

Fixed Income Insights

MONTHLY REPORT - JULY 2023 | JAPAN EDITION

FOR PROFESSIONAL INVESTORS ONLY

Yen weakness drives strong overseas bond returns as FX intervention risks grow

The BoJ retains yield curve control (YCC) awaiting more second round inflation effects of the external inflation shock. This has driven severe yen weakness, helping equities rally, though FX intervention risks are rising. YCC locks JGBs in narrow ranges, while Bunds and Treasuries have led strong overseas govt bonds returns.

Macro and policy backdrop – G7 cycles diverged post-Covid. Services drive stronger Japanese recovery

Differing Covid policies helped de-synchronise cycles. Services rebound, as BoJ awaits 2nd round inflation effects. (pages 2-3)

Yields, curves and spreads – Structural curve inversion continues, exc. Japan, and credit finds sweet spot

Deep curve inversion continues, as investors focus on re-investment risk. IG begins to benefit from relative value. (pages 4-5)

Sovereign and climate bonds – Sovereign re-weighting drives WGBI spreads tighter versus climate-WGBI

Japan's reduced overweight in Climate WGBI and an increase in UK's overweight notable in the June re-weightings, after the UK issued more green gilts. (page 6)

Performance – Currency moves dominated Q2 and YTD returns, led by weak yen and RMB

The weak yen drove very strong overseas bond returns, led by Eurozone govts, US Treasuries and short gilts. (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: A sharp expansion in inbound tourism have supported Japan's economic recovery, approaching pre-Covid levels.

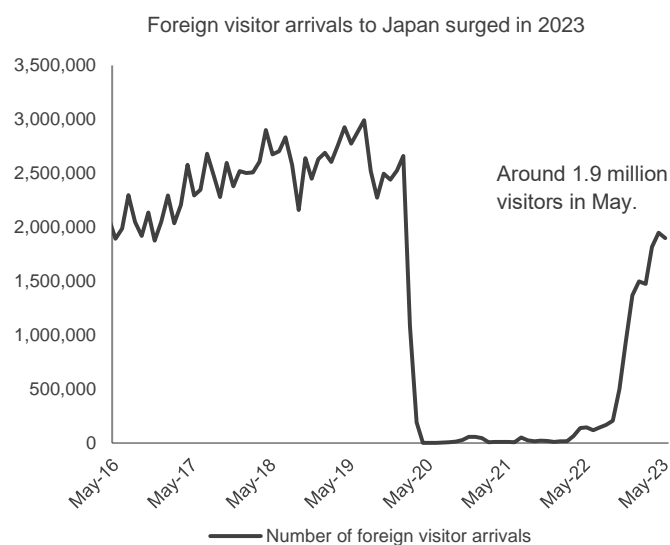
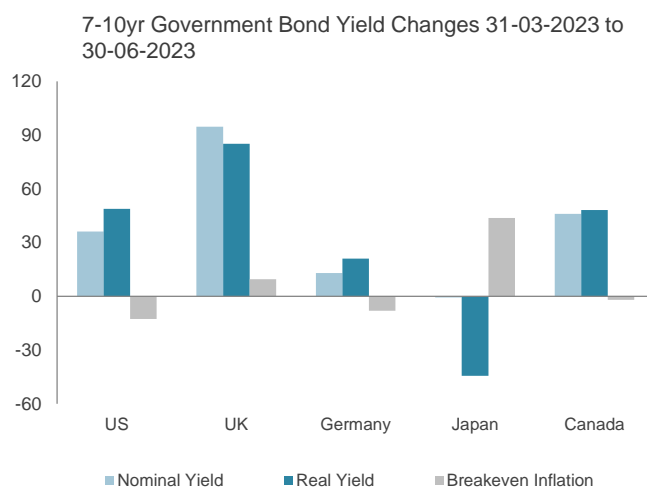


Chart 2: Nominal and real yield increases in the UK, US and Canada in Q2, and higher Japanese breakevens stood out.



Source: FTSE Russell. All data as of June 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

Evidence of a de-synchronised G7 cycle is manifest in divergent growth and inflation, due to different Covid Lockdown policy, but also energy shock differences. The UK and China remain inflation outliers. Japan’s services rebound post-Covid gathered pace, and a pass-through of higher costs to retail prices emerged, following the initial producer price rises.

Consensus GDP forecasts project Japanese growth at 1.1% in 2023, due to the squeeze on household incomes from higher inflation (Chart 1). But GDP grew 2.7% annualised in Q1 2023, led by the service sector, as tourism and internal travel recovered strongly post-Covid and Q2 looks stronger (the PMI for manufacturing showing net expansion in May for the first time in 7 months).

Higher import and energy prices, boosted by the weak yen, drove Japan’s CPI surge (all items less fresh food) to a peak of 4.3% y/y in January 2023. Chart 2 shows inflation fell faster elsewhere in the G7, than Japan, where it stabilised at 3-4% y/y in Q2, helped by govt subsidies and lower energy prices. Core-core inflation, ex fresh food and energy, increased 4.3% y/y in May, a 42 year high.

After being triggered by an external supply shock, the BoJ has expressed doubts about the sustainability of higher inflation, and would prefer to see both consumers and wage bargainers build in higher inflation expectations, as evidence of a more permanent increase in inflation. Wage growth has fallen back since the surge after the spring wage round, as Chart 3 shows.

Nonetheless, recent higher inflation and wage growth may bring the BoJ closer to a yield curve control (YCC) tweak, and the BoJ is conducting a broad review of monetary policy, in the next year. Meanwhile, YCC continues, as Chart 4 shows, with lower mid-term inflation expectations in Japan vs global peers considered another reason for the price stability target not having been met yet.

Chart 1: The IMF revised down its GDP forecast for Japan in April, despite the rebound in GDP in Q4. However, strength in services post-Covid may cause forecasts to be revised up for 2023.

Latest Consensus Real GDP Forecasts (% , June 2023)			
	2022	2023	2024
US	2.1	1.2	0.6
UK	4.1	0.2	0.8
Eurozone	3.3	0.6	1.0
Japan	1.6	1.1	1.2
China	3.0	5.4	5.0
Canada	3.5	0.7	1.4

Chart 2: Inflation dispersion has fallen from 2022 highs throughout the G7, with the UK a global outlier on higher inflation. Japanese inflation stays above the target at 3.2% YoY in May.

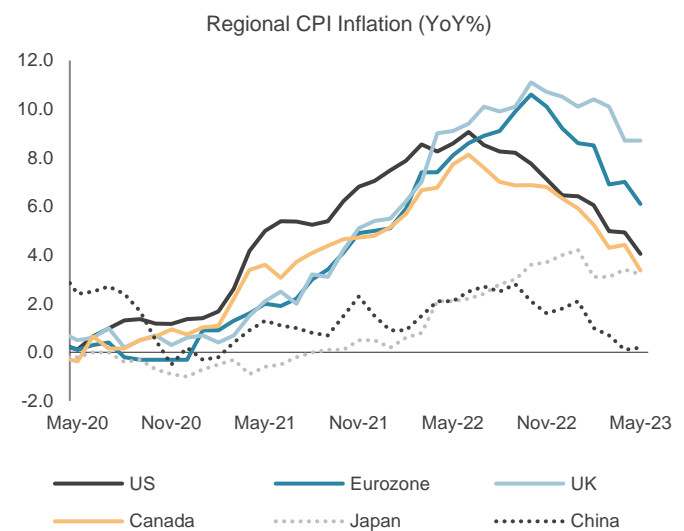


Chart 3: The spring wage round, or Shunto, showed some 2nd round effects from the initial external inflation shock, in higher wage inflation, but the BoJ would like to see more evidence.

