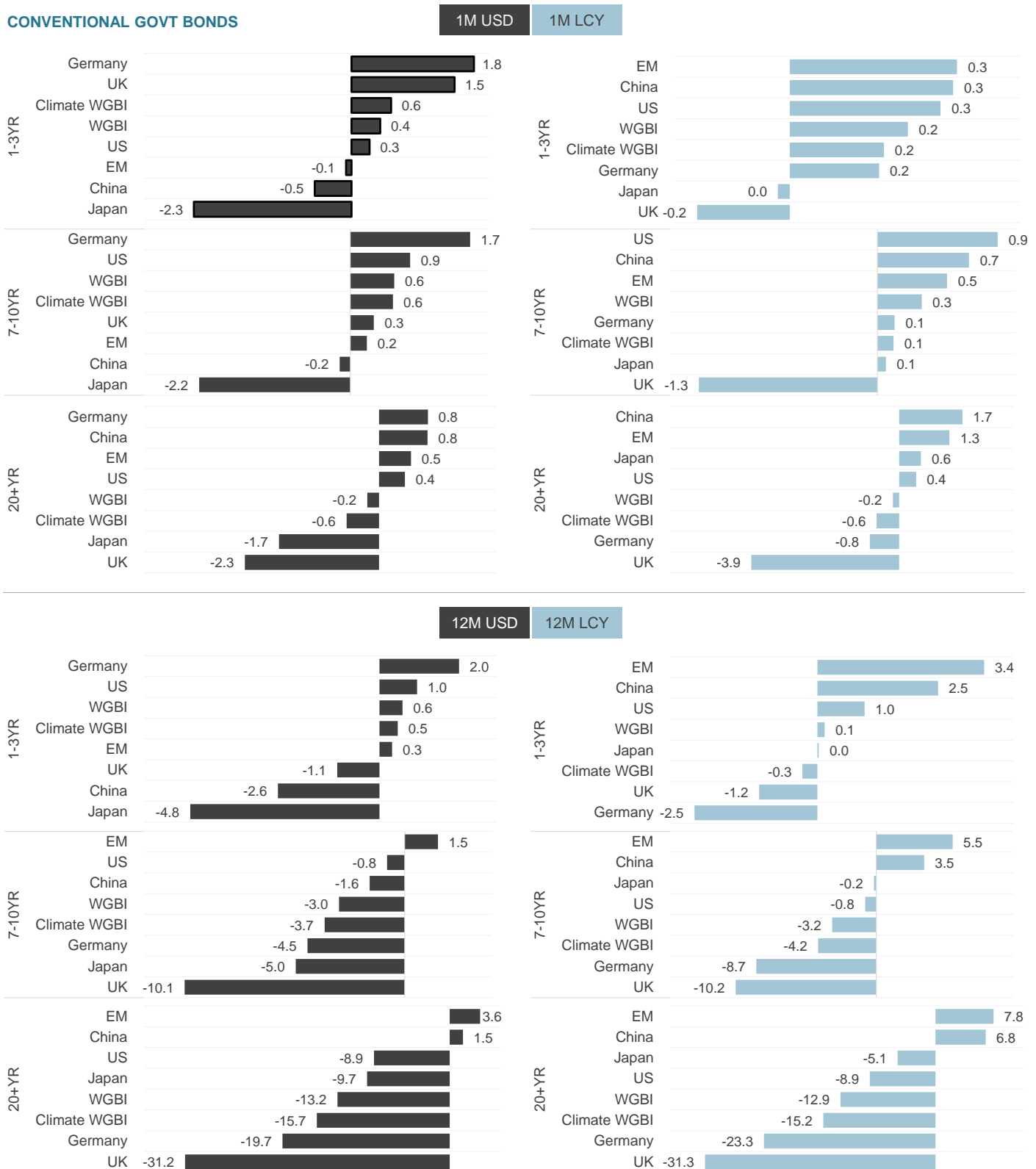
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Global Sovereign Bond Returns – 1M and 12M % (USD & LCY, TR) as of April 30, 2023

Sovereign bonds stabilized in April, after the strong rally on banking woes in March. Returns were modestly positive in shorts and mediums for a dollar-based investor, apart from JGBs which lost about 2%, and longer gilts. 12M returns continue to show the damage done by longer duration and higher policy rates in 2022, with losses of 9-31% in longs.

Bunds returned up to 2% in April, helped by the stronger Euro. JGBs lost 2% across the curve, in dollar terms, as the yen fell back on continuing BoJ curve control. Gilts were helped by the currency but long gilts lost 2%, as the MPC signaled more tightening.

12M returns are strongly negative, led by longs but EM and China largely escaped with positive returns of 2-4% in US dollar terms.



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Global Inflation-Linked Bond Returns – 1M & 12M % (USD, LC, TR) as of April 30, 2023

Global inflation-linked (IL) bonds showed modestly positive returns in April, in US dollar terms apart from long UK IL bonds. Credit rallied after limited contagion from banking woes in March, led by the Eurozone, on the currency. 12M IL returns are dominated by the negative impact of long duration and rising rates. Shorter duration IG credits showed positive returns.

Inflation-linked markets generally consolidated March gains in April, with Bunds showing gains of about 2%. Long UK IL suffered after poor inflation data raised the threat of more MPC tightening, causing longs to lose 4.9%. US Tips barely moved in April.

