

Fixed Income Insights

MONTHLY REPORT - DECEMBER 2023 | CANADA EDITION

FOR PROFESSIONAL INVESTORS ONLY

Canadian govt bonds front-run BoC easing, despite caution on early pivot

Global bond markets rallied in November after US, Eurozone and Canadian inflation fell, suggesting the cyclical peak in rates may be at hand, despite central bank caution on early policy pivots. Long Canadian AAA corporates, provincial bonds and conventional bonds gained nearly 9-10% in November.

Macro and policy backdrop - Soft landing seems in sight for G7 economies, including Canada, as rates peak

The BoC indicated that Canada's latest drop in inflation was in line with its forecasts, and consistent with meeting the 2% target by 2025, but caution on an early pivot is likely after 2021-22. (page 2)

Canadian govts and credit - Falling inflation reassures bond markets and signals possible peak in rates

Canadian bonds tracked the general bond market rally after weaker growth and lower inflation signal a peak in interest rates may be at hand. (pages 3-4)

Global yields and spreads - Yield curves re-inverted as markets anticipate policy easing

Canadian sovereign spreads tightened after a bull inversion in November reversed the October bear steepening. (pages 5-6)

Sovereign and climate bonds - EM ESG saw a strong recovery in 2023

The recovery in Emerging Markets ESG is the most striking in the 2023 performance, but higher European and JGB yields dragged Climate and Advanced Climate WGBI lower YTD. (page 7)

Performance - Long dated gilts and Bunds led the November rally, in reversal of the Q3 and October sell-off

G7 govt markets enjoyed their strongest month since tightening began, led by long bonds. Credits rallied. (pages 8-10)

Appendix (from page 11)

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

Chart 1: Increased divergence in nominal and real yields has been notable in 2023, especially in Bunds vs Treasuries and Canadian bonds. Breakevens have moved little, apart from the increase in Japan.

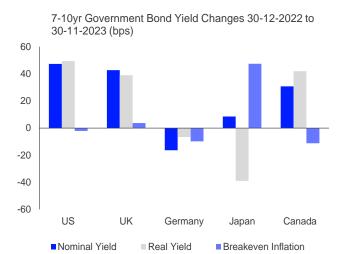
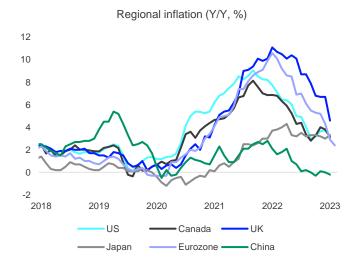


Chart 2: G7 inflation fell sharply in November (ex Japan), causing the bank of Canada to pause policy for the second time since September; squeezing inflation down to 2% targets remains a policy challenge.



Source: FTSE Russell and LSEG. Latest data available as of November 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

Expectations of soft landings across G7 economies, including Canada, continue to dominate forecasts for 2023-24. G7 inflation has halved since the 2022 peaks (see cover), taking pressure off central banks for further tightening as inflation nears central bank targets in some cases. The Chinese economy fell into deflation.

The scale of the energy shock and monetary tightening mean some economies, like the Eurozone and UK, may just skirt recession in 2023, with Consensus forecasts of 0.5% and 0.4% y/y respectively, while others, like the US benefitted from strong capex and consumer spending driving stronger growth. Canadian growth is expected to stay near 1.1% in 2023, but to weaken to 0.7% y/y in 2024 (Chart 1). The surprising feature of global forecasts is that no recessions are forecast in the UK or Eurozone in 2024.

Central banks breathed a sigh of relief after inflation fell in October, suggesting an end to the current rate hike cycle. Canada's CPI has halved since the 2022 peak and stood at 3.8% y/y in October – 1.8% from target – and it may fall further in Q4. Eurozone CPI fell to 2.4% y/ in November and the UK CPI eased to 4.6% y/y) in October, while China fell into deflation (Chart 2 & also cover).

G7 central banks paused policy in November (Chart 3), maintaining rates at current levels and continuing quantitative tightening (QT), after inflation fell sharply. A related issue is whether QT will end, when central banks do pivot towards easing rates?

Canadian unemployment ticked up modestly to 5.7% y/y (from 5.5% y/y in previous months), highlighting softening economic activity, though levels remain historically low, underpinning consumption, with retail sales up slightly on the month (Chart 4).

Chart 1: 2023 proved to be a better year than expected for growth, with economies averting a recession. Forecasts for 2024 also suggest a soft landing, so far, with flattish Canadian real growth.

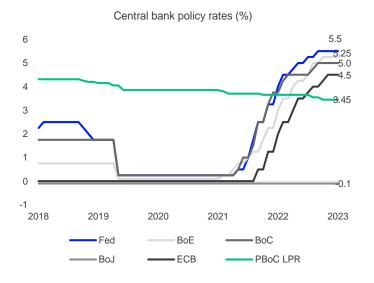
Chart 2:	Currently running with a 3.1% y/y inflation, Canada is
making	strides towards its 2% target, with a lag effect in the
Consens	sus estimates for 2023.

Latest Consens	us Real GDP Fore	ecasts (%, Noven	nber 2023)
	2022	2023	2024
US	2.1	2.3	1.1
UK	4.1	0.4	0.4
Euro Area	3.5	0.5	0.7
Japan	1.6	0.8	1.0
China	2.8	5.0	4.4
Canada	3.5	1.1	0.7

Chart 3: Central banks paused policy in November after inflation rates decelerated sharply, more than halving since their peak in 2022. Still, most G7 central banks have ruled out early pivots.

Consensus Inflation Forecasts (%, November 2023)												
	2023	Change Since Jan- 23 (Bps)	Since Jan- 23 (Bps)									
US	4.2	50	2.7	20								
UK	7.4	40	3.0	50								
Eurozone	5.6	-40	2.7	20								
Japan	2.9	110	2.2	90								
China	0.5	-180	1.8	-50								
Canada	3.9	20	2.5	30								

Chart 4: Canadian unemployment edged up from historical lows in November, but remained close to historical lows, underpinning consumption and consumer confidence.



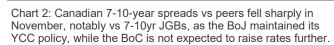


Canadian Governments, Provinces and Municipalities

Chart 1: The Canadian curve disinverted in November after long duration bonds rallied strongly in response to weaker growth, lower inflation and a likely end to monetary tightening.



Chart 3: Long-dated Canadian real yields tracked nominal yields lower after inflation eased in November, despite the BoC retaining its 'higher for longer' interest rate strategy.



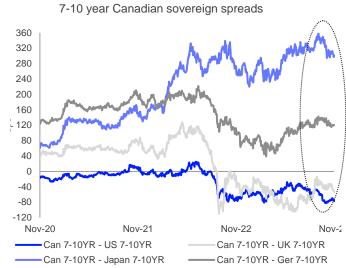


Chart 4: Real yields were mostly stable in November, except for German inflation breakevens, which saw large moves, mostly down, after headline inflation declined.