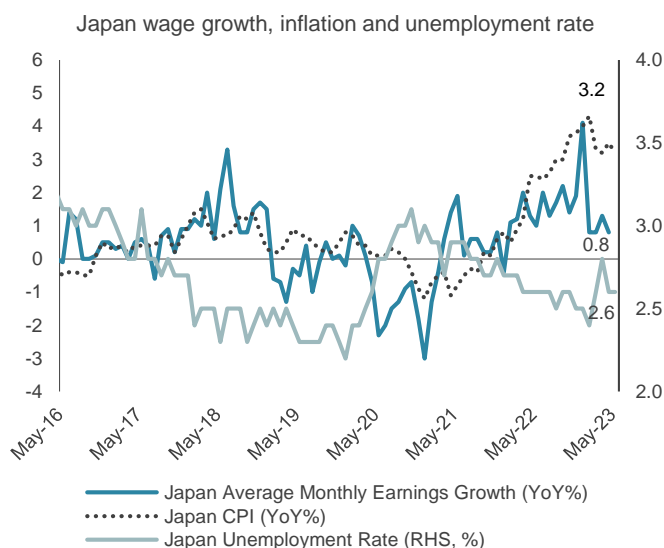
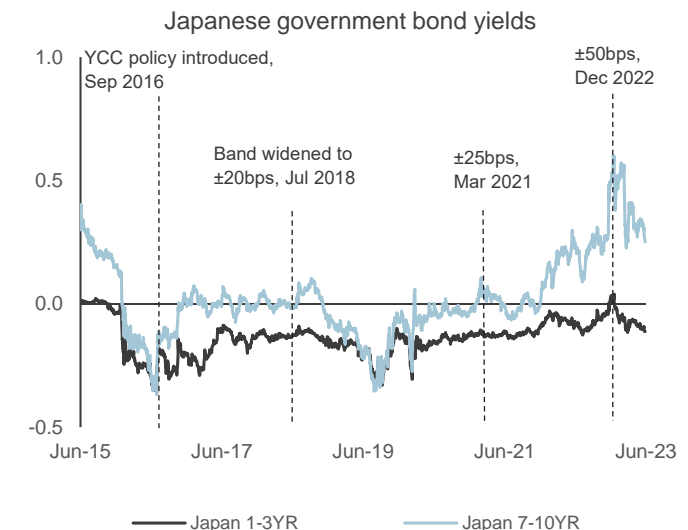


Chart 4: More signs of sustainable inflation and wage growth are required for the BoJ to adjust its YCC policy. 7-10yr bond yields stabilised at levels near 0.3%, with ongoing QE by the BoJ.



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Financial Conditions and Monetary Policy Settings

Tight labour markets remain a challenge for the G7, but policy divergence has increased, given differing inflation performance. The BoJ remains in no hurry to abandon its curve control, as yen weakness persists, helping Japan's stock market rally. G7 QT programmes and higher rates are driving the yen down towards the FX intervention levels of Q4 2022.

BoJ Governor Ueda confirmed he expects core inflation to fall back below 2% y/y in September/October, and has been resolute in retaining curve control to date. The Fed paused in June, but the BoE increased rates by a further 50bp (see Chart 1).

Central bank balance sheets continue to contract, apart from the BoJ, as G7 liquidity shrinks. Chart 2 shows the Fed's balance sheet contraction resumed in Q2. The ECB's balance sheet contraction was boosted by the unwinding of TLTROs in 2022.

Higher economic growth in Q1 (quarter-on-quarter annualised GDP growth of 2.7%), provisional signs of an escape from deflation in Japan, increased foreign interest and yen weakness have driven the stock market rally in Q2. Chart 3 suggests Japan's equity market performance has been squeezed by the lack of corporate pricing power during the long era of deflation.

The Japanese yen weakened significantly against the US dollar in Q2, reaching 144 per dollar by the end of June, despite the fact the US dollar gave up grounds against sterling, euro, and the Canadian dollar. The Bank of Japan may act again to defend the depreciating yen, like last October when the currency declined below 149 against the dollar (Chart 4).

Chart 1: Policy rates diverged further in June, after divergent inflation continued. The BoJ is committed to YCC, and zero rates, until it sees further evidence of inflation sustainably above 2%/y/y.

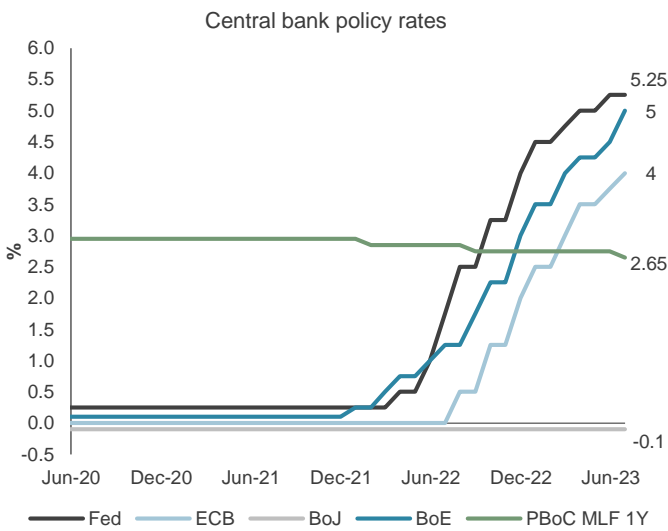


Chart 2: The Fed's balance sheet unwound March's emergency lending, but the ECB's balance sheet has contracted most since 2022. The BoJ continues with QE, but for how much longer?

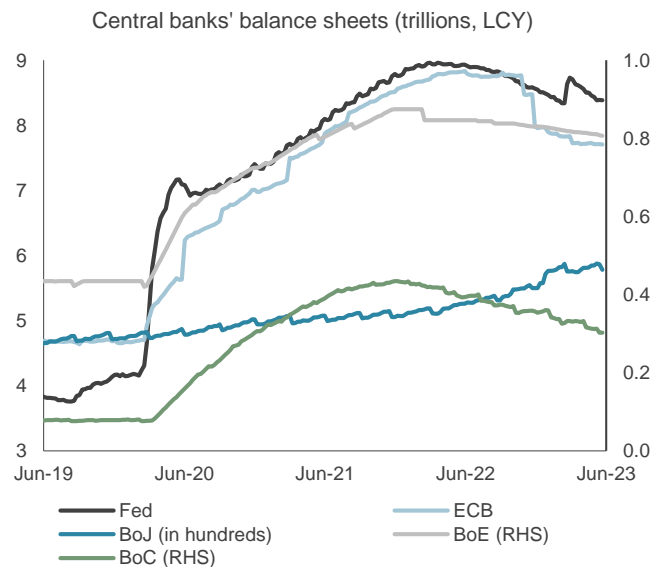


Chart 3: Higher growth, rising inflation expectations and increased foreign interest drove the stock market rally, with the weaker yen being another driver.

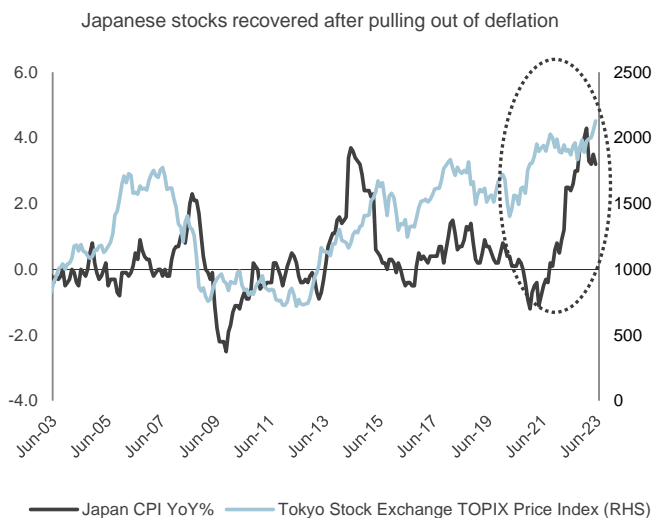
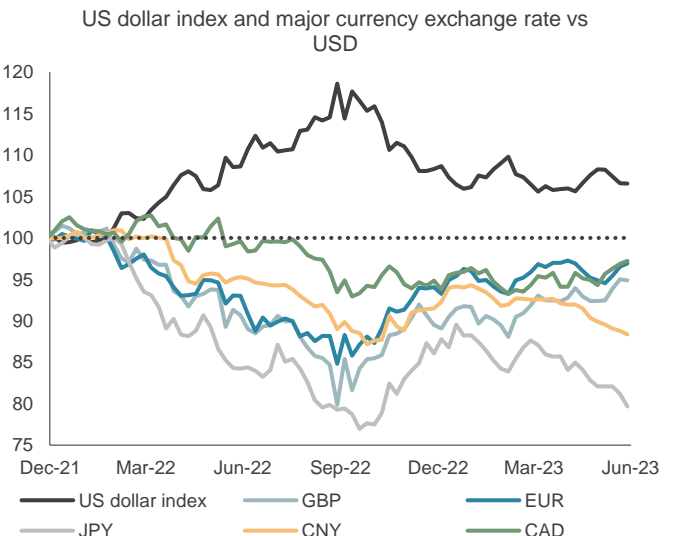


Chart 4: JPY has weakened in Q2 against the USD, trading at 144 by end-June (lowest since last October), despite a weaker US dollar index recently. A central bank intervention may occur again.



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Global Yields, Curves and Spread Analysis

Chart 1: G7 7-10yr yields edged higher in June. The biggest move was in gilts, which spiked on higher inflation and the BoE's 50bp rate move. Treasury yields range traded after the Fed policy pause.

