FTSE Russell
An LSEG Business

Fixed Income Insights

MONTHLY REPORT – **OCTOBER 2023 | US EDITION**

FOR PROFESSIONAL INVESTORS ONLY

US Treasuries re-price for Goldilocks after a soft landing for growth

G7 yield curves dis-inverted modestly in September, as long yields rose sharply, despite central bank policy pauses, and higher energy prices. The move in long yields suggests some capitulation to the higher for longer narrative, with the US economy still near full employment. Chinese and EM bonds again outperformed.

Macro and policy backdrop – Soft landings for growth give central banks room to retain tight policy settings
Central banks mostly paused tightening cycles in September, but higher energy prices extended inflation risks. (pages 2-3)

Yields, curves and spreads – Curve dis-inversion in long bonds as some long G7 yields reach new cycle highs
Longs led yield curve dis-inversion in September, suggesting some capitulation, as Treasury spreads widened. (pages 4-5)

Credit and MBS analysis – Signs of recovery in US real estate. MBS spreads trending wider as Fed unwinds holdings
US real estate spreads tightened notably since Q1 banking crisis. European insurance spreads also tightened. (page 6)

Sovereign and climate bonds – High Japan & Euro weight in climate-WGBI continues to squeeze returns vs WGBI
The underperformance by JGBs has continued to weigh on Climate-WGBI returns. (page 7)

Performance – Long maturities suffered more losses in Q3. HY credit, China and EM bonds outperformed
Duration proved the investor's enemy in Q3, with JGB returns squeezed further by yen weakness. (pages 9-10)

Appendix (from page 11)
Global bond market returns, historical bond yields, bond market durations and market values and foreign exchange returns.

Chart 1: Real and nominal yields rose sharply in the G7 (ex UK), as markets showed acceptance of the higher for longer narrative.

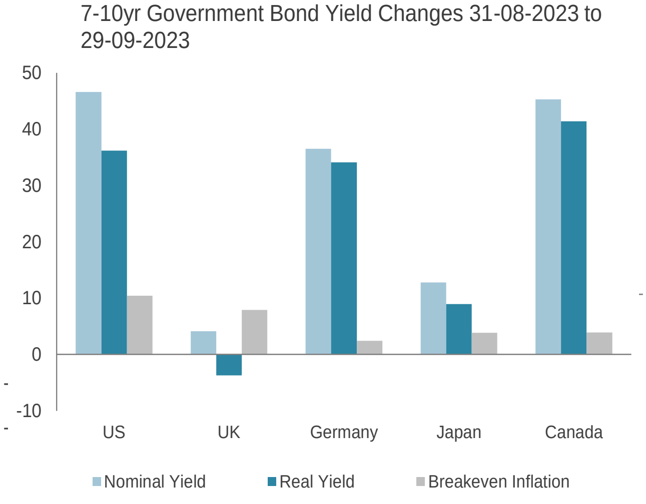
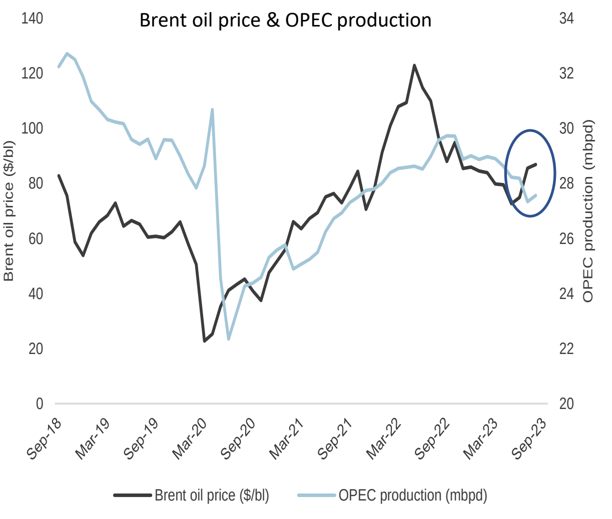


Chart 2: Oil prices have generally been demand-driven since Covid, but recent OPEC supply cuts have led to a notable price rebound.



Source: FTSE Russell and Lipper. Data available as of September 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

G7 growth generally remains weak, after the policy tightening in 2022-23, although robust consumers and high levels of employment have enabled soft landings to date. European growth is weaker, as central banks and energy prices squeeze growth. Fiscal policy may become more active in 2023-24, even if debt levels reduce room for manoeuvre. UK inflation fell further in Q3, but from high levels and 2nd round inflation risks from the labour market appear notably higher than in the US.

IMF growth forecasts have been upgraded modestly in 2022/23, as Chart 1 shows, largely due to consumer spending, as consumers ran down Covid windfalls, led by the US (Chart 1). The Atlanta Fed Nowcast is tracking at 4.9% growth for Q3, with consumer spending again the main driver. But higher rates, the rebound in oil prices, de-globalization and weak Chinese growth are major headwinds for global growth, in the post-Covid era.

Chart 2 shows a mixed inflation picture in August, on less favorable base effects and higher energy prices, with “easy” disinflation gains complete (from base effects and lower energy prices). Lower housing costs kept US CPI inflation below 4%, but the Fed remains concerned about core inflation, despite a policy pause in September. UK inflation fell in August (to 6.7% y/y), mainly on weaker food prices, but higher energy prices and wage inflation pressures present ongoing 2nd round inflation risks. Chinese deflation risks remain.

Debt/GDP ratios are higher than ideal for the G7, after Covid support drove sharp increases in debt levels (Chart 3). Higher inflation rates has at least reduced the real value of debt burdens, With monetary policy focused on restoring inflation to 2% target levels, more active fiscal policy is likely, to enhance infrastructure, and to prevent recessions, like the US Inflation Reduction Act.

The US labor market has slowed from the hectic pace in H1 2023, as the impact of 525bp of Fed tightening emerges. Payroll growth has been below 200k for three successive months to August, and unemployment increased to 3.8%, partly because labor force participation improved to 62.8% in August, the highest since Feb 2020, evidence of workers returning to the labor force. A soft landing in the labor market, near full employment, with wage growth stabilizing, helps explain the Fed policy pause in September.

Chart 1: IMF growth forecasts have edged higher for 2023, despite more G7 policy tightening. A further upgrade is likely in Q4, with the likely exception of China. Weaker Eurozone & UK growth also a feature.

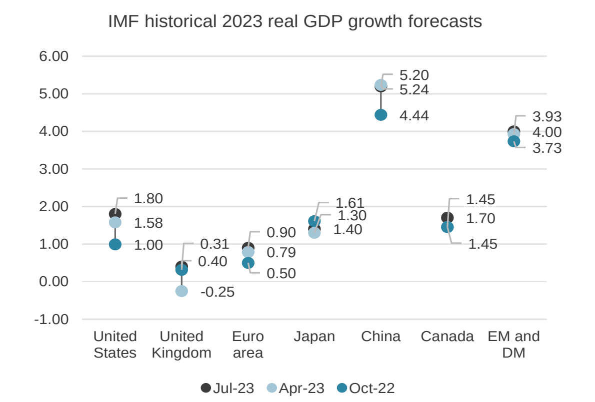


Chart 2: August inflation data was mixed, but higher energy prices and base effects caused higher US and Canadian inflation. Dispersion fell, but remains high, with UK inflation at 6.7%, and Chinese inflation near zero.

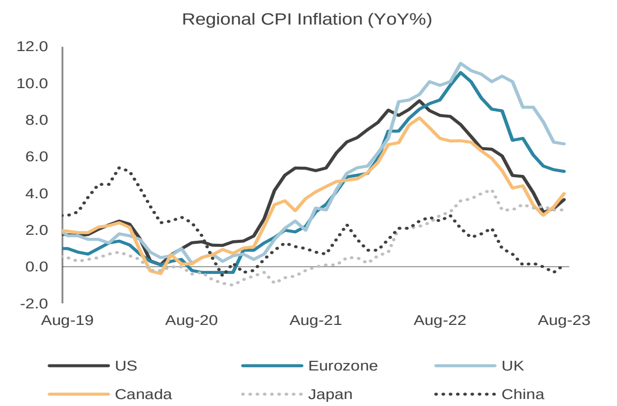


Chart 3: Debt/GDP ratios show the impact of Covid, government furlough schemes, and fiscal support. However, with monetary policy now locked on controlling inflation overshoots, more active fiscal policy may emerge.

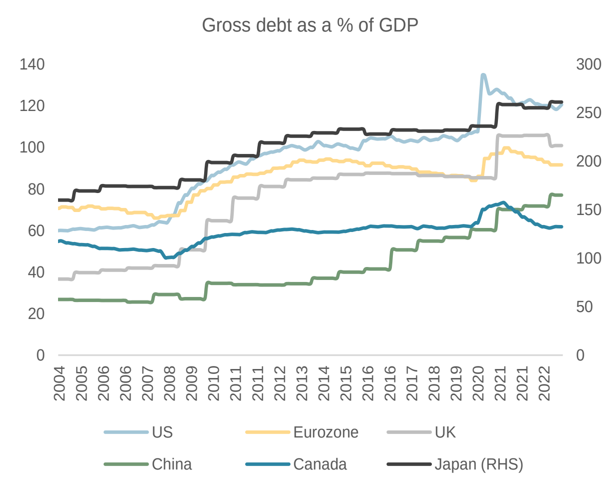
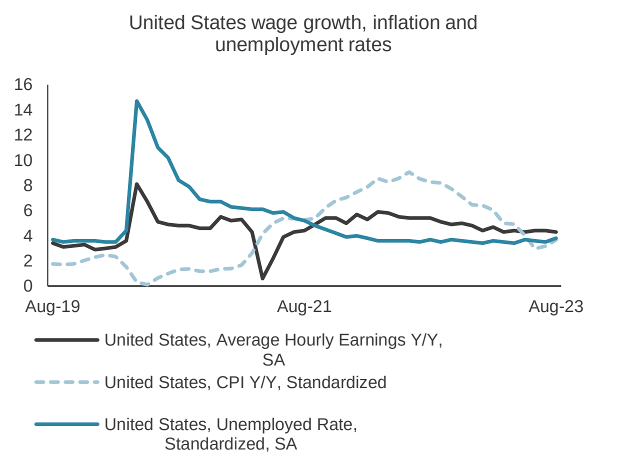


Chart 4: there are clear signs of the US labor market cooling, with payroll growth below 200k and unemployment rising to 3.8% in August (the highest since Feb 2022). Average earnings growth of 4.3% remains stable.



