Fixed Income Insights

MONTHLY REPORT – **OCTOBER 2023 | EUROZONE EDITION** FOR PROFESSIONAL INVESTORS ONLY

Euro HY credit shines YTD, amid deep losses in long duration sovereign bonds

The ECB raised rates again in September. Other G7 central banks paused policy to assess the impact of tightening to date, but with the door open for further moves, unnerving longs. The surge in oil prices and tight labour markets remain inflation risks. Longs have sold off YTD, while Euro HY outperformed with 7% returns.

Macro and policy backdrop – Nearing a peak in rates but central banks leave door open to tighten again

The ECB bucked the trend and raised rates by 0.25%, unlike other G7 central banks, while leaving the door open for further rate hikes. (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 to the 'higher for longer' narrative. (pages 4-5)

Credit and MBS analysis – Euro credit spreads tightened, and signs of recovery in US real estate

European insurance spreads tightened as did US real estate spreads, notably since the banking crisis in Q1. (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 sharp losses in Q3. HY credit, China and EM bonds outperformed

Duration again proved the investor's enemy in Q3, while Euro high yield bonds have outperformed since January. (pages 8-10)

Appendix (from page 11)

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

Chart 1: Real yields drove nominal yields higher as markets respond to the 'higher for longer' narrative. The UK is an outlier.

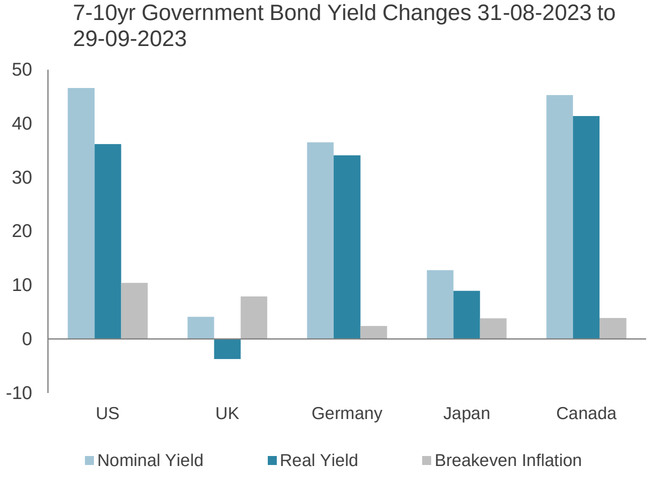
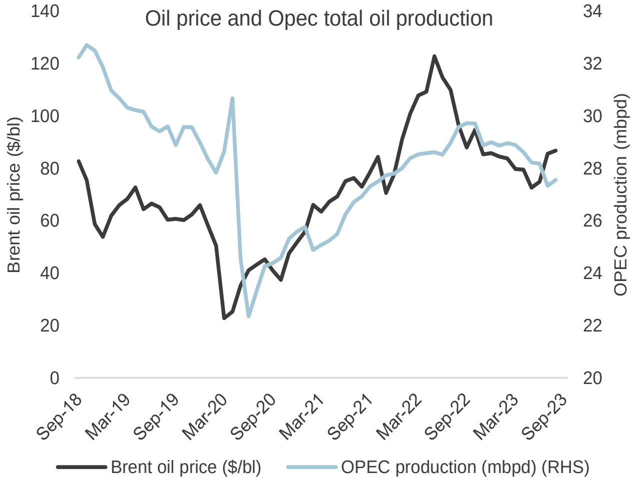


Chart 2: Oil prices have generally been demand-driven since Covid, but recent OPEC supply cuts drove a price rebound.



Source: FTSE Russel and LSEG. All data 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, notably within the Eurozone, after the policy tightening in 2022-23, although robust consumers and high levels of employment have enabled soft landings to date. Fiscal policy may become more active in 2023-24 but could be limited in Europe as government debt levels reduce room for manoeuvre.

Widening economic divergence and de-globalisation? The IMF real economic growth forecasts were increased modestly, following stronger GDP in the first quarter 2023. However, the main thesis remains of slowing and divergent global growth. The UK economy surprised on the upside, just averting a contraction in the first half of 2023 (Chart 1).

Chart 2 shows a mixed inflation picture, on less favourable base effects and higher energy prices, with “easy” disinflation gains complete. The ECB expects inflation to continue to fall gradually to its 2% target after reaching 4.3% in September, but “the last mile” is expected to drag until 2025. Elsewhere, 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 to 6.7% y/y, mainly on weaker food prices.

Debt/GDP ratios are higher than ideal for the G7, after Covid support drove sharp increases in debt levels (Chart 3). Higher inflation rates have 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, like the US Inflation Reduction Act, to enhance infrastructure and prevent recessions, though southern European nations will be constrained by the EU fiscal rules.

Chart 4 shows Eurozone wages are growing by about 5 per cent on average, underpinning continued high demand for services and creating a risk of second round inflation effects, if wage bargaining adapts further to higher inflation rates.

Chart 1: Real GDP IMF forecasts were revised higher in July, with the global economy expected to avoid a recession, including in the UK, where growth has remained positive, largely due to consumers.

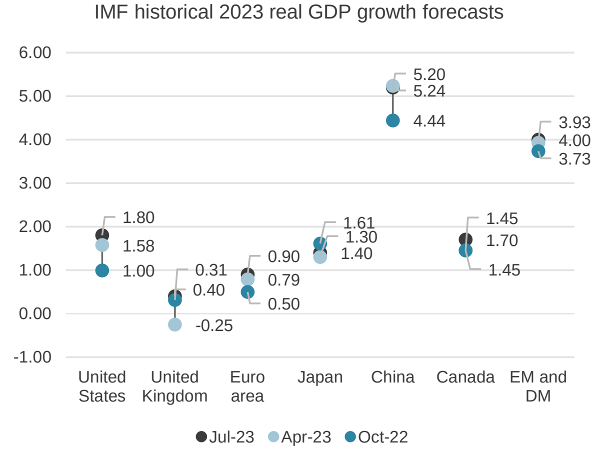


Chart 2: Inflation ticked back up in Canada and the US on higher oil prices. China moved away from deflation, while Eurozone, Japan and UK CPI eased a little, but for how long?

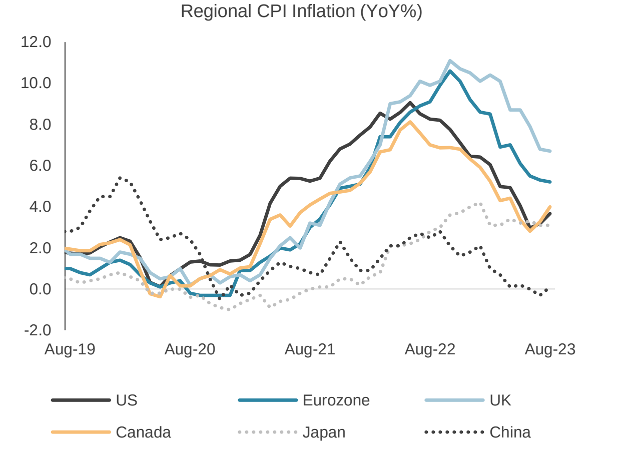


Chart 3: Debt/GDP ratios show the impact of Covid and government furlough schemes. However, with monetary policy now locked on controlling inflation overshoots, more active fiscal policy may emerge.

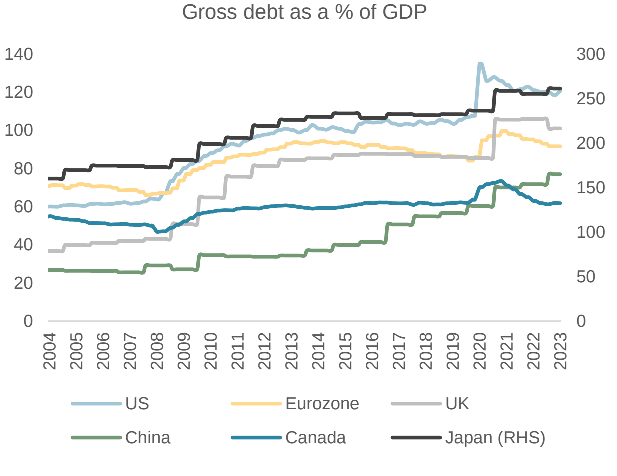
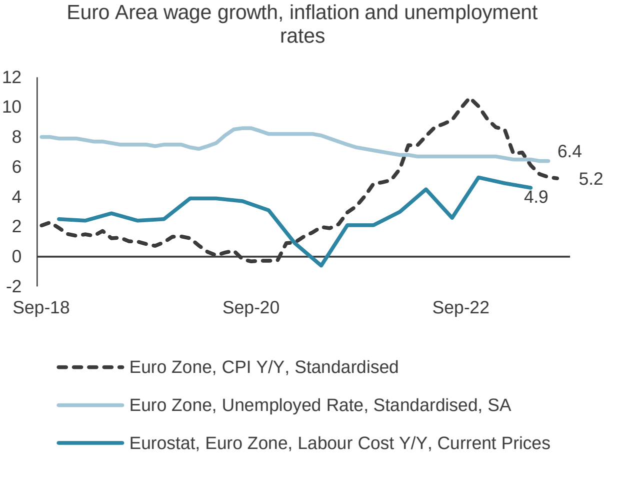


Chart 4: Eurozone wage growth has stayed robust, as has the labour market, with unemployment at historical lows, underpinning consumption. The ECB is conscious of second round inflation risks.



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Financial Conditions and Monetary Policy Settings

The ECB tightened policy further in September, in what may be the last hike, before the central bank assesses the impact. Other G7 central banks paused policy tightening, after 500-525bp of tightening and inflation gradually eased, but kept the door open for future rise(s). The US dollar rally highlights the short rate differentials, particularly versus yen and yuan.

