

Fixed Income Insights

MONTHLY REPORT - February 2023 | CANADA EDITION

FOR PROFESSIONAL INVESTORS ONLY

Canadian provinces and municipals lead January's bond rally, as BoC confirms pause

The Bank of Canada confirmed a policy pause on January 25, after the soft signal in December. Markets had discounted this move, and the bull inversion of the curve continued through January. Both provincial and municipal spreads have fallen pro-cyclically during the rally, with investors drawn to their high relative yields.

Growth and inflation expectations – BoC pause to refresh? Central bank to assess impact of tightening

With unemployment near historic lows, further tightening cannot be ruled out, but BoC now takes a pause to assess. (page 2)

Canadian govts and credit – Real return bonds have lagged the rally in long conventionals as breakevens fell

Long-dated Canadian breakevens fell in January, more so than those in the US and Germany, as nominal bonds responded more to the confirmation of a policy pause than real return bonds. (pages 3-4)

Global yields and spreads – Disconnect between cautious central banks and market optimism on rates widened

Curves flattened, or inverted more, as markets anticipate policy easing and 2018/19 re-run, but with tail risks? (pages 5-6)

Performance – Provis and munis lead the January rally, after underperforming in 2022

Canadian provinces, municipals and energy corporates gained about 4% in January. (pages 7-9)

Sovereign and climate bonds – Swings in relative performance in 2022/23 were led by duration and country weights

Climate WGBI failed to sustain Q4 recovery vs WGBI, after the underperformance of (overweight) JGBs. (page 10)

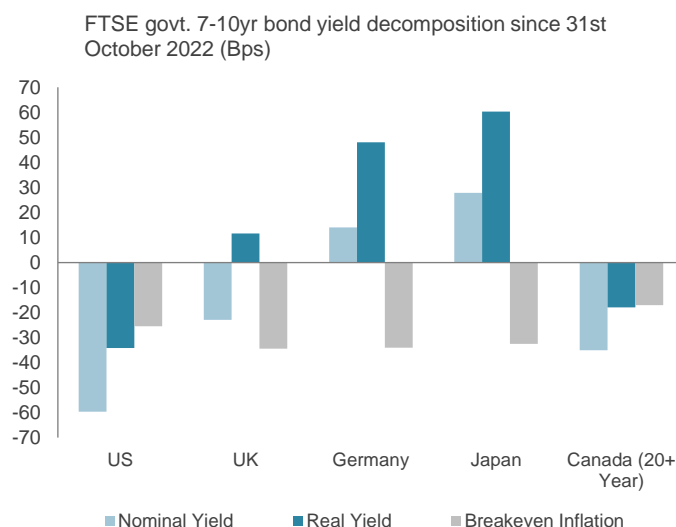
Appendix

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

Chart 1: The tight Canadian labour market, with unemployment near historic lows, remains an inflation risk for the Bank of Canada.



Chart 2: Inflation breakevens have fallen throughout the G7 during the recent rally, as nominal bonds have generally led the rally.



Macroeconomic Backdrop – Growth and Inflation Expectations

Consensus forecasts show G7 economies suffering mild recessions at worst in 2023, with Europe being the worst hit by the 2022 energy shock and monetary tightening. The BoC raised its overnight rate by 25bp, citing tight labour markets and inflation as reasons, but firmly signalled a policy pause. The Canadian dollar fell with lower energy prices.

GDP growth forecasts for 2023 continue to project a soft landing for the G7 economies, with outright contraction only expected in the UK. In Canada, estimated GDP growth of 3.5% for 2022 would be higher than that forecast for the US (2.1%), though, like other G7 countries, a sharp slowdown is forecast in 2023 (Chart 1).

Canadian inflation fell sharply in December to 6.3% y/y, from 8.1% y/y in June, with CPI y/y expected to almost halve to 3.7% in 2023 and to reach its 2% target in 2024, along with other G7 countries. (Chart 2).

Canada's labour market remains tight, and the unemployment rate fell near historic lows in December (see Chart 1, page 1), prompting the BoC to raise its overnight rate by another 25bp to 4.50% on January 25 (Chart 3). However, the BoC also stated "it's now time to pause and assess" whether policy is restrictive enough to restore inflation to target — a pause markets had anticipated.

Chart 4 shows the Canadian dollar has been more stable versus US dollar than other currencies, reflecting closer rate differentials. The US dollar has fallen further from 2022 highs, as markets price in a lower peak for US interest rates, and risk appetite recovers. The BoJ did not widen the 10-year JGB yield band further in January, but easing of curve control has supported the yen rally.

Chart 1: Consensus GDP growth expectations project a sharp slowdown in 2023, but with a net contraction only in the UK. Canada's GDP is set to be among the highest in 2024.

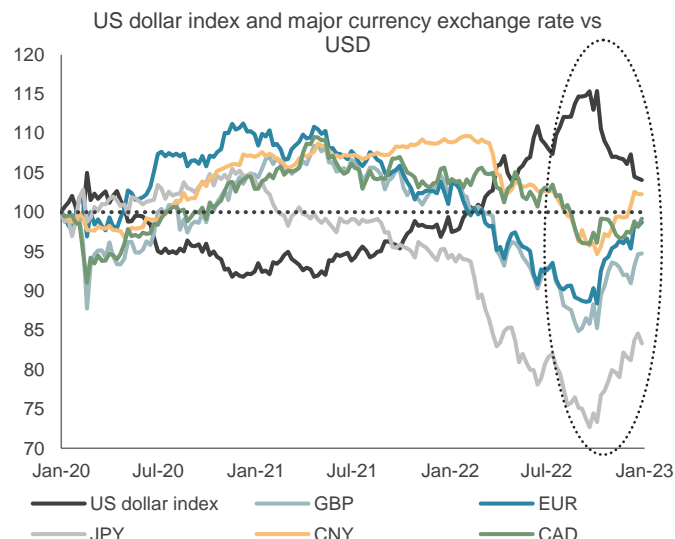
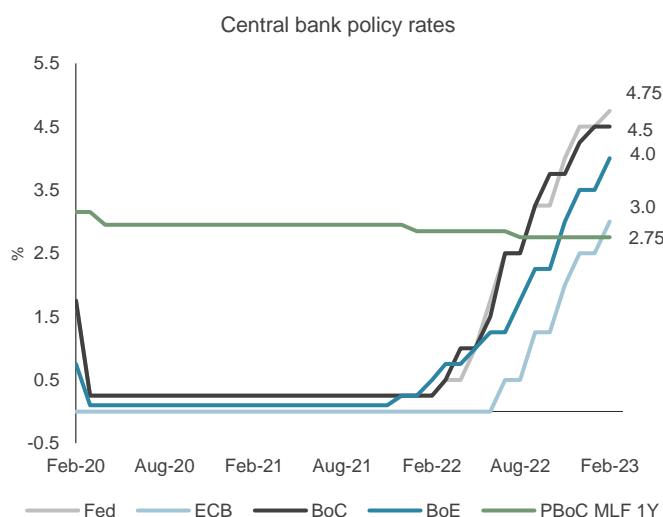
Latest Consensus Real GDP Forecasts (% January 2023)			
	2022	2023	2024
US	2.1	0.5	1.3
UK	4.1	-0.9	0.8
Eurozone	3.3	0.1	1.3
Japan	1.6	1.1	1.1
China	3.0	4.9	5.0
Canada	3.5	0.5	1.5

Chart 2: Inflation forecasts for G7 countries remain well above target in 2023, despite steep rate increases. China and Japan are exceptions, with inflation much closer to their targets.

Consensus Inflation Forecasts (% January 2023)				
	2023	Change Since Jan-22 (Bps)	2024	Change Since Jan-22 (Bps)
US	3.7	130	2.5	20
UK	7.0	480	2.5	40
Eurozone	6.0	430	2.5	70
Japan	1.8	110	1.3	80
China	2.3	20	2.3	30
Canada	3.7	150	2.2	0

Chart 3: The BoC's latest rate rise (by 0.25% to 4.50%) in January was less than European rate moves, with a policy pause to follow, though the rate differential has widened again with PBOC and BoJ.

Chart 4: The dip in the US dollar, from the Q4 highs, reflects the revision down to Fed tightening expectations as US inflation fell. The Canadian dollar remains more stable versus US dollar.



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

Canadian Governments, Provinces and Municipalities

Chart 1: The 10s/2s and 20s/2s Canadian curves remained deeply inverted, suggesting some recession risks in 2023, however, growth in H2 2022 has been stronger than forecast by the Bank of Canada.

Canada govt yields: longs and mediums vs shorts

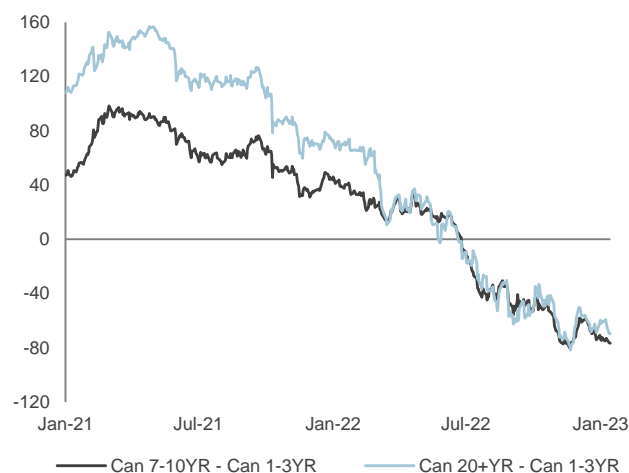


Chart 2: Canadian 7-10-year government spreads have tightened against G7 peers since Q4 2022 after the signalling of a BoC policy pause, which was confirmed in January.

7-10yr Canadian sovereign spreads

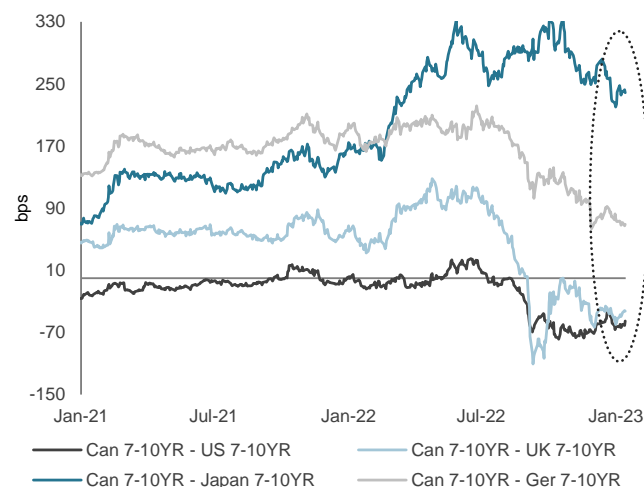


Chart 3: Long Canadian nominal and real yields continued to track closely in January, reflecting stable long-run inflation breakevens. Only during the early stages of Covid did yields decouple sharply.

Long-dated Canadian nominal and real yields

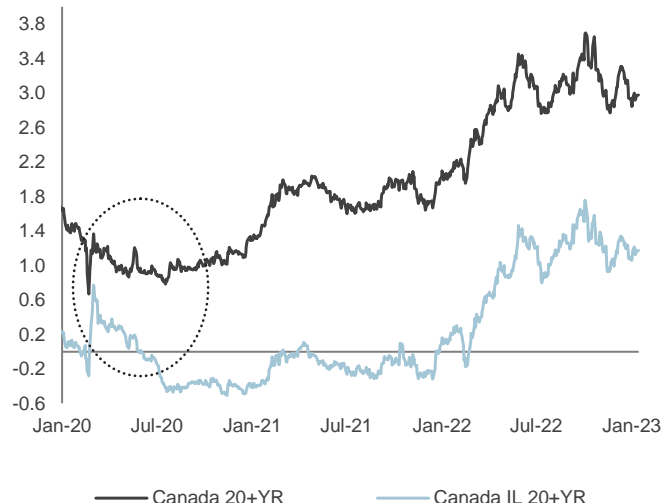


Chart 4: Long-dated Canadian breakevens fell in January, more so than those in the US and Germany, as nominal bonds responded more to the confirmation of a policy pause than real return bonds.

Selected longer dated inflation breakevens

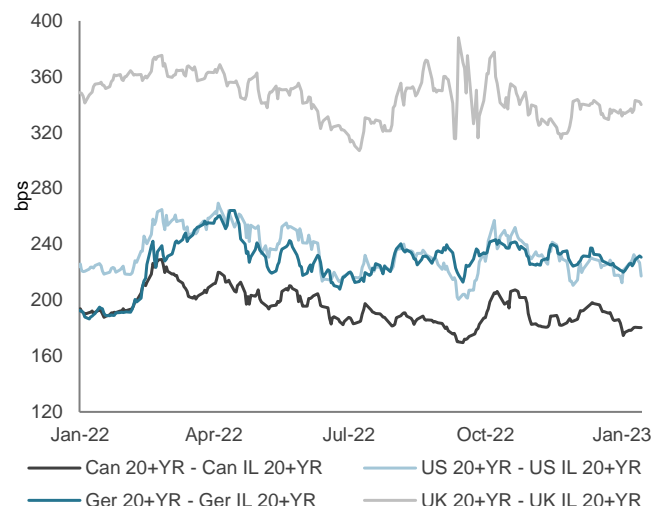


Chart 5: Provincial spreads have returned towards pre-Covid levels, but converged across provinces. Alberta's spread divergence in the early days of Covid has ended.