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Financial Conditions and Monetary Policy Settings

The Fed's policy pause in September was well discounted, though the Fed left policy options open to tighten further, should the data dictate. Financial conditions have eased in the risk rally in 2023, mitigating the impact of higher short rates, led by the US. The BoE decision to pause surprised markets, given second round inflation effects on wages persist.

Easing in aggregate US financial conditions (FC), despite Fed funds at multi-year highs, is shown in Chart 1. Within FC, higher Treasury and corporate bond yields have been offset by tighter credit spreads and stronger equities in the risk rally, and a weaker US dollar in 2023. FC were also very accommodative before the Fed started tightening, so overall, they are only a little tighter than they were before Covid in 2019-20. This helps to explain why the US economy has dodged a recession, despite the Fed tightening.

The US dollar rally continued in September, despite the Fed policy pause, as rate differentials improved against the renminbi, after the PBoC cut rates, and only the ECB raised rates in September. The yen rally on the flexing of yield curve control on July 28 proved short-lived, as the BoJ has retained short rates below zero. Expectations of further PBoC easing weigh on the renminbi.

After over 500bp of tightening, a policy pause from the Fed was no surprise in September, though the BoE pause surprised markets by pausing, particularly after more strong UK wage inflation data. The soft landing for the US and Canadian economies gives the Fed and BoC room to assess the impact of previous tightening moves. Meanwhile, the BoJ seems in no hurry to abandon zero rates, as it seeks sustained inflation above target, and the PBoC appears prepared to cut rates faster to fight deflation risks.

US 30-year fixed rate mortgages dominate US mortgage finance, with a market share of 65-70% (MBA data), and closely tied to 10-year US Treasury yields (Chart 4). With a high share of US fixed rate mortgages on low rates, the impact of higher short rates is reduced, unlike the UK, where the share of variable rate mortgages is higher (near 50%) and fixed rate mortgages are shorter.

Chart 1: The de-coupling of US financial conditions from the Fed's policy rate started in Q4 2022, when the risk rally began, and is more marked in 2023, with equities rallying and the dollar easing.

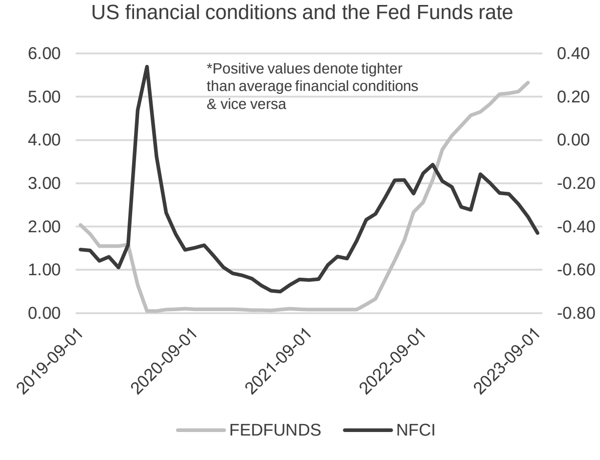


Chart 2: Currencies remain strongly correlated with short rate differentials, as the yen and renminbi moved to new 2023 lows in Q3, and the US dollar rallied. Sterling fell back after the BoE policy pause.

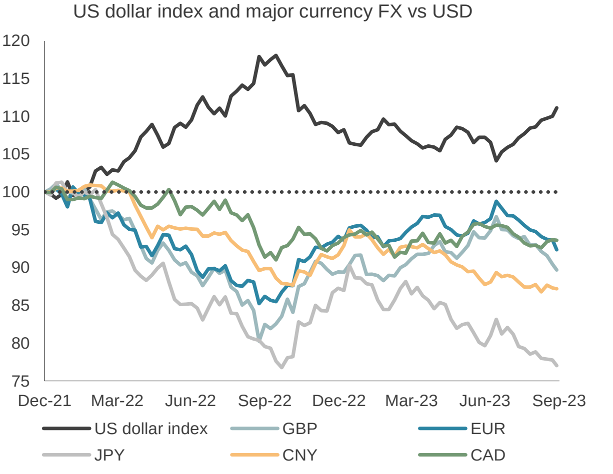


Chart 3: The Fed, BoC and the BoE held rates unchanged in September, after 500-525bp of tightening in 2022-23, without ruling out further moves in Q4. The PBoC used the room available to ease rates further.

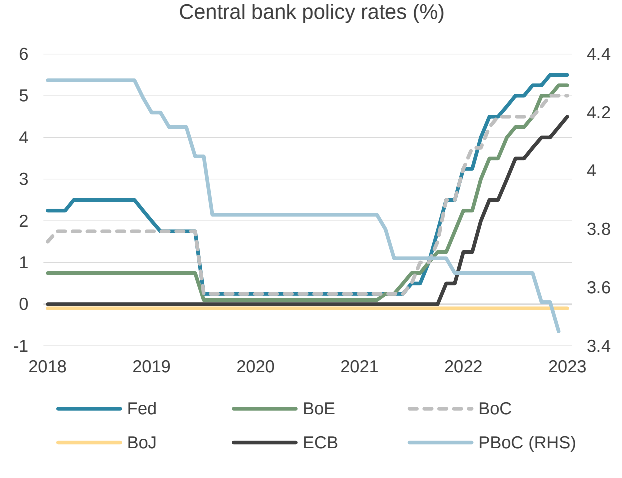
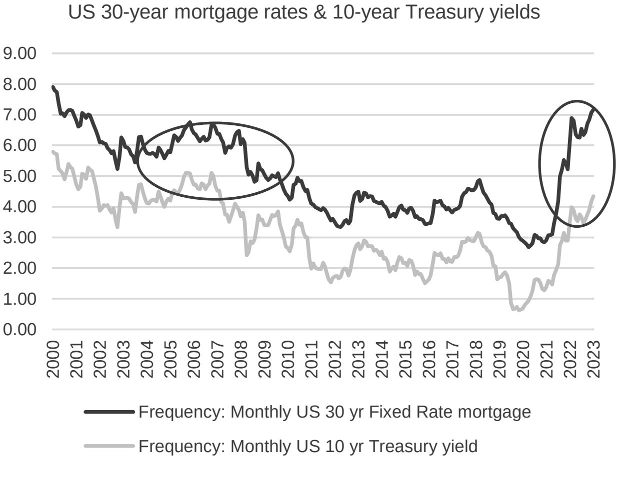


Chart 4: Back to Goldilocks? US 30-year fixed rate mortgage costs have returned to levels last seen before the GFC, increasing from 3 to 7%, driven by the 400bp increase in US Treasury yields since 2020.



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Global Yields, Curves and Breakevens

Chart 1: September saw a further increase in G7 7-10yr yields, led by the Eurozone and Canada, where yields hit new cycle highs. JGB yields edged higher, though the 1% 10-year yield ceiling is intact.

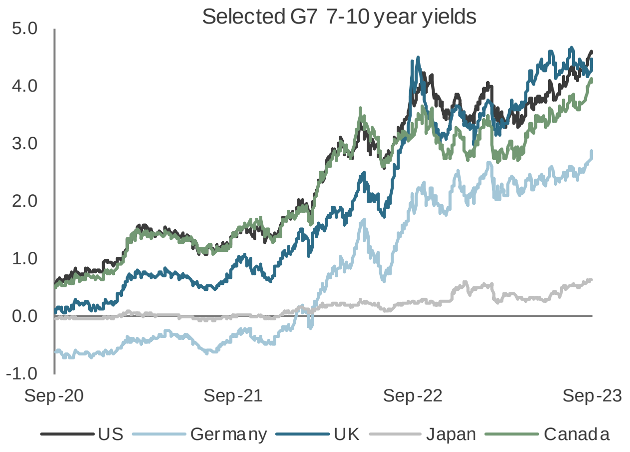


Chart 2: Real yields increased to new cycle highs in the US and Eurozone, but UK index linked rallied on better inflation data, and the BoE policy pause. JGB real yields edged higher with nominal yields.

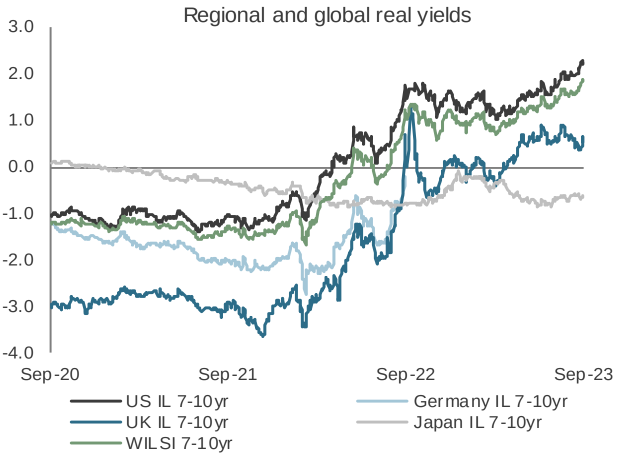


Chart 3: Yield curves dis-inverted further in September, with the front end helped by policy pauses (ex ECB). Curves remain deeply inverted, apart from JGBs, due to the BoJ's curve control.

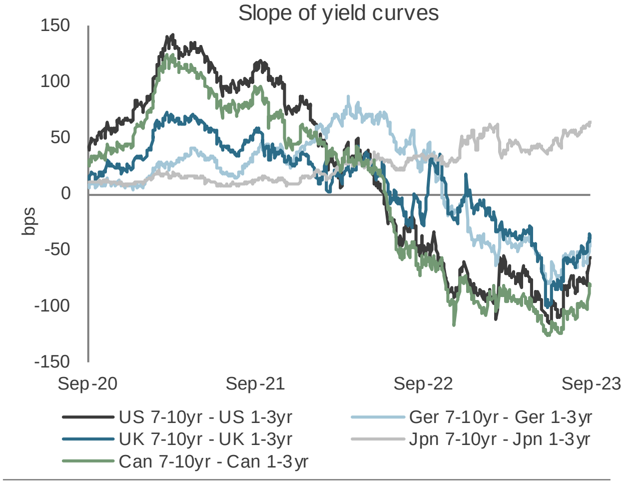


Chart 4: There were bigger dis-inversion moves in longer maturities versus shorts, led by the UK, after the surprise BoE policy pause caused short yields to ease. Long end JGB yields also increased.