Chart 1 shows that liquidity has fallen sharply within the Eurozone, and the month-on-month change over the last twelve months is now negative for the first time, as financial conditions have tightened sharply, and economic growth has weakened.

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 slightly weaker euro and rebounding energy costs are risks to the disinflation scenario in 2023 (Chart 2).

There was a concerted policy pause among most G7 central banks in September as they assess the impact of previous tightening moves. The ECB was an exception. Having been behind peers in raising rates, the central bank proceeded with another 25bp rise to 4.5%. The PBoC cut its loan prime rate by 10bp to fight deflation risks, while the BoJ left its policy unchanged since introducing a 1% cap in July, as it seeks sustained inflation above target (Chart 3).

The Eurozone's balance sheet reduction efforts via credit operations has resulted in TLTRO (targeted longer-term refinancing operations) levels falling below €500 billion (from €2.2 trillion in June 2021) and are expected to reach close to zero by the end of 2023. Chart 4 also shows the sizeable and growing BoJ balance sheet, as it purchases JGBs for yield curve control purposes.

Chart 1: The Eurozone is experiencing one of the most severe money supply contraction in recent years on inflation and higher rates, and residential property prices fall sharply.

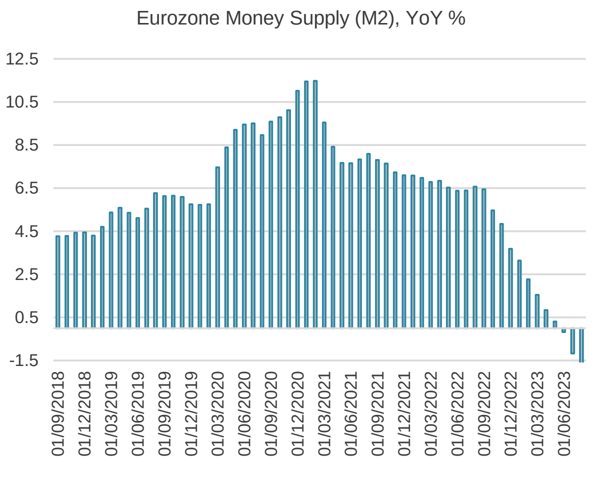


Chart 2: Currencies remain correlated with short rate differential as the yen and renminbi move to new 2023 lows in Q3 and the dollar rallied. A weaker euro pauses a risk to further inflation falls.

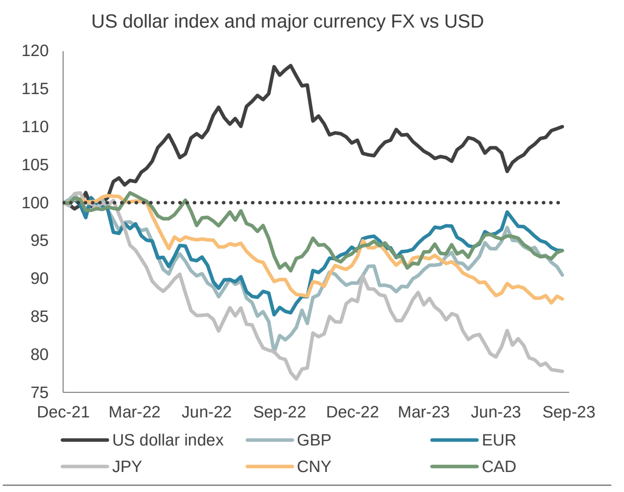


Chart 3: Widening growth dispersion: G7 central banks (ex the ECB) paused monetary policy in September, while the PBoC reduced its loan prime rate by another 10bp to revive weak economic activity.

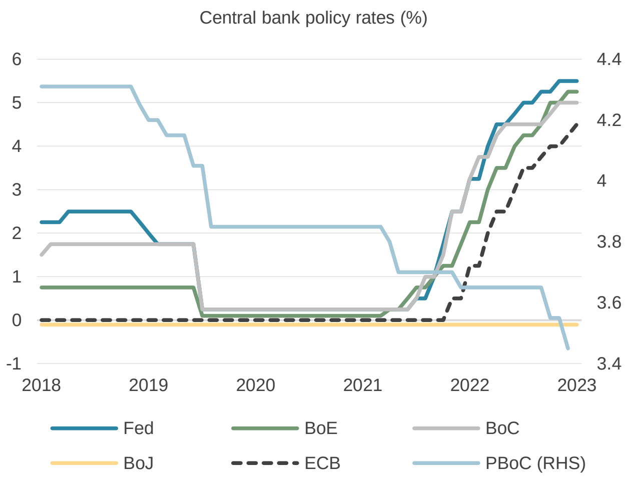
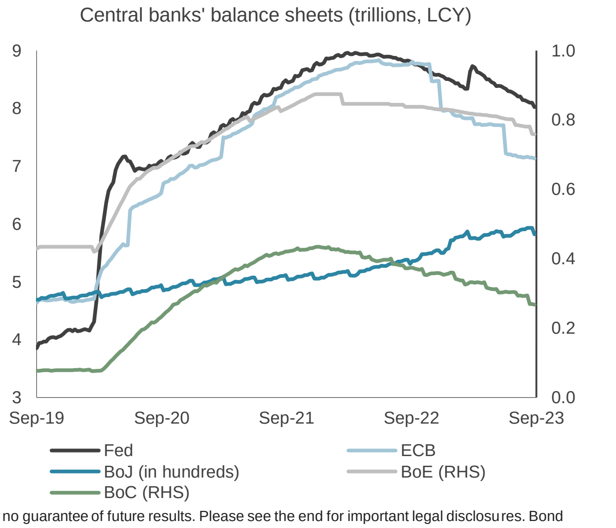


Chart 4: G7 balance sheets are falling fast as central banks use quantitative tightening as another monetary tool to restrain financial conditions. The JGB is the outlier.



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Global Yields, Curves and Spread Analysis

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

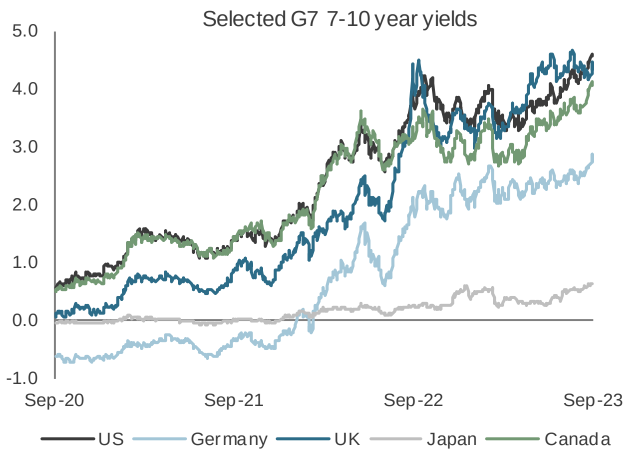


Chart 2: Real yields increased to new cycle highs in the US and Germany, but UK index linked rallied a little on better inflation data, and the BoE policy pause. JGB real 7-10-year yields flatlined.

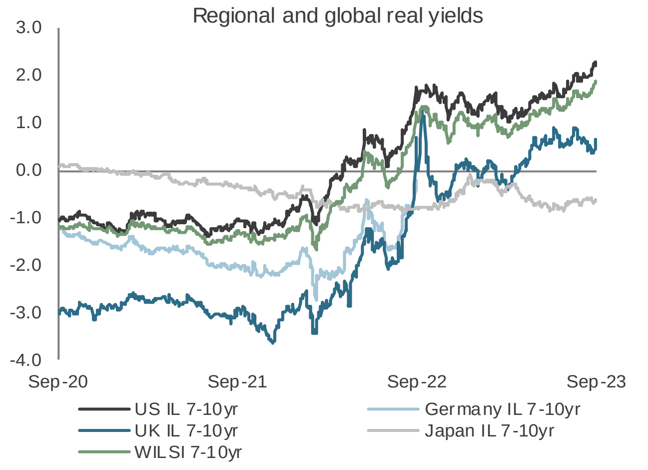


Chart 3: Yield curves dis-inverted further in September, with the front end helped by policy pauses (except the ECB). Curves remain deeply inverted, apart from JGBs, due to the BoJ's curve control.

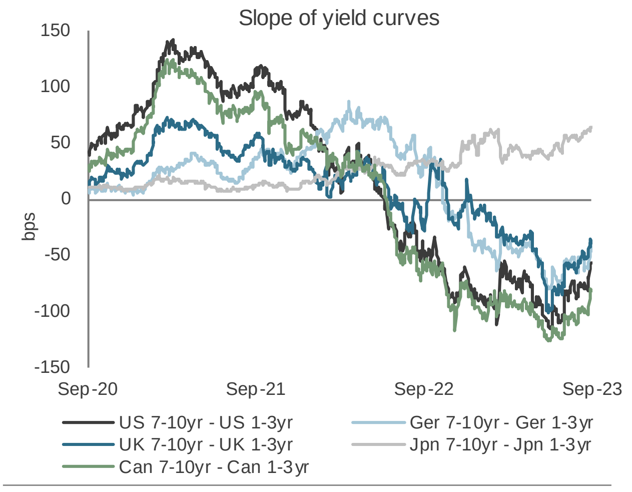


Chart 4: There were bigger dis-inversion moves in longer maturities versus shorts, led by the UK, after the surprise BoE policy pause caused short yields to ease. Long end JGB yields also increased.