Selected 7-10yr provincial spreads

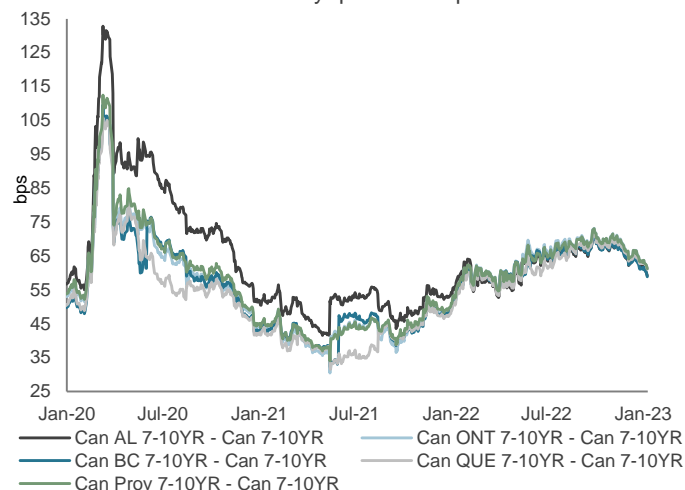
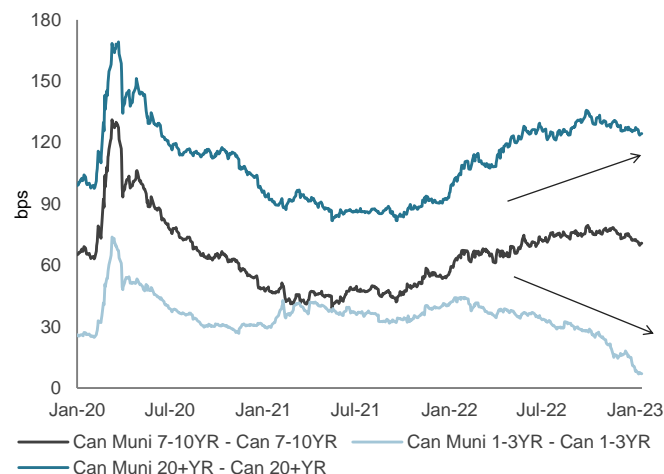


Chart 6: Convergence of short-dated municipal spreads towards government yields continued, taking spreads below pre-Covid levels, with longer municipal spreads also starting to fall in January.

Municipal spreads versus Canadian govt bonds



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

Canadian Corporate Bonds

Chart 1: Canadian high yield (HY) bond yields have been more stable than US HY during 2022, while Canadian IG corporate bond yields have largely tracked their US investment grade equivalents.

Canadian and US corporate bond yields

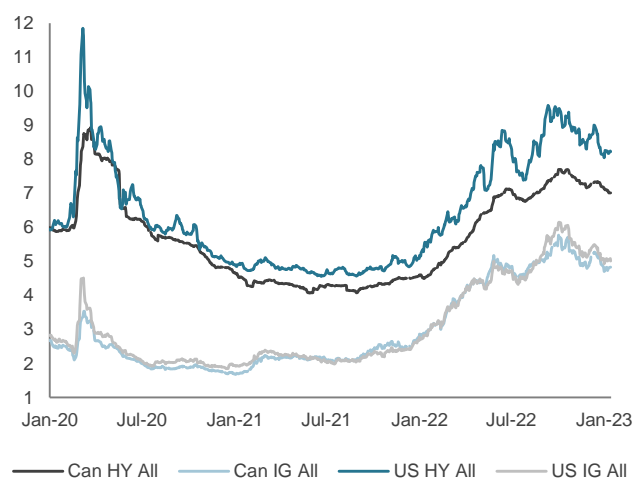


Chart 3: Canadian high yield spreads have been less volatile than their US equivalents during the upswing in yields in 2022, reflecting the higher energy weighting in Canadian high yield bonds.

Canadian and US high yield spreads

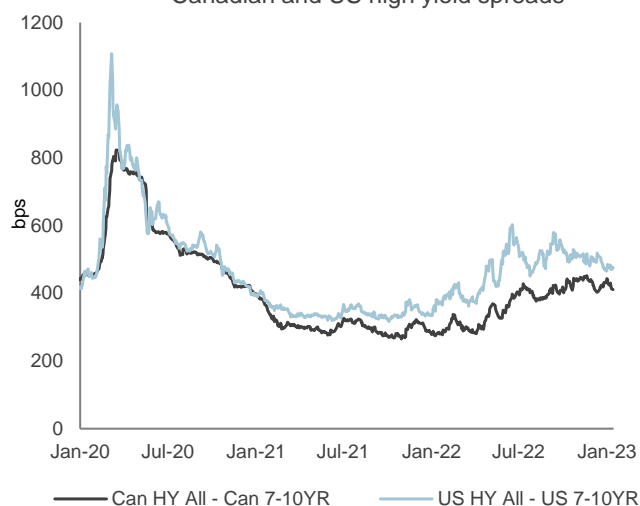


Chart 5: BBB spreads rose 32bp less than AAA peers since pre-Covid, despite predictions of a spike in downgrades to sub-investment grade. This may reflect more defensive agency ratings since the GFC.

31-Jan-2020 to 31-Jan-2023

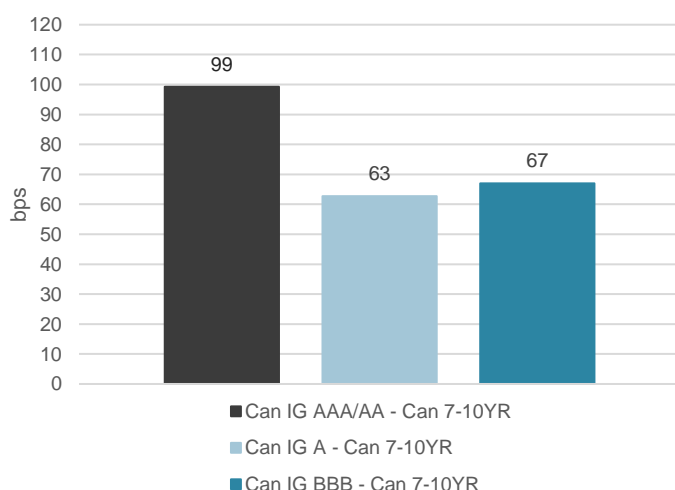


Chart 2: Infrastructure credit spreads have been the best performing sector since Covid. Financial sector spreads proved the most sensitive to the inversion of the yield curve (see Chart 6).

Selected Canadian credit sector

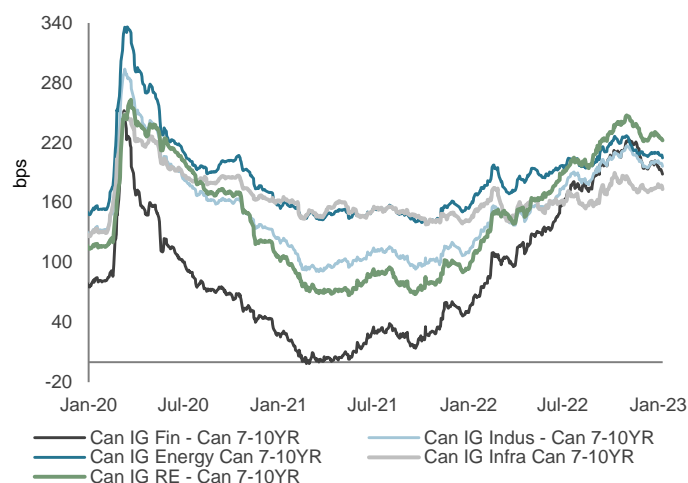


Chart 4: The rise in corporate bond yields was greater in 2022 than after Covid in 2020, and led by AAA/AA credits. AAA and A spreads are now close to converging and BBB credits have outperformed.

Recent spread moves in different credit quality buckets

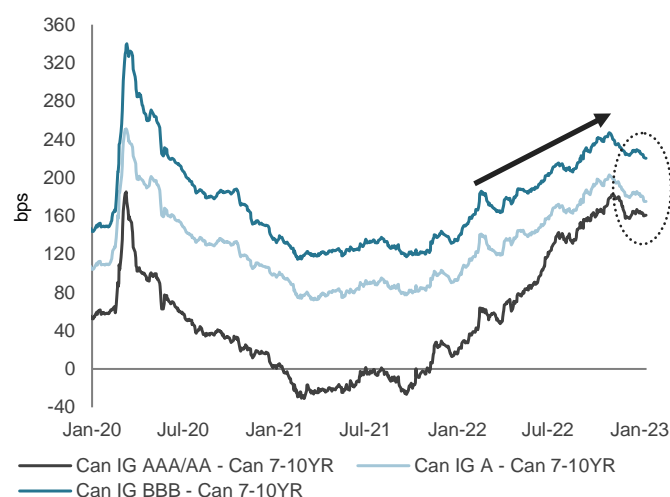
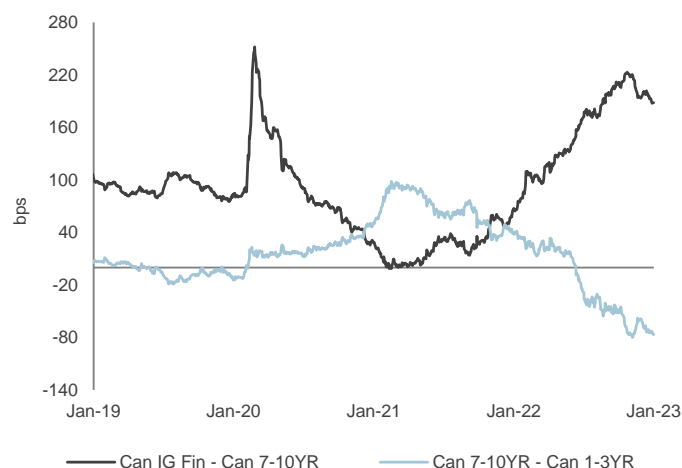


Chart 6: Financial sector spreads remain sensitive to the 10s/2s yield curve, narrowing during the post-Covid reflation trade, before widening as the curve inverted and recession risks grew.

Financial spreads and Canadian yield curve



Global Yields, Curves and Spread Analysis

Chart 1: G7 conventional bond yields declined sharply in January, inc Canada, as inflation weakened further, led by US Treasuries, as markets anticipated a pause, or even a reversal, in policy tightening.

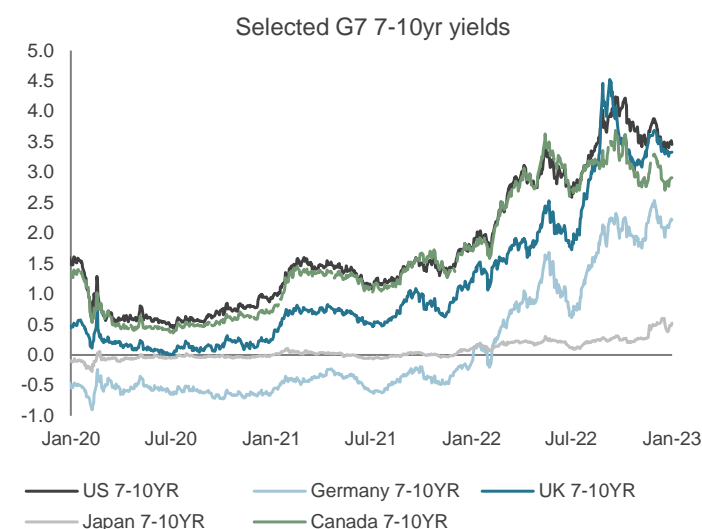


Chart 3: G7 10/2s yield curves remained inverted (ex in Japan) in January, notably in Canada and the US. A bull inversion of 10s/2s (falling yields) has been a strong recession signal previously.