Selected longer dated inflation

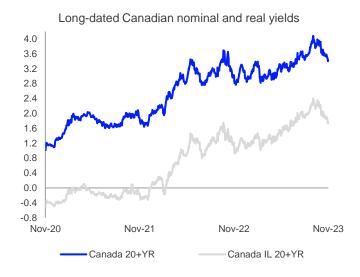
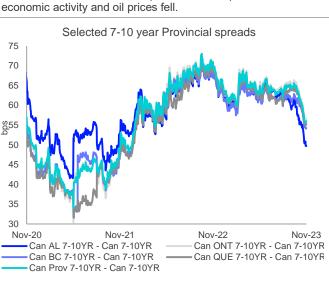


Chart 5: Provincial spreads fell sharply in November, especially those of Alberta, which decoupled from other peers, after both economic activity and oil prices fell.



340 8 260 180 100 Nov-20 Nov-21 Nov-22 Nov-23

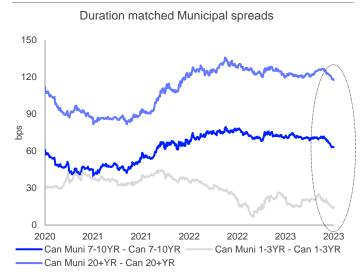
US 20+YR - US IL 20+YR

UK 20+YR - UK IL 20+YR

Chart 6: Canadian Municipals spreads fell in November, as investors readjusted for the possibility of an end to the interest rate cycle and the BoC starting to ease in 2H 2024.

Can 20+YR - Can IL 20+YR

Ger 20+YR - Ger IL 20+YR



Canadian Corporate Bonds

Chart 1: US HY and IG credit spreads fell more than their Canadian equivalents, as inflation retreated, and risk appetite recovered in equities and correlated asset classes.

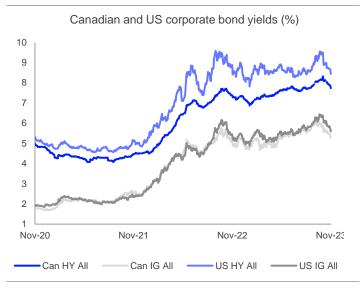


Chart 3: Canadian HY spreads have been more stable than US, but US spreads have now converged to Canadian levels, close to 400bp, the first time US spreads have done so for three years.

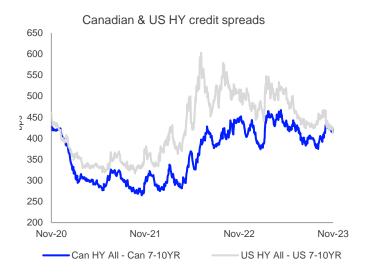


Chart 5: Corporate IG spreads have fallen sharply over the last 12 months by some 30-40bp, notably in November, as markets readjusted to a likely end to monetary tightening and lower inflation.

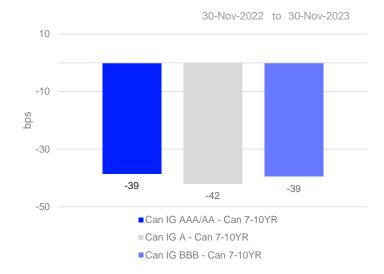


Chart 2: Canadian infrastructure spreads have decoupled from other industry peers in 2023, with spreads tightening over the last 12 months. Real estate spreads have remained at around 220bp.

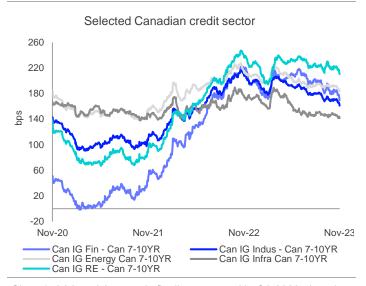


Chart 4: AAA and A spreads finally converged in Q3 2023, though more recently, AAA spreads have tightened more than their lower quality peers, reversing two years of widening.

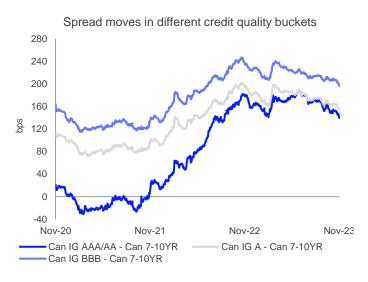
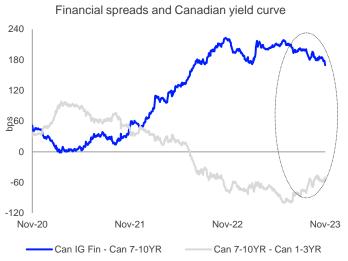


Chart 6: Financial spreads fell again in November, while the Canadian curve steepened a little, repeating the pattern since Covid of spreads tightening when the curve steepens, and vice versa.



Global Yields, Curves and Spread Analysis

Chart 1: G7 yields fell sharply on lower inflation and the central bank policy pause, despite central bank keeping interest rates higher for longer and so far, ruling out early pivots.

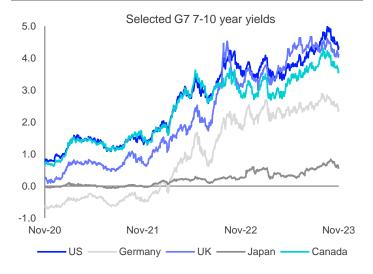


Chart 3: G7 yield curves re-inverted as 7-10yr yields fell sharply in the rally, and 1-3yr yields were constrained by central bank policy rates. However, the Canadian curve moved less than others.

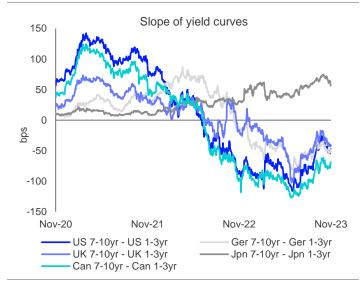


Chart 5: JGB breakevens continue to rise vs other G7 breakevens. US 7-10yr breakevens fell in November as nominal yields dropped relative to real yields, after lower inflation data, as in the UK.

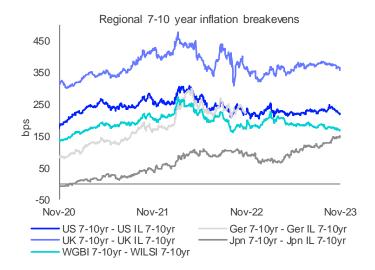


Chart 2: Inflation linked bond yields fell, as investors modestly revised down rate expectations in 2024. Lower inflation and weak growth in Europe helped keep real yields below US Tips levels.

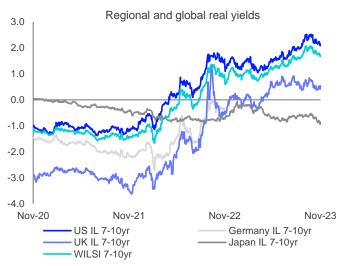


Chart 4: Long maturities also rallied, unwinding some of the recent dis-inversion, as investors began to re-focus on re-investment risks. The Canadian yield curve remains the most inverted in the G7.