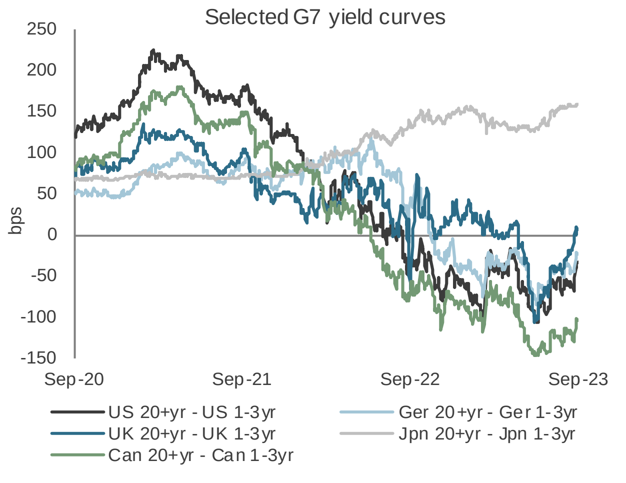


Chart 5: Breakevens increased in the UK, on the BoE policy pause, and in Japan, as the BoJ retained zero rates, but moved little elsewhere in September, including WGBI breakevens.

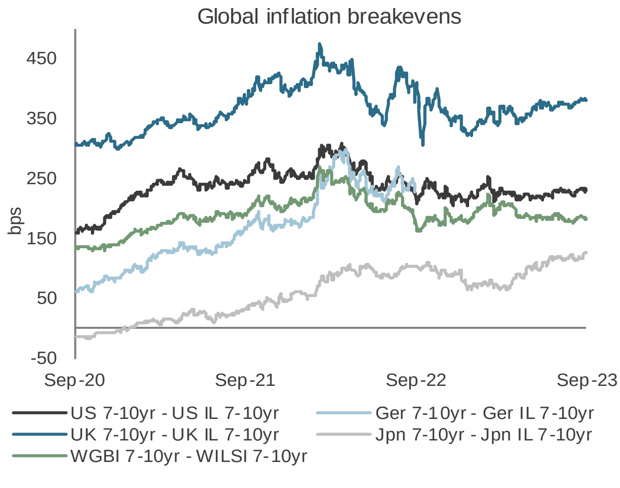
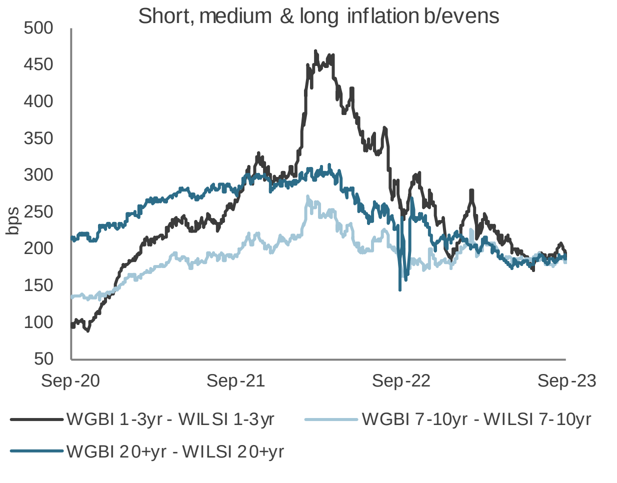


Chart 6: Global inflation breakevens of all tenors remain stable around 2%. Despite the oil price rebound in September, there is little evidence of inflation expectations de-stabilising.



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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 vs Canada.

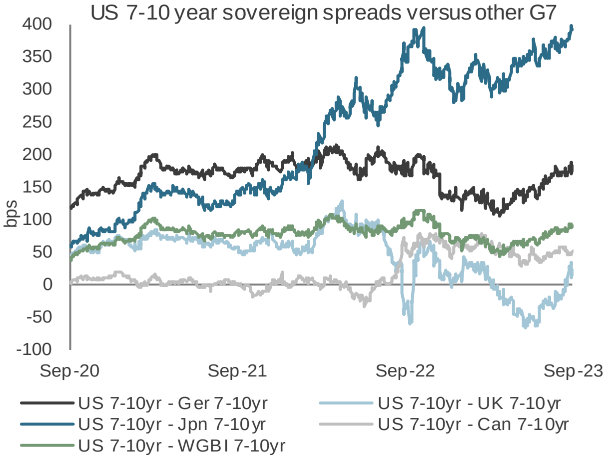


Chart 2: 7-10-year Italian spreads edged out in September versus European peers, driven by higher Bund yields, further ECB policy tightening and failure to reach agreement on new EU fiscal rules.

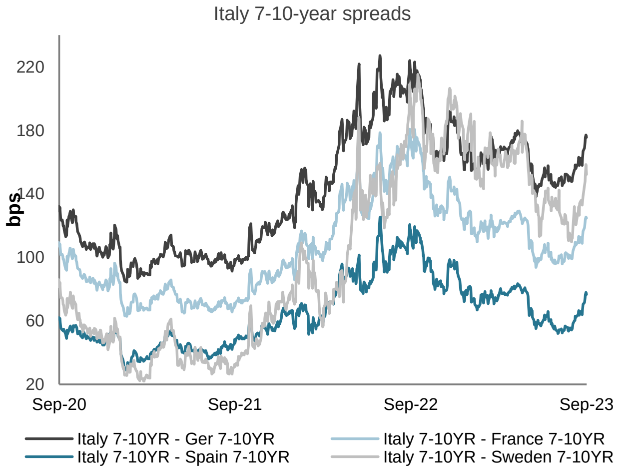


Chart 3: EM sovereign spreads remain near post-Covid lows, helped by early counter-inflation policy, in advance of DM. EM spill-over effects from G7 tightening have been far less than previous cycles.

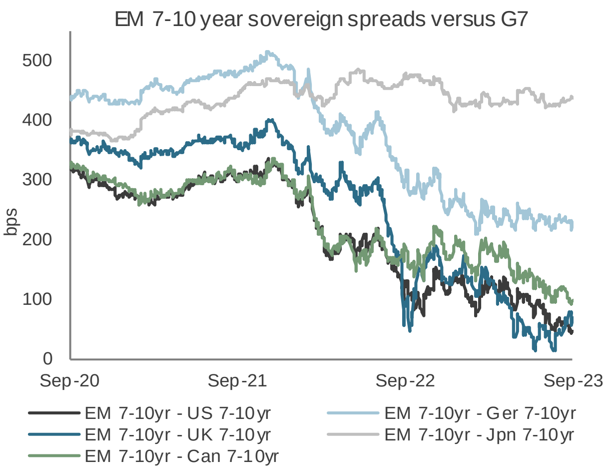


Chart 4:The PBoC's latest policy easing drove Chinese spreads to, or near, cyclical lows. The correlation of Chinese yields to the G7 remains very low, and de-globalisation may reduce this further.

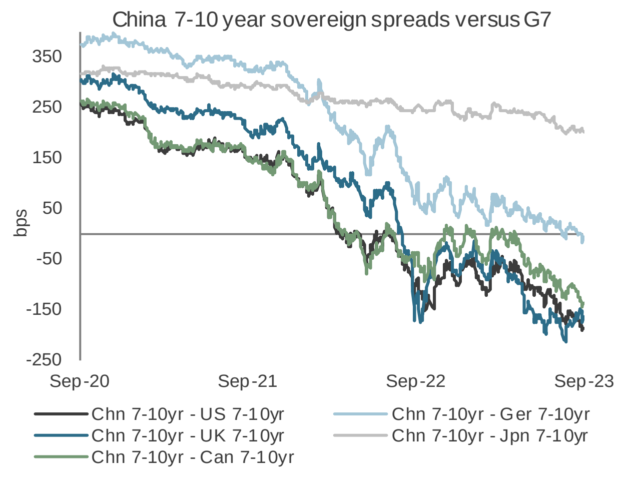


Chart 5: High yield credit spreads continue to grind lower, helped by investor risk appetite, and low default rates. IG spreads are now relatively more attractive, having fallen far less since the 2022 spike.

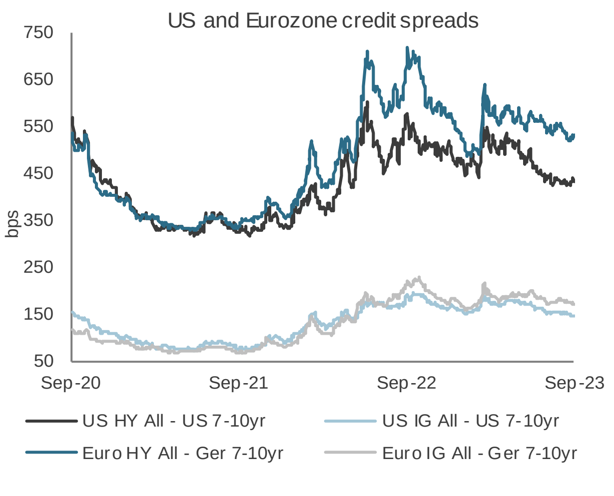
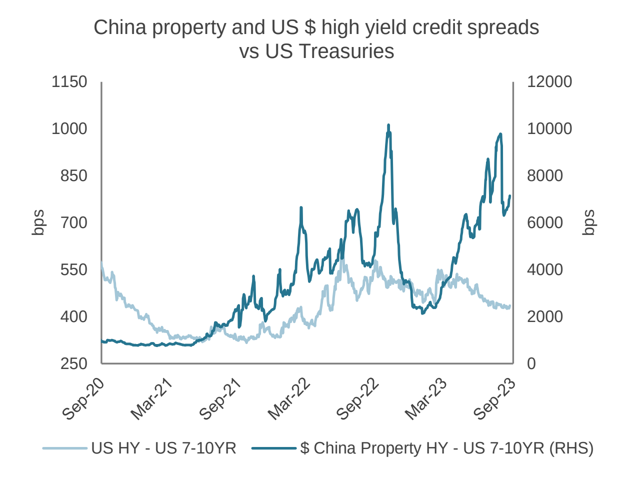


Chart 6: Chinese $ HY spreads eased in September from record highs, as Country Garden escaped from a potential default. Easier mortgage policies may also have helped to narrow spreads.