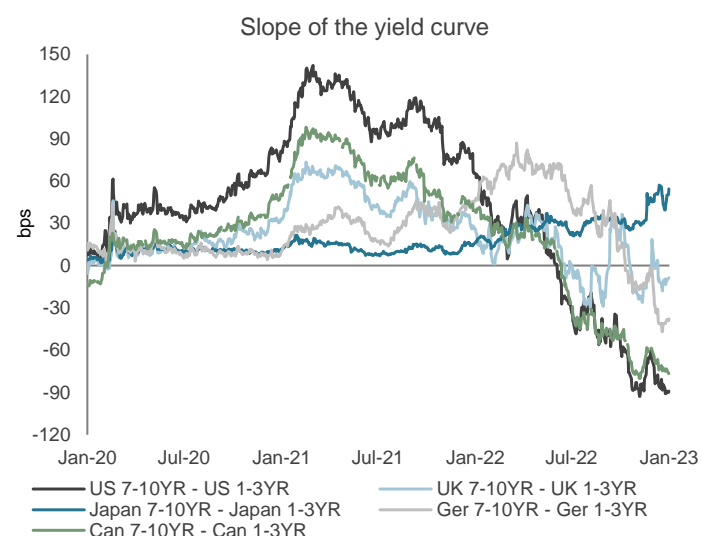


Chart 5: The rate of decline in 7-10-year breakevens has differed across regions, but the trend to lower inflation expectations appears intact globally, even in the UK, where inflation is still above 10% y/y.

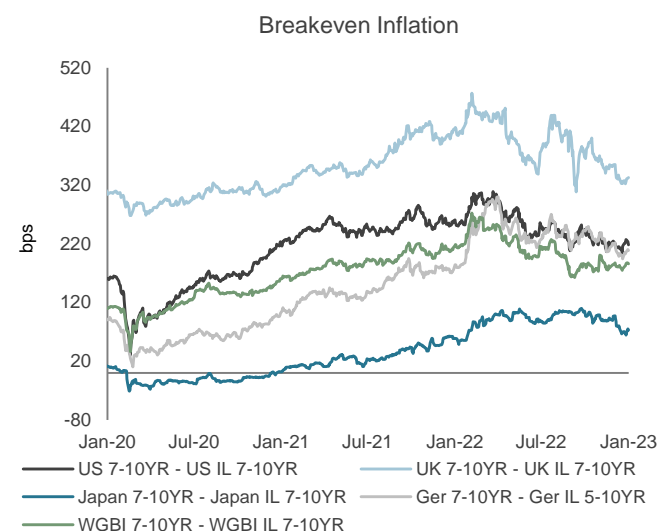


Chart 2: Inflation-linked (IL) real yields have turned positive in most G7 markets, including the UK and Germany. In Japan, inflation-linked bond yields are still just negative.

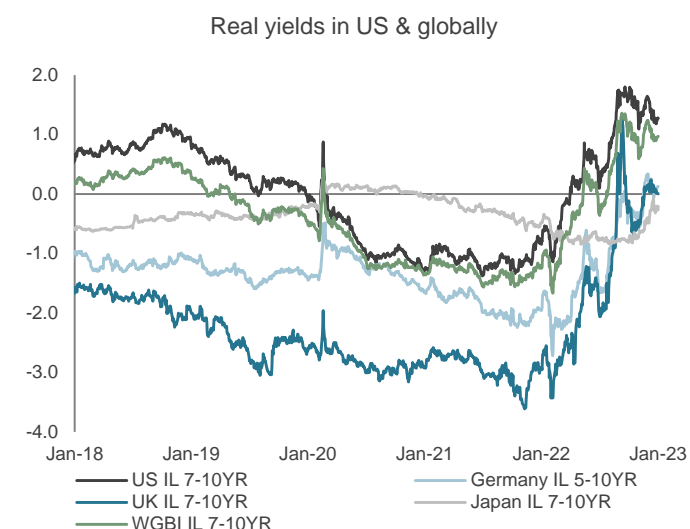


Chart 4: For 20/2s, only Japan and the UK have retained normally-shaped curves, unlike the US, Germany and Canada, which, like 10/2s in Chart 3, have deeply inverted curves.

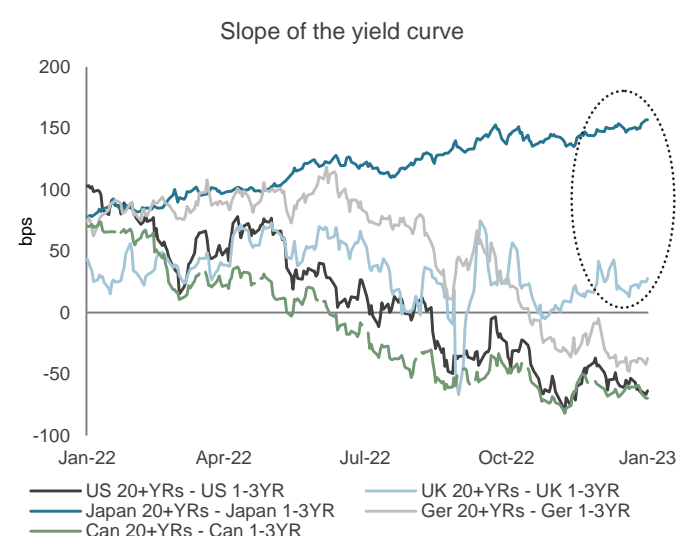


Chart 6: Short breakevens fell on lower commodity prices and policy tightening since the 2022 Ukraine spike. Note short b/evens dipped below longs in January, like the pre-Covid, low inflation era.



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

Yield Spread and Credit Spread Analysis

Chart 1: US 7-10yr spreads have narrowed pro-cyclically in most G7 markets as yields fell since the Treasury rally began in October, even against Japan, despite the BoJ continuing with curve control.

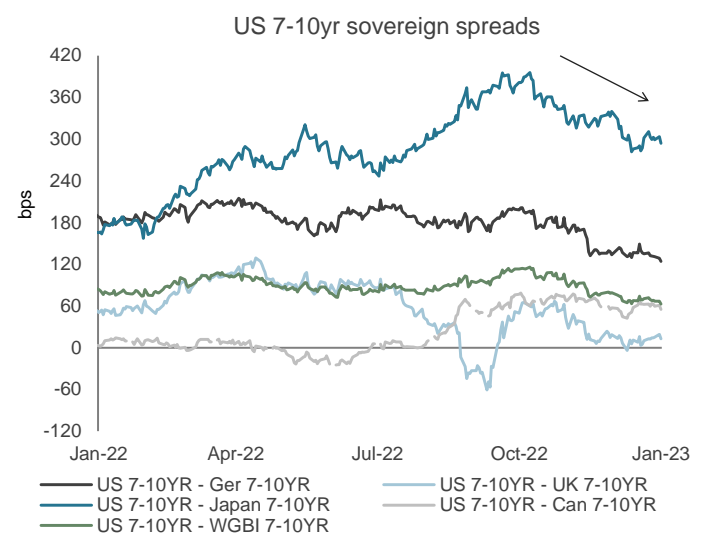


Chart 3: Crisis, what EM crisis? Spread narrowing partly reflects higher G7 yields in 2022, but at no point have EM spreads spiked since Covid, as they did in genuine crises previously.

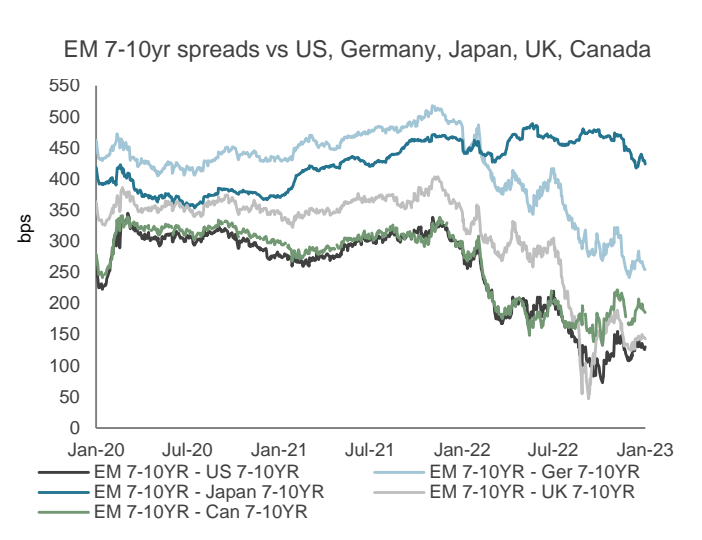
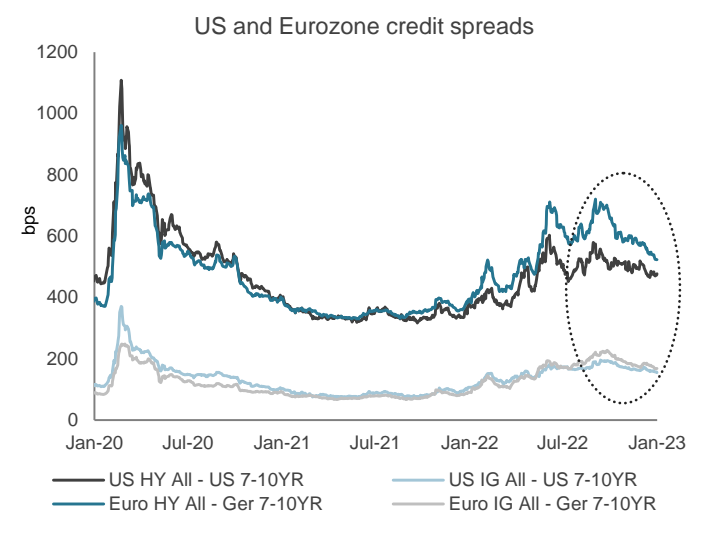


Chart 5: Credit spreads fell since the US Treasury rally began in October 2022, with Eurozone HY spreads the biggest movers. Low default rates and renewed risk appetite have helped drive the rally.



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Chart 2: Increased risk appetite and lower US inflation, particularly, have helped Italian spreads tighten a little as Treasury and Bund yields fell since Q4, despite the ECB moving towards QT.

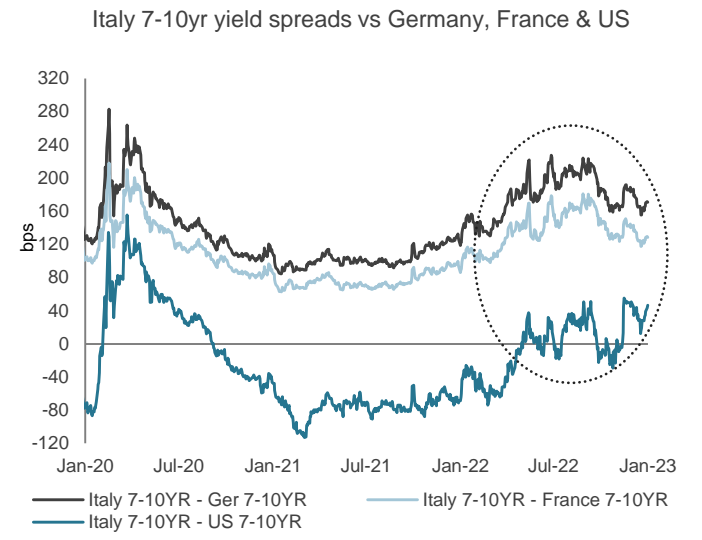


Chart 4: Low correlation of Chinese yields to G7 yields is well established, and is not directional, as the Chart shows, enhancing the portfolio diversification benefits of Chinese government bonds.

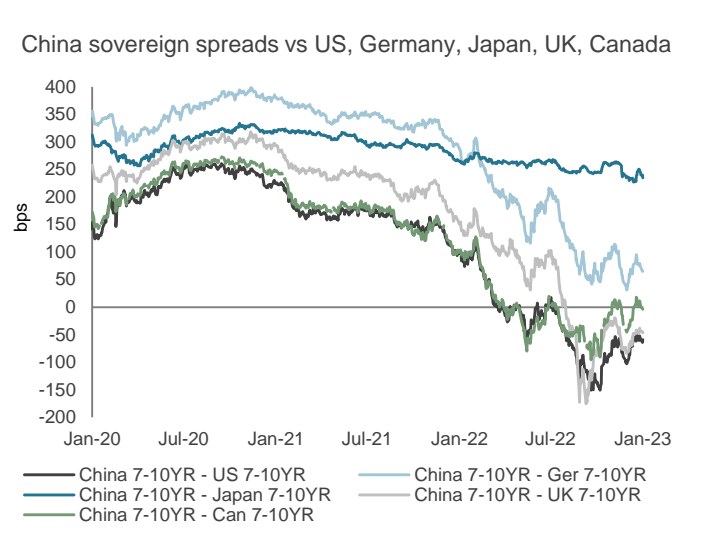
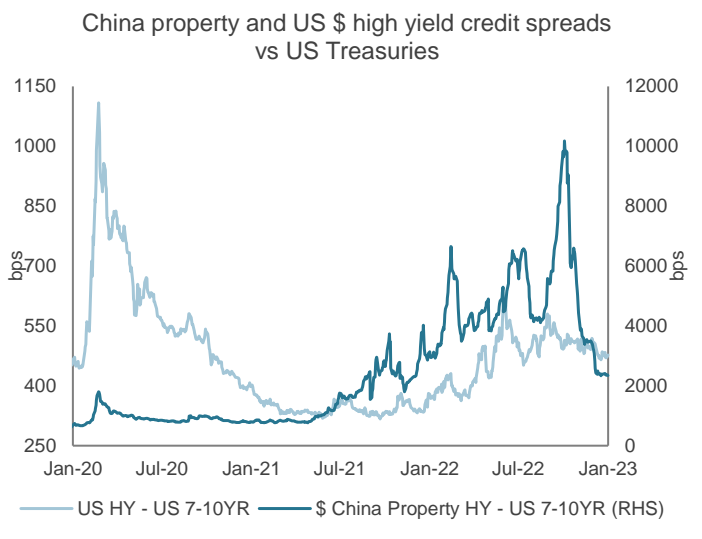


Chart 6: Chinese \$ HY spreads tightened further vs Treasuries in January, to about 2300bps (last seen pre-Ukraine), helped by support measures for the property sector, and the US HY rally.