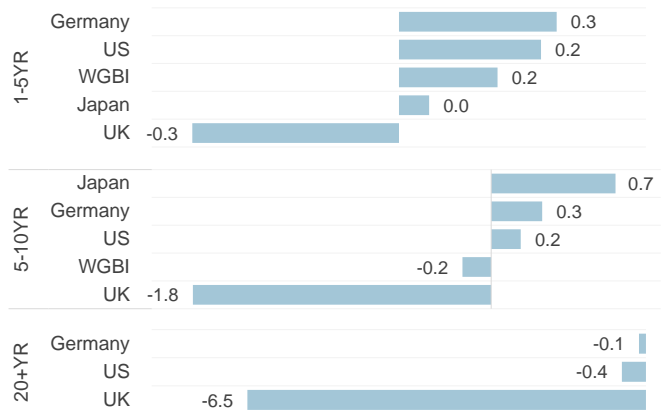
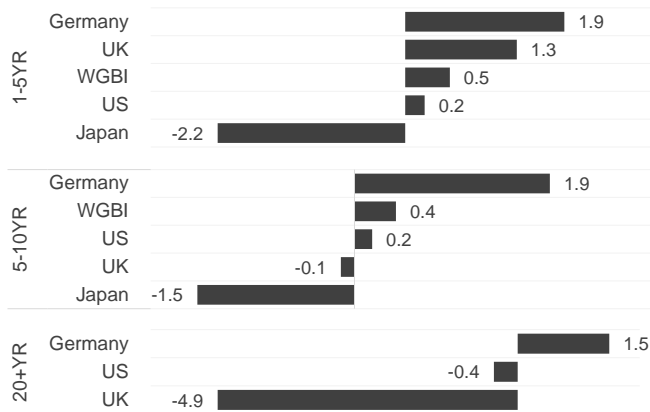
12M returns show losses of 17-40% in long IL bonds, in US dollar terms, with ultra-long gilt index-linked bonds the worst performers.

Euro and US high yield credits outperformed investment grade corporates on 12M helped by shorter duration.

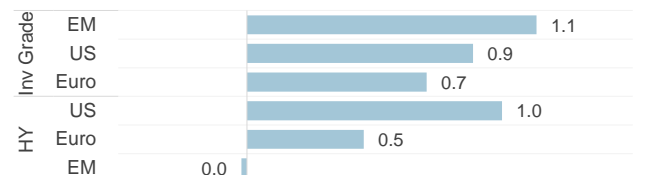
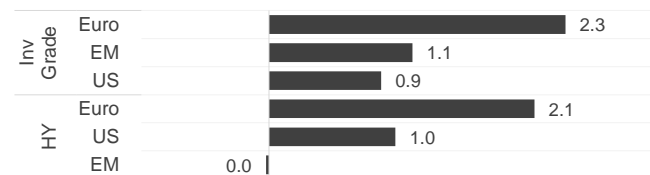
INFLATION LINKED BONDS

1M USD

1M LCY



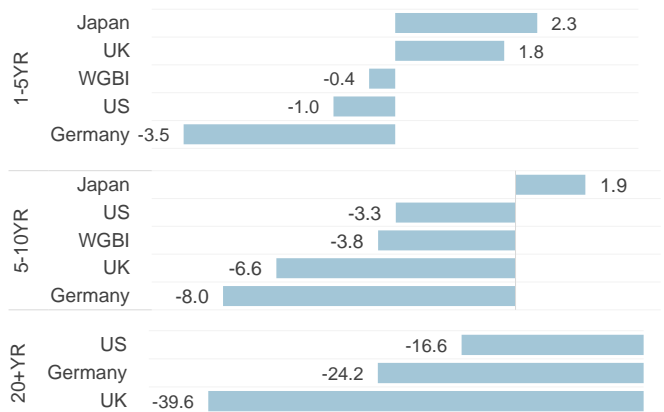
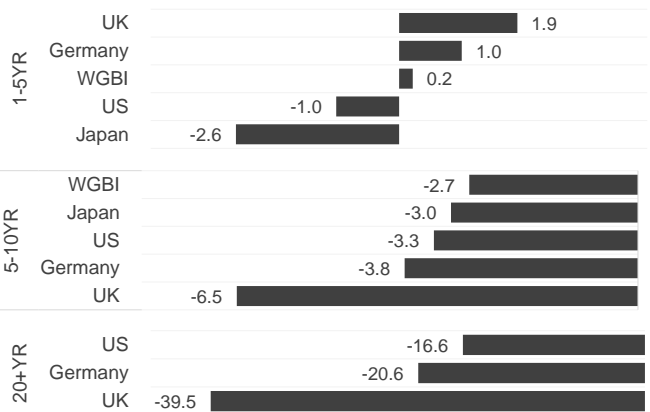
CORPORATE BONDS



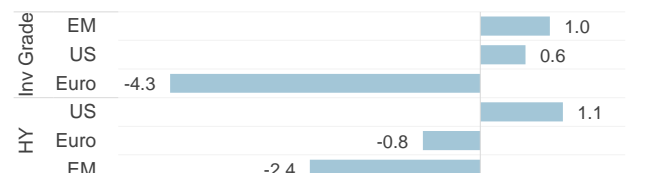
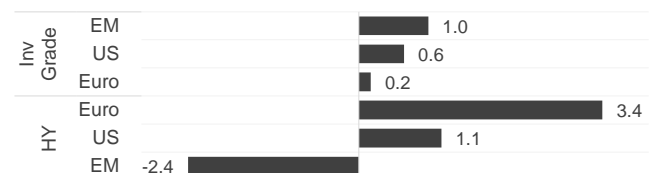
INFLATION LINKED BONDS