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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.

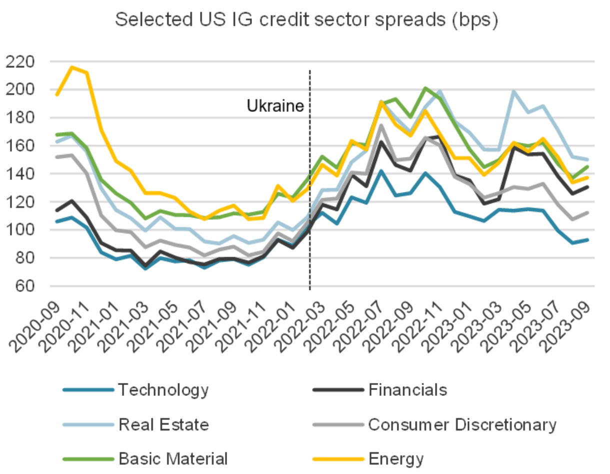


Chart 2: Euro credit sector spreads show the impact of the Ukraine war on the insurance sector. Consumer credits have outperformed, and bank spreads have narrowed on higher rates.

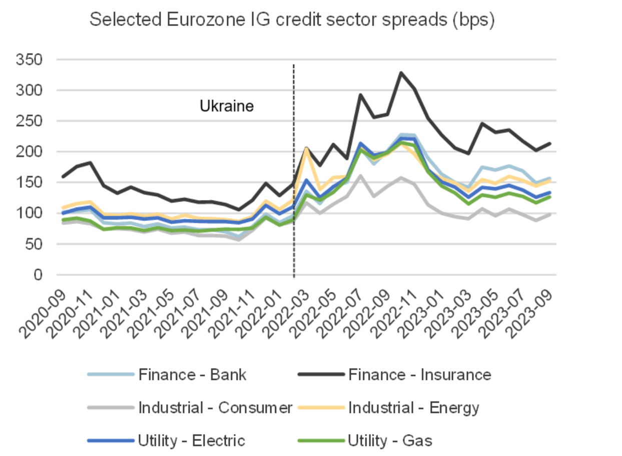


Chart 3: UK IG credit spreads rose with gilt yields in 2022, but unwound some of this in 2023, as has the spike in insurance sector spreads on the Ukraine war. Consumer credits trended lower in 2023.

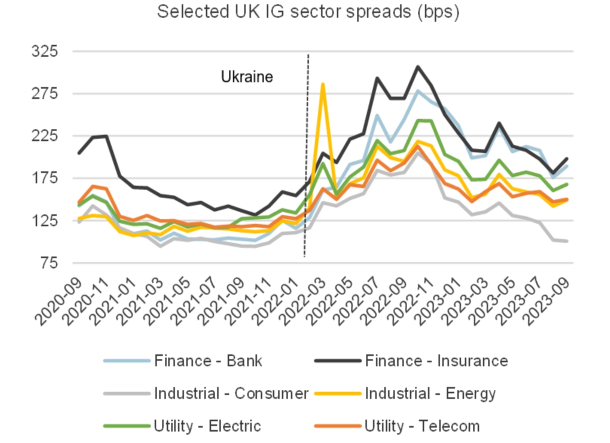


Chart 4: US agency-MBS traded through 7-10-year Treasuries in the early Covid period, driven by aggressive Fed QE. Negative convexity in MBS and higher Fed rates have caused MBS spreads to rise.

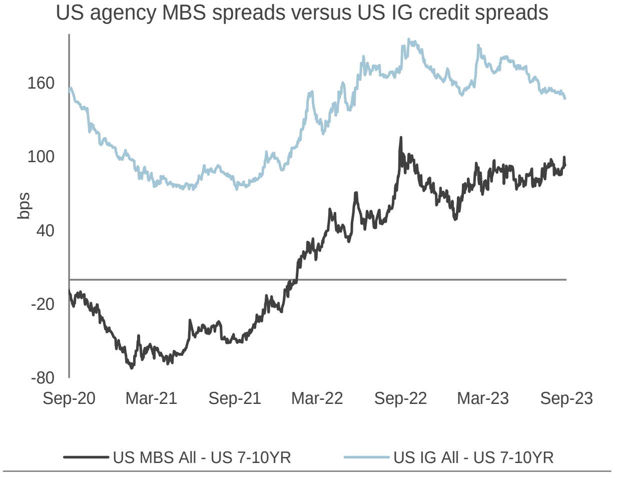


Chart 5: MBS prepayments and mortgage refinancings have collapsed since the Fed tightening began, due to the increase in US Treasury yields and mortgage coupons in 2022-23.

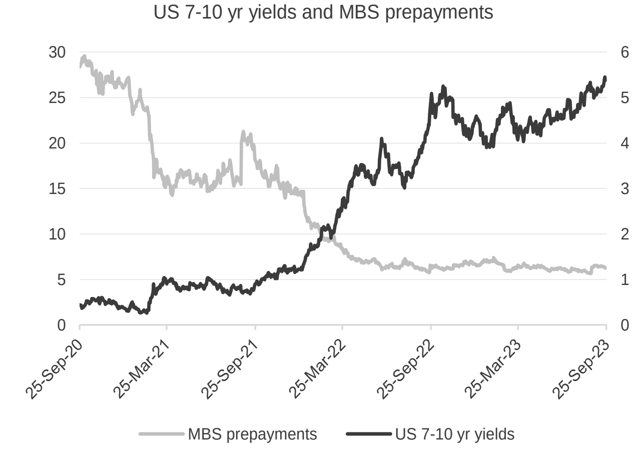
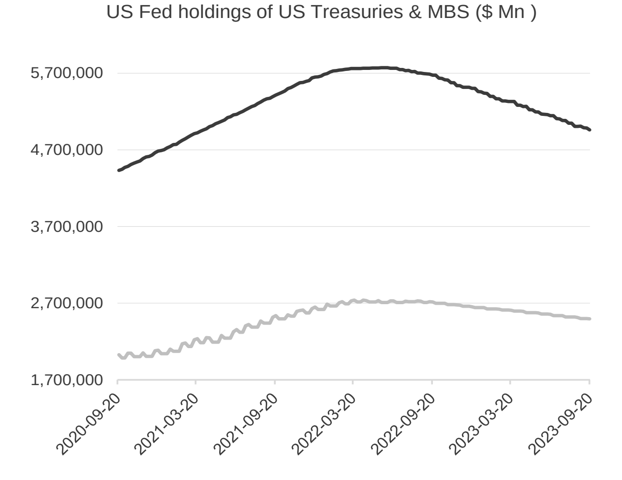


Chart 6: Fed holdings of MBS have been reduced at a slower pace than US Treasuries, since QT began in 2022. This reflects slow MBS prepayments for low coupons, and the Fed's coupon stack.



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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.

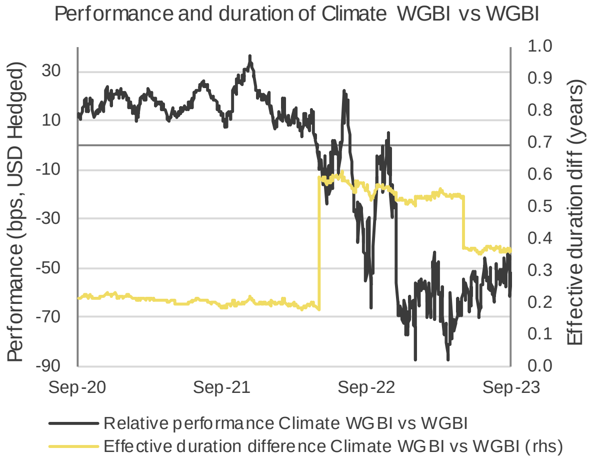


Chart 2: US underweight in the Climate WGBI fell in July's re-weighting, reducing the duration difference vs WGBI. China's 15% underweight prevented lower Chinese yields impacting Climate-WGBI significantly.

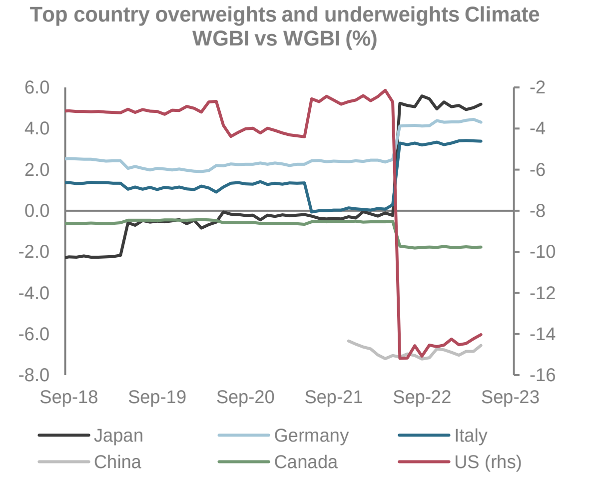


Chart 3: The increase in JGB yields in 2023 and high Japan country weight drove Climate-WGBI yields higher, versus WGBI, though Climate-WGBI yields remain lower, even if the 'greenium' is modest.

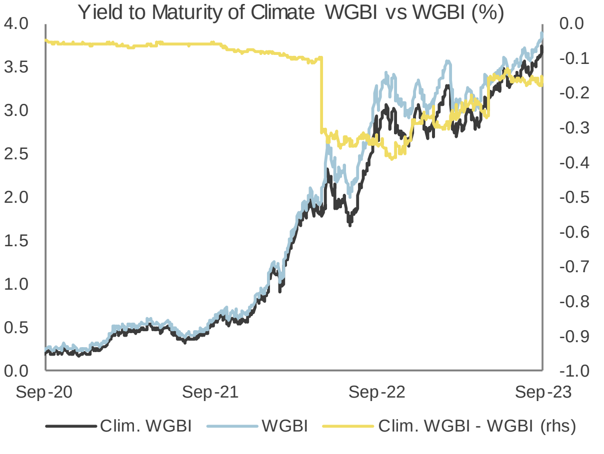


Chart 4: Climate WGBI's higher weighting in the Eurozone gives the index a higher AAA weight, with Bunds rated AAA, but the lower US weighting in Climate WGBI means the AA weight is notably lower.