Global Bond Market Returns – 1M & 12M % (CAD, LC, TR) as of January 31, 2023

Global bonds rallied in January after softening economic data, especially falls in inflation, brought hopes of more modest central bank tightening measures in 2023. Returns for Canadian government bonds were positive across maturities, especially in long-dated maturities. 12M losses reflect the steep rise in inflation and policy rates in 2022.

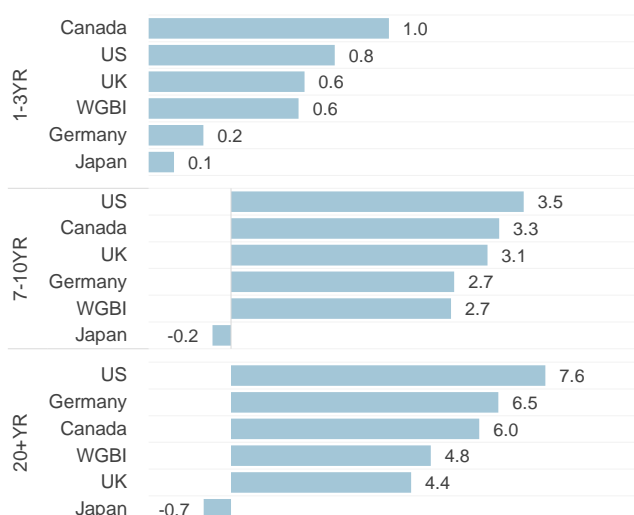
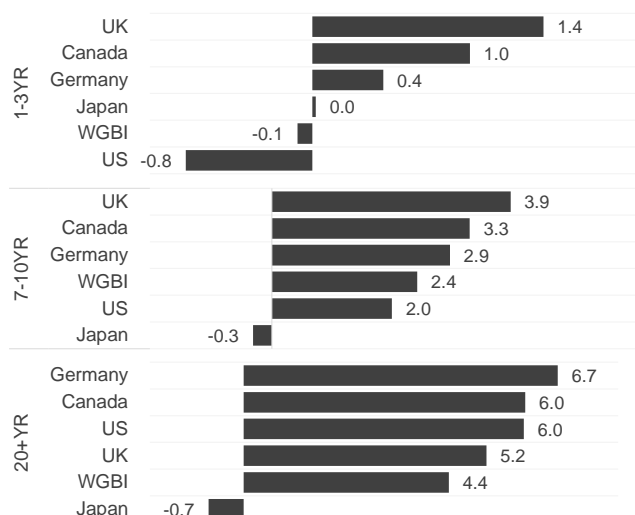
Long-dated conventional bonds benefited the most from the rally, with WGBI averaging a 4% return in January, while Bunds, up nearly 7% in Canadian dollars, outperformed. Inflation-linked bonds also recovered in January with gains of 2-7% in Canadian dollars.

Despite the rally since October, 12M returns are still strongly negative, with losses for both global conventional and real return bonds still around 7-46%, with UK 20-year+ index-linked Gilts remaining the worst performers.

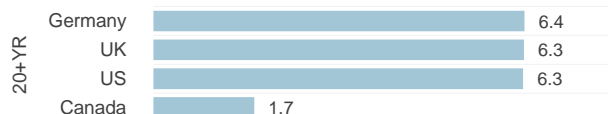
CONVENTIONAL BONDS

1M CAD

1M LCY



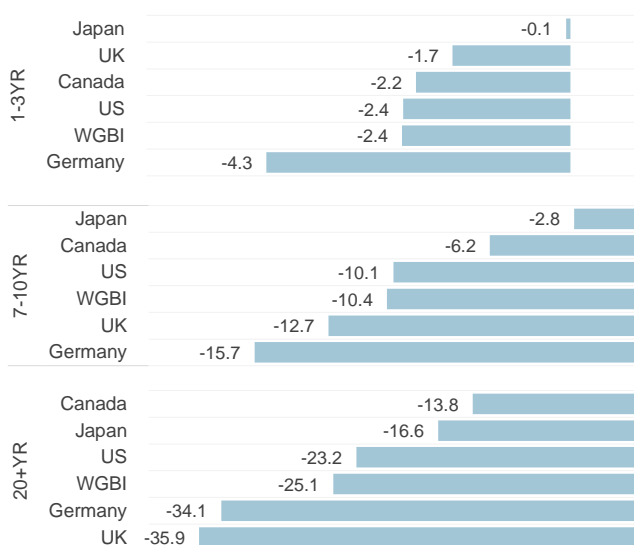
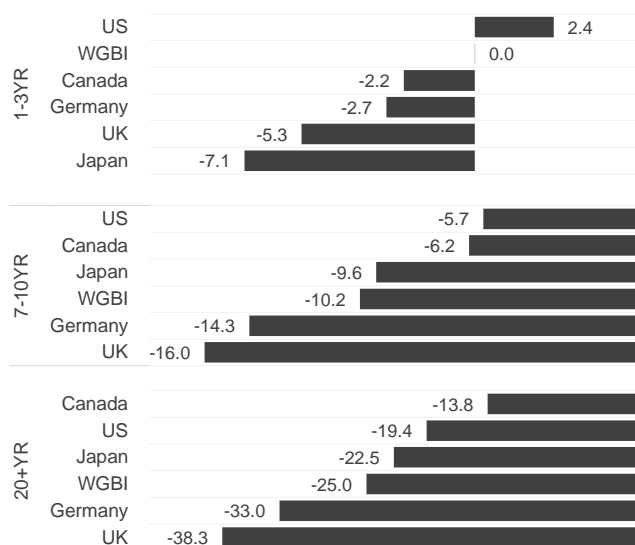
INFLATION LINKED BONDS



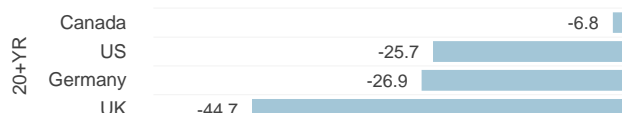
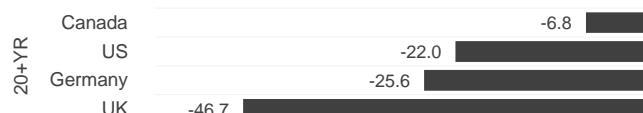
CONVENTIONAL BONDS

12M CAD

12M LCY



INFLATION LINKED BONDS



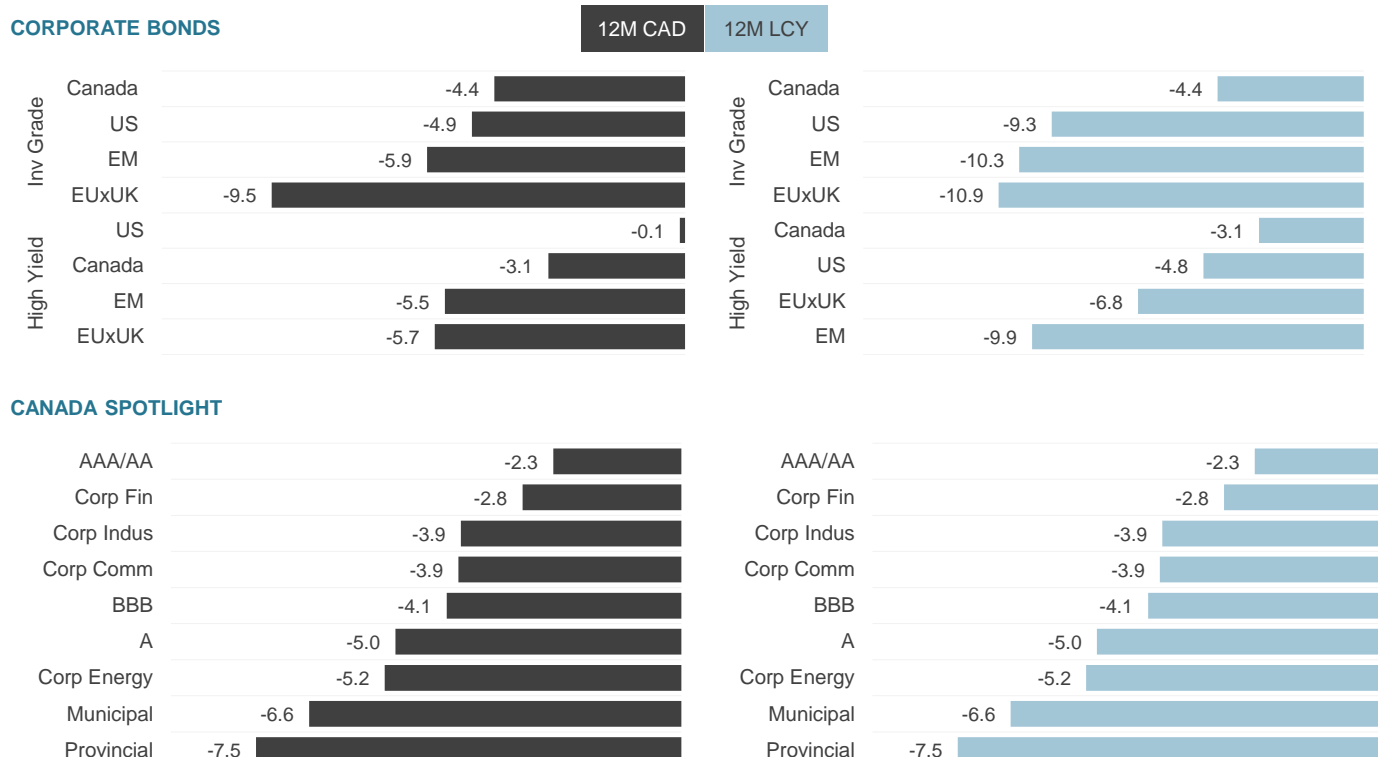
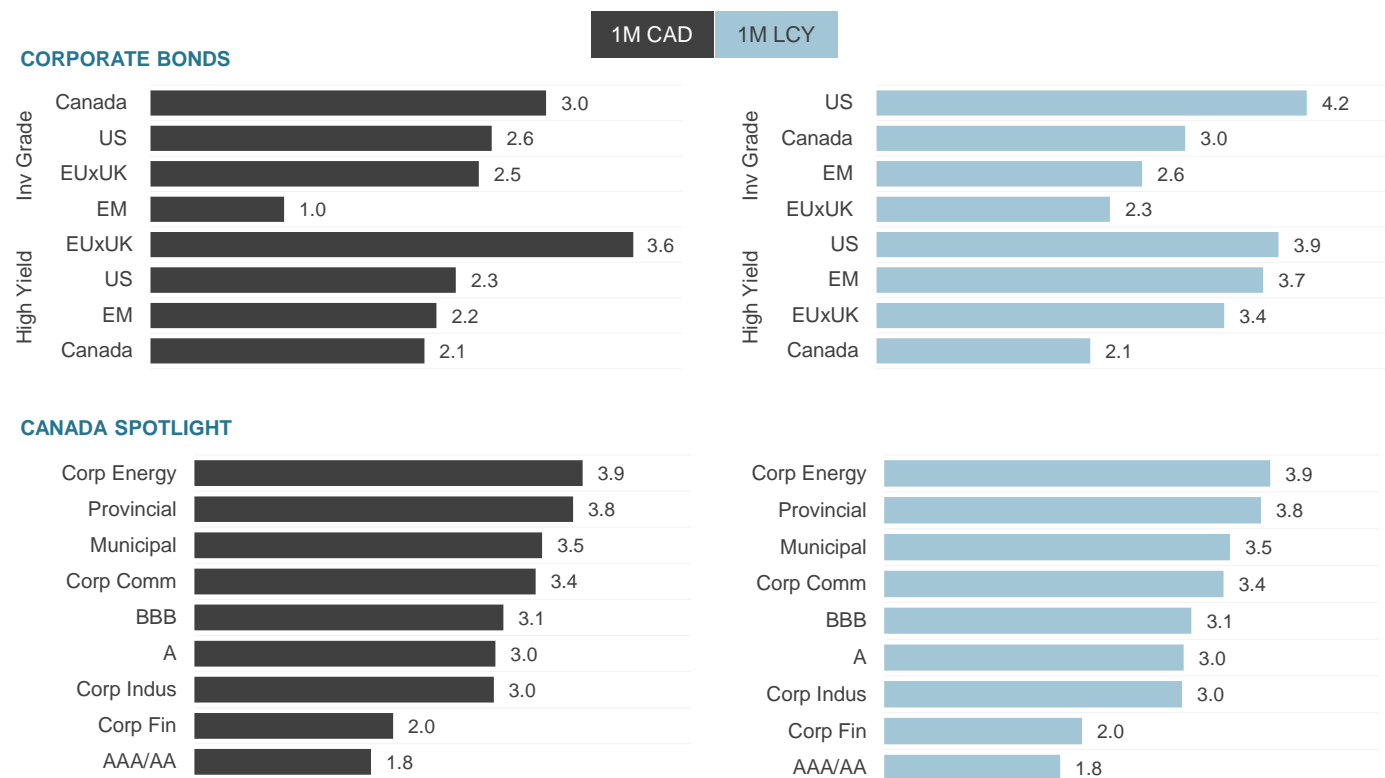
Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

Corporate Bond Returns – 1M & 12M % (CAD, LC, TR) as of January 31, 2023

Most corporates extended their Q4 2022 rally into January, with similar returns reached across regions and between investment grade and high yield credits. Provincials led the performance in Canada in January.