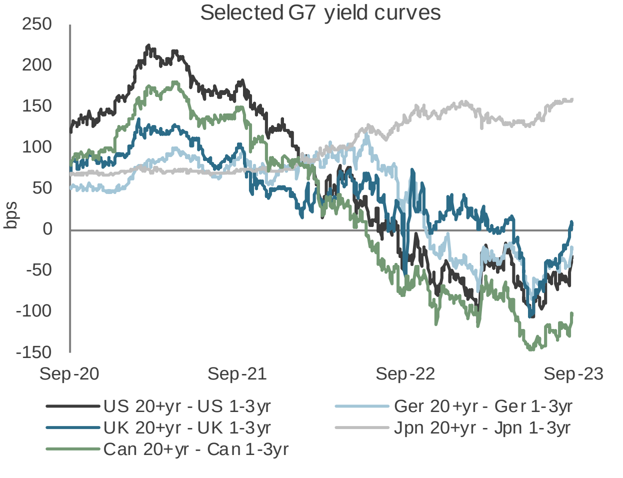


Chart 5: Breakevens increased in the UK, on the BoE policy pause, but moved little overall in September, including WGBI breakevens. JGB breakevens edged higher, as the BoJ retained zero rates.

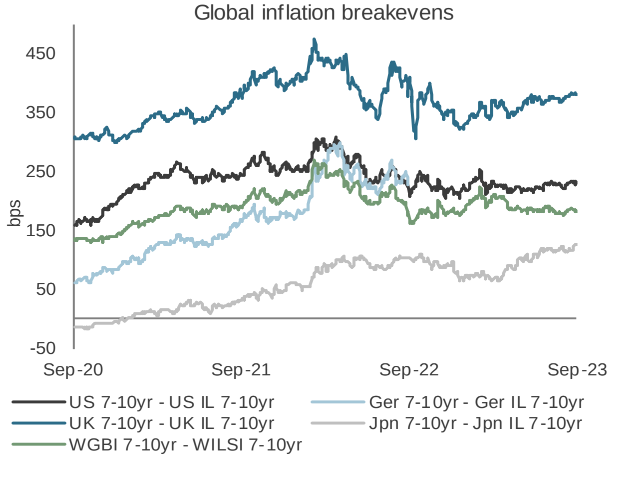
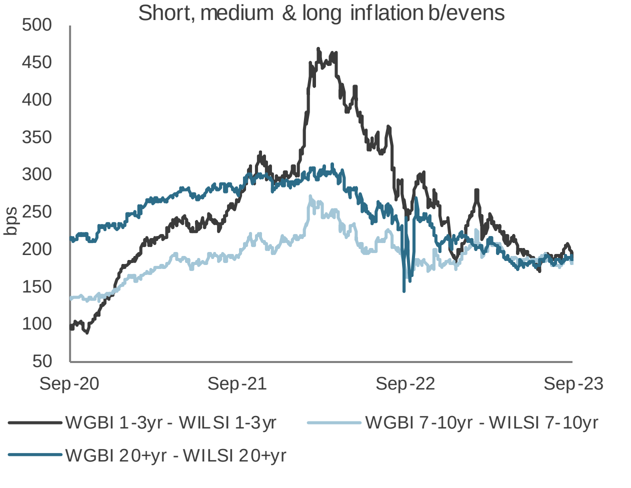


Chart 6: Global inflation breakevens of all tenors remain stable at around 2%. Despite the oil price rebound in September, there is little evidence of inflation expectations de-stabilizing.



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Yield Spread and Credit Spread Analysis

Chart 1: UK gilt yields traded through US Treasuries again in September, reversing the pattern of recent months. US spreads generally increased in September, though moved less v Canada.

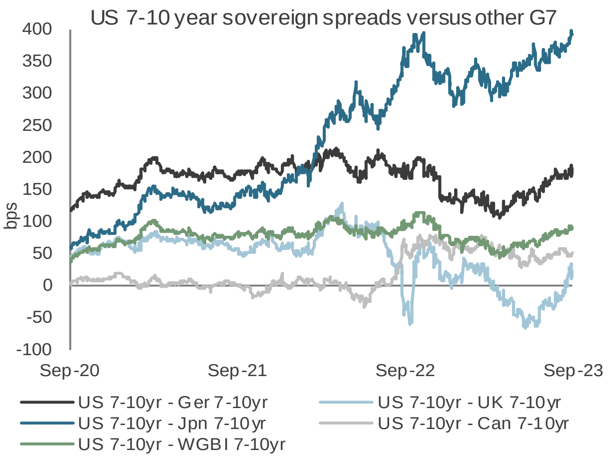


Chart 2: 7-10-year Italian spreads spiked in September, partly on failure to agree new EU fiscal rules but also after further ECB policy tightening. Italian spreads have trended pro-cyclically since Covid.

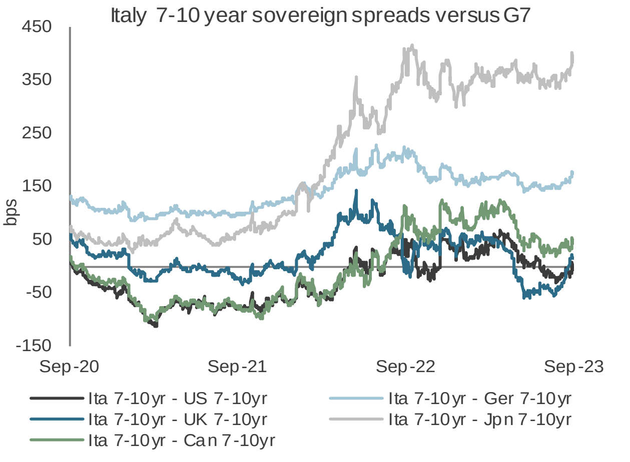


Chart 3: EM sovereign spreads remain near post-Covid lows, helped by early counter-inflation policy, in advance of DM. EM spill-over effects from G7 tightening have been far less than previous cycles.

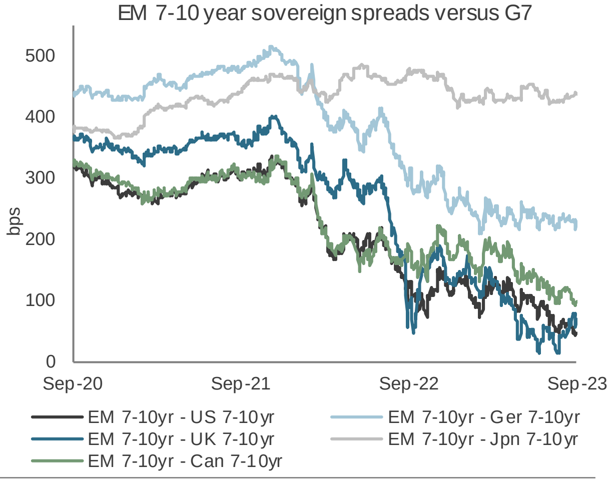


Chart 4: The PBoC's latest policy easing drove Chinese spreads to, or near, cyclical lows. The correlation of Chinese yields to the G7 remains very low, and de-globalization may reduce this further.

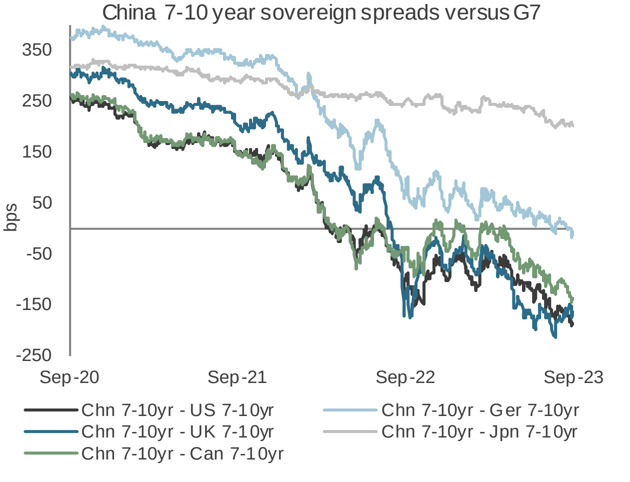


Chart 5: High yield credit spreads continue to grind lower, helped by investor risk appetite, and low default rates. IG spreads are now relatively more attractive, having fallen far less since the 2022 spike.

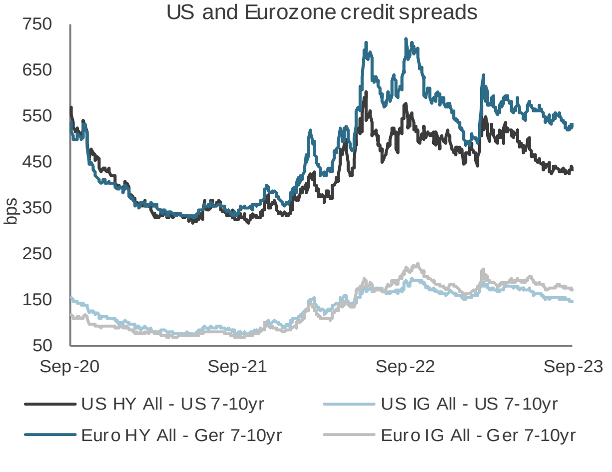
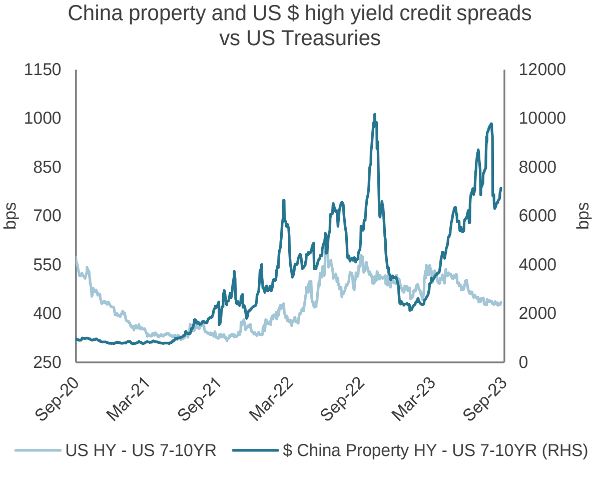


Chart 6: Chinese $ HY spreads eased in September from record highs, as Country Garden escaped from a potential default. Easier mortgage policies may also have helped to narrow spreads.



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Credit sector and MBS analysis

Chart 1: US credit sector spreads show signs of a recovery in commercial real estate, since the Q1 banking crisis, and Technology outperformance on AI. Industrials benefited from the growth pick-up.