12M USD

12M LCY



CORPORATE BONDS



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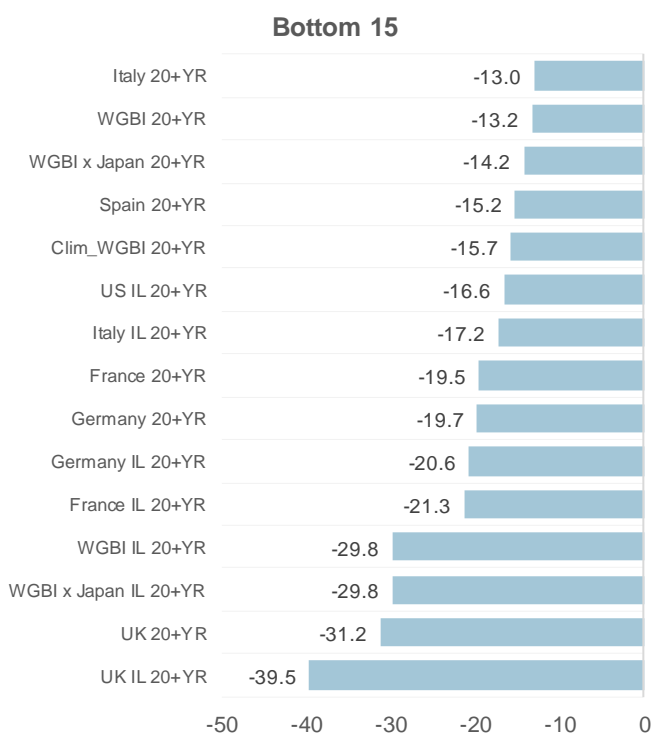
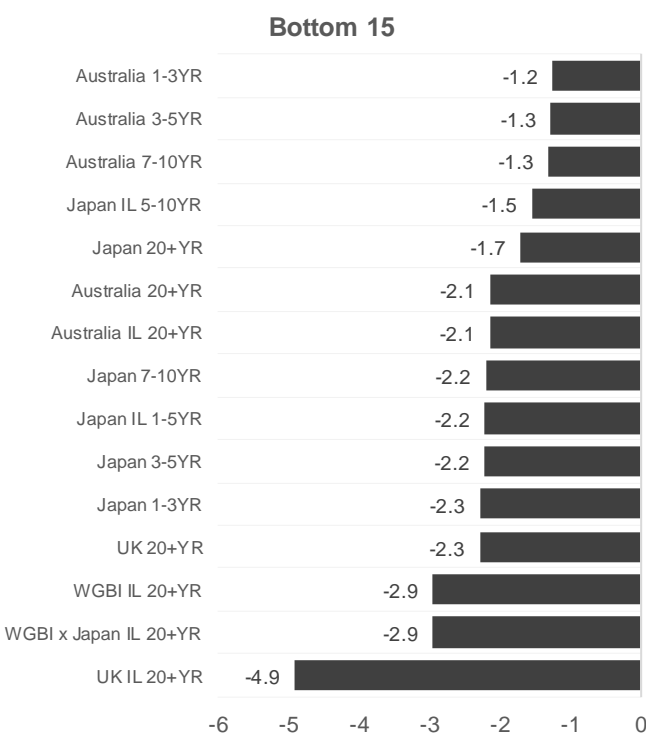
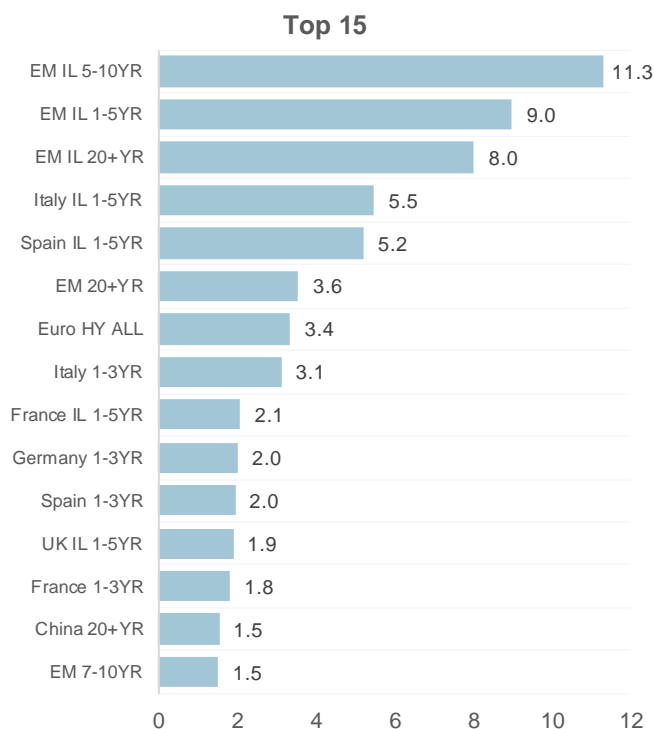
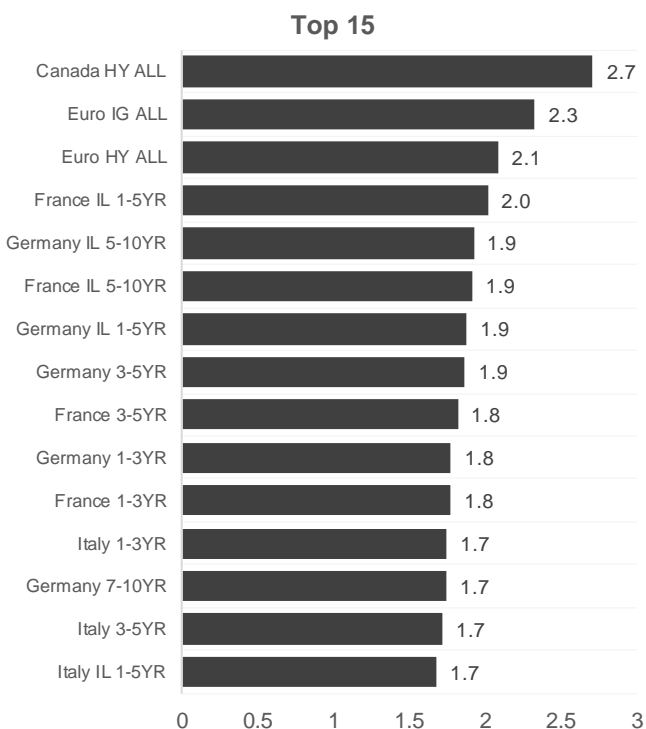
Top and Bottom Bond Returns – 1M & 12M % (USD,TR) as of April 30, 2023