Canadian provinces, municipals and energy corporates gained about 4% in January, while BBB-rated corporates, up 3.1%, continued to outperform high quality AAA/AA corporates.

Canadian investment grade corporates (+3.0%) outperformed other regions and their sub-IG corporate peers (+2.0%) in January.



Indices used: FTSE Canada Corporate Bond Index (AAA/AA, A, BBB, Financial, Communication, Industrial, Energy, Overall), FTSE Canada High Yield Bond Index, FTSE Canada Provincial Bond Index, FTSE Canada Municipal Bond Index.

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

Top and Bottom Bond Returns – 1M & 12M % (CAD, TR) as of January 31, 2023

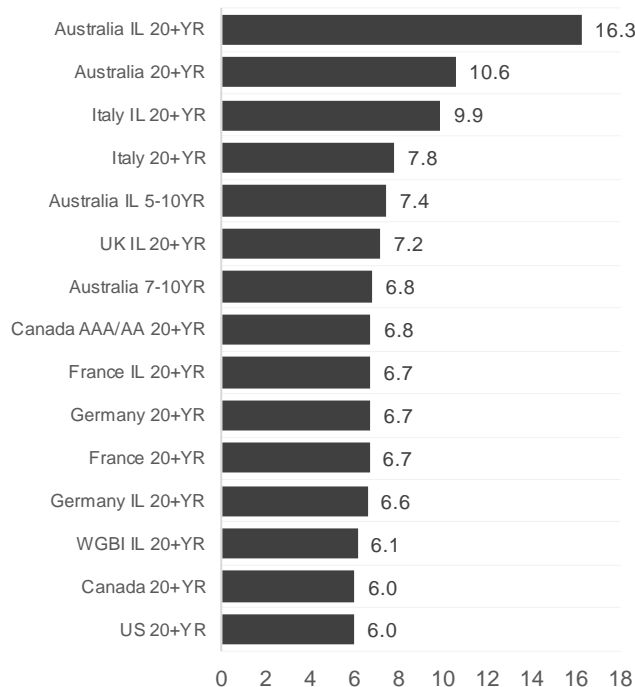
Inflation-linked and conventional bonds with long maturities gained the most during the January rally after lower inflation reinforced expectations that policy tightening was nearing completion in the G7. The best performance came from long Australian and Italian inflation-linked and conventional bonds. EM inflation-linked bonds continued to outperform over 12M.

Returns for Australian and Eurozone conventional and inflation-linked bonds ranged from 7-16% in January, while those for short US Treasuries were negative in Canadian dollar, reflecting the recent depreciation of the US dollar.

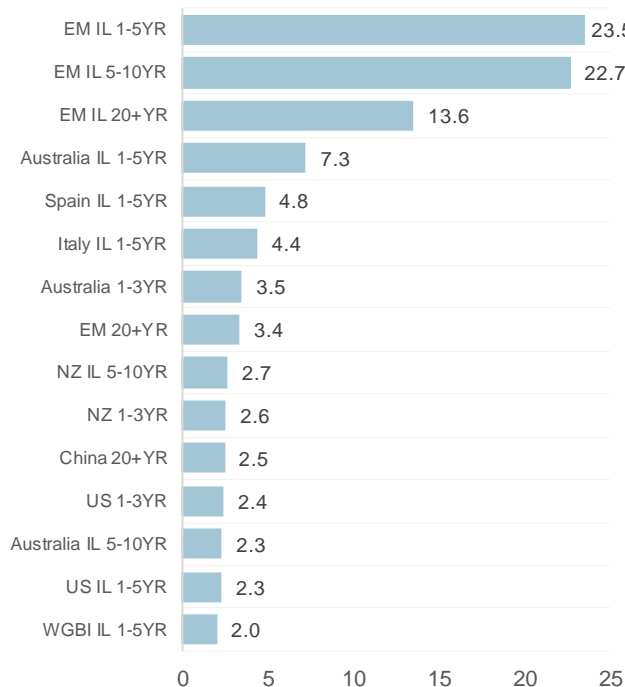
EM inflation-linked bonds have stayed the top performers over the last twelve months, with returns of 14-24% in Canadian dollars, while long-dated Gilts have underperformed the most, with losses of 38-47%.

1M CAD 12M CAD

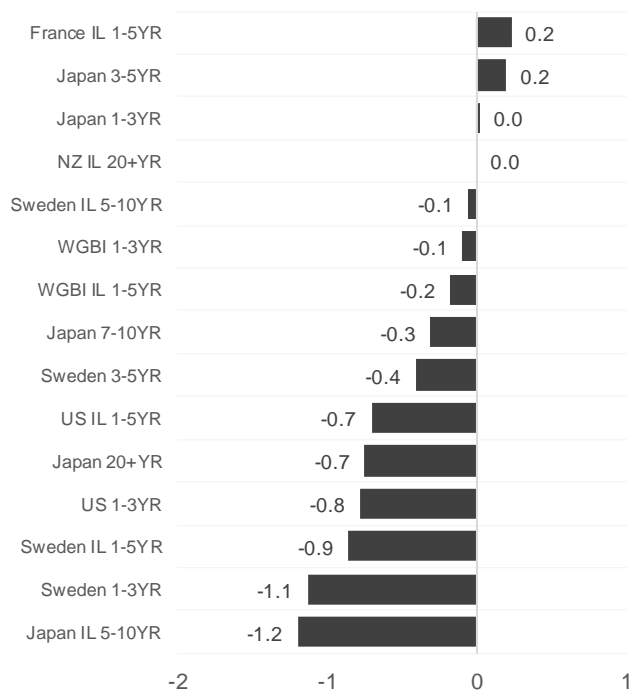
Top 15



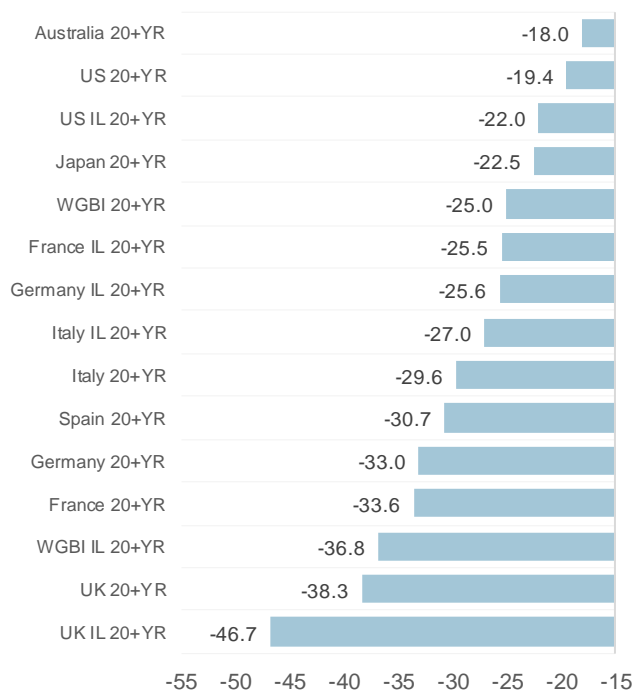
Top 15



Bottom 15



Bottom 15



Source: FTSE Russell. All data as of January 31, 2023. This analysis is taken from 130+ FTSE Russell sub-indices. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Sovereign and Climate Bonds Analysis

Chart 1: Climate WGBI failed to sustain its Q4 recovery vs WGBI, after the underperformance of JGBs (given Japan's overweight).

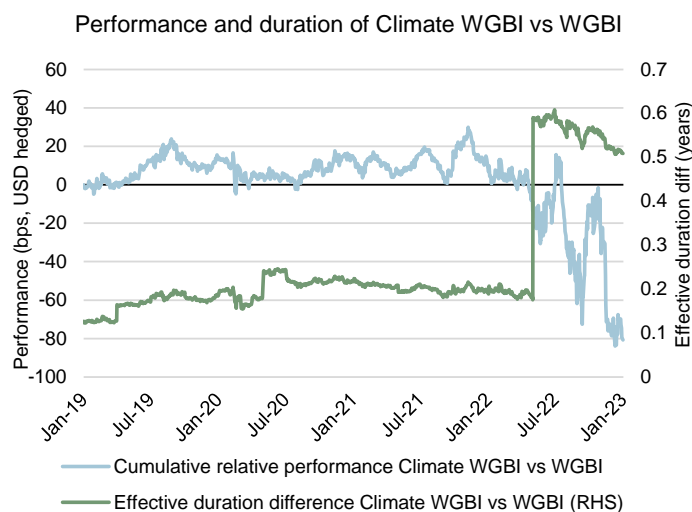


Chart 2: Japan's overweight, and the US underweight are the most significant in the climate WGBI, driving 2022/23 performance.

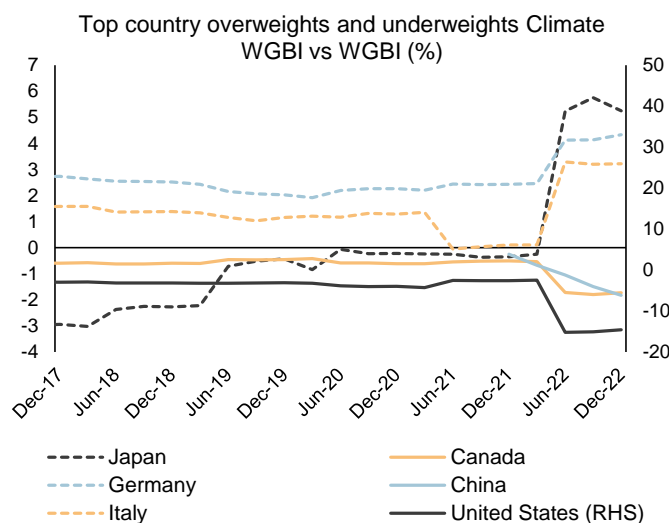


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yield Europe and Japan.

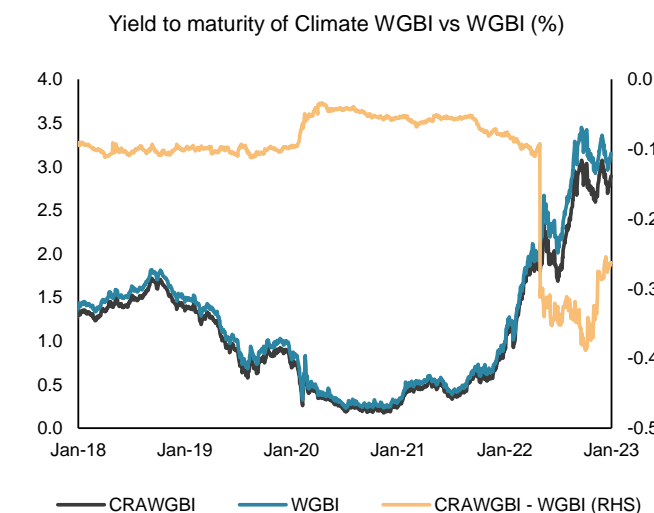


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

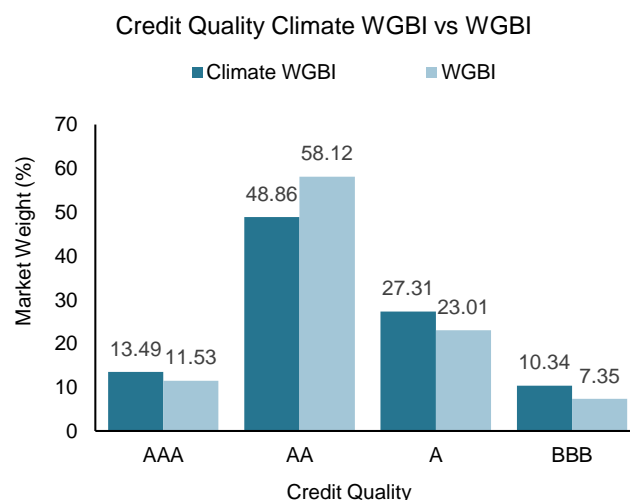


Chart 5: Yields increased more in WGBI indices in 2022, led by US, but climate WGBI's extra duration caused underperformance.