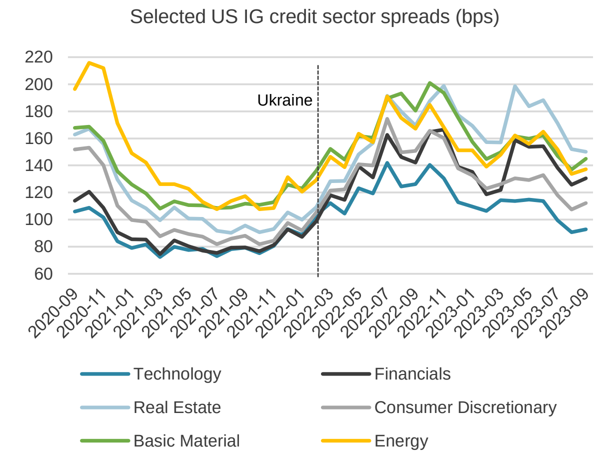


Chart 2: Euro credit sector spreads show the impact of the Ukraine war on the insurance sector. Consumer credits have outperformed, and bank spreads have narrowed on higher rates.

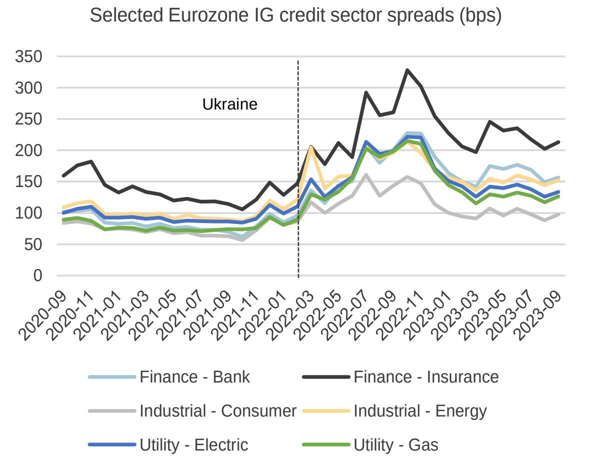


Chart 3: As in the Eurozone, UK spreads show the spike in insurance sector spreads on the Ukraine war, and resilience of consumer credits. Energy spreads show high volatility but trended lower in 2023.

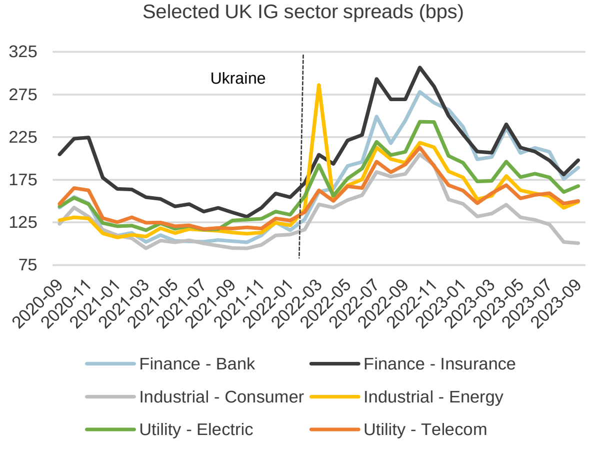


Chart 4: US agency-MBS traded through 7-10-year Treasuries in the early Covid period, driven by aggressive Fed QE. Negative convexity in MBS and higher Fed rates have caused MBS spreads to rise.

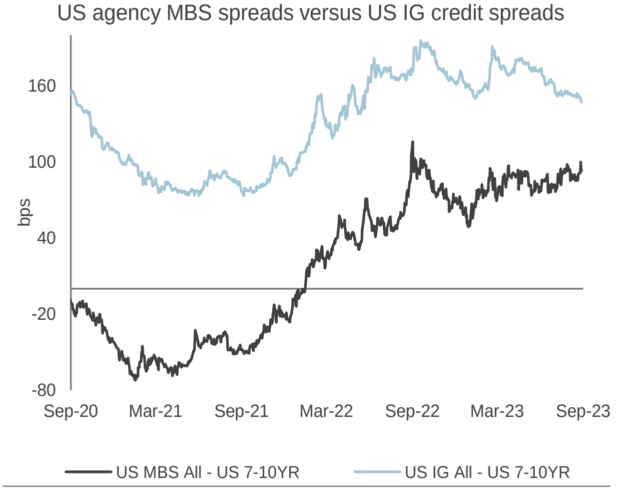


Chart 5: MBS prepayments and mortgage refinancings have collapsed since the Fed tightening began, due to the increase in US Treasury yields and mortgage coupons in 2022-23.

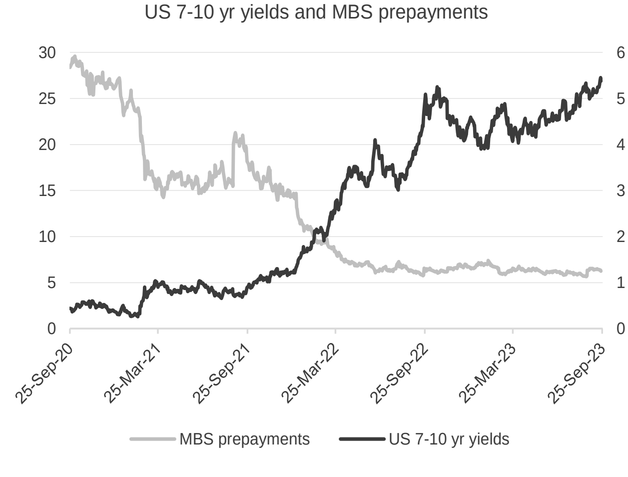
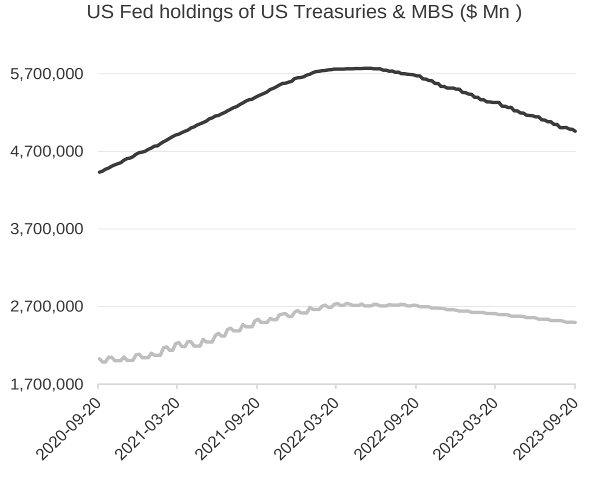


Chart 6: Fed holdings of MBS have been reduced at a slower pace than US Treasuries, since QT began in 2022. This reflects slow MBS prepayments for low coupons, and the Fed's coupon stack.



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Sovereign and Climate Bonds Analysis

Chart 1: Climate WGBI outperformed WGBI during the years of very low yields, helped by extra duration, but this reversed in the sell-off in 2022. Climate WGBI continues to underperform WGBI.

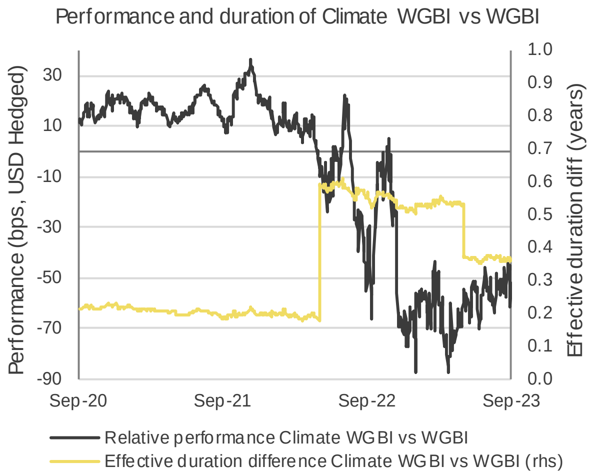


Chart 2: US underweight in the Climate WGBI fell in July's re-weighting, reducing the duration difference vs WGBI. China's 15% underweight prevented lower Chinese yields impacting Climate-WGBI significantly.

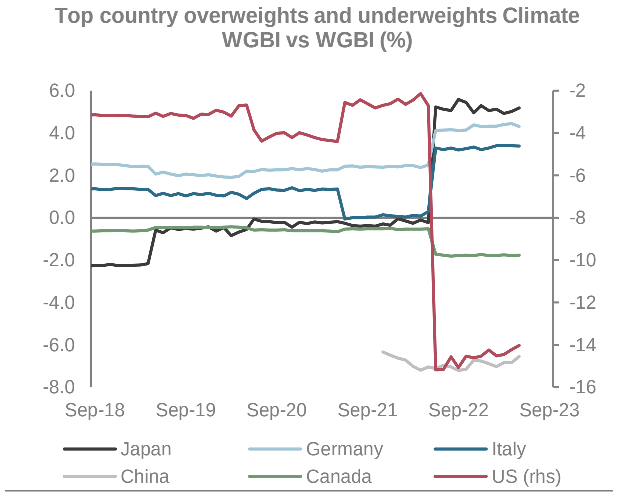


Chart 3: The increase in JGB yields in 2023 and high Japan country weight drove Climate-WGBI yields higher, versus WGBI, though climate-WBI yields remain lower, even if the 'greenium' is modest.

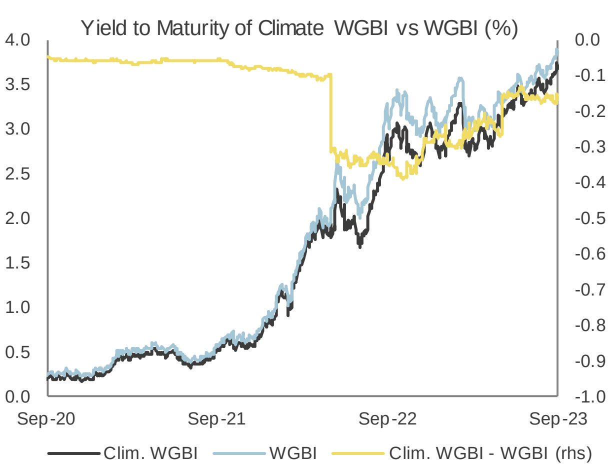


Chart 4: Climate WGBI's higher weighting in the Eurozone gives the index higher AAA weight, with Bunds rated AAA, but the lower US weighting in climate WGBI means the AA weight is notably lower.