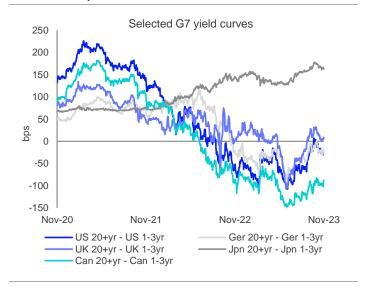


Chart 6: Short-dated inflation breakevens fell sharply in November, after lower-than-expected inflation data, showing the normal strong correlation with spot inflation rates.



Yield Spread and Credit Spread Analysis

Chart 1: Treasury spreads narrowed in November, and repeated the normal pro-cyclical pattern, rising during periods of rising yields and vice versa. The biggest moves were vs Bunds and gilts.

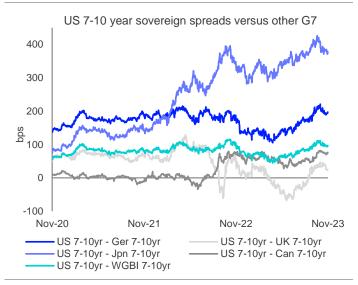


Chart 3: EM sovereign spreads widened a little in the 7-10yr area, mainly because G7 yields fell sharply in the November rally, though this follows general spread tightening since 2021 (ex Japan).

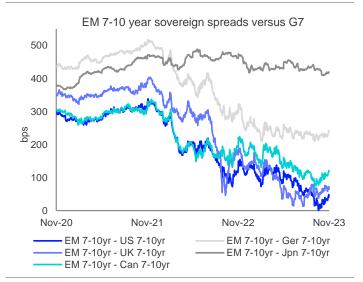


Chart 5: Credit spreads fell in November, despite the sharp drop in govt bond yields in the 7-10 year area. High yield joined the rally, reflecting a recovery in risk appetite and strong stock markets.

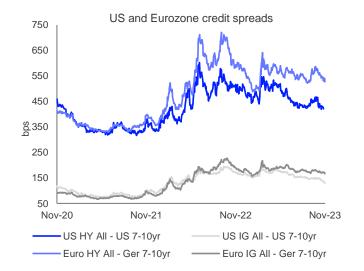


Chart 2: Italian sovereign spreads fell sharply in November, after the decline in Eurozone inflation, though spreads barely moved versus the US, as US Treasury yields fell significantly in the month.

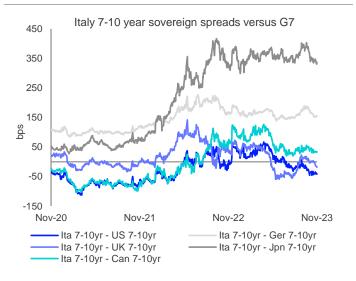


Chart 4: It is a similar story in China on wider sovereign spreads vs the G7 in November, following protracted tightening in 2023. Moves were limited vs Bunds, since yields fell less in Germany.

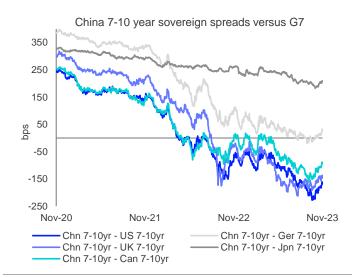
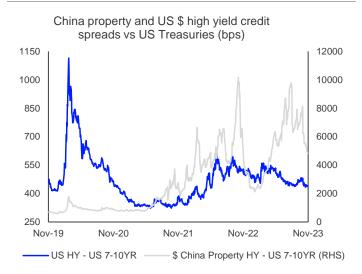


Chart 6: Chinese \$ HY spreads eased in September from record highs, as Country Garden escaped from a potential default. Easier mortgage policies may also have helped to narrow spreads.



Sovereign and Climate Bonds Analysis

Chart 1: The recovery in Emerging Markets ESG is the most striking in 2023 performance. Higher European and JGB yields dragged CWGCI and ACWGBI lower, but adjusted climate WGBI recovered.

Chart 2. ESG WGBI has a higher US weight, and underweight in China, reflected in underperformance in 2022-23. Adjusted Climate WGBI outperformed in 2023 after re-weighting towards Europe

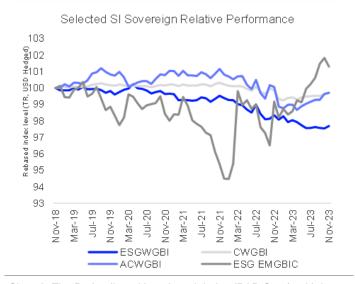


Chart 3: The Paris-aligned benchmark index (PAB Corp), with its heavy tilt away from carbon, outperformed strongly in the early Covid period, but underperformed since as energy recovered.

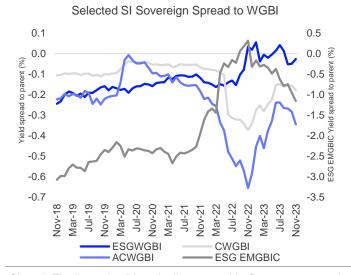


Chart 4: The "greenium" largely disappeared in Green corporates in 2022, after heavy issuance, as yields rose, as the Green WBIG spread move shows vs WBIG. But this has been restored in 2023.

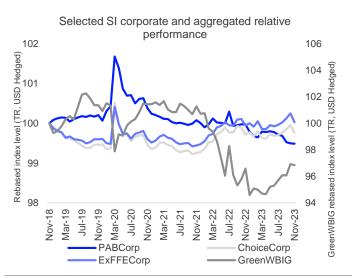


Chart 5: The November rally in govt bonds, and yield declines, favoured Climate WGBI over WGBI, due to the extra duration in lower yielding Bunds and JGBs, though the moves were modest.

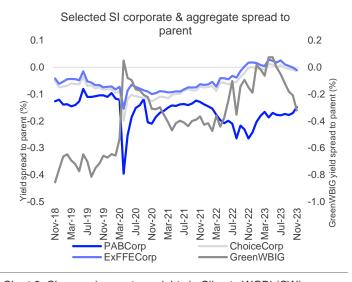
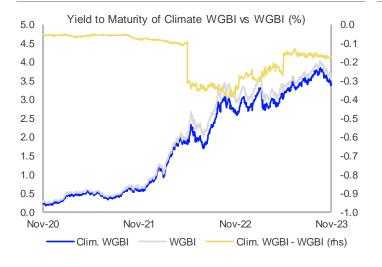
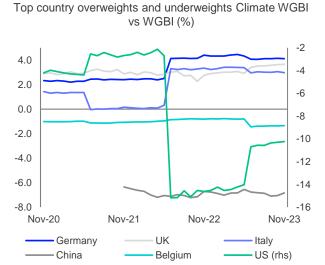


Chart 6: Changes in country weights in Climate WGBI (CW) impacted performance; the underweight in China & overweight in Europe caused the underperformance of CW vs WGBI in 2022-23.