HY credits and short inflation-link bonds performed best in April, led by Canadian and Euro HY credits, with 2-3% returns. EM inflation-linked remain best performers on 12M. Longer UK gilts and JGBs showed the worst April returns, with losses of 2-5%. All bottom 15 performers on 12M are long-dated government bonds, with losses of up to 40%, in US dollar terms.

Short to medium maturity bonds consolidated March gains in April, and HY credits and peripheral Eurozone bonds benefited from risk appetite, as banking crisis contagion was limited. The stronger Euro also boosted Eurozone returns in US dollar terms.

Ultra-long duration in long gilts and inflation-linked caused substantial losses in the 20+ year maturities, as rates rose, with losses of up to 40%, increased by weaker sterling on 12M. Long Tips and Eurozone bonds also lost 13-21% in US dollar terms.

1M USD 12M USD



Source: FTSE Russell. All data as of April 30, 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.

Appendix – Global Bond Market Returns % (USD & LC, TR) – April 30, 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	1.12	1.12	2.68	2.68	1.88	1.88	0.96	0.96
	7-10YR	1.23	1.23	7.00	7.00	4.82	4.82	-0.81	-0.81
	20+YR	0.09	0.09	12.59	12.59	7.72	7.72	-8.92	-8.92
	IG All	0.32	0.32	9.17	9.17	4.49	4.49	0.62	0.62
	HY All	0.77	0.77	5.33	5.33	4.68	4.68	1.14	1.14
UK	1-3YR	-0.28	1.81	0.62	9.84	0.35	4.85	-1.19	-1.08
	7-10YR	-1.43	0.64	1.19	10.47	1.64	6.20	-10.23	-10.13
	20+YR	-5.24	-3.25	-6.30	2.29	-1.10	3.34	-31.26	-31.18
EUR	IG All	0.31	1.97	3.49	15.60	2.57	6.10	-4.28	0.17
	HY All	0.17	1.88	6.71	18.92	3.53	7.21	-0.79	3.36
Japan	1-3YR	0.09	-4.41	0.05	9.21	0.19	-2.91	0.03	-4.82
	7-10YR	2.06	-2.53	-0.01	9.14	1.82	-1.33	-0.18	-5.02
	20+YR	8.86	3.97	3.71	13.21	8.13	4.78	-5.15	-9.75
China	1-3YR	0.67	-1.82	0.69	6.08	0.81	1.15	2.46	-2.59
	7-10YR	1.39	-1.12	0.76	6.15	1.47	1.81	3.49	-1.61
	20+YR	3.16	0.61	1.13	6.53	2.58	2.93	6.81	1.55
EM	1-3YR	0.82	-0.75	1.82	8.22	1.14	2.52	3.40	0.32
	7-10YR	1.30	-0.07	4.78	10.71	2.82	3.94	5.55	1.53
	20+YR	2.45	0.27	4.27	9.91	3.16	3.53	7.85	3.58
	IG All	0.77	0.77	9.26	9.26	3.36	3.36	0.96	0.96
	HY All	-2.74	-2.74	11.93	11.93	0.88	0.88	-2.35	-2.35
Germany	1-3YR	0.44	2.10	-0.12	11.57	0.67	4.13	-2.50	2.03
	7-10YR	0.32	1.98	-0.22	11.46	3.03	6.58	-8.72	-4.48
	20+YR	-2.66	-1.05	-2.15	9.30	3.65	7.22	-23.26	-19.70
Italy	1-3YR	0.54	2.20	0.82	12.62	1.19	4.68	-1.45	3.13
	7-10YR	0.94	2.61	2.54	14.54	4.95	8.57	-6.11	-1.75
	20+YR	-1.29	0.34	0.94	12.75	6.20	9.86	-16.85	-12.98
Spain	1-3YR	0.49	2.15	0.02	11.73	0.92	4.39	-2.57	1.96
	7-10YR	0.40	2.05	0.31	12.05	3.18	6.74	-7.63	-3.33
	20+YR	-2.56	-0.95	-1.58	9.94	2.95	6.50	-18.93	-15.16
France	1-3YR	0.47	2.13	-0.04	11.66	0.99	4.46	-2.69	1.83
	7-10YR	0.00	1.65	-0.54	11.10	2.94	6.48	-8.45	-4.20
	20+YR	-3.77	-2.18	-2.82	8.55	2.43	5.95	-23.04	-19.46
Sweden	1-3YR	-0.13	1.94	0.18	7.93	0.75	2.34	-0.82	-5.31
	7-10YR	-1.50	0.55	0.09	7.82	1.26	2.86	-3.44	-7.80
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	0.88	-5.39	1.83	5.24	1.73	-0.86	1.97	-5.17
	7-10YR	2.51	-3.87	5.07	8.58	7.00	4.27	1.99	-5.16
	20+YR	2.34	-4.02	6.08	9.63	10.60	7.77	-3.73	-10.48
NZ	1-3YR	0.88	-3.59	1.43	7.84	1.88	-0.51	1.43	-3.48
	7-10YR	1.23	-3.25	2.88	9.38	4.45	2.01	0.47	-4.39
Canada	1-3YR	0.91	-0.72	2.38	2.96	1.89	1.79	1.35	-4.50
	7-10YR	1.39	-0.25	5.05	5.65	4.69	4.58	3.17	-2.78
	20+YR	1.41	-0.23	8.15	8.77	7.52	7.41	0.52	-5.28