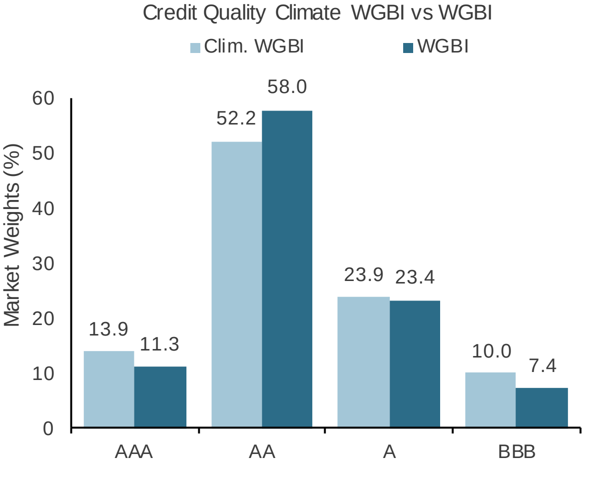


Chart 5: Although curves dis-inverted further in September, as long yields rose, yields converged on 3% in both WGBI and Climate WGBI in 2023, eliminating most of the 'greenium' in Climate WGBI.

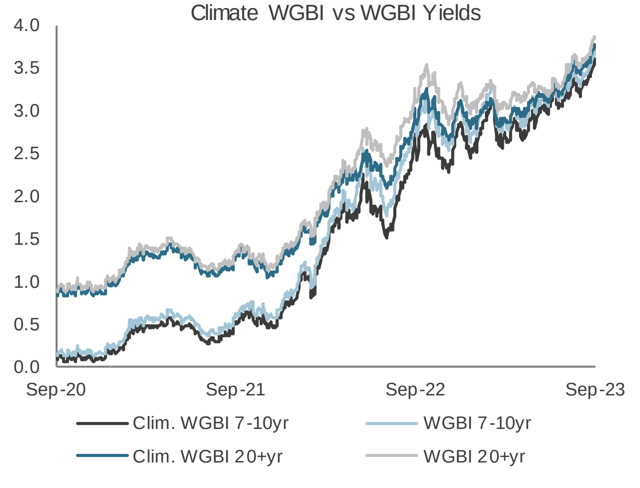
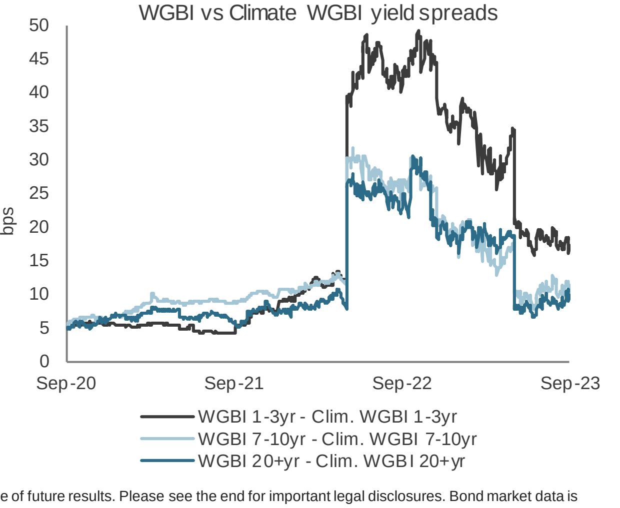


Chart 6: The 'greenium' rose sharply in 2022, when Japan's country weight was increased, and the US fell, reflecting Fed tightening, and BoJ curve control, but much of this has unwound in 2023.



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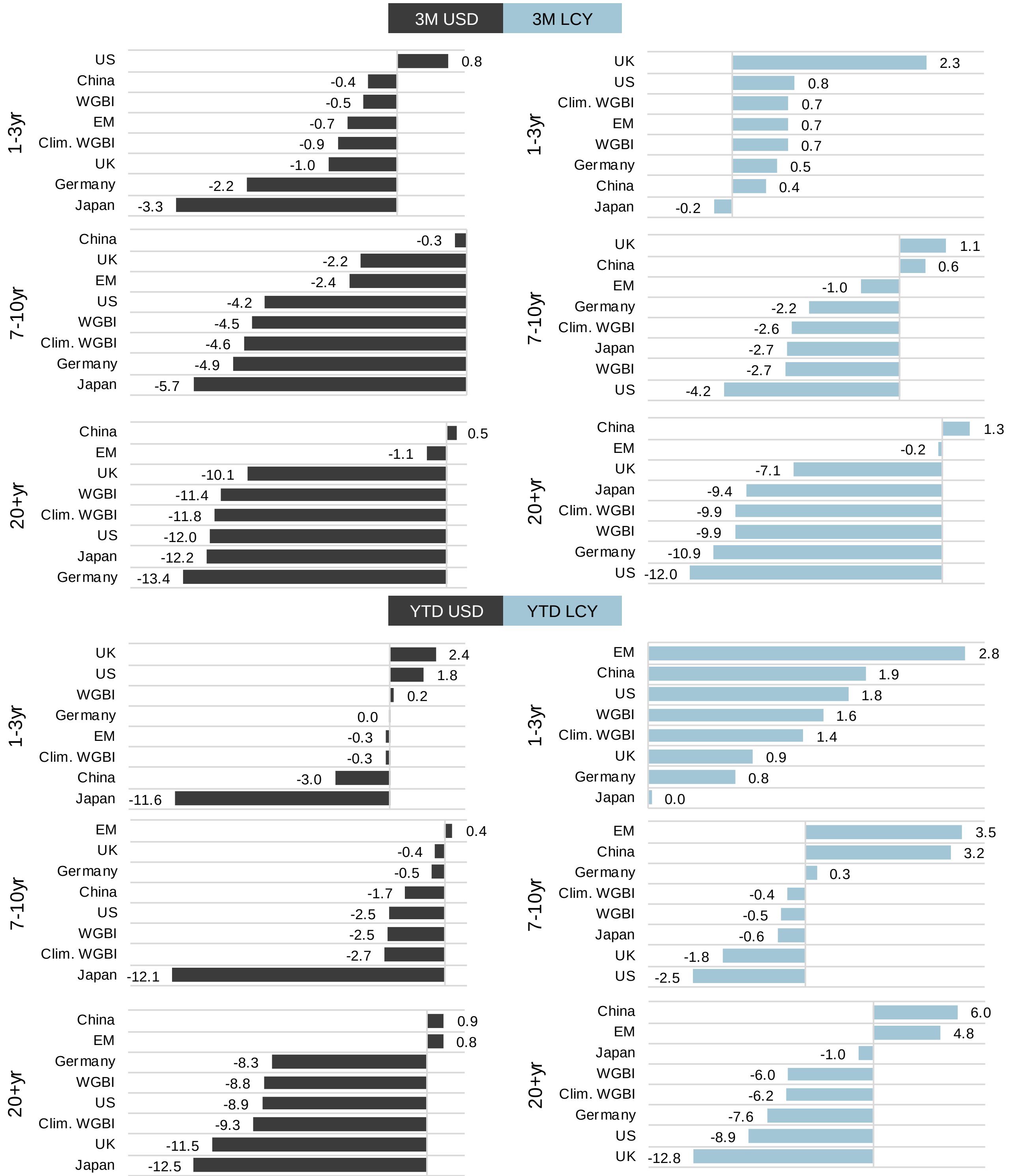
Global Sovereign Bond Returns – 3M and YTD % (USD & LC, TR)

Longer conventional bonds fell in Q3, as "higher for longer" rates proved a dominant narrative, after strong central bank signaling. Bunds fell most, and the dollar rally reduced returns in non-US bonds in dollar terms. YTD, long bonds were also weakest, led by JGBs. China and EM bonds were the best performers, helped by rate cuts and stronger currencies.

G7 sovereigns fell 10-13% in Q3, in dollars, led by long Bunds, JGBs and Treasuries. Curves dis-inverted as short bonds held up well, with short US Treasuries gaining 0.8%. China bucked the trend as the PBoC cut rates, and longs gained modestly.

YTD returns show similar losses in longs, but with JGBs losing 12-13% in all maturities, reflecting pronounced yen weakness.

CONVENTIONAL GOVT BONDS



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Global Inflation-Linked Bond Returns – 3M & YTD % (USD, LC, TR)

Longer inflation-linked bonds show sharp losses on 3M in dollar terms, like conventionals, with Bunds weakest, losing 11%. Shorter maturities were more resilient, but dollar strength squeezing overseas returns. HY credit outperformed, on both 3M and YTD, with gains of 6% YTD in US and Euro credits. Higher govt yields. dragged IG returns lower.

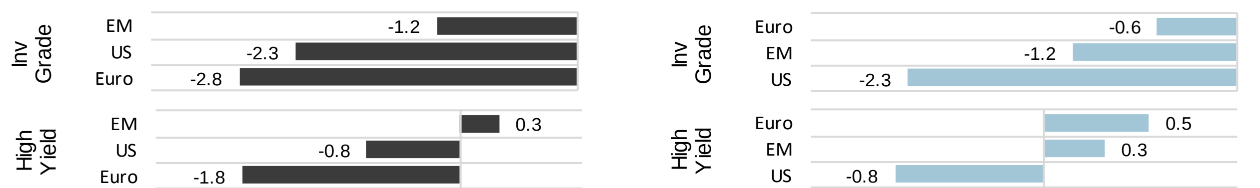
Long Bund, UK and US linkers all lost 7-11% in Q3, as duration and higher rates had their impact, with losses of 7-17% YTD.

HY credit's correlation to equities, as a risk asset, low default rates and a soft landing for global growth drove outperformance.