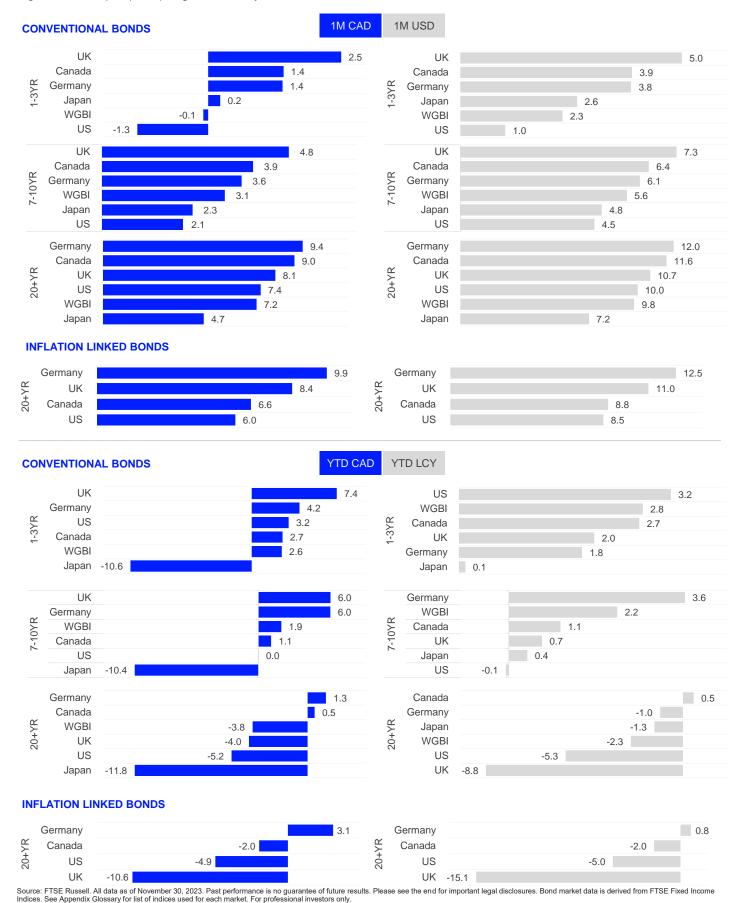




Global Bond Market Returns - 1M & YTD % (CAD, LC, TR) as of Nov 30, 2023

Global bond markets rallied strongly in November on lower inflation, oil prices and weaker economic activity. UK gilts and Bunds outperformed across maturities, as the probability of the BoE and ECB raising rates again receded, driving yields lower. Also, sterling and Euro strength helped improve gilt returns in Canadian dollar terms.

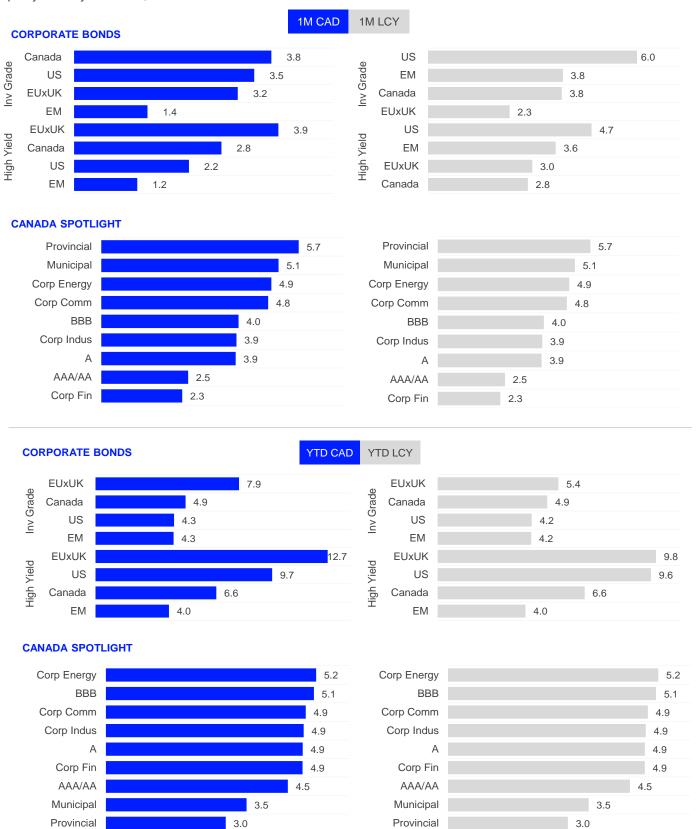
But longer Canadian government bonds also gained 4-9% in November. Year to date, long Canadian real return bonds showed negative returns (-2%), despite gains of nearly 7% in November.



Canadian and Corporate Bond Returns - 1M & YTD % (CAD, LC, TR) as of Nov 30, 2023

Both investment grade and high yield credits rallied in November, led by euro high yields, which benefited from the equity rally, the sharp drop in Eurozone inflation and a stronger currency. Provis and Munis delivered 5-6% returns, while AAA corporates outperformed lower quality corporates, after a long period of under-performance.

Canadian munis and provis erased some of the underperformance since January. BBB corporates have outperformed higher quality credits year to date, with a return of 5%.



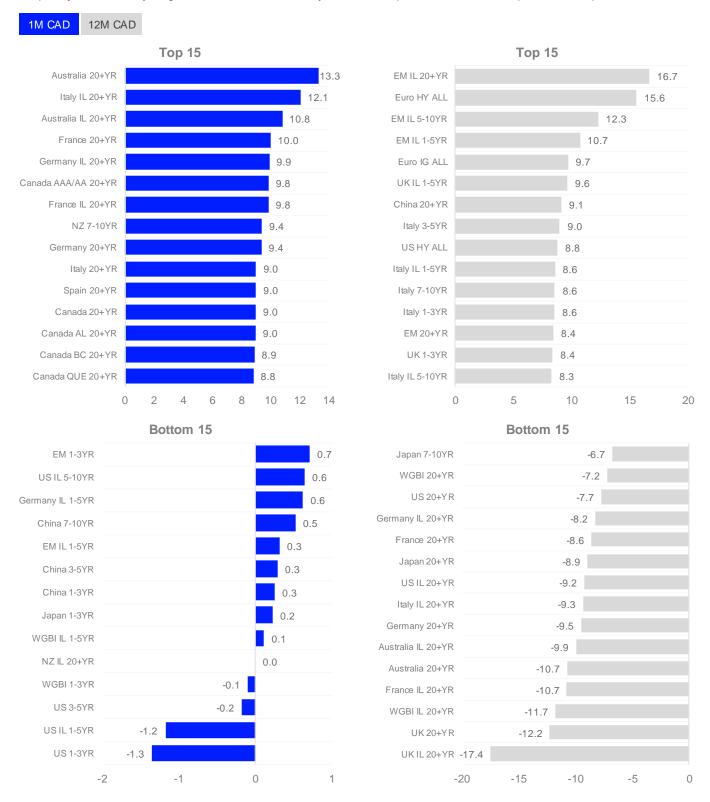
Indices used: FTSE Canada Corporate Bond Index (AAA/AA, A, BBB, Financial, Communication, Industrial, Energy, Overall), FTSE Canada High Yield Bond Index, FTSE Canada Provincial Bond Index, FTSE Canada Municipal Bond Index.