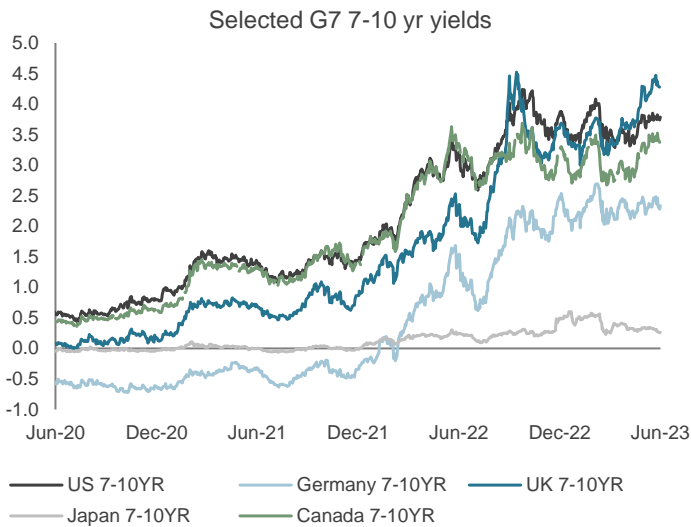


Chart 2: Real yields generally tracked nominals a little higher in June, but the biggest increase was in UK inflation linked bonds. US and UK real yields remain close to the cycle highs of 2022.

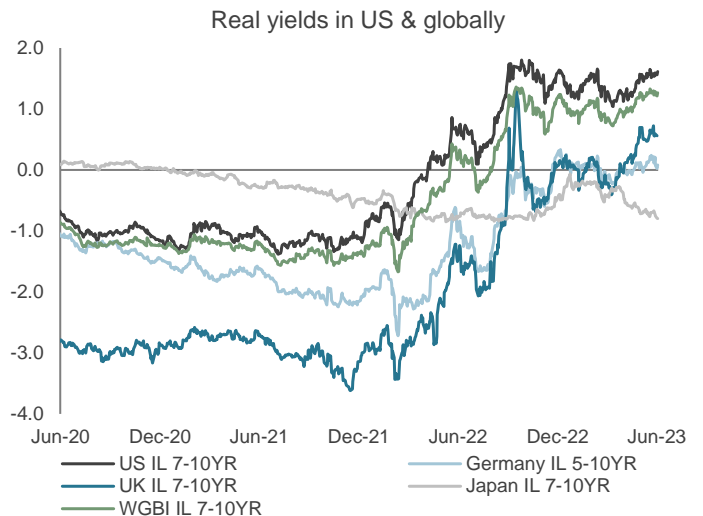


Chart 3: Deep inversion of G7 yield curves continues, led by the US 10s/2s, and the March steepening after the banking crisis reversed. BoJ curve control continues to keep the JGB curve positively sloped.

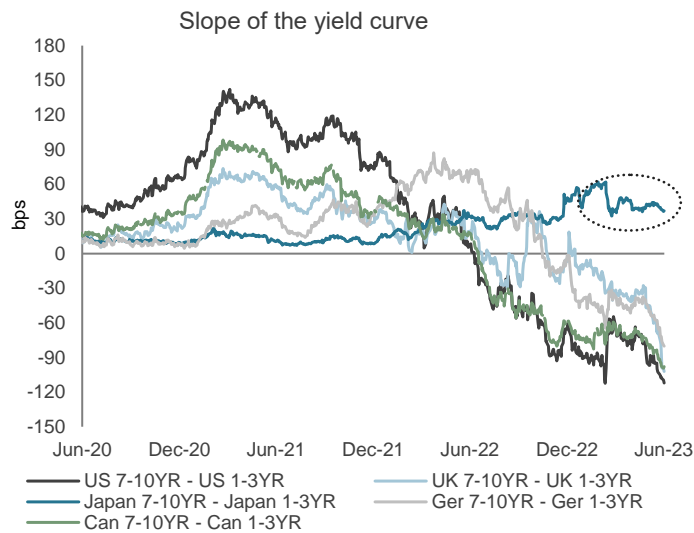


Chart 4: It is a similar story with inversion in long maturities, with Japan the exception. With yields near 15-year highs, investor concern over re-investment risks may be keeping curves inverted.

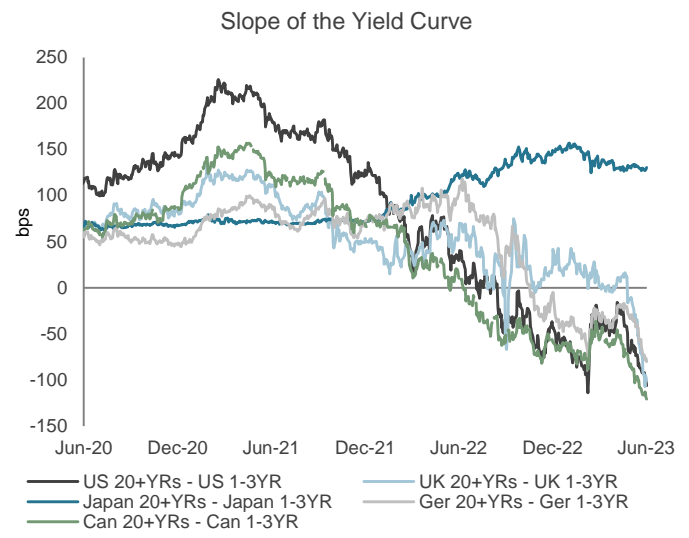


Chart 5: Inflation breakevens moved higher in the UK and Japan in June, while remaining stable near 2% elsewhere. This is in line with persistently higher inflation in the UK and Japan.

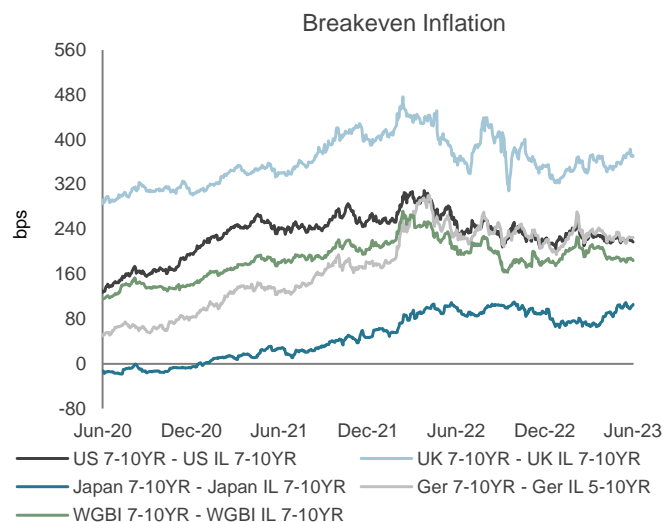


Chart 6: Global inflation breakevens of all tenors have converged near 2%, after a period of much higher short-dated breakevens. There is little evidence of inflation expectations de-stabilising.



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Yield Spread and Credit Spread Analysis

Chart 1: US sovereign spreads widened versus Japan in Q2, but fell sharply versus the UK, after the spike in gilt yields, taking them to new post-Covid lows. Spreads widened versus Bunds.

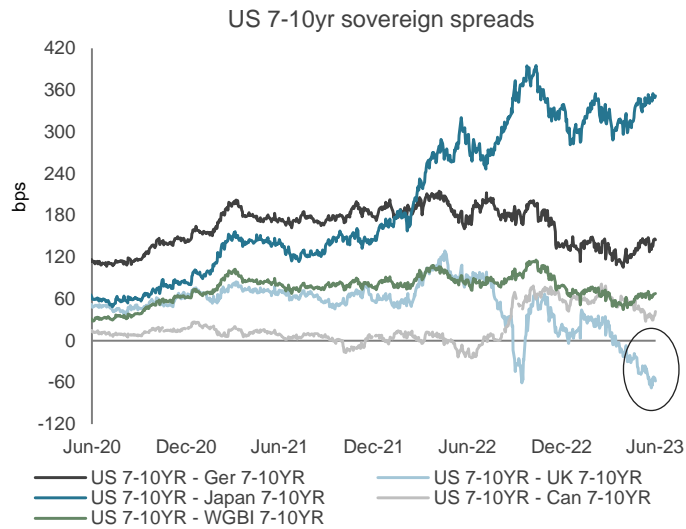


Chart 2: Peripheral Eurozone spreads fell, with Italy a strong performer, helped by lower energy prices, political stability, and support from the ECB's transmission protection instrument.