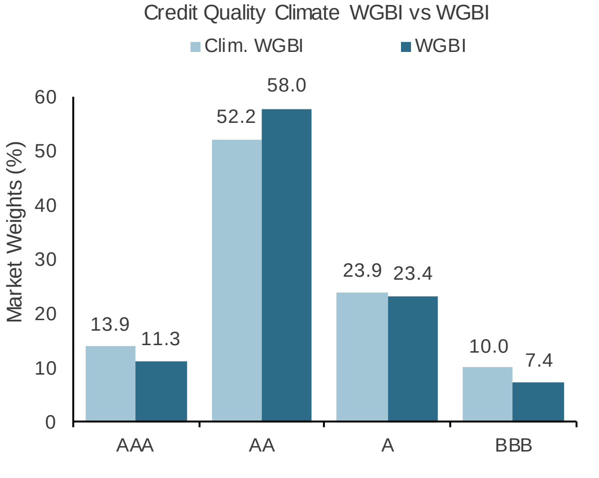


Chart 5: Although curves dis-inverted further in September, as long yields rose, yields converged on 3% in both WGBI and Climate WGBI in 2023, eliminating most of the 'greenium' in Climate WGBI.

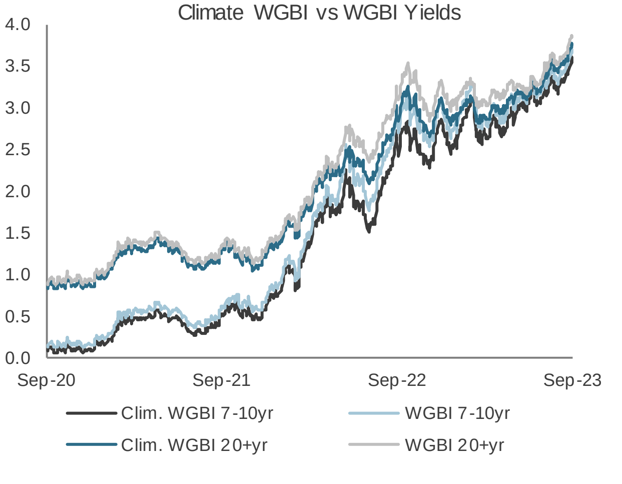
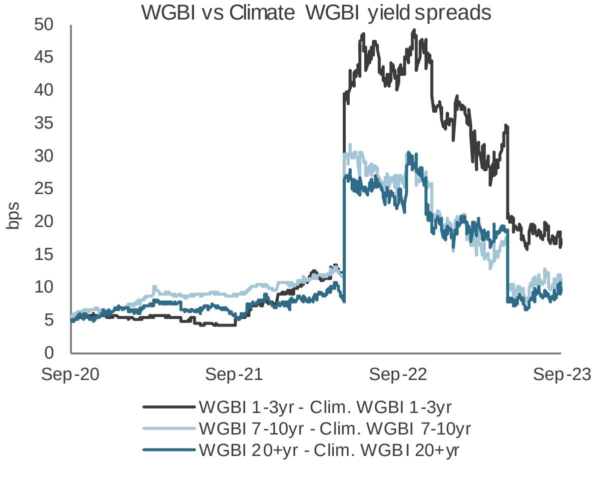


Chart 6: The 'greenium' rose sharply in 2022, when Japan's country weight was increased, and the US fell, reflecting Fed tightening, and BoJ curve control, but much of this has unwound in 2023.



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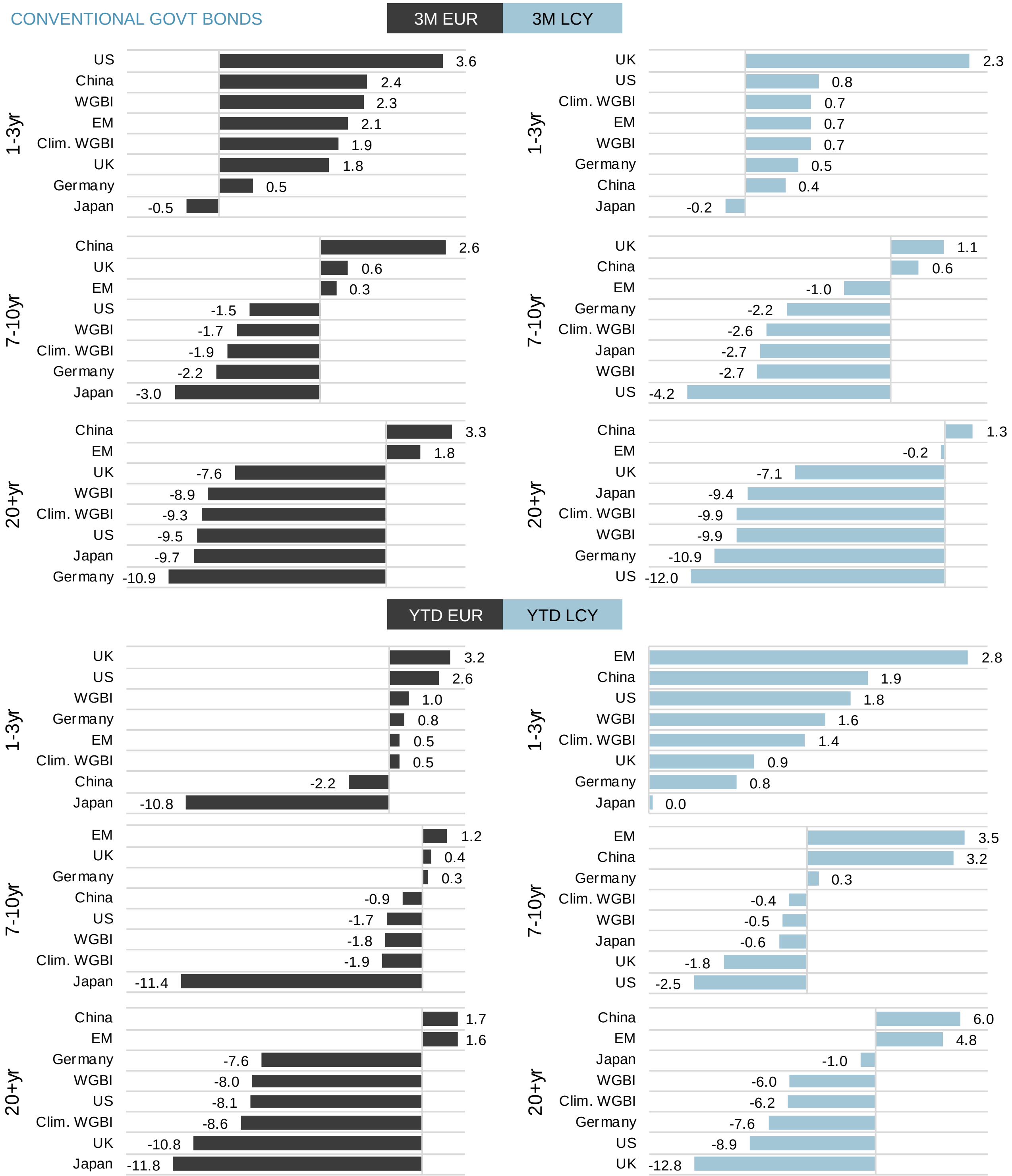
Global Bond Market Returns − 3M &YTD % (EUR, LC, TR)

Long government bond returns fell sharply in Q3, as tight labour markets, and slower disinflation suggested rates will have to stay higher for longer, with the risk of a further tightening move in Q4. Longer Eurozone bonds were particularly weak, with the failure to agree new EU fiscal rules another negative in September.

Long G7 sovereigns fell 8-11% in euros in Q3 2023 , led by long Bunds, JGBs and US Treasuries. Curves dis-inverted as short bonds held up well, with short US Treasuries gaining nearly 4% and Bunds 0.5%. China bucked the trend as the PBoC cut rates, to boost the recovery and reduce deflation risks, with long Chinese sovereign bonds gaining 3%.

YTD returns show similar losses in long duration bonds, but with JGBs losing 11-12% in all maturities, reflecting pronounced yen weakness. Ultra long duration in UK inflation linked bonds boosted losses to 11%, in Euro terms.



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

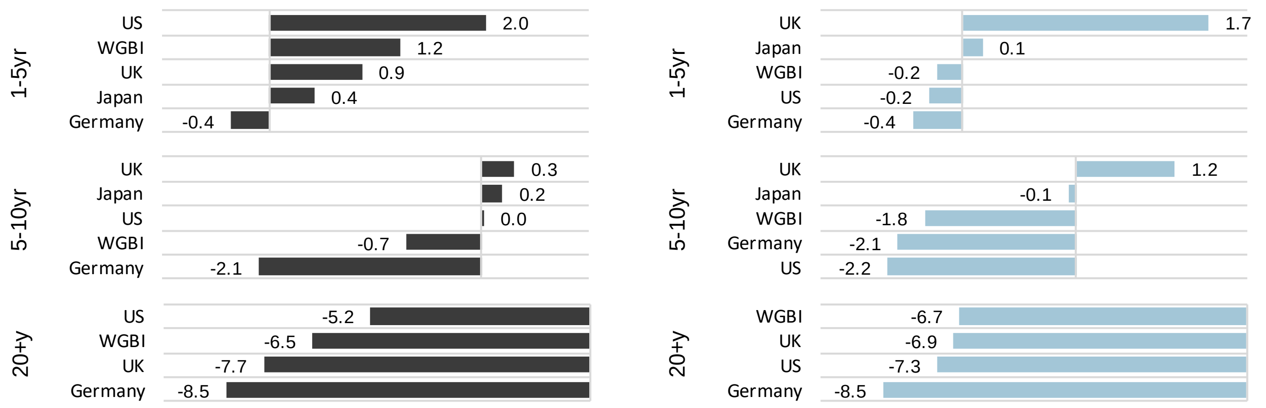
Longer inflation-linked bonds show sharp losses on 3M in euro terms, like conventional bonds, with Bunds the weakest performer, losing 9%. Shorter maturities were more resilient. HY credit outperformed, on both 3M and YTD, with gains of 7% YTD in US and Euro credits.