Top and Bottom Bond Returns - 1M & 12M % (CAD, TR) as of Nov 30, 2023

Long Australian, Canadian and European govt bonds outperformed in November, after inflation fell sharply and despite central banks cautioning on early pivots. Over 12M, long EM inflation bonds and Euro high yield credits still dominate the performance ranking, while long government returns remained (though less) deeply negative.

Eurozone, Australian and Canadian bonds with 20-year maturities outperformed in November with returns of 9-13% in Canadian dollar terms. Canadian AAA corporates also gained nearly 10%. Short US Treasuries and Tips lost 1%, mostly on account of currency weakness versus the Canadian dollar.

The scale of the November rally reduced 12M losses significantly in longer maturity bonds, but the Bottom 15 returns are still completely dominated by long duration bonds. Conversely, short bonds pre-dominate in the Top15 returns, apart from China and EM.



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

Government and corporate bond returns

Top 15% Bottom 15%

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

		3	М	6	M	Y	ГD	12	М
		Local	USD	Local	USD	Local	USD	Local	USD
Government	1-3YR	1.84	1.62	1.69	1.94	2.70	2.63	2.55	2.53
	7-10YR	1.20	0.99	-0.98	-0.72	1.06	1.00	-1.30	-1.31
	20+YR	0.93	0.72	-3.20	-2.95	0.48	0.42	-4.44	-4.45
Inflation-Linked	20+YR	2.79	2.57	-1.45	-1.20	-1.95	-2.02	-2.61	-2.62
Corporate	1-3YR	2.45	2.23	2.82	3.08	4.69	4.62	4.70	4.69
	7-10YR	2.37	2.15	1.60	1.86	4.34	4.27	2.88	2.87
	20+YR	2.25	2.03	0.99	1.25	5.90	5.83	2.76	2.75
AAA/AA	1-3YR	2.36	2.14	2.57	2.84	4.27	4.20	4.31	4.30
	7-10YR	2.38	2.16	1.42	1.68	3.36	3.29	2.29	2.27
	20+YR	2.55	2.33	0.76	1.02	5.99	5.92	1.97	1.96
	All	2.51	2.29	2.60	2.86	4.49	4.42	4.17	4.16
A	1-3YR	2.46	2.24	2.85	3.11	4.63	4.56	4.67	4.66
	7-10YR	2.17	1.95	1.35	1.61	4.09	4.02	2.76	2.75
	20+YR	2.01	1.79	0.66	0.92	5.48	5.41	2.23	2.22
	All	2.30	2.08	2.02	2.28	4.86	4.79	3.78	3.77
BBB	1-3YR	2.47	2.25	2.86	3.12	4.89	4.82	4.86	4.85
	7-10YR	2.47	2.25	1.74	2.00	4.57	4.50	2.99	2.98
	20+YR	2.54	2.32	1.44	1.70	6.46	6.39	3.50	3.48
	All	2.44	2.22	2.15	2.41	5.14	5.07	3.93	3.92
Sectors	Comm	2.76	2.54	1.76	2.02	4.93	4.86	3.30	3.29
	Energy	2.24	2.02	1.68	1.93	5.19	5.12	3.30	3.28
	Fin	2.48	2.26	2.82	3.08	4.86	4.79	4.77	4.76
	Indus	2.22	2.00	2.01	2.27	4.88	4.81	3.80	3.78
	Infra	2.09	1.87	0.93	1.19	4.94	4.87	2.37	2.36
	RE	2.29	2.07	2.44	2.70	4.47	4.40	4.02	4.01
	Secur	2.29	2.07	2.73	2.99	4.62	4.55	4.68	4.67
Provinces (All)	1-3YR	2.12	1.90	1.77	2.03	3.06	2.99	2.78	2.77
	7-10YR	1.92	1.70	0.35	0.60	2.78	2.71	0.98	0.97
	20+YR	1.70	1.49	-1.18	-0.92	2.99	2.92	-0.70	-0.71
	All	1.86	1.65	-0.06	0.19	2.96	2.89	0.58	0.57
Ontario	1-3YR	2.13	1.91	1.76	2.02	3.06	2.99	2.81	2.80
	7-10YR	1.87	1.65	0.29	0.54	2.76	2.70	1.00	0.99
	20+YR	1.69	1.47	-1.27	-1.02	3.10	3.03	-0.54	-0.55
	All	1.86	1.64	-0.01	0.25	3.03	2.96	0.79	0.78
Alberta	1-3YR	2.12	1.90	1.71	1.96	2.95	2.88	2.62	2.60
	7-10YR	2.13	1.91	0.59	0.85	2.93	2.86	1.11	1.10
	20+YR	1.83	1.62	-1.25	-1.00	2.24	2.17	-1.74	-1.75
	All	2.00	1.78	0.03	0.29	2.59	2.52	0.19	0.17
Quebec	1-3YR	2.11	1.90	1.85	2.11	3.16	3.09	2.86	2.85
	7-10YR	1.90	1.68	0.32	0.58	2.74	2.67	0.89	0.88
	20+YR	1.75	1.53	-1.00	-0.75	3.16	3.09	-0.54	-0.55
	All	1.87	1.65	-0.11	0.15	3.04	2.98	0.50	0.49
BC	1-3YR	2.02	1.80	1.86	2.12	3.05	2.98	2.63	2.61
	7-10YR	1.95	1.74	0.39	0.65	2.77	2.70	0.91	0.90
	20+YR	1.42	1.20	-1.45	-1.20	2.47	2.41	-1.27	-1.28
		1	0						

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.

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%.