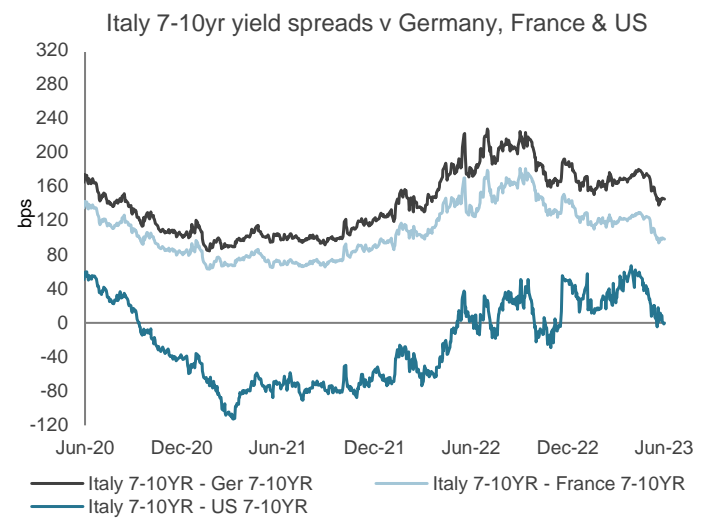


Chart 3: EM spreads remain at, or near post-Covid lows, reflecting early counter-inflation action by EM than the G7, reduced re-financing risks in EM debt, and favorable external accounts.

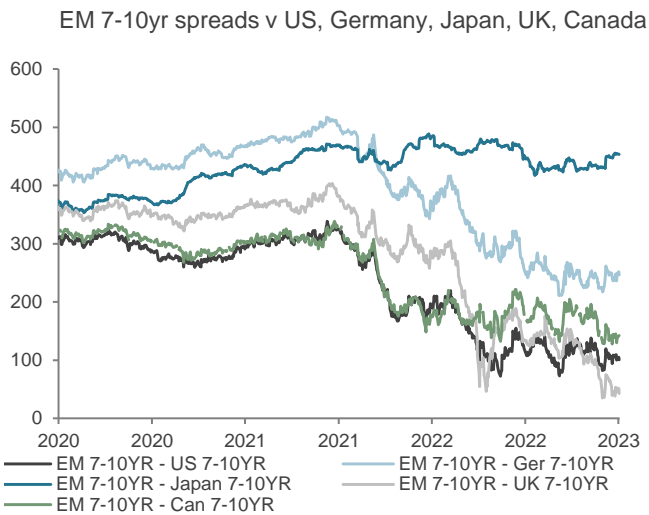


Chart 4: Chinese sovereign spreads tightened further in June, after the PBoC eased rates, and some G7 central banks raised rates. Very low inflation gives the PBoC room to ease rates further.

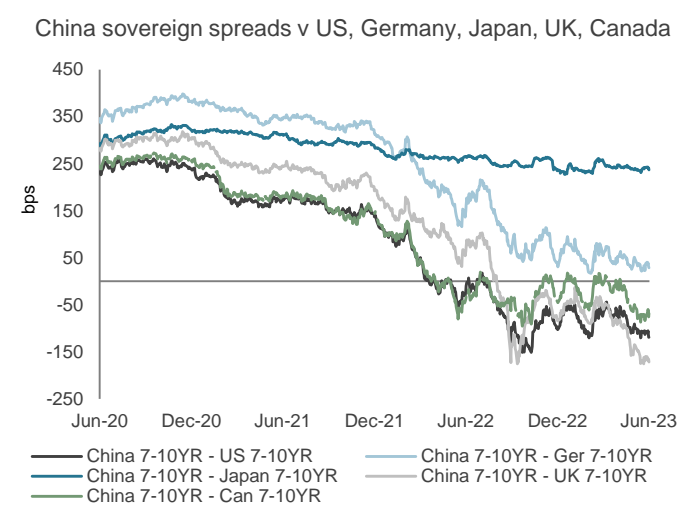


Chart 5: High yield spreads edged wider in June, led by Eurozone spreads, but they remain below Covid levels. US IG credits fell in June, perhaps reflecting the fact spreads are relatively high vs HY.

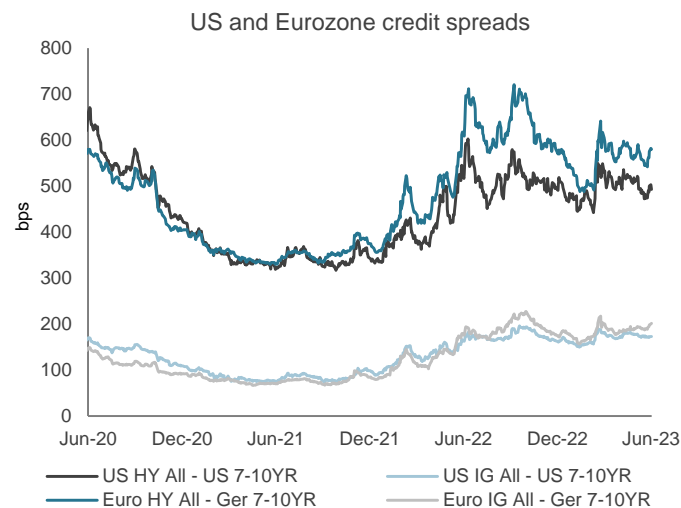


Chart 6: Chinese \$ HY spreads tightened in early June before backing up to 6000bps, after defaults by property developers and a lack of new property stimulus measures. Restructurings made little progress.



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Sovereign and Climate Bonds Analysis

Chart 1: With yields surging in the UK, while near zero in Japan, and Japan's climate-WGBI weight falling, overall WGBI spreads narrowed sharply versus climate WGBI in June, led by 1-3 years.

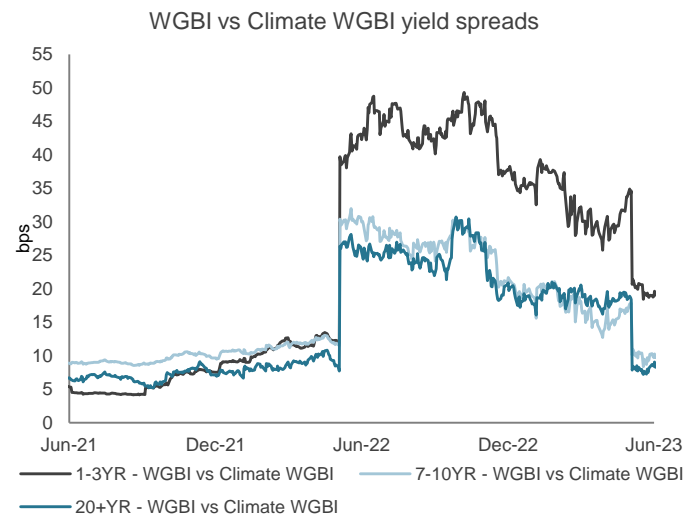


Chart 2: Both a decrease in Japan's overweight in Climate WGBI vs WGBI and an increase in UK's overweight were notable in the June re-weightings, after the UK issued more green gilts.

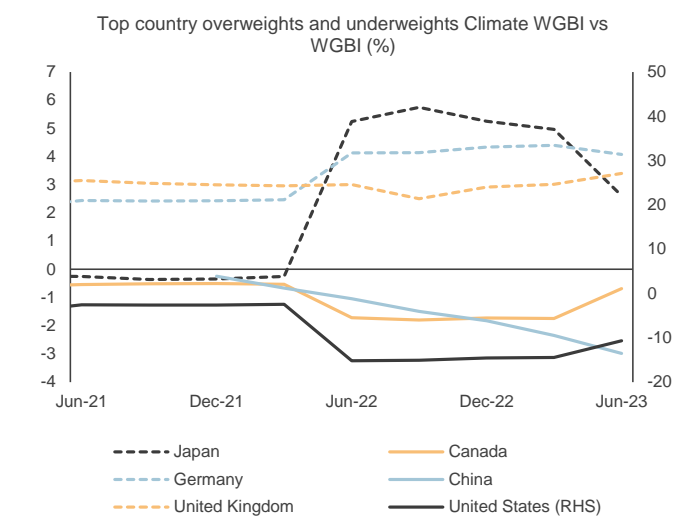


Chart 3: Within IG credit, green corporates are underweight in higher-rated sectors of AAA/AA vs global peers, and overweight most in the BBB sector (54.7% vs 51.4%).

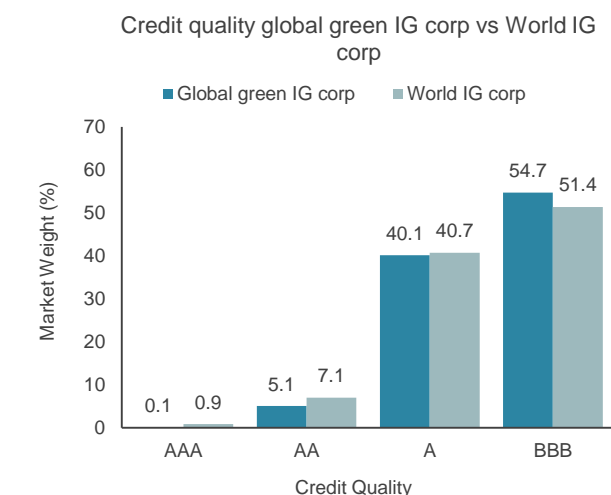


Chart 4: The opposite is seen in HY – higher rated BB bonds have a much larger share compared with global peers, 89.2% vs 54.5%, suggesting better credit quality for HY green corporates.