INFLATION LINKED BONDS

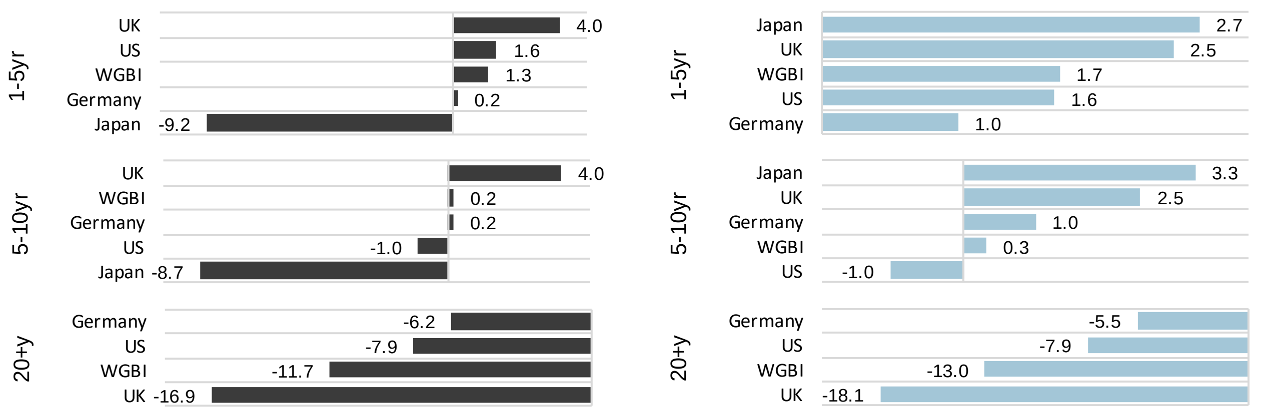
3M USD | 3M LCY

CORPORATE BONDS

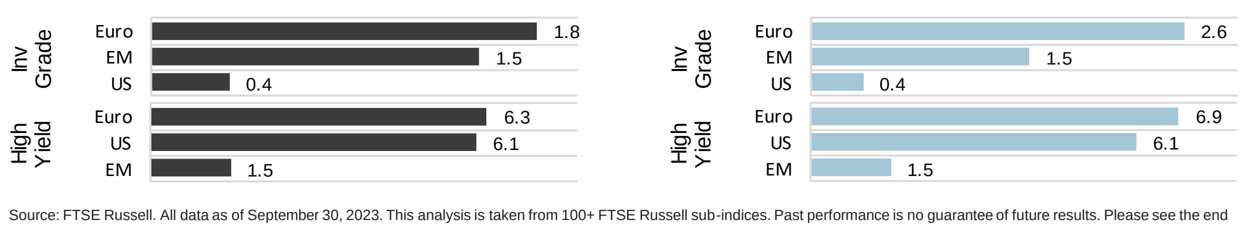


INFLATION LINKED BONDS

YTD USD | YTD LCY



CORPORATE BONDS



Source: FTSE Russell. All data as of September 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.

Top and Bottom Bond Returns – 1M & 12M % (USD, TR)

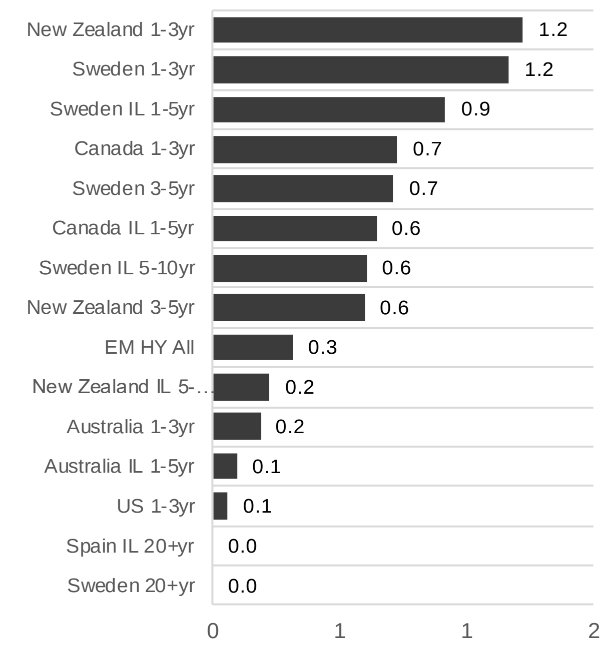
Long conventionals and linkers fell sharply in September, as yields spiked, led by Eurozone longs, with losses of 7-16% in dollar terms. Dollar strength also squeezed overseas returns in dollar terms. Euro HY credit and shorter UK gilts recovered strongly y/y from September 2022 sell-offs, with 16-22% returns. EM inflation linked remain strong performers.

Real yields rose abruptly in long dated govt bonds in September, as yield curves dis-inverted further, in signs of capitulation by bond bulls, and despite policy pauses, apart from the ECB. Australasian bonds stabilized, helped by modest currency recoveries.

It is a similar story on 12M, with longs underperforming led by US Treasuries and Canadian govt bonds, with losses of up to 12%.

1M USD | 12M USD

Top 15



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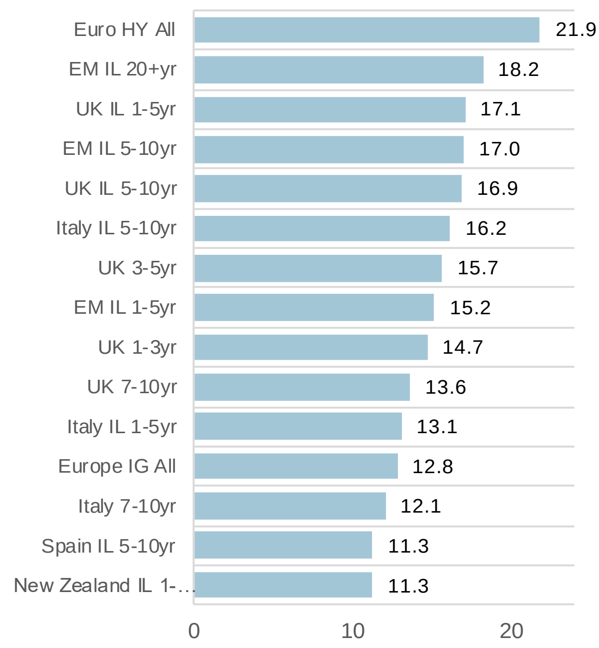

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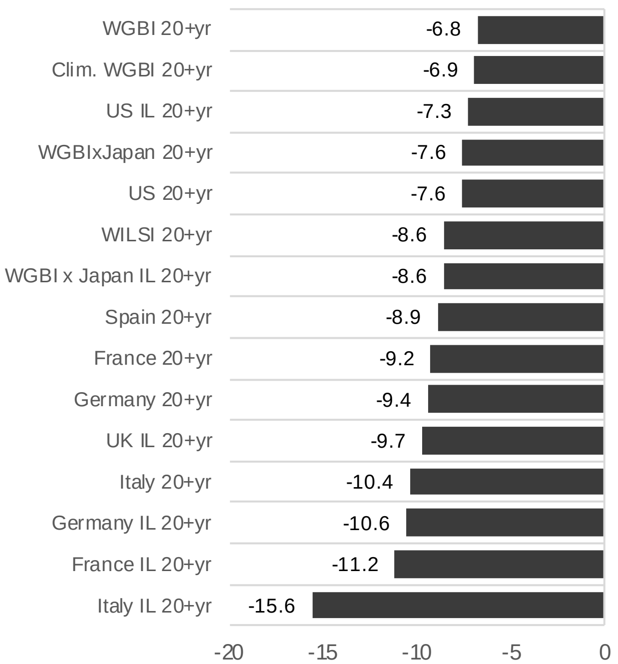

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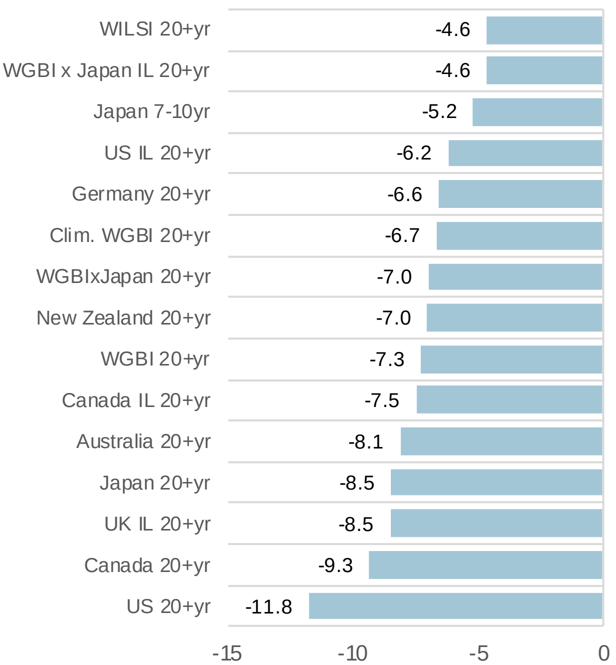

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Appendix – Global Bond Market Returns % (USD & LC, TR) – September 30, 2023