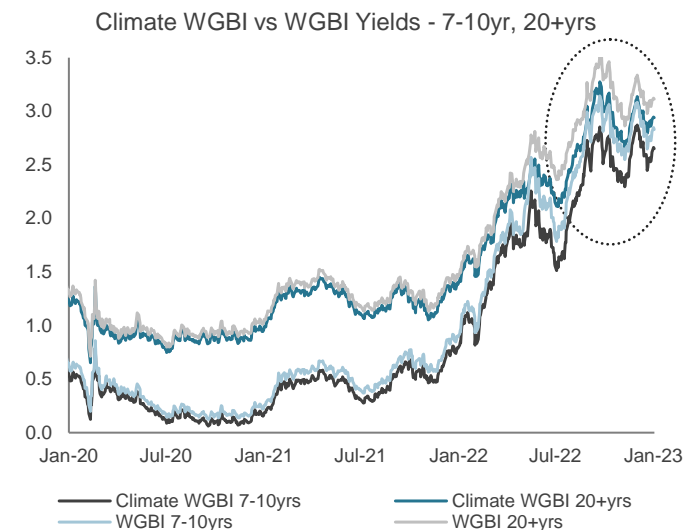
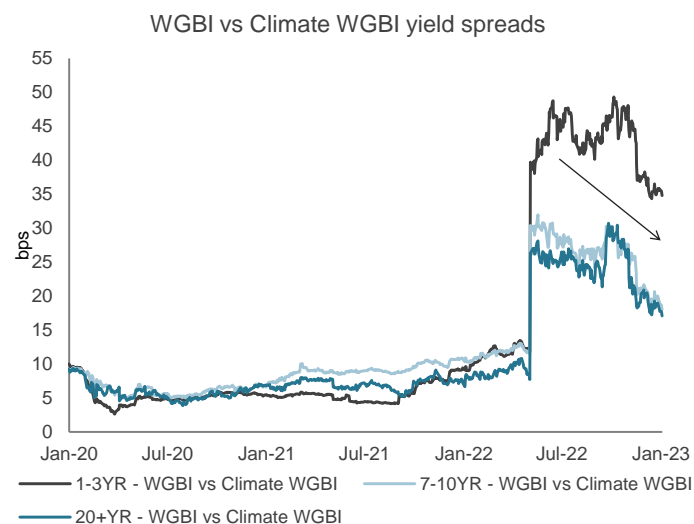


Chart 6: WGBI spreads narrowed in the US rally, as US spreads have narrowed versus Europe and Japan (see Chart 1, page 5).



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Appendix – Canadian Bond Market Returns % (CAD vs USD, TR)

Government and corporate bond returns

Top 15% Bottom 15%

		3M		6M		YTD		12M	
		Local	USD	Local	USD	Local	USD	Local	USD
Government	1-3YR	1.45	3.71	0.03	-3.94	0.97	2.53	-2.19	-6.77
	7-10YR	3.61	5.92	-0.86	-4.80	3.25	4.84	-6.21	-10.60
	20+YR	6.64	9.01	-2.79	-6.65	6.02	7.65	-13.80	-17.85
Inflation-Linked	20+YR	4.08	6.39	-2.43	-6.31	1.73	3.30	-6.79	-11.16
Corporate	1-3YR	2.98	5.27	1.19	-2.83	1.70	3.27	-1.71	-6.32
	7-10YR	5.35	7.69	1.01	-3.00	3.37	4.96	-4.43	-8.91
	20+YR	8.83	11.25	0.73	-3.27	5.47	7.10	-8.77	-13.05
AAA/AA	1-3YR	2.26	4.54	0.77	-3.23	1.35	2.92	-1.40	-6.02
	7-10YR	4.07	6.39	0.36	-3.62	2.68	4.27	-5.20	-9.64
	20+YR	10.52	12.98	-0.13	-4.10	6.75	8.40	-11.82	-15.95
	All	2.86	5.15	0.67	-3.33	1.78	3.35	-2.26	-6.84
A	1-3YR	3.05	5.35	1.21	-2.81	1.74	3.31	-2.05	-6.64
	7-10YR	5.25	7.59	0.82	-3.19	3.42	5.02	-4.94	-9.40
	20+YR	8.61	11.03	0.22	-3.76	5.51	7.14	-9.42	-13.67
	All	4.95	7.28	0.79	-3.21	3.03	4.62	-5.04	-9.49
BBB	1-3YR	3.06	5.35	1.27	-2.76	1.72	3.29	-1.49	-6.11
	7-10YR	5.54	7.88	1.18	-2.84	3.42	5.01	-4.12	-8.61
	20+YR	9.10	11.53	1.49	-2.54	5.40	7.02	-7.80	-12.12
	All	5.24	7.58	1.28	-2.74	3.11	4.70	-4.14	-8.63
Sectors	Comm	6.12	8.49	1.61	-2.43	3.44	5.03	-3.93	-8.43
	Energy	6.38	8.75	1.23	-2.79	3.91	5.51	-5.23	-9.67
	Fin	3.40	5.70	1.07	-2.95	2.00	3.58	-2.80	-7.36
	Indus	4.84	7.17	1.50	-2.53	3.02	4.61	-3.89	-8.39
	Infra	6.81	9.18	0.03	-3.95	4.40	6.01	-7.81	-12.13
	RE	3.82	6.13	0.78	-3.22	2.24	3.82	-3.52	-8.04
	Secur	2.48	4.77	1.00	-3.01	1.54	3.11	-2.45	-7.02
Provinces (All)	1-3YR	1.92	4.19	0.40	-3.59	1.37	2.93	-1.54	-6.16
	7-10YR	3.94	6.26	0.06	-3.91	3.26	4.85	-4.20	-8.69
	20+YR	7.14	9.53	-1.55	-5.46	5.32	6.95	-11.83	-15.96
	All	5.01	7.35	-0.64	-4.58	3.81	5.42	-7.50	-11.83
Ontario	1-3YR	1.87	4.14	0.36	-3.63	1.31	2.87	-1.46	-6.08
	7-10YR	3.94	6.26	0.11	-3.86	3.23	4.82	-4.11	-8.61
	20+YR	7.15	9.53	-1.35	-5.27	5.31	6.94	-11.69	-15.83
	All	4.85	7.19	-0.47	-4.43	3.66	5.26	-6.94	-11.31
Alberta	1-3YR	1.99	4.26	0.31	-3.67	1.45	3.01	-1.60	-6.21
	7-10YR	3.93	6.24	-0.19	-4.15	3.26	4.85	-4.01	-8.51
	20+YR	7.22	9.61	-2.78	-6.64	5.47	7.10	-12.36	-16.47
	All	4.82	7.16	-1.14	-5.06	3.74	5.34	-7.40	-11.74
Quebec	1-3YR	2.03	4.30	0.70	-3.30	1.42	2.99	-1.69	-6.29
	7-10YR	3.99	6.31	0.10	-3.88	3.31	4.91	-4.61	-9.08
	20+YR	7.13	9.52	-1.46	-5.37	5.31	6.94	-11.77	-15.91
	All	5.28	7.62	-0.62	-4.57	4.00	5.61	-8.15	-12.46
BC	1-3YR	1.74	4.01	0.28	-3.70	1.43	3.00	-1.57	-6.19
	7-10YR	4.00	6.31	-0.03	-4.01	3.34	4.94	-4.24	-8.73
	20+YR	7.34	9.73	-1.64	-5.55	5.44	7.07	-12.43	-16.54
	All	5.10	7.44	-0.73	-4.68	4.05	5.66	-8.12	-12.43

Indices used: FTSE Canada Non-Agency Bond Index (Short, Mid, Long), FTSE Canada RRB Canada Index, FTSE Canada Corporate Bond Index (Short, Mid, Long, AAA/AA, A, BBB), FTSE Canada Provincial Bond Index, FTSE Canada High Yield Bond Index.

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

Appendix – Global Bond Market Returns % (CAD vs LC, TR)

Government bond returns

Top 15% Bottom 15%

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

		1M		3M		YTD		12M	
		Local	CAD	Local	CAD	Local	CAD	Local	CAD
US	1-3YR	0.75	-0.78	1.54	-0.67	0.75	-0.78	-2.37	2.43
	7-10YR	3.55	1.97	5.70	3.40	3.55	1.97	-10.11	-5.69
	20+YR	7.62	5.99	12.49	10.04	7.62	5.99	-23.21	-19.44
	IG All	4.15	2.57	8.82	6.45	4.15	2.57	-9.35	-4.89
	HY All	3.88	2.30	4.53	2.25	3.88	2.30	-4.80	-0.12
UK	1-3YR	0.63	1.42	0.90	5.54	0.63	1.42	-1.67	-5.33
	7-10YR	3.11	3.92	2.66	7.38	3.11	3.92	-12.73	-15.99
	20+YR	4.36	5.19	-1.12	3.43	4.36	5.19	-35.93	-38.31
EUR	IG All	2.25	2.47	3.17	10.90	2.25	2.47	-10.94	-9.48
	HY All	3.36	3.63	6.53	14.19	3.36	3.63	-6.76	-5.74
Japan	1-3YR	0.10	0.02	-0.04	11.76	0.10	0.02	-0.06	-7.09
	7-10YR	-0.23	-0.31	-2.03	9.54	-0.23	-0.31	-2.80	-9.65
	20+YR	-0.67	-0.75	-4.73	6.52	-0.67	-0.75	-16.60	-22.47
China	1-3YR	0.14	1.46	0.02	5.69	0.14	1.46	2.19	1.00
	7-10YR	0.08	1.40	-0.61	5.02	0.08	1.40	1.95	0.76
	20+YR	-0.56	0.75	-1.97	3.58	-0.56	0.75	3.69	2.48
EM	1-3YR	0.32	1.72	0.99	6.66	0.32	1.72	0.81	0.50
	7-10YR	1.50	2.43	3.44	8.37	1.50	2.43	-2.07	-3.64
	20+YR	0.69	1.68	1.77	7.22	0.69	1.68	3.21	3.37
	IG All	2.56	1.00	8.42	6.06	2.56	1.00	-10.32	-5.91
	HY All	3.73	2.15	15.09	12.59	3.73	2.15	-9.94	-5.51
Germany	1-3YR	0.22	0.44	-0.56	6.89	0.22	0.44	-4.30	-2.72
	7-10YR	2.71	2.93	-0.53	6.92	2.71	2.93	-15.72	-14.33
	20+YR	6.48	6.71	0.53	8.06	6.48	6.71	-34.13	-33.04
Italy	1-3YR	0.65	0.86	0.28	7.79	0.65	0.86	-3.61	-2.02
	7-10YR	3.97	4.20	1.59	9.20	3.97	4.20	-16.11	-14.73
	20+YR	7.59	7.82	2.26	9.92	7.59	7.82	-30.77	-29.63
Spain	1-3YR	0.42	0.64	-0.47	6.99	0.42	0.64	-4.51	-2.94
	7-10YR	2.78	3.00	-0.08	7.40	2.78	3.00	-15.70	-14.31
	20+YR	5.66	5.89	1.01	8.57	5.66	5.89	-31.79	-30.67
France	1-3YR	0.51	0.73	-0.51	6.95	0.51	0.73	-4.54	-2.97
	7-10YR	2.94	3.16	-0.54	6.92	2.94	3.16	-15.24	-13.85
	20+YR	6.44	6.67	0.99	8.55	6.44	6.67	-34.64	-33.56
Sweden	1-3YR	0.88	-1.13	0.31	3.57	0.88	-1.13	-2.52	-8.82
	7-10YR	2.80	0.75	1.60	4.90	2.80	0.75	-11.79	-17.49
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	0.84	3.19	0.95	8.82	0.84	3.19	-1.36	3.51
	7-10YR	4.38	6.81	2.50	10.49	4.38	6.81	-9.21	-4.73
	20+YR	8.07	10.58	3.66	11.74	8.07	10.58	-21.87	-18.02
NZ	1-3YR	0.99	1.62	0.55	9.42	0.99	1.62	-0.64	2.58
	7-10YR	3.18	3.83	1.63	10.59	3.18	3.83	-7.39	-4.39
Canada	1-3YR	0.97	0.97	1.45	1.45	0.97	0.97	-2.19	-2.19
	7-10YR	3.25	3.25	3.61	3.61	3.25	3.25	-6.21	-6.21
	20+YR	6.02	6.02	6.64	6.64	6.02	6.02	-13.80	-13.80

Indices used: FTSE Canada Non-Agency Bond Index (Short, Mid, Long).