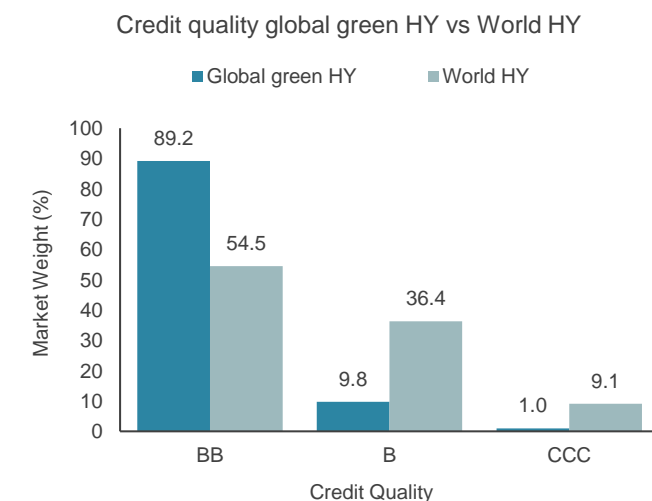


Chart 5: Euro green bonds dominate currency weights in the Global Green index at 68.3%, in contrast to the low USD weight (18%). This is reversed in WorldBIG with a USD weight of 55%.

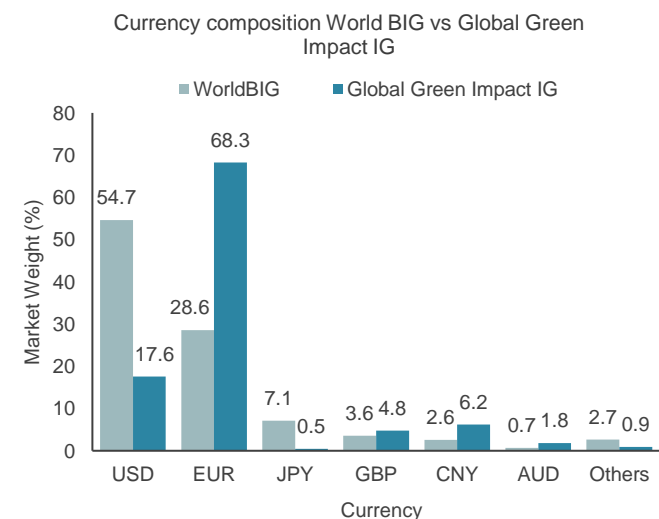
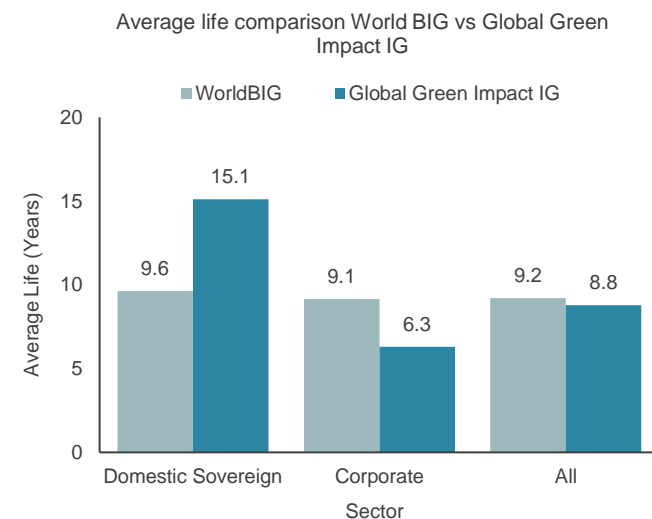


Chart 6: Breakdown of Global Green & WorldBIG indices shows differences in average life for different components. Corporates offset the Sovereign impact in boosting Global Green average life.



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Global Sovereign Bond Returns – 3M and YTD % (JPY & LC, TR) as of June 30, 2023

Sovereign bonds delivered significant 3M and YTD returns in JPY terms, led by Bunds, as yen depreciated sharply, although higher inflation and rates drove gilts lower in local currency terms. Chinese bond returns in yen benefited from the stronger yuan vs yen. Bunds and short gilts performed best YTD, and JGBs were the weakest.

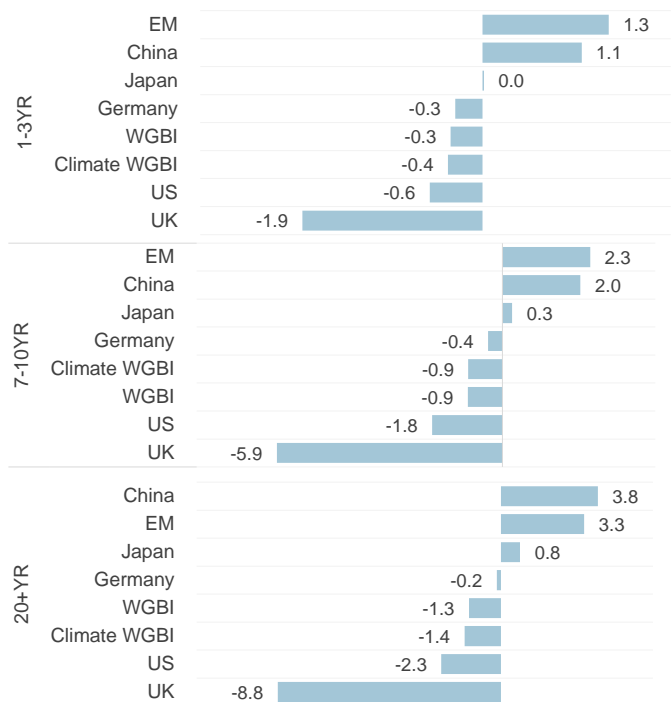
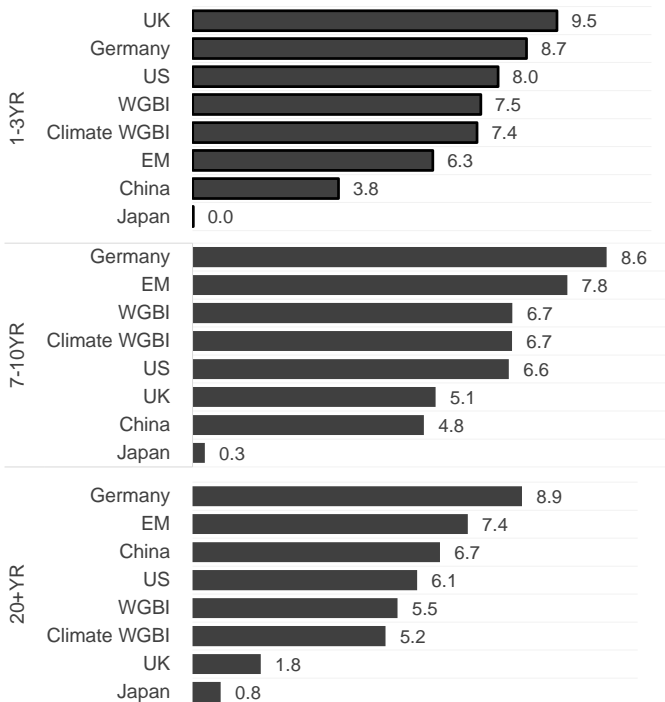
3M returns show the impact of severe yen weakness with the currency falling against almost all the other currencies, including a weaker yuan vs dollar. Notably, sterling strength boosted gilts returns in yen substantially by more than 10% (see page 12).

YTD, G7 yields have fallen, apart from gilts, as curves inverted further and inflation fell, with long Bunds and US Treasuries up 4-5% in local currency, and euro and US dollar strength boosting returns in yen terms to 17 and 15% respectively.