Long Bund, UK and US inflation linked bonds all lost 5-9% in Q3 2023, as duration and higher rates squeezed returns, with Q3 losses contributing to year-to-date losses of 5-16% in euros.

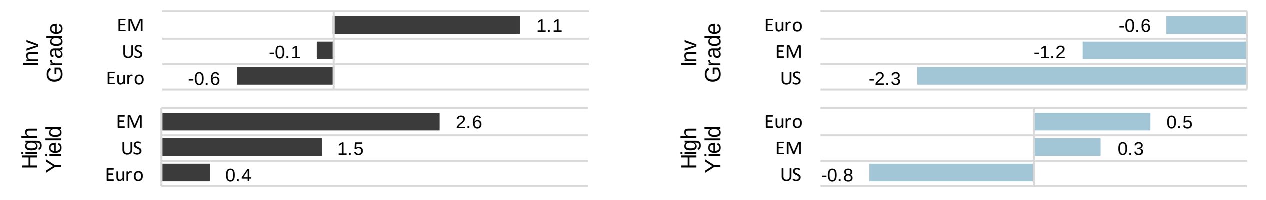
HY credit's correlation to equities, as a risk asset, low default rates and a soft landing for global growth drove outperformance. Euro and US high yield credits stand out with gains of 7% since January.

INFLATION LINKED BONDS

3M EUR | 3M LCY

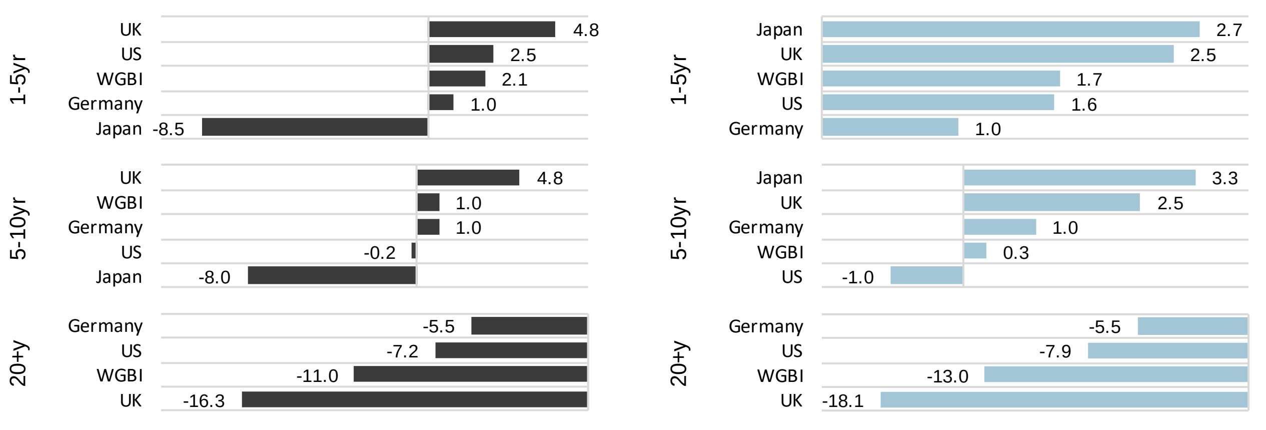


CORPORATE BONDS

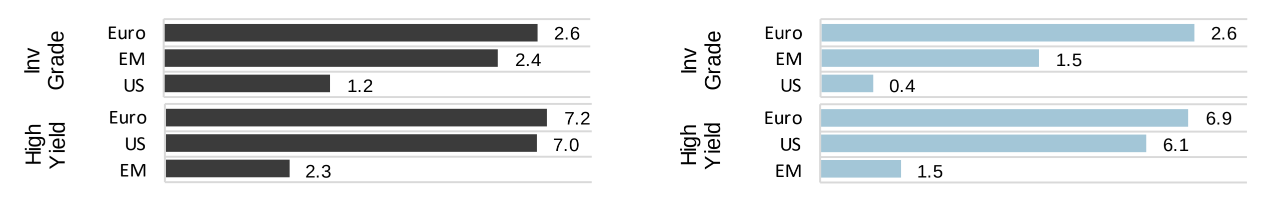


INFLATION LINKED BONDS

YTD EUR | YTD LCY



CORPORATE BONDS



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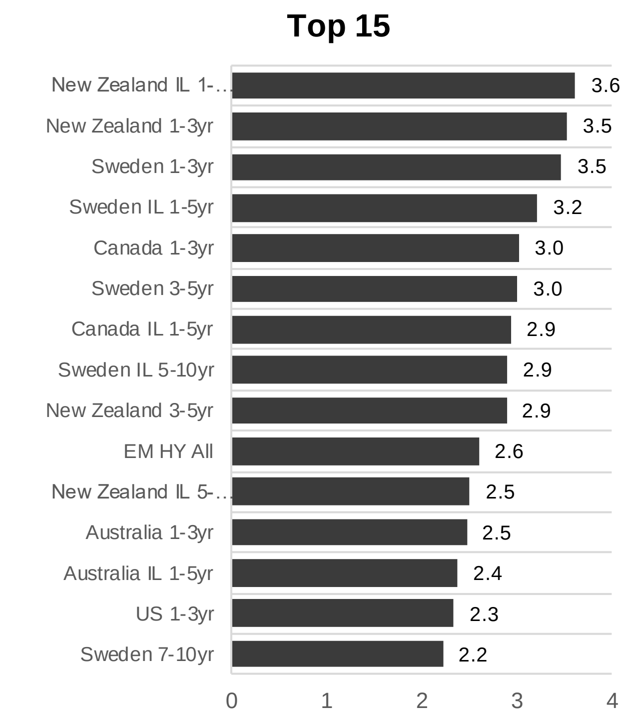
Top and Bottom Bond Returns − 1M & 12M % (EUR, TR)

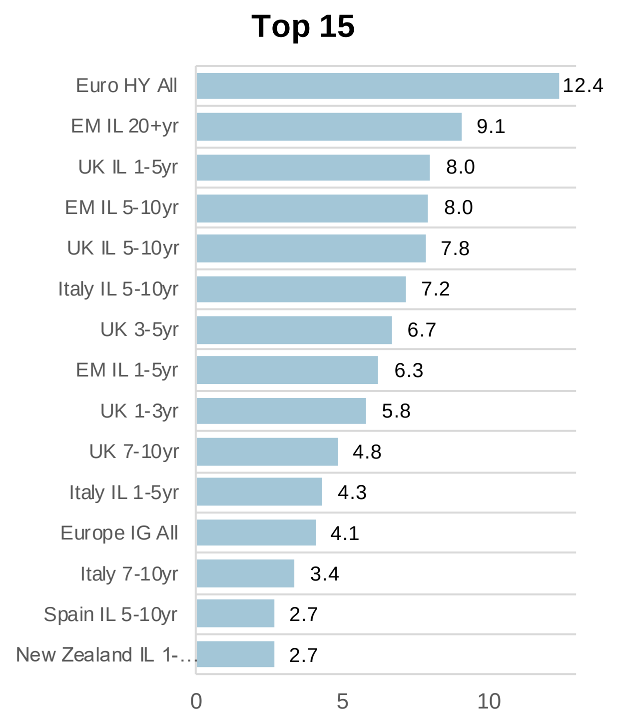
Long conventional and inflation linked fell sharply in September, as real yields spiked on soft landings for growth, and higher for longer fears on rates. Eurozone long governments lost 7-14%. Euro HY credit and shorter UK gilts recovered strongly Y/Y from September 2022 sell-offs, with 5-12% returns in Euros. EM inflation linked remain strong performers.

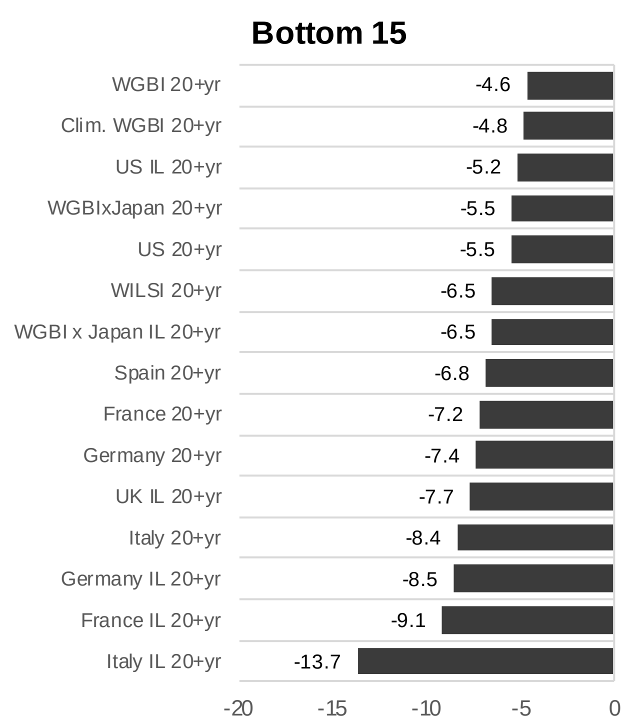
Real yields rose abruptly in long dated government bonds in September, as yield curves dis-inverted further, in signs of capitulation by bond bulls, and despite policy pauses, apart from the ECB. Australasian bonds stabilised, helped by modest currency gains.