		1	M	3	М	Y	TD	12	2M
		Local	CAD	Local	CAD	Local	CAD	Local	CAD
US	1-3YR	1.01	-1.35	1.35	1.57	3.17	3.24	3.34	3.35
	7-10YR	4.52	2.08	-0.68	-0.47	-0.06	0.00	-1.51	-1.50
	20+YR	9.97	7.40	-4.27	-4.06	-5.26	-5.20	-7.69	-7.68
	IG All	5.95	3.48	1.25	1.47	4.24	4.31	3.76	3.77
	HY All	4.66	2.22	2.08	2.30	9.62	9.69	8.78	8.80
UK	1-3YR	0.62	2.53	1.82	1.94	2.02	7.44	1.95	8.38
	7-10YR	2.84	4.78	2.65	2.77	0.68	6.03	-2.79	3.34
	20+YR	6.08	8.08	-0.21	-0.09	-8.85	-4.01	-17.45	-12.24
EUR	IG All	2.33	3.16	1.87	2.63	5.45	7.87	3.51	9.70
	HY All	2.97	3.94	3.17	3.87	9.84	12.74	9.03	15.62
Japan	1-3YR	0.18	0.23	0.02	-1.29	0.09	-10.61	-0.02	-5.62
	7-10YR	2.27	2.32	0.02	-1.29	0.38	-10.35	-1.18	-6.72
	20+YR	4.67	4.73	-1.44	-2.73	-1.28	-11.83	-3.50	-8.90
China	1-3YR	0.02	0.26	0.07	2.53	2.12	-0.38	2.34	2.52
	7-10YR	0.30	0.53	0.09	2.55	4.00	1.45	4.57	4.76
	20+YR	1.20	1.44	-0.83	1.61	7.14	4.52	8.94	9.13
EM	1-3YR	0.35	0.71	0.48	2.22	3.35	2.75	3.78	5.49
	7-10YR	1.89	1.90	0.30	1.43	5.43	4.20	6.17	6.83
	20+YR	2.20	2.14	-0.38	1.17	6.84	4.74	8.37	8.43
	IG All	3.84	1.42	1.28	1.50	4.21	4.28	5.42	5.43
	HY All	3.64	1.22	2.38	2.60	3.96	4.03	7.53	7.54
Germany	1-3YR	0.59	1.41	0.86	1.61	1.84	4.19	1.09	7.14
	7-10YR	2.74	3.58	0.75	1.51	3.62	6.01	-1.10	4.82
	20+YR	8.48	9.36	-1.68	-0.95	-1.02	1.26	-14.57	-9.46
Italy	1-3YR	1.01	1.84	1.21	1.96	3.28	5.66	2.44	8.56
	7-10YR	4.07	4.92	0.70	1.45	8.01	10.50	2.45	8.58
	20+YR	8.12	9.00	-1.64	-0.91	6.75	9.20	-7.12	-1.57
Spain	1-3YR	0.64	1.46	1.01	1.76	2.36	4.71	1.41	7.48
	7-10YR	3.26	4.10	1.06	1.82	4.69	7.10	-0.38	5.58
	20+YR	8.11	8.99	-0.48	0.26	1.79	4.13	-10.23	-4.86
France	1-3YR	0.64	1.47	0.94	1.70	2.27	4.62	1.23	7.29
	7-10YR	3.05	3.90	0.76	1.51	3.76	6.15	-1.58	4.30
	20+YR	9.12	10.02	-1.18	-0.44	-0.28	2.02	-13.71	-8.55
Sweden	1-3YR	0.50	4.66	1.07	5.84	1.90	1.39	1.32	3.12
	7-10YR	2.77	7.01	1.75	6.55	0.31	-0.20	-3.46	-1.75
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Australia	1-3YR	1.01	3.31	0.50	3.11	1.87	-0.33	1.50	0.51
	7-10YR	4.29	6.67	-1.73	0.82	1.15	-1.04	-2.57	-3.53
	20+YR	10.75	13.28	-4.30	-1.81	-2.50	-4.61	-9.83	-10.72
NZ	1-3YR	1.25	5.01	1.71	5.73	3.56	1.20	3.40	2.84
	7-10YR	5.48	9.39	1.26	5.26	1.04	-1.26	-1.34	-1.87
Canada	1-3YR	1.43	1.43	1.84	1.84	2.70	2.70	2.55	2.55
	7-10YR	3.87	3.87	1.20	1.20	1.06	1.06	-1.30	-1.30
	20+YR	8.98	8.98	0.93	0.93	0.48	0.48	-4.44	-4.44

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

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%.

		1	M	3	М	Y	TD	12	2M
		Local	CAD	Local	CAD	Local	CAD	Local	CAD
US	1-5YR	1.19	-1.17	1.23	1.44	3.20	3.27	2.81	2.82
	5-10YR	3.05	0.65	-0.09	0.12	1.04	1.11	-0.44	-0.43
	20+YR	8.50	5.96	-4.24	-4.03	-5.00	-4.93	-9.20	-9.19
UK	1-5YR	0.77	2.67	2.20	2.32	3.49	8.98	3.13	9.64
	5-10YR	1.70	3.63	1.41	1.53	3.59	9.10	0.79	7.15
	20+YR	6.40	8.41	-4.56	-4.45	-15.10	-10.59	-22.35	-17.44
EUxUK	1-5YR	-0.19	0.62	-0.28	0.47	1.29	3.62	-0.51	5.44
	5-10YR	1.23	2.06	-0.66	0.08	2.74	5.11	-1.21	4.70
	20+YR	9.01	9.90	-2.92	-2.20	0.77	3.09	-13.40	-8.22
Japan	1-5YR	1.16	1.22	1.32	-0.01	3.85	-7.25	3.71	-2.10
	5-10YR	2.26	2.31	2.13	0.79	5.46	-5.82	4.29	-1.55
EM	1-5YR	0.93	0.32	0.07	-1.08	10.51	10.02	11.50	10.73
	5-10YR	2.83	2.76	1.13	-0.37	9.31	10.81	11.06	12.32
	20+YR	5.53	5.71	0.85	0.33	9.62	16.80	9.55	16.71
Germany	1-5YR	-0.19	0.62	-0.28	0.47	1.29	3.62	-0.51	5.44
	5-10YR	1.23	2.06	-0.66	0.08	2.74	5.11	-1.21	4.70
	20+YR	9.01	9.90	-2.92	-2.20	0.77	3.09	-13.40	-8.22
Italy	1-5YR	1.11	1.94	0.84	1.59	3.74	6.13	2.45	8.58
	5-10YR	3.45	4.29	-0.83	-0.09	6.88	9.35	2.19	8.30
	20+YR	11.15	12.06	-6.26	-5.56	5.68	8.11	-14.42	-9.31
Spain	1-5YR	0.38	1.20	0.24	0.99	2.19	4.54	1.33	7.39
	5-10YR	1.67	2.50	-0.29	0.46	3.50	5.88	-0.03	5.95
France	1-5YR	0.25	1.07	-0.21	0.54	1.46	3.79	-0.31	5.66
	5-10YR	1.23	2.06	-0.94	-0.20	2.67	5.04	-1.98	3.88
	20+YR	8.95	9.84	-4.98	-4.28	-1.40	0.87	-15.77	-10.73
Sweden	1-5YR	0.83	4.99	1.11	5.88	2.73	2.21	2.76	4.58
	5-10YR	1.75	5.95	1.02	5.78	1.37	0.86	-1.67	0.07
Australia	1-5YR	1.02	3.32	0.62	3.23	4.98	2.71	4.37	3.35
	5-10YR	2.23	4.56	-1.12	1.45	4.82	2.55	2.47	1.47
	20+YR	8.33	10.80	-6.17	-3.73	0.51	-1.67	-9.03	-9.92
NZ	5-10YR	3.44	7.28	1.74	5.76	4.46	2.08	4.58	4.01
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	6.64	6.64	2.79	2.79	-1.95	-1.95	-2.61	-2.61

Indices used: FTSE Canada RRB Canada Bond Index.