CONVENTIONAL GOVT BONDS

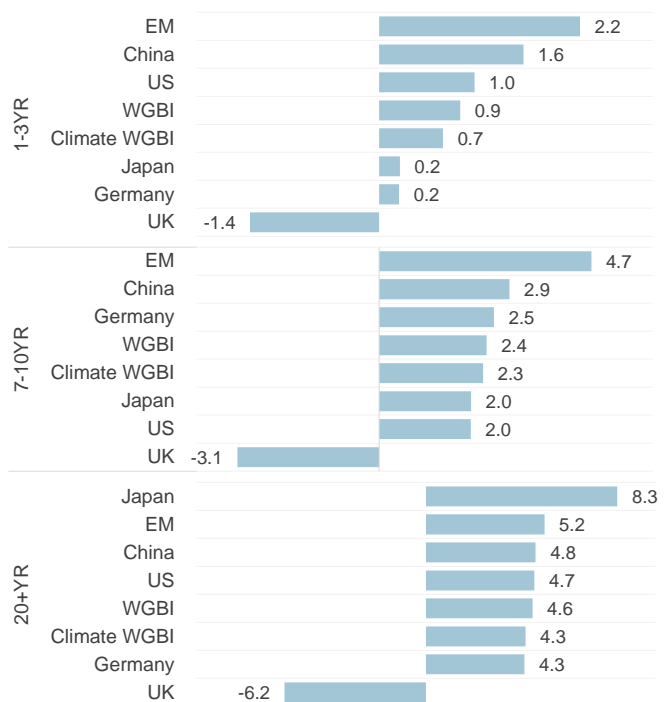
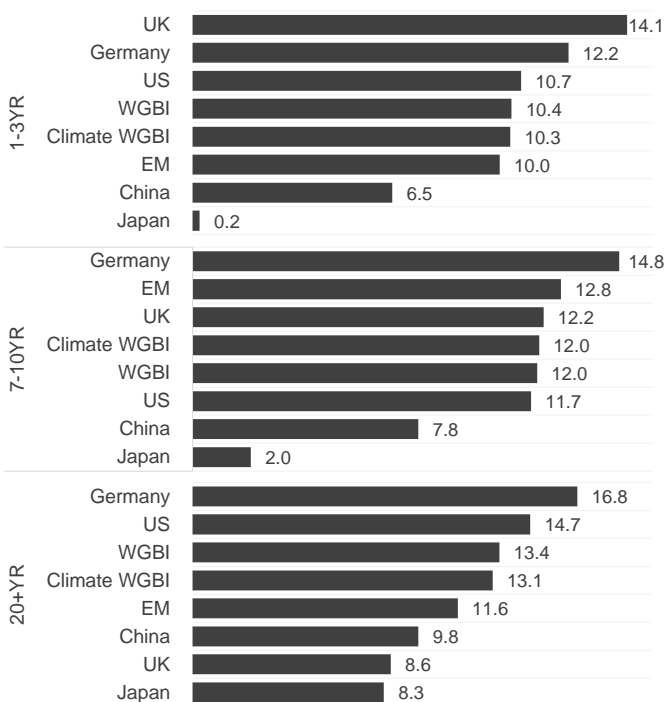
3M JPY

3M LCY



YTD JPY

YTD LCY



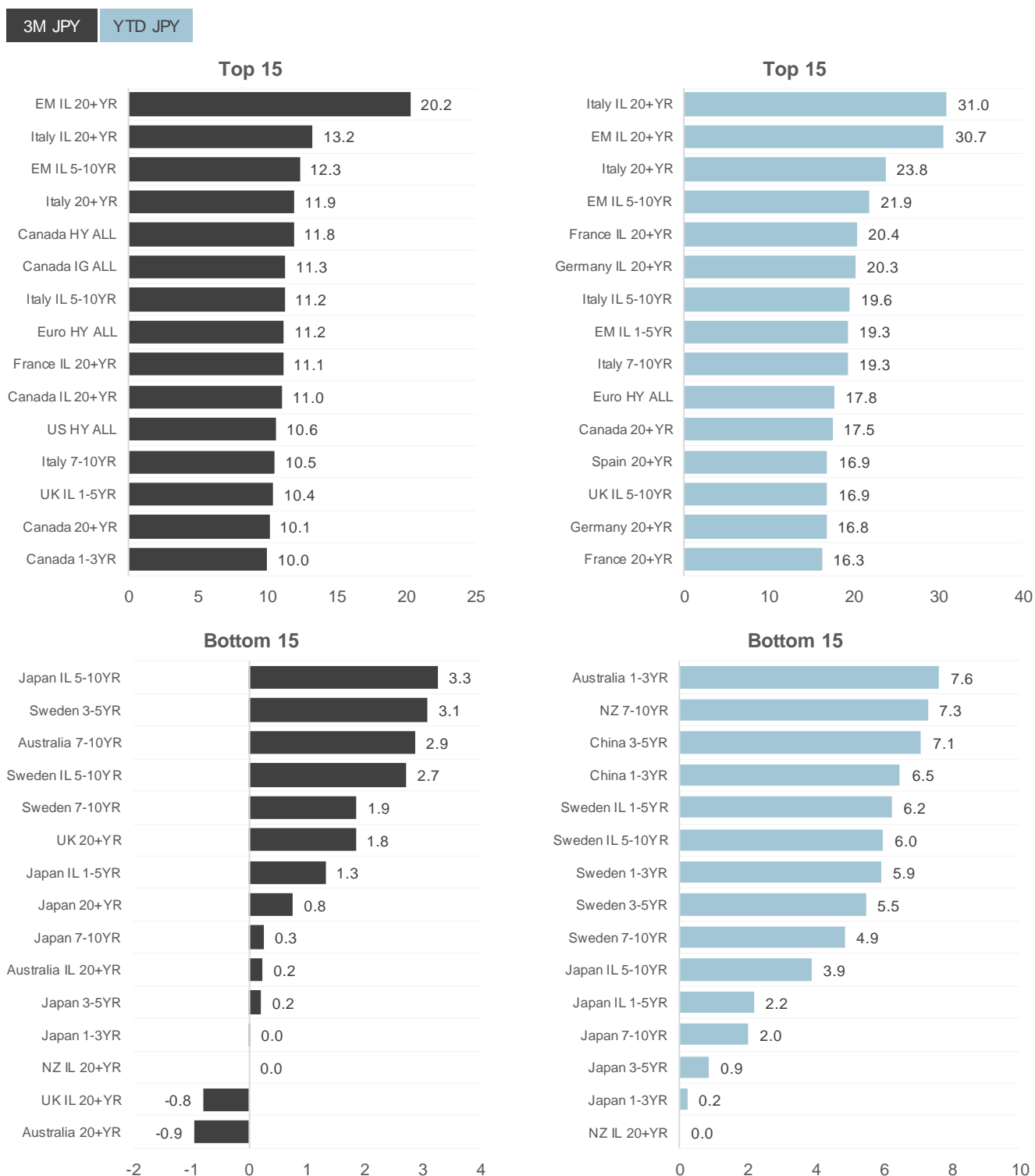
Source: FTSE Russell. All data as of June 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors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

Top and Bottom Bond Returns – 3M & YTD % (JPY, TR) as of June 30, 2023

Longer EM inflation linked (IL) and European bonds, and Canadian credit, led 3M gains of 11-20%, and YTD of 16-31%, in yen terms. Pronounced yen weakness boosted overseas returns in yen terms, especially in Eurozone and EM bonds.

Currencies have been big drivers of fixed income returns in 2023, reflecting differences in inflation and policy cycles. EM inflation-linked performed strongly, after early counter-inflation tightening. Canadian HY also benefited from short duration and the risk rally.

YTD, Swedish and Chinese bonds underperformed, but a weak yen boosted JPY returns, up 5-7%. Long Euro government bonds benefited from spread convergence as risk appetite recovered, and inflation fell, with long Italy returns of 24-31% in yen terms.



Source: FTSE Russell. All data as of June 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 % (JPY & LC, TR) – June 30, 2023