Source: FTSE Russell. All data as of April 30, 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) – April 30, 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	1.74	1.74	2.76	2.76	2.58	2.58	-1.01	-1.01
	5-10YR	1.80	1.80	5.12	5.12	4.41	4.41	-3.29	-3.29
	20+YR	0.40	0.40	8.21	8.21	6.76	6.76	-16.57	-16.57
UK	1-5YR	1.18	3.30	1.06	10.32	0.70	5.23	1.79	1.91
	5-10YR	0.77	2.88	3.43	12.91	2.50	7.10	-6.57	-6.47
	20+YR	-7.46	-5.52	-6.02	2.59	-1.58	2.83	-39.60	-39.53
EUxUK	1-5YR	0.93	2.60	-0.25	11.42	0.98	4.46	-3.48	1.01
	5-10YR	1.45	3.13	0.62	12.39	2.97	6.52	-8.04	-3.76
	20+YR	0.66	2.32	1.31	13.17	7.06	10.75	-24.17	-20.64
Japan	1-5YR	0.42	-4.10	1.09	10.35	0.91	-2.22	2.34	-2.63
	5-10YR	2.48	-2.12	0.26	9.44	1.34	-1.80	1.93	-3.02
EM	1-5YR	2.49	3.26	3.99	8.79	3.39	7.23	13.30	8.99
	5-10YR	3.65	4.76	5.90	11.24	3.42	7.35	15.12	11.34
	20+YR	4.66	6.37	6.46	13.71	4.15	9.47	6.48	8.03
Germany	1-5YR	0.93	2.60	-0.25	11.42	0.98	4.46	-3.48	1.01
	5-10YR	1.45	3.13	0.62	12.39	2.97	6.52	-8.04	-3.76
	20+YR	0.66	2.32	1.31	13.17	7.06	10.75	-24.17	-20.64
Italy	1-5YR	1.23	2.91	1.86	13.78	1.48	4.98	0.81	5.49
	5-10YR	2.06	3.74	3.84	15.99	4.59	8.19	-3.55	0.93
	20+YR	1.10	2.77	4.14	16.33	10.85	14.67	-20.92	-17.24
Spain	1-5YR	1.10	2.77	1.16	12.99	1.21	4.69	0.55	5.23
	5-10YR	1.44	3.12	1.08	12.91	2.52	6.05	-5.00	-0.59
France	1-5YR	1.27	2.94	0.40	12.15	1.29	4.77	-2.45	2.09
	5-10YR	1.76	3.44	0.60	12.37	3.11	6.66	-6.65	-2.31
	20+YR	-1.20	0.44	0.03	11.73	5.22	8.84	-24.76	-21.26
Sweden	1-5YR	-0.57	1.49	1.14	8.96	0.58	2.17	2.51	-2.13
	5-10YR	-1.85	0.18	-0.83	6.84	0.09	1.67	-3.86	-8.20
Australia	1-5YR	2.27	-4.08	4.64	8.14	4.35	1.69	6.74	-0.74
	5-10YR	2.61	-3.77	7.13	10.71	7.74	4.99	6.07	-1.36
	20+YR	-0.89	-7.05	8.69	12.33	12.60	9.73	-4.22	-10.94
NZ	5-10YR	3.50	-1.08	7.85	14.66	6.36	3.87	5.63	0.52
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	-1.14	-2.74	2.89	3.48	0.57	0.47	0.02	-5.76