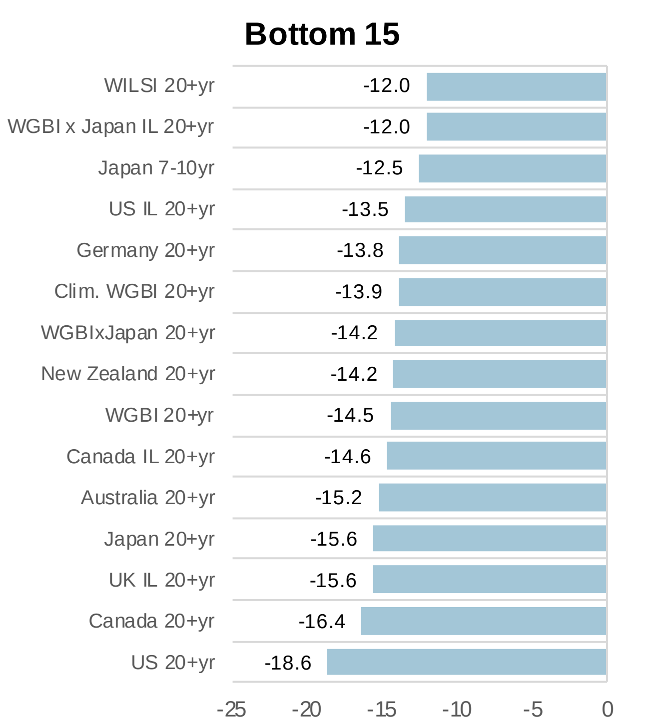
Long governments remained in the doldrums, both in September and over 12M, with deeply negative returns of 12-18%.

1M EUR | 12M EUR









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.

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

Government Bond Returns

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

		3M		6M		YTD		12M	
		Local	EUR	Local	EUR	Local	EUR	Local	EUR
US	1-3yr	0.76	3.62	0.29	2.60	1.78	2.60	2.42	-5.52
	7-10yr	-4.19	-1.47	-5.52	-3.35	-2.50	-1.71	-2.14	-9.73
	20+yr	-12.02	-9.51	-13.40	-11.41	-8.86	-8.12	-11.77	-18.61
	IG All	-2.40	0.37	-2.13	0.12	0.37	1.17	3.66	-4.38
	HY All	0.81	3.68	3.66	6.04	6.11	6.96	10.34	1.78
UK	1-3yr	2.32	1.78	0.28	1.71	0.94	3.24	3.71	5.82
	7-10yr	1.10	0.58	-5.21	-3.86	-1.85	0.39	2.74	4.83
	20+yr	-7.08	-7.56	-16.16	-14.96	-12.81	-10.82	-13.25	-11.49
Euro	IG All	0.37	0.37	1.07	1.07	2.63	2.63	4.07	4.07
	HY All	2.09	2.03	4.18	4.35	6.91	7.17	12.18	12.41
Japan	1-3yr	-0.21	-0.54	-0.20	-9.35	0.03	-10.84	-0.13	-10.73
	7-10yr	-2.70	-3.01	-2.71	-11.63	-0.62	-11.43	-2.14	-12.53
	20+yr	-9.37	-9.67	-8.44	-16.83	-1.03	-11.79	-5.54	-15.57
China	1-3yr	0.41	2.40	1.44	-2.14	1.94	-2.20	2.24	-7.04
	7-10yr	0.59	2.58	2.44	-1.17	3.24	-0.95	3.55	-5.85
	20+yr	1.32	3.34	4.98	1.27	6.01	1.71	5.47	-4.10
EM	1-3yr	0.44	3.29	0.95	3.27	2.70	3.53	5.68	-2.52
	7-10yr	-2.42	0.36	-0.81	1.47	-0.28	0.52	6.64	-1.63
	IG All	-1.55	1.25	-0.30	2.00	1.54	2.35	4.96	-3.18
	HY All	0.01	2.85	1.25	3.58	1.51	2.32	10.04	1.50
Germany	1-3yr	0.54	0.54	0.15	0.15	0.78	0.78	-0.20	-0.20
	7-10yr	-2.16	-2.16	-2.62	-2.62	0.25	0.25	-2.48	-2.48
	20+yr	-10.90	-10.90	-11.29	-11.29	-7.59	-7.59	-13.81	-13.81
Italy	1-3yr	0.57	0.57	0.39	0.39	1.59	1.59	1.86	1.86
	7-10yr	-3.44	-3.44	-2.24	-2.24	2.89	2.89	3.38	3.38
	20+yr	-10.34	-10.34	-7.78	-7.78	-1.07	-1.07	-4.33	-4.33
Spain	1-3yr	0.53	0.53	0.18	0.18	1.11	1.11	0.44	0.44
	7-10yr	-2.43	-2.43	-2.57	-2.57	0.60	0.60	-0.90	-0.90
	20+yr	-9.39	-9.39	-8.76	-8.76	-5.38	-5.38	-8.97	-8.97
France	1-3yr	0.55	0.55	0.12	0.12	1.09	1.09	-0.04	-0.04
	7-10yr	-2.33	-2.33	-2.63	-2.63	0.19	0.19	-2.28	-2.28
	20+yr	-10.32	-10.32	-10.18	-10.18	-7.21	-7.21	-11.94	-11.94
Sweden	1-3yr	0.79	3.55	0.27	-1.68	1.00	-2.36	0.75	-4.05
	7-10yr	-1.99	0.70	-4.75	-6.61	-2.91	-6.13	-3.63	-8.22
Australia	1-3yr	0.83	0.93	-0.55	-1.76	1.16	-2.95	2.15	-6.09
	7-10yr	-2.97	-2.87	-6.78	-7.91	-0.14	-4.20	-0.01	-8.07
	20+yr	-9.16	-9.07	-15.21	-16.24	-5.17	-9.02	-7.81	-15.24
New Zealand	1-3yr	-0.05	1.66	-0.11	-1.36	1.57	-2.73	1.19	-1.34
	7-10yr	-4.45	-2.81	-6.20	-7.38	-3.04	-7.15	-4.03	-6.42
	20+yr	-11.60	-10.09	-15.48	-16.54	-12.52	-16.23	-12.03	-14.22
Canada	1-3yr	0.67	1.46	-0.02	2.77	1.25	2.28	1.73	-4.81
	7-10yr	-3.97	-3.22	-6.86	-4.25	-3.55	-2.56	-3.39	-9.60
	20+yr	-10.85	-10.15	-12.82	-10.39	-8.57	-7.63	-10.61	-16.35

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 % (EUR & LC, TR) – September 30, 2023

Inflation-Linked Bond Returns

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

		3M		6M		YTD		12M	
		Local	EUR	Local	EUR	Local	EUR	Local	EUR
US	1-5yr	0.38	3.23	-0.38	1.91	1.64	2.45	2.61	-5.35
	5-10yr	-2.64	0.13	-4.40	-2.20	-1.03	-0.24	0.30	-7.48
	20+yr	-11.48	-8.96	-13.16	-11.16	-7.92	-7.18	-6.20	-13.47
UK	1-5yr	2.47	1.94	1.33	2.77	2.47	4.81	5.86	8.02
	5-10yr	1.37	0.85	-1.97	-0.57	2.48	4.82	5.69	7.84
	20+yr	-11.62	-12.08	-22.54	-21.43	-18.14	-16.27	-17.29	-15.61
Japan	1-5yr	0.52	0.19	1.58	-7.73	2.66	-8.50	3.15	-7.80
	5-10yr	-0.70	-1.02	2.11	-7.25	3.25	-7.97	2.78	-8.13
EM	1-5yr	3.45	3.35	4.18	3.31	9.52	9.59	13.45	6.25
	5-10yr	0.28	0.34	2.11	2.59	6.63	8.65	12.77	7.95
	20+yr	-3.42	-3.26	2.60	6.80	5.00	11.60	8.10	9.06
Germany	1-5yr	0.43	0.43	0.11	0.11	0.96	0.96	1.39	1.39
	5-10yr	-1.91	-1.91	-1.49	-1.49	1.01	1.01	1.26	1.26
	20+yr	-12.13	-12.13	-10.76	-10.76	-5.48	-5.48	-7.52	-7.52
Italy	1-5yr	0.23	0.23	0.32	0.32	1.83	1.83	4.32	4.32
	5-10yr	-3.84	-3.84	-1.57	-1.57	2.91	2.91	7.17	7.17
	20+yr	-17.54	-17.54	-12.32	-12.32	-2.96	-2.96	0.57	0.57
Spain	1-5yr	0.19	0.19	0.03	0.03	1.23	1.23	1.84	1.84
	5-10yr	-1.93	-1.93	-1.53	-1.53	0.98	0.98	2.66	2.66
France	1-5yr	-0.20	-0.20	-0.39	-0.39	0.60	0.60	1.21	1.21
	5-10yr	-2.01	-2.01	-1.61	-1.61	0.93	0.93	1.63	1.63
	20+yr	-12.59	-12.59	-10.62	-10.62	-6.32	-6.32	-5.91	-5.91
Sweden	1-5yr	0.98	3.75	0.01	-1.95	1.51	-1.87	3.44	-1.49
	5-10yr	-0.59	2.14	-2.62	-4.52	-0.38	-3.69	-0.17	-4.93
Australia	1-5yr	0.80	0.90	-0.10	-1.31	3.91	-0.31	7.21	-1.43
	5-10yr	-1.08	-0.98	-3.02	-4.20	3.93	-0.30	7.26	-1.39
	20+yr	-8.18	-8.09	-13.07	-14.12	-1.77	-5.76	3.43	-4.90
New Zealand	5-10yr	-3.70	-2.06	-3.45	-4.65	1.29	-3.00	3.39	0.81
Canada	20+yr	-10.32	-9.62	-11.32	-8.84	-15.06	-14.19	-8.78	-14.65