Government Bond Returns

Top 15% Bottom 15%

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

		3M		6M		YTD		12M	
		Local	JPY	Local	JPY	Local	JPY	Local	JPY
WGBI	1-3YR	-0.34	7.54	0.89	10.37	0.89	10.37	-0.21	6.57
	7-10YR	-0.90	6.68	2.36	11.95	2.36	11.95	-2.81	3.98
	20+YR	-1.26	5.53	4.64	13.38	4.64	13.38	-7.99	-2.42
WGBI x Japan	1-3YR	-0.91	7.56	1.07	11.52	1.07	11.52	-1.73	5.83
	7-10YR	-1.05	7.52	2.49	13.41	2.49	13.41	-3.44	4.21
	20+YR	-1.81	6.85	3.63	14.80	3.63	14.80	-10.27	-3.15
US	1-3YR	-0.56	7.99	1.04	10.69	1.04	10.69	0.16	6.56
	7-10YR	-1.84	6.60	2.01	11.74	2.01	11.74	-3.31	2.86
	20+YR	-2.35	6.05	4.73	14.72	4.73	14.72	-8.47	-2.62
	IG All	-0.27	8.31	3.30	13.16	3.30	13.16	1.46	7.94
	HY All	1.84	10.59	5.55	15.62	5.55	15.62	9.06	16.03
UK	1-3YR	-1.91	9.53	-1.42	14.14	-1.42	14.14	-2.68	8.39
	7-10YR	-5.90	5.07	-3.11	12.17	-3.11	12.17	-12.55	-2.60
	20+YR	-8.80	1.84	-6.17	8.64	-6.17	8.64	-26.94	-18.63
EUR	IG All	0.45	9.54	2.31	14.57	2.31	14.57	0.17	11.21
	HY All	1.67	11.17	4.78	17.76	4.78	17.76	9.23	21.35
Japan	1-3YR	0.01	0.01	0.23	0.23	0.23	0.23	0.03	0.03
	7-10YR	0.25	0.25	2.02	2.02	2.02	2.02	0.33	0.33
	20+YR	0.76	0.76	8.34	8.34	8.34	8.34	0.03	0.03
China	1-3YR	1.05	3.82	1.58	6.49	1.58	6.49	2.76	0.75
	7-10YR	2.04	4.83	2.86	7.83	2.86	7.83	4.51	2.47
	20+YR	3.83	6.67	4.78	9.84	4.78	9.84	8.19	6.08
EM	1-3YR	1.34	6.28	2.20	9.99	2.20	9.99	4.22	6.22
	7-10YR	2.29	7.82	4.65	12.78	4.65	12.78	7.78	9.59
	20+YR	3.29	7.42	5.17	11.56	5.17	11.56	9.45	9.80
	IG All	0.92	9.60	3.15	12.99	3.15	12.99	2.82	9.39
	HY All	0.59	9.24	1.50	11.18	1.50	11.18	6.41	13.21
Germany	1-3YR	-0.29	8.74	0.22	12.22	0.22	12.22	-2.40	8.36
	7-10YR	-0.38	8.64	2.52	14.80	2.52	14.80	-6.29	4.04
	20+YR	-0.16	8.88	4.29	16.78	4.29	16.78	-13.40	-3.85
Italy	1-3YR	-0.08	8.96	0.98	13.08	0.98	13.08	-1.03	9.89
	7-10YR	1.31	10.49	6.57	19.33	6.57	19.33	-1.21	9.69
	20+YR	2.61	11.90	10.52	23.75	10.52	23.75	-6.39	3.93
France	1-3YR	-0.32	8.70	0.51	12.55	0.51	12.55	-2.46	8.29
	7-10YR	-0.28	8.75	2.62	14.91	2.62	14.91	-5.42	5.01
	20+YR	0.34	9.42	3.83	16.27	3.83	16.27	-10.88	-1.06
Australia	1-3YR	-1.52	6.30	0.10	7.63	0.10	7.63	0.66	3.66
	7-10YR	-4.70	2.87	1.95	9.62	1.95	9.62	0.74	3.75
	20+YR	-8.22	-0.94	2.34	10.03	2.34	10.03	-4.75	-1.90
NZ	1-3YR	-0.14	6.20	1.43	7.63	1.43	7.63	0.75	5.61
	7-10YR	-1.74	4.49	1.11	7.29	1.11	7.29	-1.57	3.18

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Appendix – Historical Bond Yields % as of June 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	5.01	4.31	3.85	3.95	2.45	1.72	1.68	5.53	8.61
	3M Ago	4.20	3.72	3.49	3.76	1.44	1.17	1.53	5.25	8.45
	6M Ago	4.54	4.13	3.88	4.11	2.09	1.68	1.82	5.50	9.00
	12M Ago	2.96	3.03	2.97	3.28	-0.04	0.64	1.14	4.74	8.86
UK	Current	5.36	5.04	4.38	4.35	1.78	0.72	0.90		
	3M Ago	3.79	3.55	3.43	3.80	0.00	-0.27	0.35		
	6M Ago	3.50	3.65	3.69	3.92	-0.68	0.15	0.49		
	12M Ago	1.94	1.73	2.01	2.51	-2.87	-1.70	-0.71		
Japan	Current	-0.10	-0.01	0.29	1.21	-1.64	-0.87			
	3M Ago	-0.09	0.02	0.30	1.22	-1.30	-0.51			
	6M Ago	0.03	0.15	0.48	1.50	-1.22	-0.54			
	12M Ago	-0.09	-0.02	0.21	1.19	-0.99	-0.67			
China	Current	2.09	2.33	2.66	3.08					
	3M Ago	2.31	2.56	2.84	3.25					
	6M Ago	2.28	2.53	2.85	3.26					
	12M Ago	2.19	2.47	2.82	3.34					
EM	Current	3.67	4.04	4.79	4.42	4.15	4.07	4.86	5.95	
	3M Ago	3.62	4.37	4.69	4.52	2.59	3.67	5.15	5.77	
	6M Ago	3.78	4.38	4.95	4.61	2.79	3.04	5.15	5.92	
	12M Ago	3.64	4.35	4.87	4.82	3.61	3.71	5.26	5.08	
Germany	Current	3.17	2.66	2.37	2.36	0.96	0.19	-0.06		
	3M Ago	2.69	2.36	2.24	2.33	-0.02	-0.12	-0.15		
	6M Ago	2.56	2.53	2.54	2.51	0.40	0.34	0.18		
	12M Ago	0.56	0.32	0.64	1.07	-2.33	-1.57	-1.07		
Italy	Current	3.79	3.71	3.87	4.25	1.74	1.78	1.70		
	3M Ago	3.27	3.43	3.88	4.34	0.45	1.50	1.74		
	6M Ago	3.34	3.72	4.38	4.72	1.16	2.19	2.18		
	12M Ago	1.34	1.90	2.69	3.18	-2.47	0.29	1.01		
France	Current	3.21	2.94	2.85	3.19	0.88	0.47	0.55		
	3M Ago	2.83	2.66	2.70	3.17	-0.29	0.05	0.53		
	6M Ago	2.85	2.82	2.97	3.30	0.15	0.44	0.77		
	12M Ago	0.81	0.85	1.25	2.02	-2.47	-1.28	-0.34		
Sweden	Current	3.43	2.94	2.61		1.18	0.91			
	3M Ago	2.85	2.56	2.25		0.09	0.32			
	6M Ago	2.80	2.65	2.37		-0.24	0.25			
	12M Ago	1.74	1.55	1.38		-1.59	-1.45			
Australia	Current	4.17	3.99	4.02	4.36	1.04	1.47	1.85		
	3M Ago	3.03	3.00	3.27	3.82	0.01	0.82	1.43		
	6M Ago	3.43	3.62	4.01	4.37	0.60	1.45	1.88		
	12M Ago	2.92	3.18	3.38	3.79	-0.41	0.75	1.51		
NZ	Current	5.08	4.67	4.61	4.77	1.53	2.15			
	3M Ago	4.78	4.37	4.23	4.37	1.04	1.72			
	6M Ago	5.00	4.62	4.46	4.54	1.54	2.06			
	12M Ago	3.54	3.77	3.89	4.29	0.39	1.65			
Canada	Current	4.34		3.34	3.13			1.54	5.36	
	3M Ago	3.58		2.87	3.03			1.28	5.00	
	6M Ago	3.90		3.30	3.31			1.33	5.27	
	12M Ago	3.08		3.21	3.18			1.23	4.83	

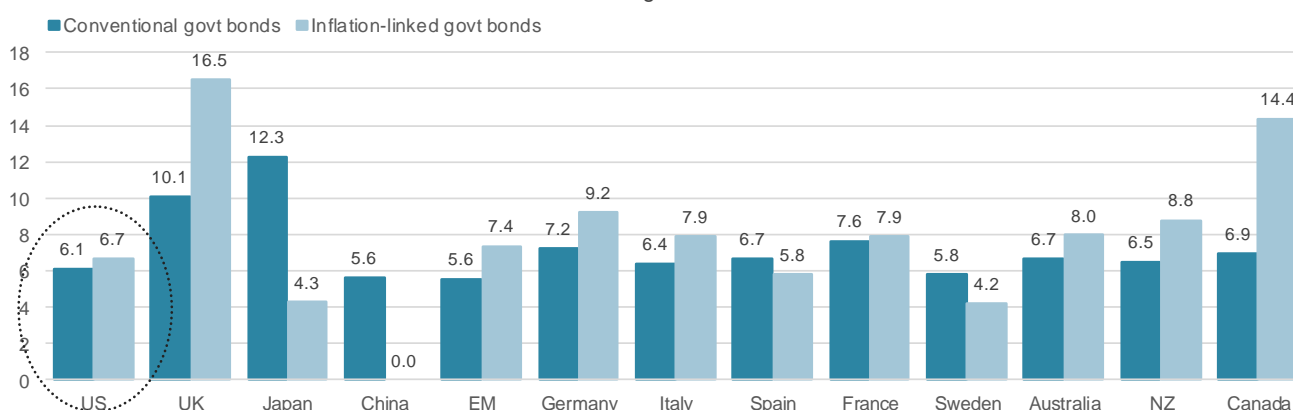
Source: FTSE Russell. All data as of June 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