Government Bond Returns

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

		3M		6M		YTD		12M	
		Local	USD	Local	USD	Local	USD	Local	USD
US	1-3yr	0.76	0.76	0.29	0.29	1.78	1.78	2.42	2.42
	7-10yr	-4.19	-4.19	-5.52	-5.52	-2.50	-2.50	-2.14	-2.14
	20+yr	-12.02	-12.02	-13.40	-13.40	-8.86	-8.86	-11.77	-11.77
	IG All	-2.40	-2.40	-2.13	-2.13	0.37	0.37	3.66	3.66
	HY All	0.81	0.81	3.66	3.66	6.11	6.11	10.34	10.34
UK	1-3yr	2.32	-1.03	0.28	-0.58	0.94	2.42	3.71	14.72
	7-10yr	1.10	-2.20	-5.21	-6.02	-1.85	-0.41	2.74	13.64
	20+yr	-7.08	-10.12	-16.16	-16.88	-12.81	-11.53	-13.25	-4.05
Euro	IG All	0.37	-2.40	1.07	-1.21	2.63	1.81	4.07	12.82
	HY All	2.09	-0.79	4.18	2.00	6.91	6.32	12.18	21.86
Japan	1-3yr	-0.21	-3.29	-0.20	-11.39	0.03	-11.55	-0.13	-3.23
	7-10yr	-2.70	-5.70	-2.71	-13.61	-0.62	-12.13	-2.14	-5.18
	20+yr	-9.37	-12.16	-8.44	-18.70	-1.03	-12.49	-5.54	-8.47
China	1-3yr	0.41	-0.43	1.44	-4.34	1.94	-2.98	2.24	0.78
	7-10yr	0.59	-0.25	2.44	-3.40	3.24	-1.74	3.55	2.07
	20+yr	1.32	0.48	4.98	-1.01	6.01	0.90	5.47	3.96
EM	1-3yr	0.44	0.44	0.95	0.95	2.70	2.70	5.68	5.68
	7-10yr	-2.42	-2.42	-0.81	-0.81	-0.28	-0.28	6.64	6.64
	IG All	-1.55	-1.55	-0.30	-0.30	1.54	1.54	4.96	4.96
	HY All	0.01	0.01	1.25	1.25	1.51	1.51	10.04	10.04
Germany	1-3yr	0.54	-2.24	0.15	-2.10	0.78	-0.02	-0.20	8.19
	7-10yr	-2.16	-4.86	-2.62	-4.81	0.25	-0.55	-2.48	5.71
	20+yr	-10.90	-13.36	-11.29	-13.29	-7.59	-8.33	-13.81	-6.56
Italy	1-3yr	0.57	-2.21	0.39	-1.87	1.59	0.79	1.86	10.43
	7-10yr	-3.44	-6.11	-2.24	-4.44	2.89	2.07	3.38	12.07
	20+yr	-10.34	-12.82	-7.78	-9.85	-1.07	-1.86	-4.33	3.71
Spain	1-3yr	0.53	-2.25	0.18	-2.08	1.11	0.30	0.44	8.88
	7-10yr	-2.43	-5.12	-2.57	-4.76	0.60	-0.20	-0.90	7.43
	20+yr	-9.39	-11.89	-8.76	-10.81	-5.38	-6.13	-8.97	-1.32
France	1-3yr	0.55	-2.23	0.12	-2.13	1.09	0.29	-0.04	8.37
	7-10yr	-2.33	-5.03	-2.63	-4.82	0.19	-0.61	-2.28	5.94
	20+yr	-10.32	-12.80	-10.18	-12.20	-7.21	-7.95	-11.94	-4.54
Sweden	1-3yr	0.79	0.69	0.27	-3.89	1.00	-3.13	0.75	4.02
	7-10yr	-1.99	-2.09	-4.75	-8.71	-2.91	-6.88	-3.63	-0.51
Australia	1-3yr	0.83	-1.86	-0.55	-3.96	1.16	-3.72	2.15	1.81
	7-10yr	-2.97	-5.56	-6.78	-9.98	-0.14	-4.96	-0.01	-0.34
	20+yr	-9.16	-11.58	-15.21	-18.12	-5.17	-9.75	-7.81	-8.11
New Zealand	1-3yr	-0.05	-1.15	-0.11	-3.58	1.57	-3.51	1.19	6.96
	7-10yr	-4.45	-5.50	-6.20	-9.46	-3.04	-7.89	-4.03	1.44
	20+yr	-11.60	-12.57	-15.48	-18.42	-12.52	-16.89	-12.03	-7.01
Canada	1-3yr	0.67	-1.34	-0.02	0.46	1.25	1.47	1.73	3.20
	7-10yr	-3.97	-5.89	-6.86	-6.40	-3.55	-3.34	-3.39	-2.00
	20+yr	-10.85	-12.64	-12.82	-12.40	-8.57	-8.37	-10.61	-9.32

Source: FTSE Russell. All data as of September 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) – September 30, 2023

Inflation-Linked Bond Returns

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

		3M		6M		YTD		12M	
		Local	USD	Local	USD	Local	USD	Local	USD
US	1-5yr	0.38	0.38	-0.38	-0.38	1.64	1.64	2.61	2.61
	5-10yr	-2.64	-2.64	-4.40	-4.40	-1.03	-1.03	0.30	0.30
	20+yr	-11.48	-11.48	-13.16	-13.16	-7.92	-7.92	-6.20	-6.20
UK	1-5yr	2.47	-0.88	1.33	0.46	2.47	3.98	5.86	17.10
	5-10yr	1.37	-1.94	-1.97	-2.81	2.48	3.99	5.69	16.90
	20+yr	-11.62	-14.51	-22.54	-23.20	-18.14	-16.94	-17.29	-8.51
Japan	1-5yr	0.52	-2.58	1.58	-9.80	2.66	-9.23	3.15	-0.05
	5-10yr	-0.70	-3.76	2.11	-9.33	3.25	-8.71	2.78	-0.41
EM	1-5yr	3.45	0.50	4.18	0.99	9.52	8.71	13.45	15.18
	5-10yr	0.28	-2.43	2.11	0.28	6.63	7.79	12.77	17.03
	20+yr	-3.42	-5.93	2.60	4.40	5.00	10.71	8.10	18.23
Germany	1-5yr	0.43	-2.34	0.11	-2.14	0.96	0.16	1.39	9.91
	5-10yr	-1.91	-4.62	-1.49	-3.70	1.01	0.20	1.26	9.78
	20+yr	-12.13	-14.56	-10.76	-12.77	-5.48	-6.24	-7.52	0.26
Italy	1-5yr	0.23	-2.54	0.32	-1.94	1.83	1.01	4.32	13.09
	5-10yr	-3.84	-6.49	-1.57	-3.78	2.91	2.10	7.17	16.18
	20+yr	-17.54	-19.82	-12.32	-14.29	-2.96	-3.73	0.57	9.02
Spain	1-5yr	0.19	-2.58	0.03	-2.22	1.23	0.42	1.84	10.40
	5-10yr	-1.93	-4.64	-1.53	-3.74	0.98	0.18	2.66	11.29
France	1-5yr	-0.20	-2.95	-0.39	-2.63	0.60	-0.21	1.21	9.71
	5-10yr	-2.01	-4.72	-1.61	-3.83	0.93	0.13	1.63	10.18
	20+yr	-12.59	-15.01	-10.62	-12.63	-6.32	-7.07	-5.91	2.00
Sweden	1-5yr	0.98	0.88	0.01	-4.15	1.51	-2.65	3.44	6.79
	5-10yr	-0.59	-0.69	-2.62	-6.66	-0.38	-4.46	-0.17	3.06
Australia	1-5yr	0.80	-1.89	-0.10	-3.53	3.91	-1.10	7.21	6.86
	5-10yr	-1.08	-3.72	-3.02	-6.35	3.93	-1.09	7.26	6.90
	20+yr	-8.18	-10.63	-13.07	-16.05	-1.77	-6.51	3.43	3.09
New Zealand	5-10yr	-3.70	-4.77	-3.45	-6.80	1.29	-3.77	3.39	9.29
Canada	20+yr	-10.32	-12.12	-11.32	-10.89	-15.06	-14.87	-8.78	-7.47

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Global Bond Yields

Green highlight indicates highest 15%, red indicates lowest 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	5.16	4.71	4.59	4.82	2.72	2.29	2.37	6.06	8.93
	3M Ago	5.02	4.31	3.88	4.01	2.48	1.77	1.75	5.58	8.67
	6M Ago	4.25	3.82	3.58	3.87	1.52	1.26	1.58	5.38	8.76
	12M Ago	4.26	4.13	3.80	3.89	2.02	1.75	1.87	5.70	9.59
UK	Current	4.73	4.46	4.35	4.81	0.55	0.53	1.39		
	3M Ago	5.32	4.97	4.35	4.35	1.73	0.70	0.93		
	6M Ago	3.70	3.45	3.35	3.75	-0.03	-0.30	0.34		
	12M Ago	4.45	4.44	4.16	3.86	-0.87	0.12	0.41		
Japan	Current	0.01	0.21	0.66	1.61	-1.75	-0.70			
	3M Ago	-0.11	-0.01	0.28	1.17	-1.61	-0.89			
	6M Ago	-0.10	0.01	0.25	1.20	-1.39	-0.59			
	12M Ago	-0.07	0.02	0.27	1.27	-1.34	-0.77			
China	Current	2.24	2.42	2.70	3.06					
	3M Ago	2.12	2.34	2.69	3.09					
	6M Ago	2.33	2.57	2.84	3.25					
	12M Ago	2.06	2.41	2.78	3.19					
EM	Current	8.32	7.12	7.13		3.27	4.48	5.32	6.43	11.01
	3M Ago	8.74	6.87	6.54		4.20	4.12	4.92	5.94	11.85
	6M Ago	7.98	7.08	6.62		2.30	3.49	5.18	5.81	11.35
	12M Ago	8.72	7.89	7.34		2.62	3.47	5.23	6.09	13.31
Germany	Current	3.21	2.78	2.75	2.97	0.87	0.44	0.52		
	3M Ago	3.15	2.65	2.38	2.39	0.87	0.15	-0.07		
	6M Ago	2.62	2.32	2.24	2.34	-0.06	-0.10	-0.10		
	12M Ago	1.71	1.91	2.10	2.14	-0.44	-0.08	-0.06		
Italy	Current	3.94	4.03	4.50	5.02	1.68	2.31	2.43		
	3M Ago	3.76	3.70	3.87	4.26	1.64	1.75	1.68		
	6M Ago	3.17	3.38	3.87	4.36	0.41	1.52	1.80		
	12M Ago	2.99	3.59	4.29	4.45	-0.28	2.08	2.17		
France	Current	3.33	3.14	3.26	3.79	0.82	0.75	1.12		
	3M Ago	3.20	2.93	2.85	3.21	0.75	0.41	0.57		
	6M Ago	2.75	2.62	2.70	3.17	-0.35	0.08	0.56		
	12M Ago	1.97	2.21	2.53	3.00	-0.65	0.20	0.65		
Sweden	Current	3.50	3.18	2.98		1.42	1.28			
	3M Ago	3.45	2.94	2.63		1.17	0.92			
	6M Ago	2.78	2.50	2.20		0.07	0.25			
	12M Ago	2.38	2.50	2.28		-0.71	-0.24			
Australia	Current	4.14	4.10	4.43	4.86	1.30	1.78	2.24		
	3M Ago	4.05	3.87	3.90	4.24	0.95	1.37	1.78		
	6M Ago	2.98	2.95	3.25	3.80	-0.02	0.82	1.45		
	12M Ago	3.49	3.69	3.91	4.15	0.75	1.54	2.00		
New Zealand	Current	5.63	5.35	5.32	5.54	2.50	2.89			
	3M Ago	4.99	4.59	4.56	4.72	1.37	1.99			
	6M Ago	4.70	4.28	4.17	4.40	1.01	1.70			
	12M Ago	4.15	4.18	4.20	4.51	1.11	2.03			
Canada	Current	4.88	4.37	4.07	3.85	2.35	2.29	2.13		
	3M Ago	4.68	3.93	3.44	3.22	2.00	1.66	1.54		
	6M Ago	3.86	3.20	2.93	3.07	1.09	1.11	1.39		
	12M Ago	3.81	3.50	3.19	3.11	1.51	1.29	1.47		