Source: FTSE Russell. All data as of April 30, 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 April 30, 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	4.24	3.62	3.41	3.75	1.68	1.23	1.58	5.15	8.50
	3M Ago	4.35	3.74	3.46	3.71	1.85	1.32	1.54	5.01	8.23
	6M Ago	4.58	4.37	4.05	4.34	1.76	1.65	1.84	5.97	8.97
	12M Ago	2.60	2.93	2.90	3.07	-1.34	-0.20	0.46	4.33	6.98
UK	Current	4.05	3.77	3.64	4.02	0.39	0.14	0.63		
	3M Ago	3.42	3.26	3.33	3.70	0.31	0.00	0.30		
	6M Ago	3.38	3.55	3.56	3.62	-2.33	-0.13	0.24		
	12M Ago	1.63	1.62	1.87	2.08	-4.34	-2.71	-1.44		
Japan	Current	-0.07	0.02	0.30	1.20	-1.31	-0.63			
	3M Ago	-0.02	0.11	0.52	1.55	-1.33	-0.34			
	6M Ago	-0.06	0.02	0.24	1.31	-1.37	-0.81			
	12M Ago	-0.06	-0.01	0.22	0.95	-1.46	-0.85			
China	Current	2.28	2.51	2.78	3.17					
	3M Ago	2.30	2.57	2.87	3.31					
	6M Ago	1.93	2.30	2.68	3.15					
	12M Ago	2.21	2.47	2.83	3.36					
EM	Current	3.74	4.37	4.66	4.46	3.84	4.04	5.15	5.61	11.71
	3M Ago	3.59	4.30	4.76	4.57	3.11	3.37	5.25	5.52	10.25
	6M Ago	3.67	4.37	5.03	4.77	1.66	3.00	5.23	6.70	13.96
	12M Ago	3.49	4.30	4.85	4.95	1.88	2.93	4.94	4.58	10.52
Germany	Current	2.72	2.35	2.25	2.37	0.16	-0.06	-0.11		
	3M Ago	2.59	2.31	2.21	2.22	0.38	0.13	-0.09		
	6M Ago	1.94	1.95	2.07	2.22	-0.76	-0.35	-0.17		
	12M Ago	0.15	0.56	0.86	1.18	-2.14	-1.50	-1.01		
Italy	Current	3.36	3.49	3.97	4.45	0.80	1.65	1.83		
	3M Ago	3.17	3.42	3.92	4.29	1.18	1.87	1.85		
	6M Ago	2.82	3.30	3.95	4.36	0.25	1.64	1.84		
	12M Ago	0.82	2.13	3.00	3.54	-2.01	0.41	1.39		
France	Current	2.84	2.66	2.73	3.23	-0.06	0.17	0.58		
	3M Ago	2.71	2.58	2.64	3.01	0.24	0.30	0.52		
	6M Ago	2.15	2.20	2.44	3.02	-0.91	-0.16	0.46		
	12M Ago	0.32	1.18	1.67	2.35	-3.14	-1.32	-0.18		
Sweden	Current	2.89	2.59	2.31	0.00	0.71	0.73			
	3M Ago	2.50	2.27	2.05	0.00	-0.17	0.14			
	6M Ago	2.34	2.38	2.25	0.00	-0.59	-0.17			
	12M Ago	1.15	2.06	1.99	0.00	-1.48	-1.14			
Australia	Current	3.13	3.05	3.30	3.88	0.09	0.84	1.50		
	3M Ago	3.17	3.24	3.51	3.96	0.23	0.92	1.37		
	6M Ago	3.21	3.35	3.70	4.10	-0.01	1.05	1.67		
	12M Ago	2.31	3.78	4.05	4.30	0.09	1.32	1.94		
NZ	Current	4.89	4.15	4.08	4.23	0.95	1.61	0.00		
	3M Ago	4.67	4.18	4.11	4.41	1.28	1.79	0.00		
	6M Ago	4.31	4.28	4.18	4.44	1.43	2.04	0.00		
	12M Ago	3.11	3.80	4.00	4.28	0.86	1.83	0.00		
Canada	Current	3.55		2.83	2.94			1.26	4.84	7.37
	3M Ago	3.68		2.91	3.00			1.20	4.83	6.99
	6M Ago	3.81		3.29	3.35			1.38	5.42	7.60
	12M Ago	2.64		2.84	2.85			0.73	4.33	5.84