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

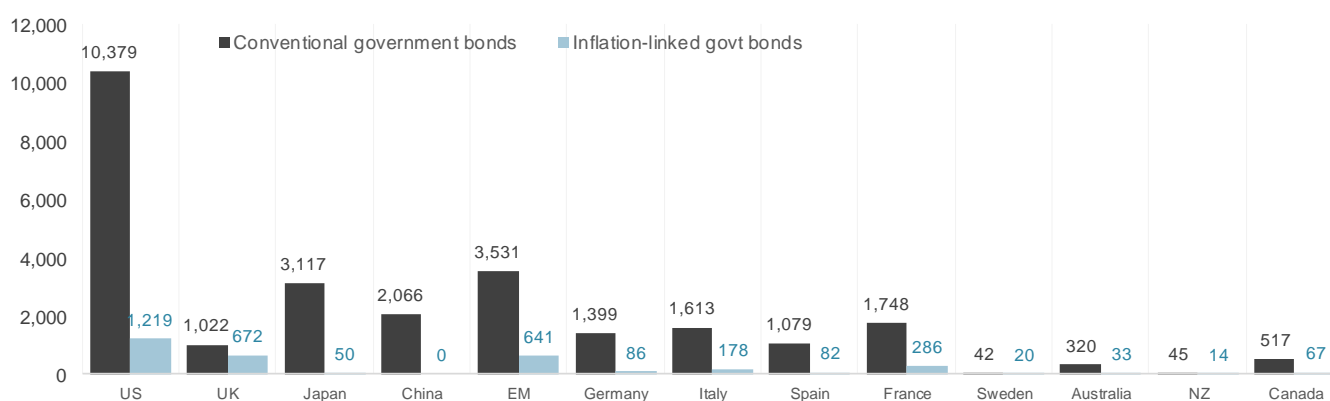
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.5	17.5	6.1	2,282.7	1,053.3	1,291.9	10,379.5	7.0	21.6	6.7	401.0	124.4	1219.3
UK	3.5	7.4	18.6	10.1	137.6	150.1	296.1	1,021.6	6.7	28.1	16.5	129.6	258.3	672.2
Japan	3.9	7.9	24.0	12.3	345.7	360.9	698.4	3,117.1	7.2		4.3	17.8		49.7
China	3.7	7.6	17.6	5.6	494.9	311.8	243.2	2,066.2						
EM	3.5	7.0	15.9	5.6	776.12	619.98	343.05	3,530.8	5.5	13.9	7.4	136.5	167.1	640.8
Germany	3.8	7.7	20.5	7.2	294.31	230.26	155.36	1,399.1	7.3	22.0	9.2	42.0	19.2	86.5
Italy	3.7	7.3	16.4	6.4	304.59	265.68	154.27	1,613.1	8.1	26.5	7.9	55.2	5.7	178.1
Spain	3.6	7.4	17.2	6.7	218.31	192.38	108.40	1,078.9	6.9		5.8	22.5		81.8
France	3.9	7.8	20.5	7.6	304.76	295.56	211.53	1,747.8	6.8	24.6	7.9	102.7	21.7	286.1
Sweden	3.9	7.8		5.8	13.15	8.61		42.0	5.9		4.2	9.4		20.3
Australia	3.7	7.8	17.6	6.7	50.66	87.55	15.00	319.7	7.3	22.5	8.0	9.5	2.6	32.7
NZ	4.0	7.7	17.2	6.5	9.23	10.46	2.29	44.6	6.4		8.8	3.1		13.7
Canada		7.3	18.9	6.9		186.00	88.00	517.4		14.4	14.4		67.0	67.0

	Investment grade bonds					High Yield						
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.0	8.8	7.4	6.7	7.2	74.0	451.3	2,591.1	3,292.0	6,408.4	4.0	1,162.9
Euro	6.4	4.9	4.7	4.3	4.5	9.5	186.1	1,160.6	1,445.9	2,802.1	3.1	418.8
EM		5.9	4.9	5.1	5.1		45.08	222.29	330.9	598.2	3.3	191.2

Average Duration



Total Market Value (USD Billions)

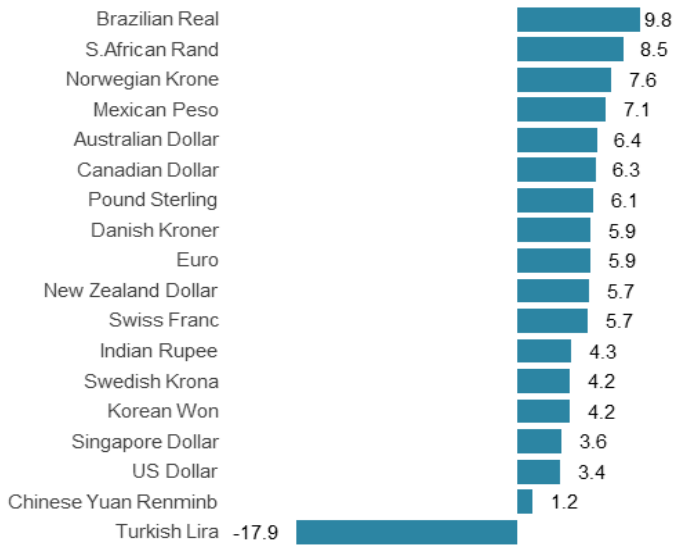


Data as of 2023-06-30

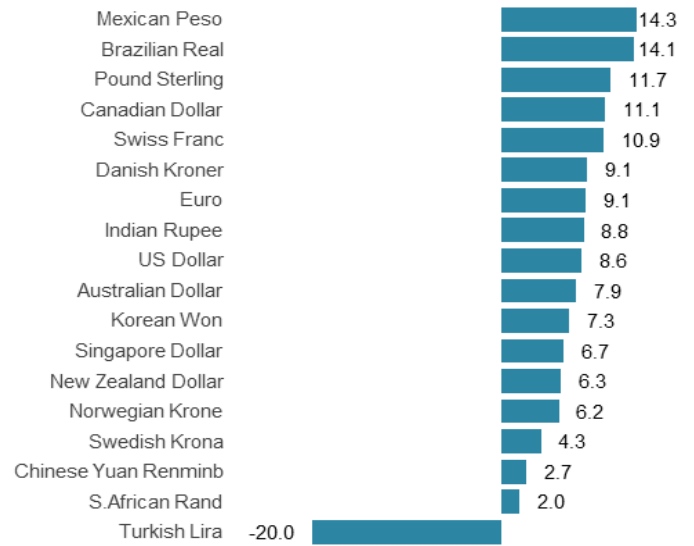
Source: FTSE Russell. All data as of June 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

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

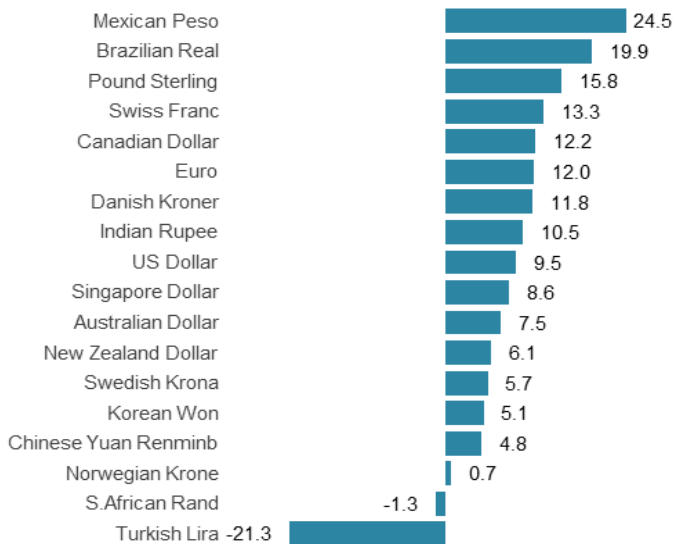
FX Moves vs JPY - 1M



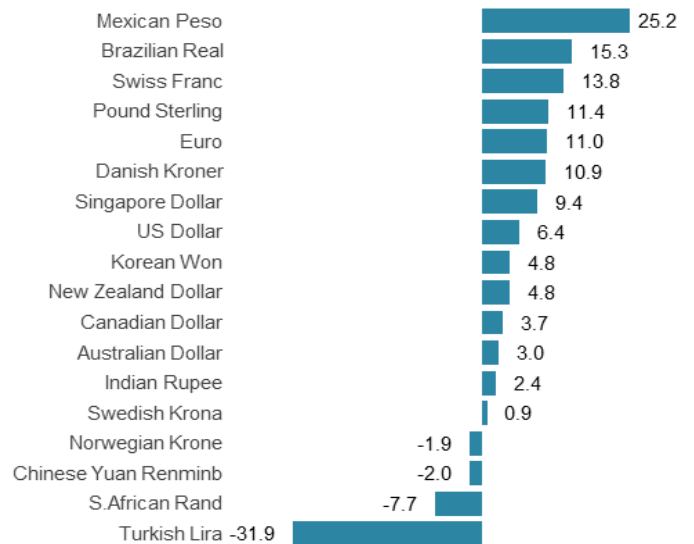
FX Moves vs JPY - 3M



FX Moves vs JPY - YTD



FX Moves vs JPY - 12M



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