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

Appendix – Global Bond Market Returns % (CAD vs LC, TR)

Inflation-Linked Bond Returns

Top 15% Bottom 15%

Green highlight indicates top 15%, red indicates bottom 15%.

		1M		3M		YTD		12M	
		Local	CAD	Local	CAD	Local	CAD	Local	CAD
US	1-5YR	0.83	-0.71	1.00	-1.20	0.83	-0.71	-2.49	2.31
	5-10YR	2.57	1.01	3.26	1.01	2.57	1.01	-8.00	-3.48
	20+YR	6.34	4.72	7.78	5.43	6.34	4.72	-25.66	-22.00
UK	1-5YR	-0.47	0.31	-0.12	4.47	-0.47	0.31	2.51	-1.31
	5-10YR	1.71	2.51	2.64	7.36	1.71	2.51	-7.81	-11.25
	20+YR	6.35	7.19	1.55	6.22	6.35	7.19	-44.66	-46.72
EUxUK	1-5YR	0.05	0.27	-1.17	6.23	0.05	0.27	-1.05	0.58
	5-10YR	1.50	1.71	-0.82	6.61	1.50	1.71	-6.89	-5.36
	20+YR	6.36	6.59	0.65	8.19	6.36	6.59	-26.85	-25.65
Japan	1-5YR	0.49	0.41	0.67	12.55	0.49	0.41	4.79	-2.58
	5-10YR	-1.12	-1.20	-2.17	9.38	-1.12	-1.20	2.01	-5.17
EM	1-5YR	0.88	2.27	1.47	3.07	0.88	2.27	20.77	23.53
	5-10YR	-0.23	0.91	2.16	3.87	-0.23	0.91	21.31	22.68
	20+YR	-0.49	1.35	1.71	4.57	-0.49	1.35	4.57	13.56
Germany	1-5YR	0.05	0.27	-1.17	6.23	0.05	0.27	-1.05	0.58
	5-10YR	1.50	1.71	-0.82	6.61	1.50	1.71	-6.89	-5.36
	20+YR	6.36	6.59	0.65	8.19	6.36	6.59	-26.85	-25.65
Italy	1-5YR	0.25	0.46	0.62	8.15	0.25	0.46	2.71	4.40
	5-10YR	2.48	2.70	1.75	9.37	2.48	2.70	-5.42	-3.87
	20+YR	9.64	9.88	3.01	10.73	9.64	9.88	-28.19	-27.00
Spain	1-5YR	0.11	0.32	0.06	7.56	0.11	0.32	3.12	4.82
	5-10YR	1.07	1.28	-0.36	7.11	1.07	1.28	-5.46	-3.90
France	1-5YR	0.02	0.23	-0.86	6.57	0.02	0.23	-0.68	0.96
	5-10YR	1.32	1.54	-1.15	6.26	1.32	1.54	-6.20	-4.66
	20+YR	6.49	6.72	1.24	8.83	6.49	6.72	-26.67	-25.46
Sweden	1-5YR	1.16	-0.86	1.73	5.03	1.16	-0.86	3.81	-2.90
	5-10YR	1.98	-0.06	1.04	4.32	1.98	-0.06	-3.14	-9.40
Australia	1-5YR	2.03	4.41	2.31	10.29	2.03	4.41	2.22	7.26
	5-10YR	5.00	7.45	4.40	12.54	5.00	7.45	-2.48	2.33
	20+YR	13.61	16.25	9.67	18.22	13.61	16.25	-18.52	-14.50
NZ	5-10YR	2.77	3.41	4.20	13.39	2.77	3.41	-0.55	2.67
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	1.73	1.73	4.08	4.08	1.73	1.73	-6.79	-6.79

Indices used: FTSE Canada RRB Canada Bond Index.

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

Appendix – Canadian Historical Bond Yields % as of January 31, 2023

Canadian Bond Yields

Top 15% Bottom 15%

Green highlight indicates top 15%, red indicates bottom 15%.

		1-3YR	7-10YR	20+YR	All Mat
Canada	Current	3.68	2.91	3.00	
	3M Ago	3.81	3.29	3.35	
	6M Ago	2.87	2.60	2.77	
	12M Ago	1.34	1.73	2.05	
IL	Current			1.20	
	3M Ago			1.38	
	6M Ago			0.80	
	12M Ago			0.12	
Provincial	Current	3.70	3.53	3.99	3.80
	3M Ago	3.99	3.97	4.40	4.18
	6M Ago	3.13	3.25	3.76	3.47
	12M Ago	1.73	2.30	2.93	2.50
Ontario	Current	3.74	3.53	3.99	3.80
	3M Ago	4.00	3.97	4.40	4.18
	6M Ago	3.14	3.25	3.77	3.46
	12M Ago	1.71	2.29	2.94	2.44
Quebec	Current	3.65	3.52	3.96	3.78
	3M Ago	3.96	3.96	4.36	4.17
	6M Ago	3.13	3.22	3.72	3.47
	12M Ago	1.72	2.27	2.88	2.52
Alberta	Current	3.66	3.51	3.98	3.76
	3M Ago	3.96	3.96	4.36	4.13
	6M Ago	3.11	3.23	3.68	3.40
	12M Ago	1.79	2.32	2.98	2.52
BC	Current	3.62	3.50	3.96	3.75
	3M Ago	4.00	3.95	4.36	4.16
	6M Ago	3.12	3.24	3.73	3.45
	12M Ago	1.71	2.28	2.88	2.49
Municipal	Current	3.75	3.62	4.24	3.93
	3M Ago	4.05	4.04	4.64	4.31
	6M Ago	3.19	3.31	3.99	3.58
	12M Ago	1.79	2.36	3.08	2.55
Corporate	Current	4.84	4.69	4.92	4.83
	3M Ago	5.40	5.36	5.50	5.42
	6M Ago	4.29	4.45	4.75	4.44
	12M Ago	2.34	3.10	3.76	2.93
High Yield	Current				6.99
	3M Ago				7.60
	6M Ago				6.84
	12M Ago				4.55

		1-5YR	5-10YR	20+YR	All Mat
AAA/AA	Current	4.59	4.25	4.40	4.52
	3M Ago	4.98	4.80	4.95	4.95
	6M Ago	3.90	3.90	4.25	3.91
	12M Ago	1.86	2.53	3.41	2.03
A	Current	4.71	4.45	4.66	4.66
	3M Ago	5.31	5.07	5.22	5.25
	6M Ago	4.22	4.14	4.47	4.29
	12M Ago	2.33	2.80	3.50	2.81
BBB	Current	5.11	4.89	5.31	5.10
	3M Ago	1.76	1.65	1.84	5.70
	6M Ago	-0.23	0.06	0.87	4.72
	12M Ago	-1.45	-0.60	0.12	3.23
Comm	Current	4.69	5.37	4.87	4.98
	3M Ago	5.40	6.03	5.43	5.65
	6M Ago	4.41	5.32	4.27	4.71
	12M Ago	3.18	4.34	2.50	3.36
Energy	Current	4.87	4.86	5.01	4.93
	3M Ago	5.43	5.49	5.61	5.52
	6M Ago	4.27	4.68	4.86	4.65
	12M Ago	2.50	3.37	3.88	3.41
Financial	Current	4.80	4.60	5.03	4.79
	3M Ago	5.39	5.35	5.56	5.40
	6M Ago	4.28	4.37	4.75	4.31
	12M Ago	2.26	2.87	3.59	2.40
Industrial	Current	4.87	4.60	5.03	4.84
	3M Ago	5.34	5.20	5.64	5.38
	6M Ago	4.29	4.30	4.94	4.45
	12M Ago	2.43	2.89	3.90	2.96
Infrastructure	Current	4.45	4.35	4.71	4.61
	3M Ago	4.87	4.93	5.23	5.13
	6M Ago	3.79	4.03	4.47	4.32
	12M Ago	2.11	2.79	3.52	3.25
Securitization	Current	4.82			4.82
	3M Ago	5.25			5.25
	6M Ago	4.14			4.14
	12M Ago	2.03			2.03

Indices used: FTSE Canada Non-Agency Bond Index (Short, Mid, Long), FTSE Canada RRB Canada Index, FTSE Canada Corporate Bond Index (Short, Mid, Long, AAA/AA, A, BBB), FTSE Canada Provincial Bond Index, FTSE Canada High Yield Bond Index.

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Appendix – Historical Bond Yields % as of January 31, 2023

Global Bond Yields

Top 15% Bottom 15%

Green highlight indicates top 15%, red indicates bottom 15%.

		Conventional government bonds				Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.35	3.74	3.46	3.71	1.85	1.32	1.54	5.01	8.23
	3MAgo	4.58	4.37	4.05	4.34	1.76	1.65	1.84	5.97	8.97
	6MAgo	2.93	2.78	2.66	3.19	-0.23	0.06	0.87	4.39	7.63
	12MAgo	1.10	1.52	1.76	2.13	-1.84	-0.94	-0.13	2.83	5.55
UK	Current	3.42	3.26	3.33	3.70	0.31	0.00	0.30		
	3MAgo	3.38	3.55	3.56	3.62	-2.33	-0.13	0.24		
	6MAgo	1.78	1.66	1.79	2.39	-3.22	-2.08	-0.92		
	12MAgo	1.00	1.27	1.36	1.46	-3.26	-2.78	-2.05		
Japan	Current	-0.02	0.11	0.52	1.55	-1.33	-0.34			
	3MAgo	-0.06	0.02	0.24	1.31	-1.37	-0.81			
	6MAgo	-0.11	-0.07	0.11	1.09	-1.17	-0.80			
	12MAgo	-0.06	0.00	0.16	0.80	-0.54	-0.43			
China	Current	2.30	2.57	2.87	3.31					
	3MAgo	1.93	2.30	2.68	3.15					
	6MAgo	2.05	2.42	2.78	3.30					
	12MAgo	2.14	2.44	2.81	3.40					
EM	Current	3.59	4.30	4.76	4.57	3.11	3.37	5.25	5.52	10.25
	3MAgo	3.67	4.37	5.03	4.77	1.66	3.00	5.23	6.70	13.96
	6MAgo	3.45	4.27	4.77	4.77	3.54	3.65	5.21	4.99	12.42
	12MAgo	3.37	3.95	4.68	4.79	3.02	3.34	4.85	3.14	8.81
Germany	Current	2.59	2.31	2.21	2.22	0.38	0.13	-0.09		
	3MAgo	1.94	1.95	2.07	2.22	-0.76	-0.35	-0.17		
	6MAgo	0.20	0.36	0.67	1.04	-2.37	-1.60	-1.16		
	12MAgo	-0.58	-0.28	0.03	0.32	-3.33	-2.07	-1.69		
Italy	Current	3.17	3.42	3.92	4.29	1.18	1.87	1.85		
	3MAgo	2.82	3.30	3.95	4.36	0.25	1.64	1.84		
	6MAgo	1.37	2.00	2.80	3.35	-2.34	0.45	1.23		
	12MAgo	-0.14	0.46	1.26	2.18	-3.53	-1.23	0.14		
France	Current	2.71	2.58	2.64	3.01	0.24	0.30	0.52		
	3MAgo	2.15	2.20	2.44	3.02	-0.91	-0.16	0.46		
	6MAgo	0.40	0.67	1.13	1.95	-3.30	-1.52	-0.38		
	12MAgo	-0.50	0.12	0.50	1.24	-3.49	-2.08	-1.06		
Sweden	Current	2.50	2.27	2.05		-0.17	0.14			
	3MAgo	2.34	2.38	2.25		-0.59	-0.17			
	6MAgo	1.71	1.57	1.39		-1.66	-1.45			
	12MAgo	-0.06	0.69	0.83		-2.26	-1.91			
Australia	Current	3.17	3.24	3.51	3.96	0.23	0.92	1.37		
	3MAgo	3.21	3.35	3.70	4.10	-0.01	1.05	1.67		
	6MAgo	2.56	2.76	3.03	3.44	-0.75	0.40	1.24		
	12MAgo	0.86	2.31	2.68	3.16	-0.81	-0.02	0.87		
NZ	Current	4.67	4.18	4.11	4.41	1.28	1.79			
	3MAgo	4.31	4.28	4.18	4.44	1.43	2.04			
	6MAgo	3.28	3.28	3.40	3.75	0.07	1.03			
	12MAgo	1.96	3.07	3.33	3.56	0.06	0.82			
Canada	Current	3.68		2.91	3.00			1.20	4.83	6.99
	3MAgo	3.81		3.29	3.35			1.38	5.42	7.60
	6MAgo	2.87		2.60	2.77			0.80	4.44	6.84
	12MAgo	1.34		1.73	2.05			0.12	2.93	4.55