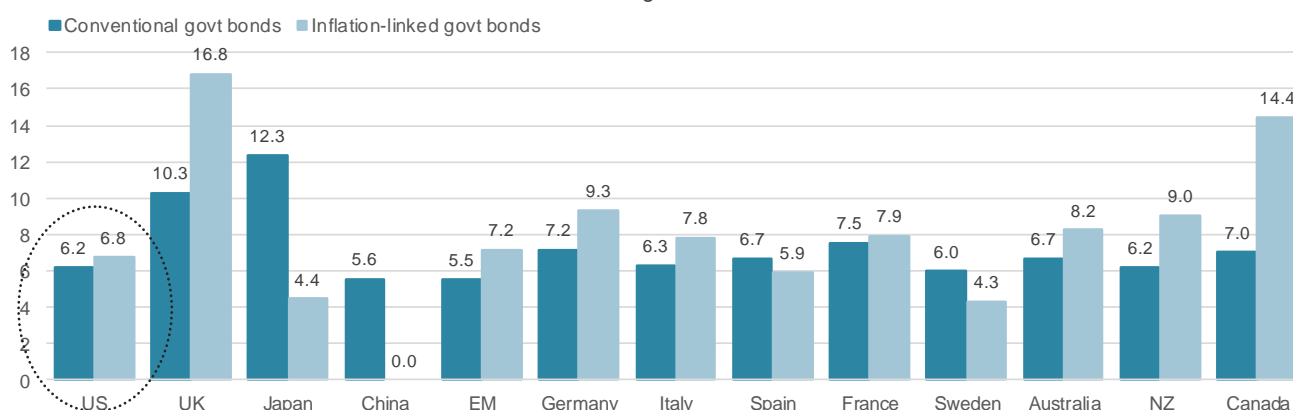
Source: FTSE Russell. All data as of April 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix – Duration and Market Value (USD, Bn) as of April 30, 2023

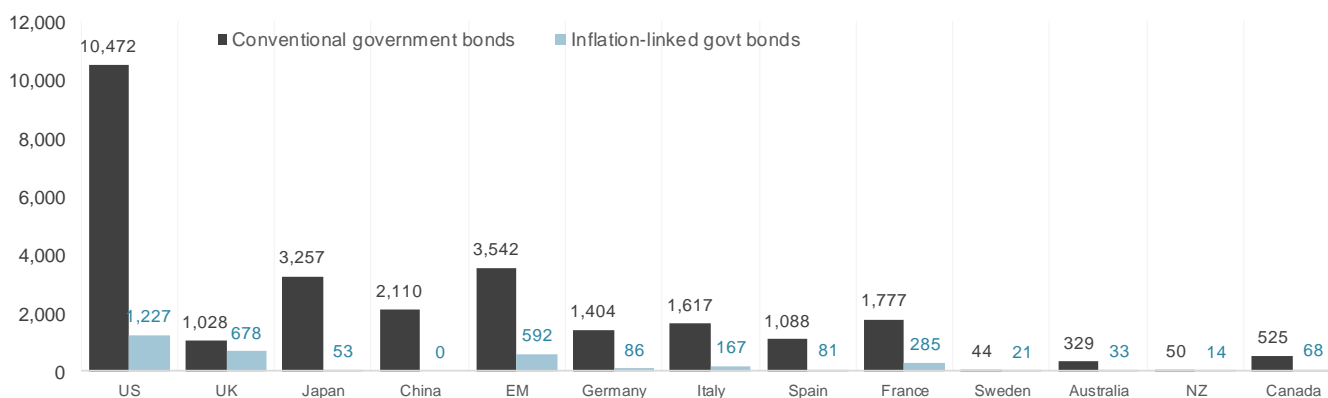
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.6	6.2	2,276.4	1,094.8	1,326.9	10,472.5	7.0	21.9	6.8	412.7	125.8	1227.4
UK	3.7	7.6	19.1	10.3	128.4	144.8	297.9	1,027.9	6.8	28.6	16.8	130.2	262.4	678.3
Japan	4.0	7.9	24.0	12.3	351.4	365.7	725.9	3,256.9	7.4		4.4	19.1		53.1
China	3.6	7.4	17.6	5.6	445.8	352.3	242.9	2,110.3						
EM	3.5	6.9	15.9	5.5	716.19	633.09	338.43	3,541.6	5.6	13.6	7.2	123.5	149.6	591.9
Germany	3.8	7.8	20.6	7.2	301.47	213.64	152.49	1,403.7	6.7	22.1	9.3	31.0	19.2	86.2
Italy	3.7	7.3	16.4	6.3	317.51	248.17	146.35	1,617.4	6.6	26.6	7.8	55.9	5.5	167.4
Spain	3.6	7.4	17.4	6.7	211.49	192.08	104.18	1,087.8	7.1		5.9	22.7		81.2
France	3.6	7.6	20.1	7.5	342.31	355.24	214.42	1,776.7	6.9	24.6	7.9	103.0	20.7	285.4
Sweden	3.4	7.9		6.0	7.78	9.28		44.3	6.1		4.3	9.9		21.3
Australia	3.5	7.7	18.1	6.7	55.88	90.14	16.22	329.4	7.4	22.8	8.2	9.7	2.8	33.2
NZ	3.3	7.2	17.6	6.2	9.03	9.31	2.48	50.0	6.5		9.0	3.2		14.2
Canada		7.3	16.9	7.0		166.20	111.10	524.5		14.4	14.4		68.4	68.4

	Investment grade bonds					High Yield						
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.2	8.7	7.3	6.9	7.2	75.7	454.0	2,530.7	3,387.0	6,447.5	4.1	1,148.6
Euro	6.1	5.0	4.7	4.3	4.5	10.6	186.9	1,135.3	1,487.3	2,820.0	3.1	432.9
EM		5.8	4.9	5.0	5.0		44.41	224.75	346.1	615.3	3.3	191.9

Average Duration



Total Market Value (USD Billions)