Appendix - Canadian Historical Bond Yields % as of November 30, 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	4.08	3.58	3.43	
	3M Ago	4.50	3.65	3.44	
	6M Ago	4.04	3.22	3.18	
	12M Ago	3.70	2.96	3.02	
IL	Current			1.76	
	3M Ago			1.88	
	6M Ago			1.44	
	12M Ago			1.20	
Provincial	Current	4.21	4.14	4.38	4.27
	3M Ago	4.63	4.27	4.42	4.43
	6M Ago	4.21	3.86	4.15	4.08
	12M Ago	3.84	3.66	4.05	3.90
Ontario	Current	4.22	4.15	4.38	4.27
	3M Ago	4.62	4.28	4.42	4.44
	6M Ago	4.24	3.86	4.14	4.09
	12M Ago	3.86	3.66	4.06	3.90
Quebec	Current	4.14	4.13	4.34	4.24
	3M Ago	4.67	4.25	4.38	4.39
	6M Ago	4.15	3.85	4.11	4.04
	12M Ago	3.80	3.65	4.02	3.87
Alberta	Current	4.23	4.08	4.40	4.26
	3M Ago	4.62	4.26	4.45	4.43
	6M Ago	4.20	3.85	4.18	4.09
	12M Ago	3.81	3.64	4.03	3.86
ВС	Current	4.29	4.12	4.38	4.27
	3M Ago	4.67	4.25	4.40	4.39
	6M Ago	4.18	3.84	4.13	4.04
	12M Ago	3.89	3.64	4.02	3.87
Municipal	Current	4.23	4.21	4.61	4.39
	3M Ago	4.69	4.34	4.65	4.57
	6M Ago	4.25	3.94	4.38	4.22
	12M Ago	3.92	3.73	4.30	4.04
Corporate	Current	5.29	5.31	5.27	5.29
	3M Ago	5.68	5.48	5.32	5.55
	6M Ago	5.33	5.12	5.11	5.24
	12M Ago	5.15	4.88	5.04	5.07
High Yield	Current				7.73
	3M Ago				7.70
	6M Ago				7.61
	12M Ago				7.37

		1-5YR	5-10YR	20+YR	All Mat
AAA/AA	Current	4.99	4.97	4.67	4.97
	3M Ago	5.39	5.28	4.77	5.37
	6M Ago	5.03	4.80	4.58	5.01
	12M Ago	4.83	4.42	4.52	4.74
A	Current	5.20	5.02	4.99	5.12
	3M Ago	5.62	5.18	5.04	5.39
	6M Ago	5.28	4.81	4.84	5.09
	12M Ago	5.05	4.62	4.78	4.91
BBB	Current	5.50	5.48	5.69	5.54
	3M Ago	2.50	1.94	2.01	5.79
	6M Ago	2.08	1.52	1.68	5.47
	12M Ago	1.91	1.44	1.45	5.31
Comm	Current	5.28	5.68	5.42	5.31
	3M Ago	5.49	5.80	5.78	5.60
	6M Ago	5.08	5.53	5.38	5.23
	12M Ago	4.82	5.50	5.10	5.15
Energy	Current	5.42	5.42	5.41	5.42
	3M Ago	5.78	5.56	5.43	5.58
	6M Ago	5.38	5.23	5.21	5.27
	12M Ago	5.10	5.02	5.13	5.10
Financial	Current	5.27	5.38	5.21	5.28
	3M Ago	5.68	5.56	5.34	5.66
	6M Ago	5.35	5.25	5.24	5.34
	12M Ago	5.16	4.93	5.20	5.14
Industrial	Current	5.15	5.16	5.31	5.19
	3M Ago	5.57	5.30	5.36	5.45
	6M Ago	5.24	4.96	5.19	5.16
	12M Ago	5.14	4.75	5.18	5.04
Infrastructure	Current	4.85	4.95	5.04	5.00
	3M Ago	5.19	5.13	5.10	5.12
	6M Ago	4.82	4.77	4.87	4.85
	12M Ago	4.65	4.47	4.81	4.72
Securitization	Current	5.28			5.28
	3M Ago	5.69			5.68
	6M Ago	5.31			5.31
	12M Ago	5.10			5.10

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.

Appendix - Historical Bond Yields % as of November 30, 2023

Global Bond Yields

Top 15% Bottom 15%

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

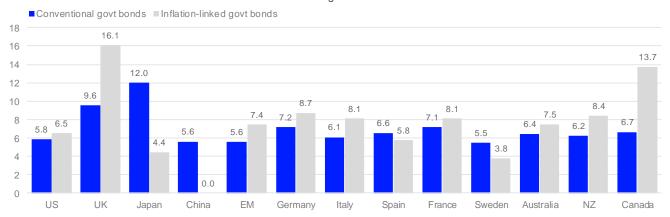
		Conv	entional go	vernment l	oonds	Inflat	ion-linked b	oonds	Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.82	4.39	4.35	4.63	2.57	2.14	2.27	5.64	8.47
	3M Ago	4.99	4.39	4.12	4.32	2.50	1.94	2.01	5.65	8.41
	6M Ago	4.61	3.92	3.65	3.94	2.08	1.52	1.68	5.43	8.84
	12M Ago	4.47	3.97	3.64	3.95	1.76	1.40	1.59	5.38	8.80
UK	Current	4.52	4.16	4.11	4.61	0.62	0.53	1.30		
	3M Ago	4.91	4.63	4.31	4.53	1.11	0.67	1.12		
	6M Ago	4.55	4.33	4.10	4.45	1.18	0.54	1.06		
	12M Ago	3.36	3.22	3.11	3.37	-1.47	-0.50	0.18		
Japan	Current	0.00	0.17	0.57	1.63	-2.08	-0.94			
•	3M Ago	-0.02	0.14	0.53	1.55	-1.82	-0.76			
	6M Ago	-0.08	0.01	0.33	1.22	-1.51	-0.77			
	12M Ago	-0.04	0.06	0.27	1.34	-1.30	-0.66			
China	Current	2.37	2.47	2.66	3.02					
	3M Ago	2.06	2.28	2.59	2.93					
	6M Ago	2.13	2.36	2.70	3.14					
	12M Ago	2.26	2.59	2.88	3.32					
EM	Current	3.66	4.22	4.76	4.46	4.42	4.45	5.10	6.08	10.41
	3M Ago	3.50	4.22	4.80	4.34	2.84	4.28	5.01	6.14	11.41
	6M Ago	3.74	4.16	4.62	4.44	4.34	4.24	5.00	5.78	12.12
	12M Ago	3.72	4.38	4.93	4.60	2.92	3.14	5.28	6.08	12.18
Germany	Current	2.86	2.41	2.37	2.67	1.16	0.34	0.28		
-	3M Ago	3.03	2.53	2.38	2.55	0.64	0.13	0.11		
	6M Ago	2.71	2.30	2.20	2.40	0.37	-0.04	-0.13		
	12M Ago	2.04	2.44	2.44	2.39	0.31	0.23	0.02		
Italy	Current	3.39	3.40	3.93	4.59	1.60	1.97	2.15		
-	3M Ago	3.56	3.53	3.87	4.41	1.37	1.72	1.86		
	6M Ago	3.35	3.42	3.89	4.43	1.11	1.62	1.80		
	12M Ago	2.73	3.48	4.07	4.43	1.14	1.98	2.00		
France	Current	3.01	2.73	2.87	3.46	0.84	0.63	0.95		
	3M Ago	3.09	2.85	2.87	3.36	0.48	0.37	0.71		
	6M Ago	2.83	2.63	2.68	3.24	0.22	0.20	0.53		
	12M Ago	2.25	2.53	2.55	2.89	0.28	0.24	0.44		
Sweden	Current	3.27	2.70	2.61	0.00	1.30	1.12			
	3M Ago	3.43	3.00	2.75	0.00	1.33	1.14			
	6M Ago	2.97	2.62	2.31	0.00	0.74	0.55			
	12M Ago	2.52	2.18	1.89	0.00	-0.30	-0.06			
Australia	Current	4.15	4.04	4.36	4.73	1.28	1.81	2.19		
	3M Ago	3.85	3.75	3.99	4.42	0.97	1.43	1.84		
	6M Ago	3.51	3.38	3.58	4.12	0.42	1.03	1.59		
	12M Ago	3.12	3.10	3.41	3.90	0.26	0.87	1.30		
NZ	Current	5.07	4.78	4.89	5.09	1.91	2.59	0.00	0.00	0.00
	3M Ago	5.30	4.96	4.89	5.07	2.15	2.58	0.00	0.00	0.00
	6M Ago	5.08	4.35	4.28	4.46	1.23	1.85	0.00	0.00	0.00
	12M Ago	4.67	4.12	4.05	4.35	1.24	1.76	0.00	0.00	0.00
Canada	Current	4.08		3.58	3.43			1.76	5.29	7.73
	3M Ago	4.50		3.65	3.44			1.88	5.55	7.70
	6M Ago	4.04		3.22	3.18			1.44	5.24	7.61
	12M Ago	3.70		2.96	3.02			1.20	5.07	7.37