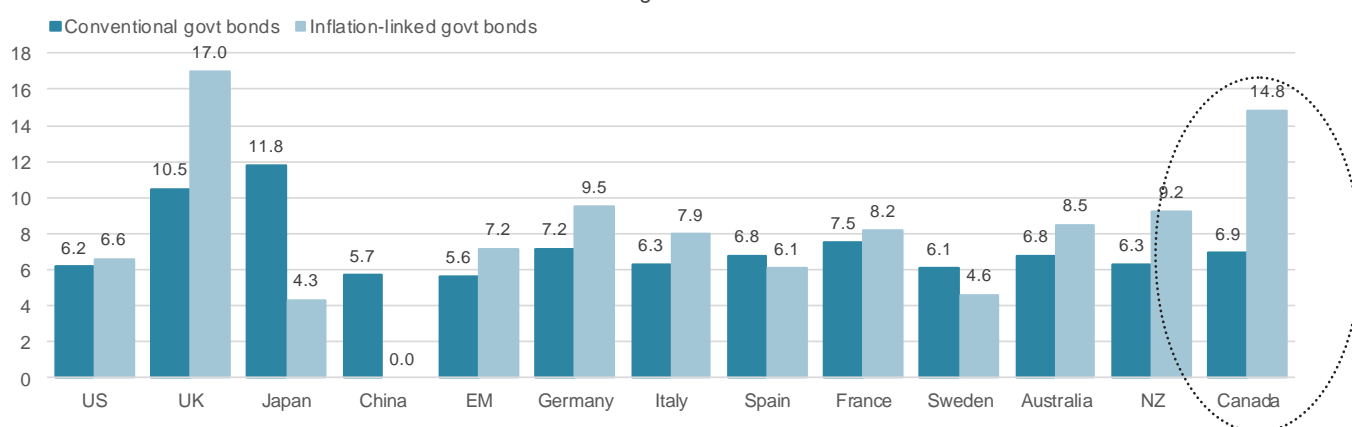
Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

Appendix – Duration and Market Value (USD, Bn)

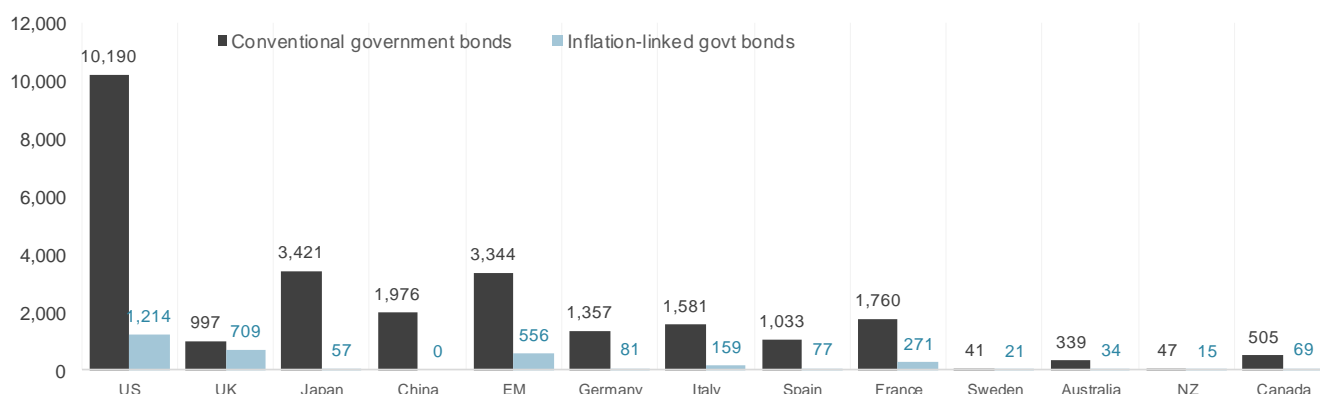
Conventional government bonds									Inflation-linked government bonds					
Duration					Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.7	6.2	2,197.8	1,036.7	1,295.4	10,189.6	6.8	21.5	6.6	424.7	129.8	1214.3
UK	3.7	7.8	19.8	10.5	112.7	129.5	288.0	996.8	7.1	29.1	17.0	124.2	276.9	708.5
Japan	4.0	8.0	23.7	11.8	388.7	462.8	700.8	3,420.7	6.7		4.3	25.6		57.1
China	3.7	7.5	17.4	5.7	462.2	322.3	234.9	1,976.0						
EM	3.6	7.0	15.7	5.6	739.00	597.42	333.42	3,344.5	5.4	13.5	7.2	113.5	138.3	556.1
Germany	3.8	7.7	20.8	7.2	277.25	229.92	143.13	1,356.6	6.9	22.4	9.5	30.2	17.8	81.2
Italy	3.6	7.4	16.7	6.3	319.81	242.45	134.74	1,581.0	6.9	26.9	7.9	54.0	5.4	159.4
Spain	3.6	7.6	17.9	6.8	196.05	184.62	100.12	1,033.3	7.3		6.1	21.3		76.7
France	3.6	7.8	20.5	7.5	327.64	316.80	208.29	1,760.0	6.9	24.8	8.2	113.2	20.3	271.2
Sweden	3.6	8.2		6.1	7.66	9.23		41.4	6.4		4.6	9.8		20.9
Australia	3.7	7.9	18.1	6.8	58.38	93.04	16.73	339.1	7.7	23.1	8.5	9.9	3.0	34.5
NZ	3.5	7.9	17.7	6.3	8.95	6.79	2.36	47.1	6.7		9.2	3.3		14.6
Canada		7.4	18.4	6.9		170.90	91.60	505.4		14.8	14.8		69.2	69.2

Investment grade bonds											High Yield	
Duration						Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.1	8.8	7.4	7.0	7.3	78.5	447.7	2,402.8	3,384.9	6,313.9	4.3	1,158.0
Euro	6.5	5.0	4.7	4.4	4.6	8.8	179.0	1,067.1	1,445.9	2,700.8	3.2	435.8
EM		5.7	4.9	5.2	5.1		37.64	219.55	358.1	615.3	3.6	213.1

Average Duration



Total Market Value (USD Billions)



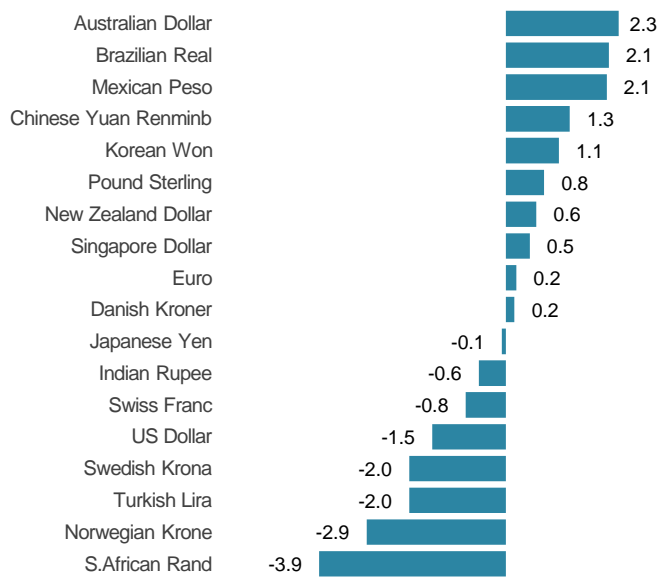
Data as of 2023-01-31

Indices used: FTSE Canada Non-Agency Bond Index (Mid, Long, Overall), FTSE Canada RRB Canada Bond Index.

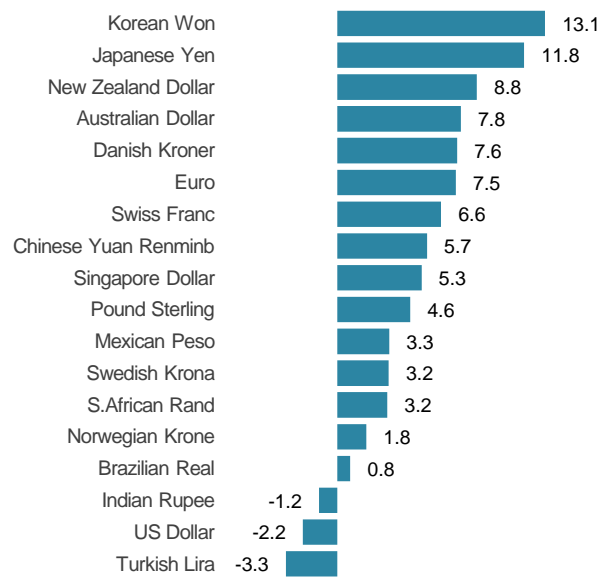
Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indexes used for each market. For professional investors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

Appendix – Foreign Exchange Returns % as of January 31, 2023

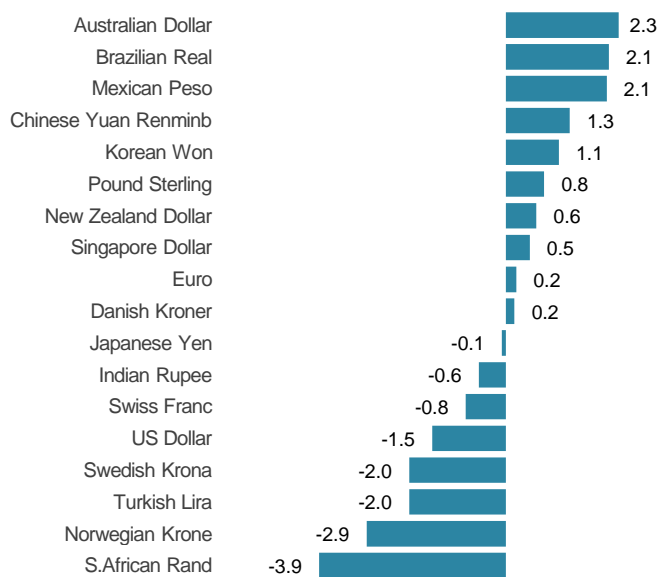
FX Moves vs CAD - 1M



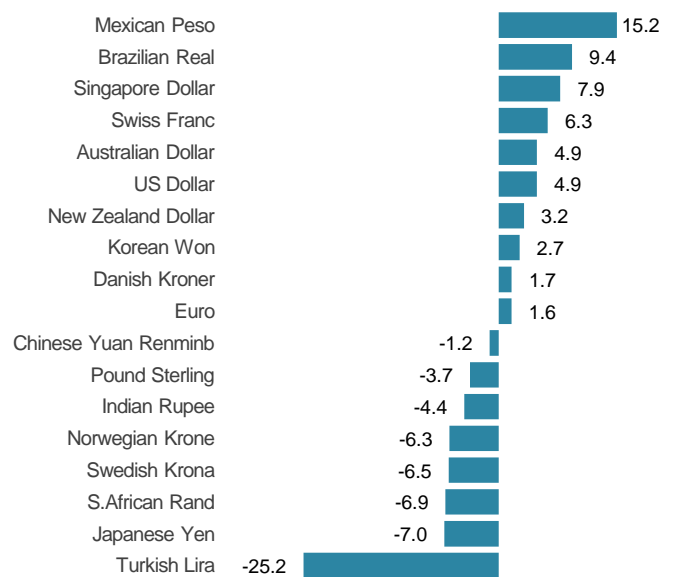
FX Moves vs CAD - 3M



FX Moves vs CAD - YTD



FX Moves vs CAD - 12M



Appendix – Glossary

Bond markets are based on the following indices:

- FTSE Canada Universe Bond Index for all Canadian government and corporate bond markets*
- FTSE Canada High Yield Bond Index for the Canadian high yield market
- FTSE Canada RRB Canada Index for the Canadian inflation-linked bond market
- 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 Broad Bond Index (EMUSDBBI) for the emerging markets corporate bond market

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

* FTSE Canada Bond Indexes

- 1-3YR = Short Term Bond Indices
- 7-10YR = Mid Term Bond Indices
- 20+ YR = Long Term Bond Indices

Source: FTSE Russell. All data as of January 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. For professional investors only.

Total Returns
Growth/Inflation
Financial Conditions
Govt. Bonds
Corporate Bonds
Spreads
Inflation-Linked
Credit/Equities
Appendix



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