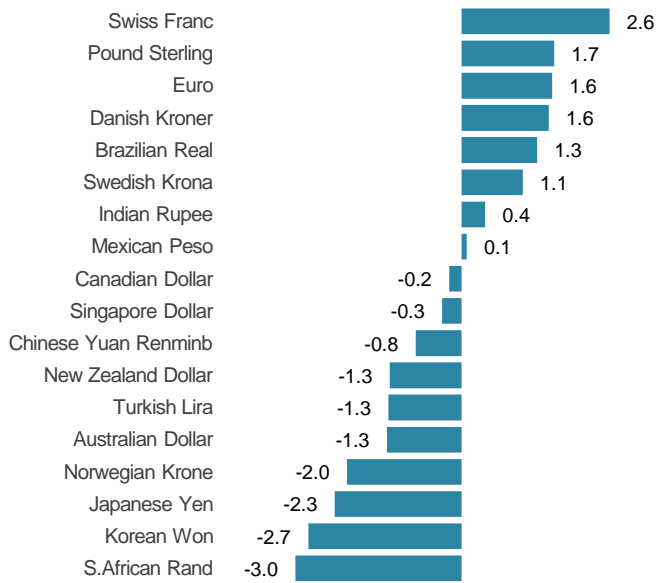


Data as of 2023-04-28

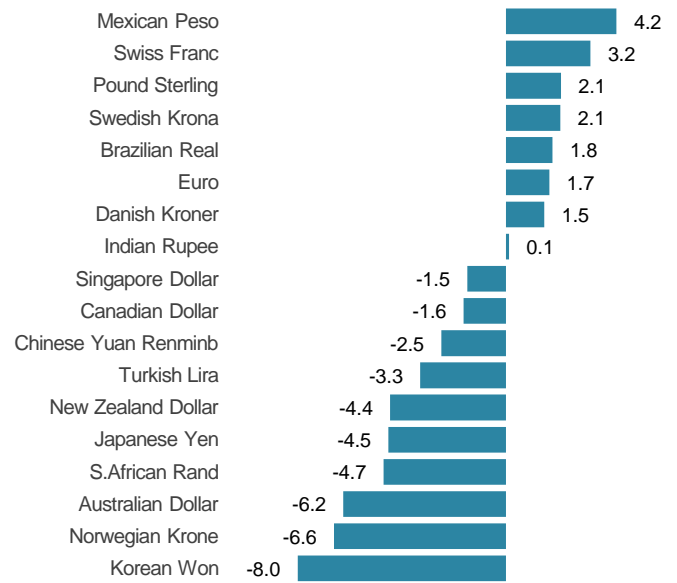
Source: FTSE Russell. All data as of April 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix – Foreign Exchange Returns % as of April 30, 2023

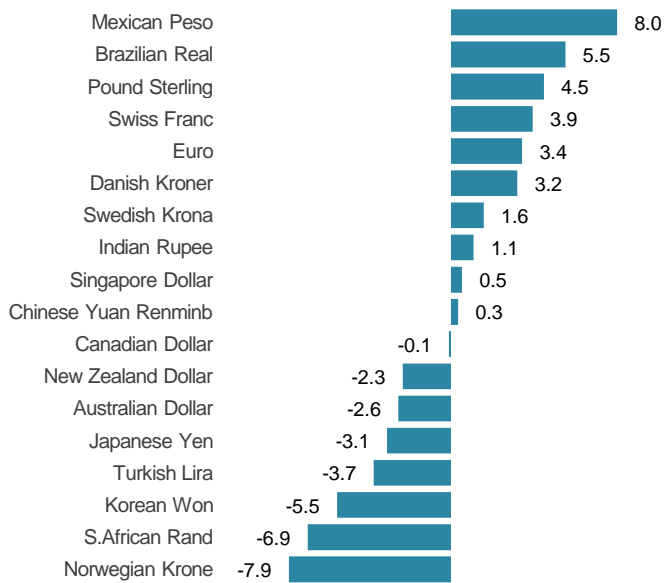
FX Moves vs USD - 1M



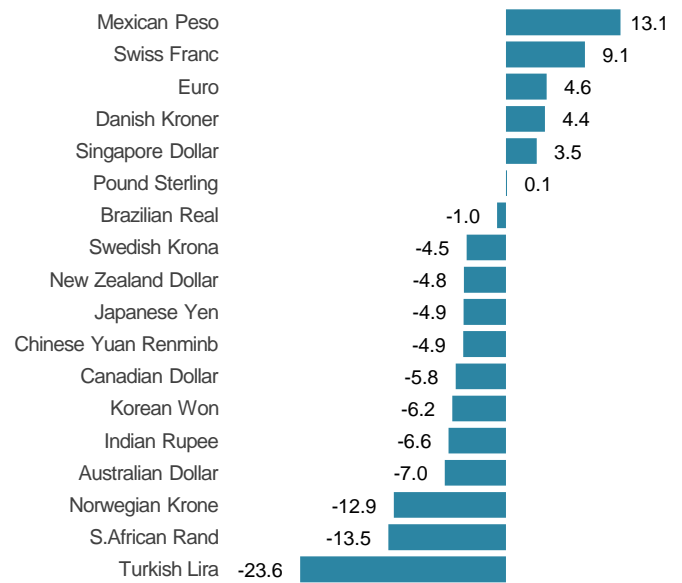
FX Moves vs USD - 3M



FX Moves vs USD - YTD



FX Moves vs USD - 12M



Source: FTSE Russell and Refinitiv. All data as of April 30, 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



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