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 – Historical Bond Yields % as of September 30, 2023

Global Bond Yields

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

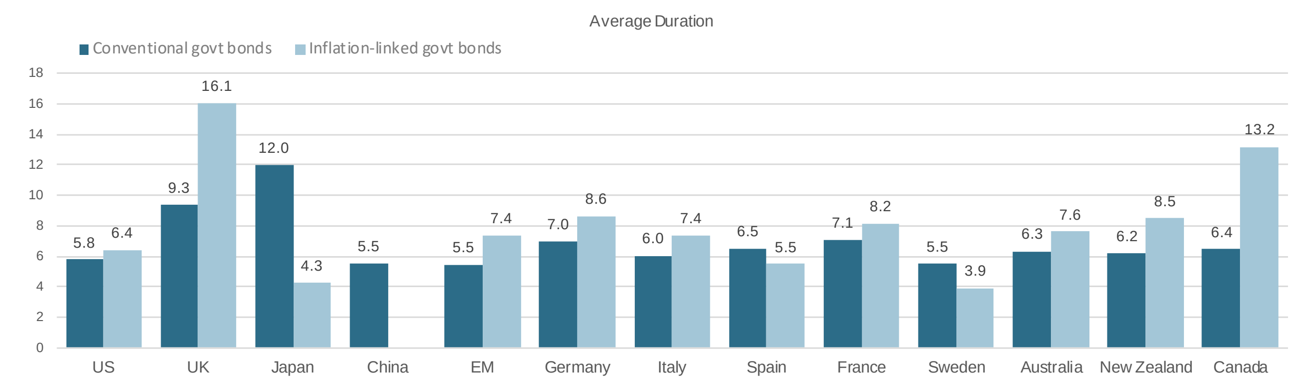
		Conventional government bonds				Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	5.16	4.71	4.59	4.82	2.72	2.29	2.37	6.06	8.93
	3M Ago	5.02	4.31	3.88	4.01	2.48	1.77	1.75	5.58	8.67
	6M Ago	4.25	3.82	3.58	3.87	1.52	1.26	1.58	5.38	8.76
	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		

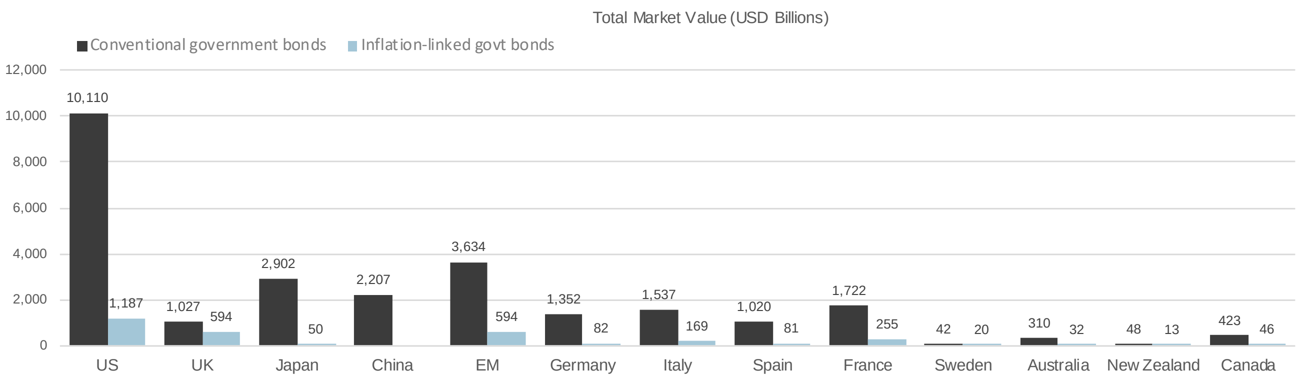
Source: FTSE Russell. All data as of September 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional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

Appendix – 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**

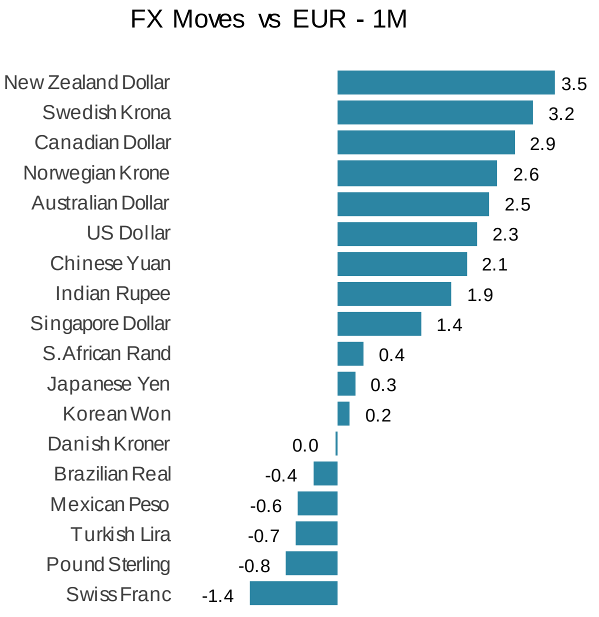
	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	10.2	8.1	6.9	6.4	6.8	68.6	431.6	2513.0	3216.0	6229.3	3.9	1012.6
Europe	5.7	4.7	4.5	4.2	4.4	11.0	177.5	1147.5	1381.6	2717.6		
EM		5.5	4.6	4.9	4.9		45.2	216.4	311.9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

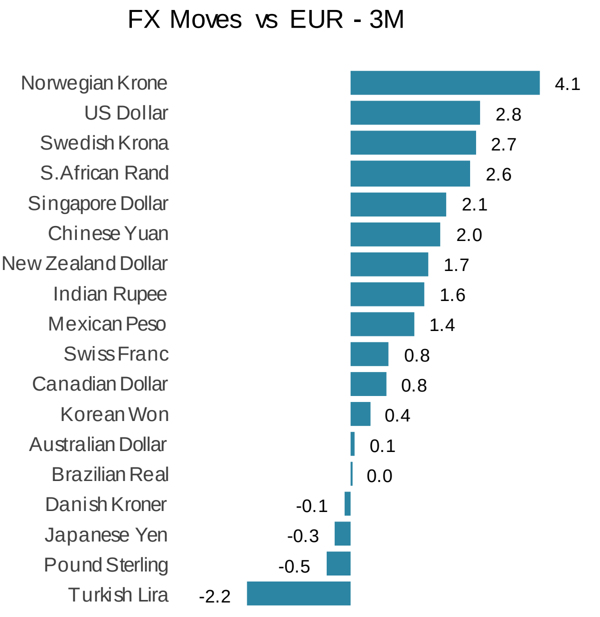


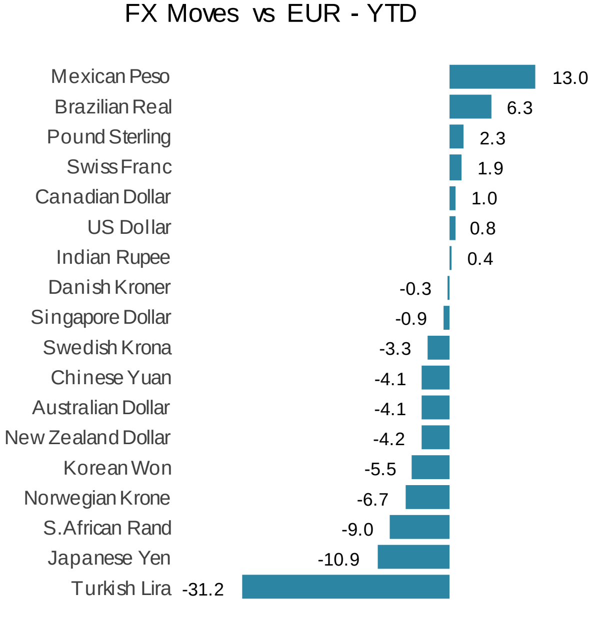


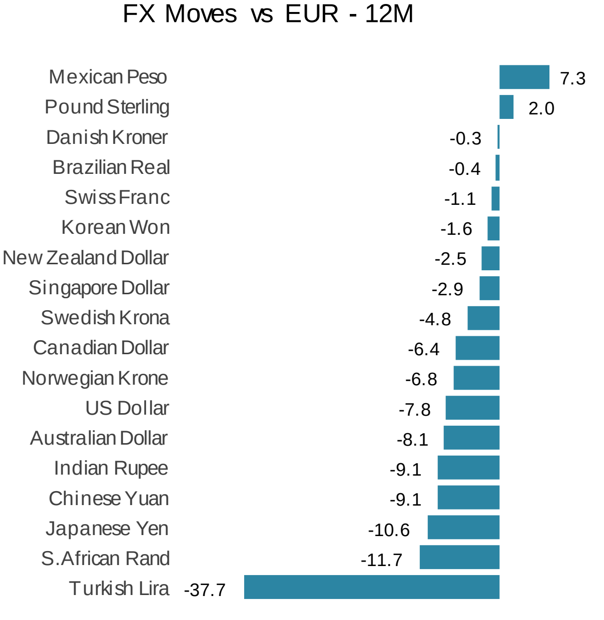
Source: FTSE Russell. All data as of September 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional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

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









Source: FTSE Russell and LSEG. 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 - 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