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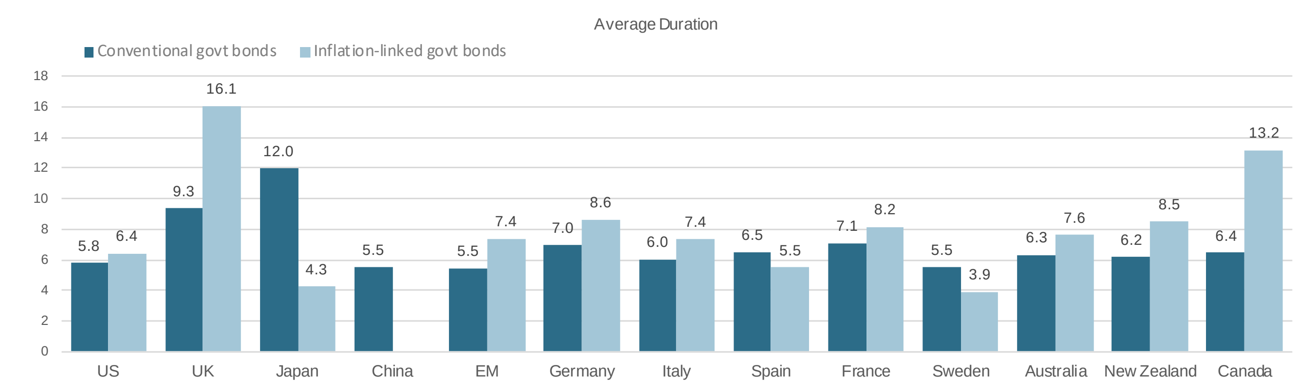
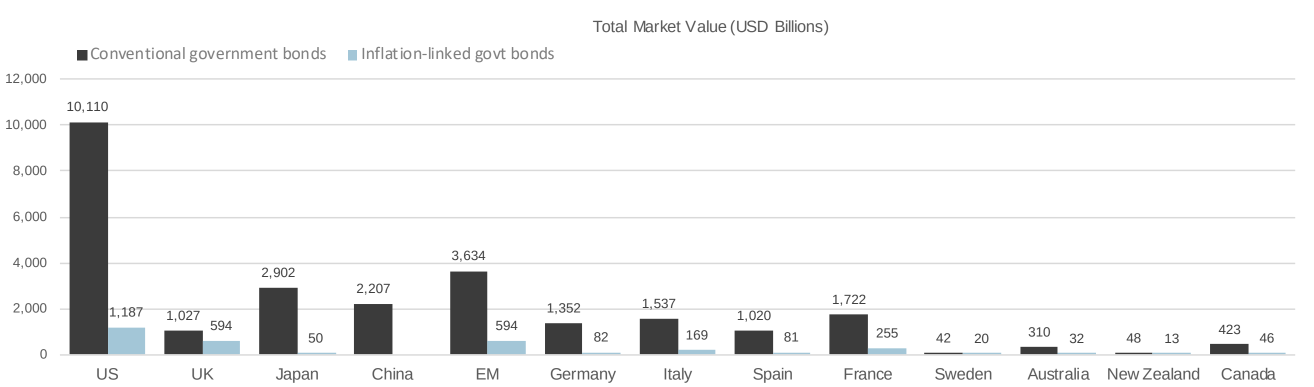
Appendix − Duration and Market Value (USD, Bn) as of September 30, 2023

	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	7.4	16.6	**5.8**	2,336.3	1,016.5	1,147.5	**10,110.2**	7.0	21.2	**6.4**	374.4	114.8	**1,186.8**
UK	3.4	7.5	17.9	**9.3**	129.3	178.5	272.7	**1,026.8**	6.9	27.2	**16.1**	97.3	220.6	**593.8**
Japan	3.9	8.0	23.7	**12.0**	347.2	333.9	626.2	**2,901.5**	7.3		**4.3**	19.1		**50.1**
China	3.7	7.5	17.6	**5.5**	450.8	347.6	252.7	**2,207.1**						
EM	3.6	6.9	15.8	**5.5**	738.7	655.5	345.3	**3,633.5**	5.8	13.4	**7.4**	105.8	159.9	**594.1**
Germany	3.8	7.6	20.3	**7.0**	296.0	204.2	142.9	**1,351.8**	7.1	21.6	**8.6**	41.2	16.6	**82.5**
Italy	3.7	7.2	15.7	**6.0**	269.1	227.2	134.1	**1,537.0**	7.8	26.1	**7.4**	54.7	4.6	**168.6**
Spain	3.8	7.5	16.8	**6.5**	196.3	175.1	88.7	**1,020.2**	6.6		**5.5**	21.5		**80.6**
France	3.6	7.5	19.4	**7.1**	312.4	302.3	190.1	**1,721.8**	6.6	24.2	**8.2**	98.6	18.6	**254.5**
Sweden	3.6	7.5		**5.5**	13.2	8.4		**41.8**	5.7		**3.9**	9.4		**20.3**
Australia	3.4	7.6	17.1	**6.3**	49.8	83.6	13.6	**310.3**	7.1	22.1	**7.6**	9.4	2.4	**31.9**
New Zealand	3.7	7.5	16.1	**6.2**	9.7	13.1	2.2	**48.0**	6.2		**8.5**	3.0		**12.9**
Canada	3.5	7.5	19.1	**6.4**	54.8	106.8	56.8	**422.8**	6.8	20.4	**13.2**	7.9	18.0	**45.7**

	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	10.2	8.1	6.9	6.4	6.8	68.6	431.6	2513.0	3216.0	6229.3	3.9	1012.6
Europe	5.7	4.7	4.5	4.2	4.4	11.0	177.5	1147.5	1381.6	2717.6		
EM		5.5	4.6	4.9	4.9		45.2	216.4	311.9	573.4	3.3	183.7





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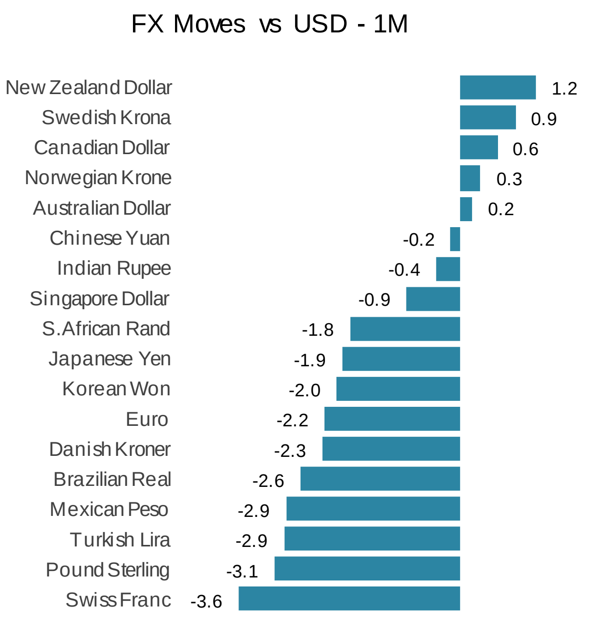
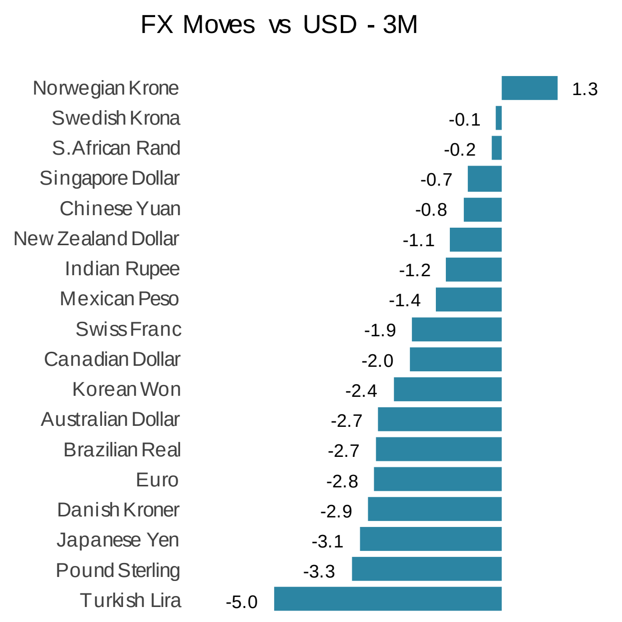
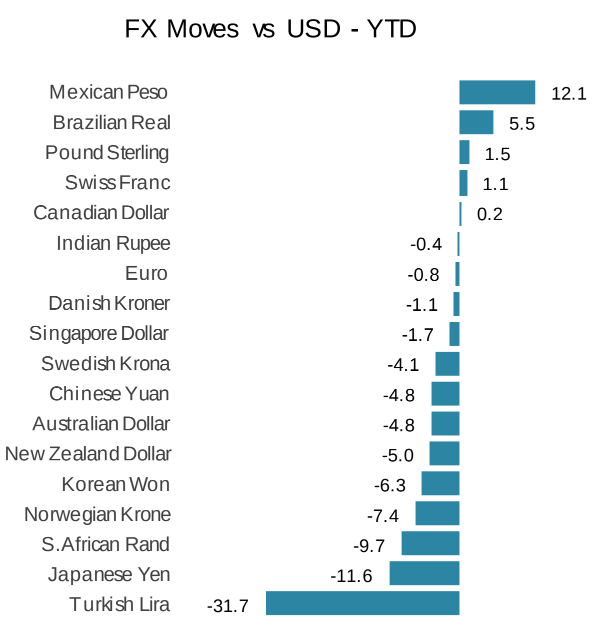
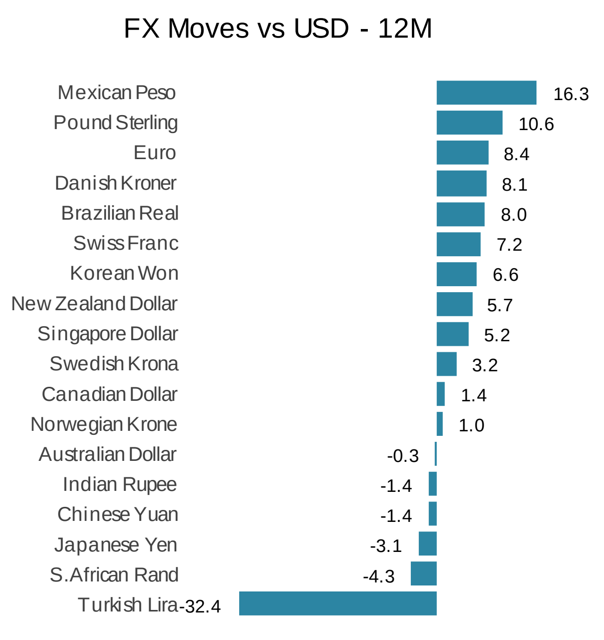
Appendix – Foreign Exchange Returns % as of September 30, 2023









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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

Source: FTSE Russell. All data as of September 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.