Appendix - Duration and Market Value (USD, Bn) as of November 30, 2023

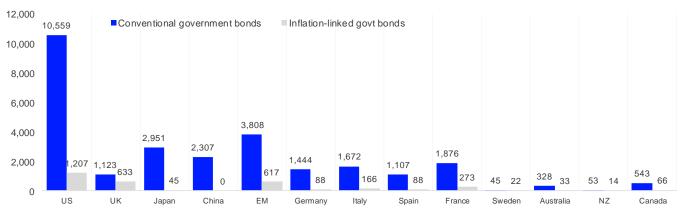
			Conve	ntional g	overnme	ent bond	S		1	nflation-	linked go	overnme	nt bond	S
		Durati	ion		Market Value					Duration		Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.3	16.7	5.8	2,428.2	1,102.6	1,219.7	10,559.2	7.0	21.1	6.5	396.0	118.4	1207.2
UK	3.6	7.5	18.2	9.6	128.7	179.5	309.5	1,122.5	6.8	27.1	16.1	101.8	238.1	632.8
Japan	3.9	8.0	23.7	12.0	354.7	348.3	632.9	2,951.4	7.1		4.4	18.7		44.8
China	3.7	7.5	17.6	5.6	548.0	387.3	262.8	2,307.4						
EM	3.6	6.9	15.8	5.6	836.61	695.77	361.23	3,808.2	5.8	13.6	7.4	112.3	169.9	616.9
Germany	3.8	7.5	20.5	7.2	317.39	235.27	163.81	1,443.7	7.0	21.5	8.7	44.2	18.8	88.5
Italy	3.6	7.1	16.1	6.1	312.91	273.55	139.24	1,672.4	7.6	26.1	8.1	61.1	5.2	165.7
Spain	3.6	7.4	17.6	6.6	210.37	189.79	96.93	1,106.6	6.6		5.8	23.2		88.2
France	3.6	7.5	19.7	7.1	297.49	327.44	214.89	1,876.4	6.4	24.2	8.1	106.3	20.2	272.8
Sweden	3.5	7.4		5.5	14.24	9.13		45.3	5.5		3.8	10.0		21.6
Australia	3.6	7.5	16.7	6.4	36.89	86.26	19.80	327.5	6.9	22.1	7.5	9.8	2.5	33.3
NZ	3.7	7.5	16.8	6.2	10.45	14.48	2.49	52.5	6.0		8.4	3.1		13.8
Canada		6.9	16.6	6.7		183.60	105.80	543.0		13.7	13.7		66.0	66.0

	Investment grade bonds											
	Duration							Market Value				MktVal
	AAA	AA	Α	BBB	Overall	AAA	AA	Α	BBB	Overall		
US	10.4	8.3	7.1	6.5	6.9	71.5	445.0	2,587.7	3,328.5	6,432.7	3.9	1,181.4
Euro	5.7	4.8	4.6	4.2	4.4	10.8	195.0	1,216.0	1,472.0	2,893.8	3.0	427.9
EM		5.8	4.7	5.0	4.9		37.08	220.70	309.7	567.5	3.3	182.7

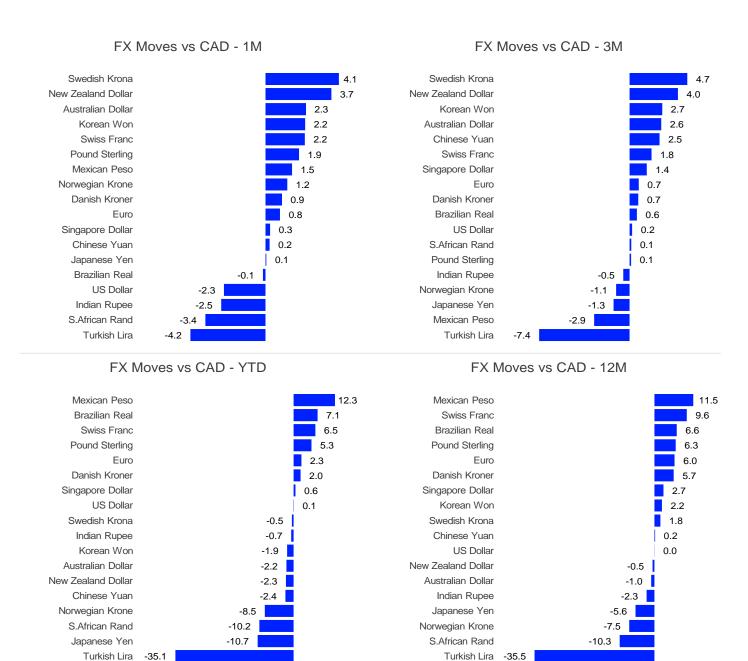
Average Duration



Total Market Value (USD Billions)



Data as of 2023-11-30



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

Global Investment Research Market Maps



ABOUT FTSE RUSSELL

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

CONTACT US

To learn more, visit Iseg.com/ftse-russell; email info@ftserussell.com; or call your regional Client Service team office:

EMEA +44 (0) 20 7866 1810 Asia-Pacific

North America +1 877 503 6437 Hong Kong +852 2164 3333

Tokyo +81 3 6441 1430

Sydney +61 (0) 2 7228 5659

© 2023 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to Indices, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indices cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell,