

Fixed Income Insights

MONTHLY REPORT - APRIL 2023 | CANADA EDITION

FOR PROFESSIONAL INVESTORS ONLY

Long Canadian government bonds benefit from policy pause and banking woes

Long Canadian governments benefited from heightened risk aversion in March, as Canadian IG credits outperformed HY. The bounce in the 20/2s curve from deep inversion reflects banking woes and the BoC pause, as 2-yr yields fell sharply. Banking strains suggest financial conditions may be tighter than perceived.

Growth and inflation expectations – Consensus forecasts revert to a soft landing for rates and inflation

Canada inflation may be mean-reverting to pre-covid levels in 2023, justifying the BoC’s policy pause. (page 2)

Canadian govts and credit – BoC policy pause and banking woes reduced extent of curve inversion

Deeply inverted Canadian 10s/2s and 20s/2s curves signal recession risks, though the collapse in 2-year yields steepened yield curves in March. (pages 3-4)

Global yields and spreads – Real G7 yields proved a safe haven of choice

Real 7-10-year yields fell sharply after the banking crisis, though not as much as conventional bonds. (pages 5-6)

Performance – Safe havens dominate returns in Q1 as banking shock unfolds in March

Flight to safe havens drove outperformance by government bonds in Q1, while munis and provis recovered. (pages 7-9)

Sovereign and climate bonds – “Greenium” more evident again in long climate-WGBI after March rally

Climate-WGBI outperformed in March, despite the US underweight, as JGBs and Bunds performed strongly. (page 10)

Appendix

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

Chart 1: Short term yields fell sharply after the banking crisis caused a disinflationary shock and a flight-to-quality on fear of contagion.

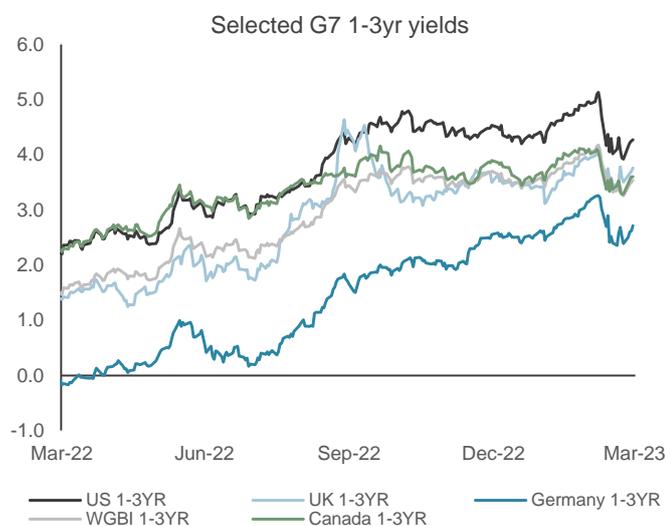
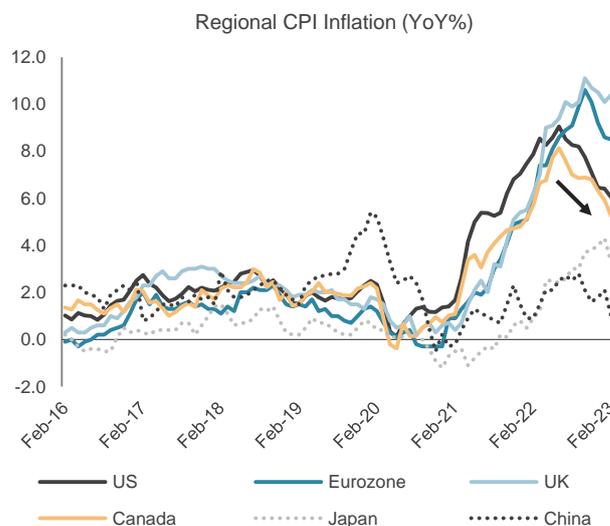


Chart 2: Canada’s sharp CPI fall (5.2% y/y) in February, combined with weaker growth, provided the justification for BoC pause.



Source: FTSE Russell and Lipper global fund data. All data as of March 31, 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

The deflationary shock from the turmoil in the banking sector in the US and Switzerland has yet to be fully reflected in adjustment to growth and inflation forecasts, but downside risks have clearly increased. Canada appears on track to return to pre-covid levels of inflation, with the recent drop in inflation justifying the BoC's policy pause.

Consensus GDP forecasts continue to project modest growth through 2024. Upward revisions for the US, UK and the Eurozone for 2023 occurred since January, but before recent banking turmoil. Canadian growth forecasts remained unchanged however, with the economy only growing 0.5% (Chart 1), in 2023, as tighter financial conditions weigh on consumer spending & business investment.

The decline in Canada's CPI inflation to 5.5% y/y in February helped justify the BoC's decision to pause policy in March, with inflation appearing to be on track to reach about 3.0% by year end, as economic activity remains sluggish (Chart 2).

The Bank of Canada was the first G7 central bank to announce a policy pause, and duly left interest rates unchanged at 4.5% in March, as it assesses the full impact of its 2022 tightening. In China, the PBoC kept policy rates steady for the seventh consecutive month, increasing the rate differentials with other central banks, while Japan retained its yield control policy (Chart 3).

Charts 4 shows inflation breakevens fell back sharply in response to Silicon Valley Bank-led woes, as memories of the global financial crisis were revived. Medium and longer dated breakevens remain more stable, on the view central banks would rapidly reverse recent tightening moves should systemic risk become more evident.

Chart 1: Canada is expected to barely grow in 2023, unchanged from earlier estimates, and in line with most peers, with weak growth seen to last through 2024.

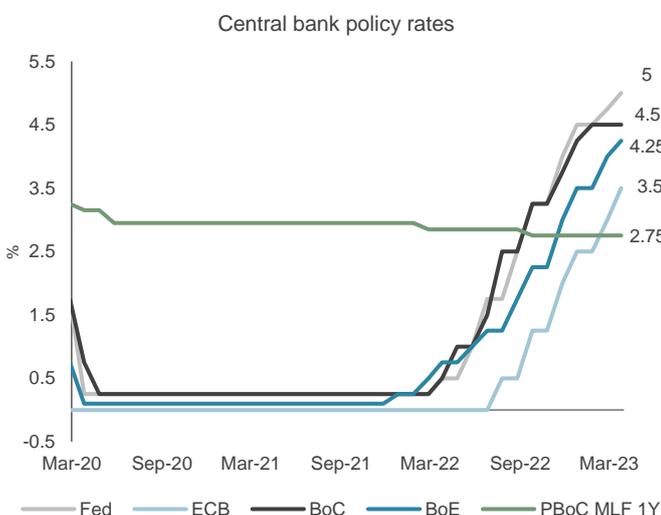
Latest Consensus Real GDP Forecasts (% , March 2023)			
	2022	2023	2024
US	2.1	1.0	1.0
UK	4.1	-0.5	0.8
Eurozone	3.3	0.5	1.2
Japan	1.6	1.0	1.1
China	3.0	4.9	5.0
Canada	3.5	0.5	1.5

Chart 2: Canada's inflation forecast has been unchanged since January, as the decline in energy prices was offset by tight labour markets and rising food prices.

Consensus Inflation Forecasts (% , March 2023)				
	2023	Change Since Jan-23 (Bps)	2024	Change Since Jan-23 (Bps)
US	4.1	40	2.5	0
UK	6.6	-40	2.4	-10
Eurozone	5.8	-20	2.5	0
Japan	2.1	30	1.3	0
China	2.3	0	2.3	0
Canada	3.7	0	2.2	0

Chart 3: The Bank of Canada paused policy in March, justified by weaker economic activity and inflation, in contrast to the Fed, ECB and BoE, which tightened by 25-50bp, despite financial turmoil.

Chart 2: Global inflation breakevens show the impact of the deflationary shock from banking strains in the US and Switzerland. Medium and longer term breakevens remain more stable.



Source: FTSE Russell and Refinitiv. All data as of March 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: Canadian 10s/2s and 20s/2s remain deeply inverted and continue to signal recession risks. March steepening reflects the collapse in 2-year yields as banking frailties developed.

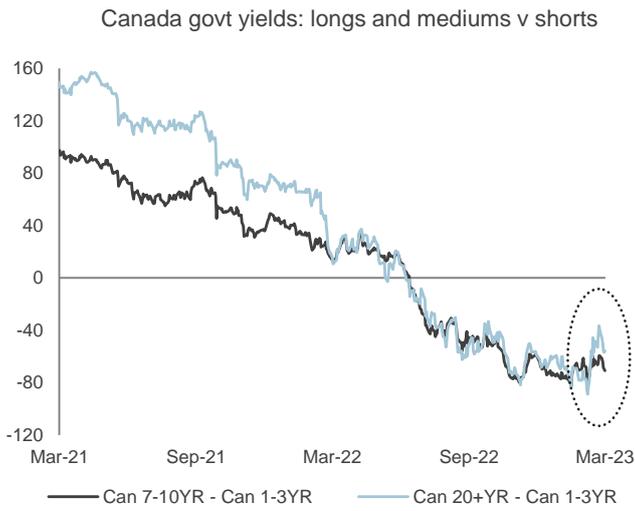


Chart 2: The Canadian 7-10yr government bond spreads mostly fell vs G7 equivalents in March before stabilising, helped by the BoC policy pause, but continued to trade through the US and UK.

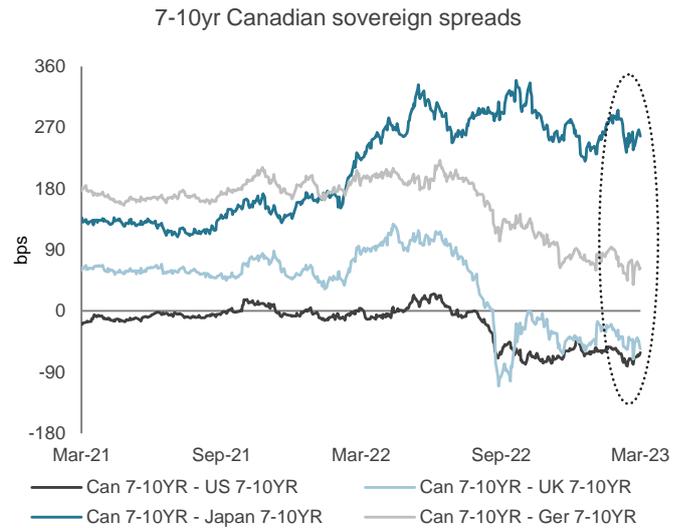


Chart 3: Long Canadian nominal and real yields have tracked closely, apart from the early Covid stage, when yields decoupled, as inflation and growth expectations collapsed.

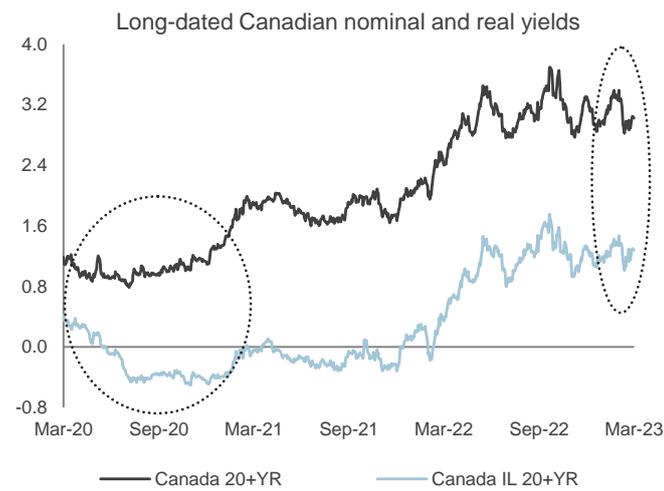


Chart 4: Long-dated Canadian breakevens fell in March after the strains in the banking sector caused a deflationary shock and BoC paused policy, while UK, Germany and US b/evens bounced back.

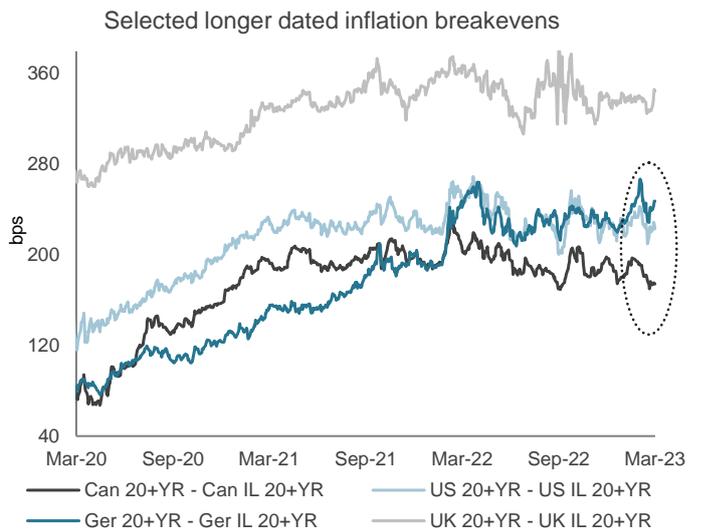


Chart 5: Provincial spreads have converged against each other, especially in Alberta, where the divergence versus other provinces has ended. Spread widening reflected risk-aversion during March.

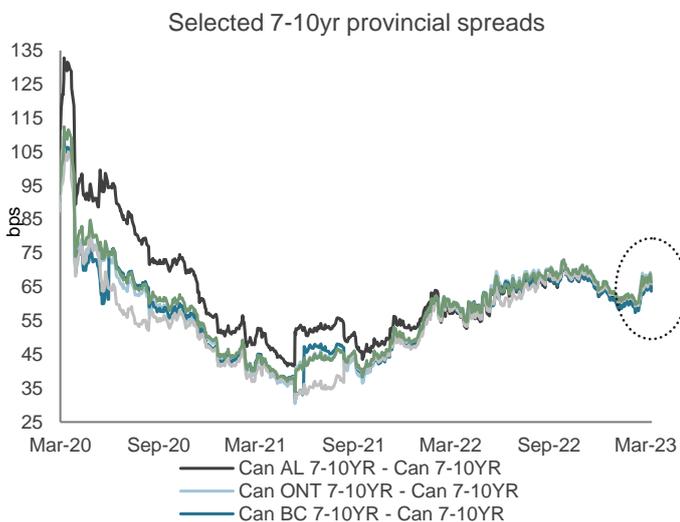
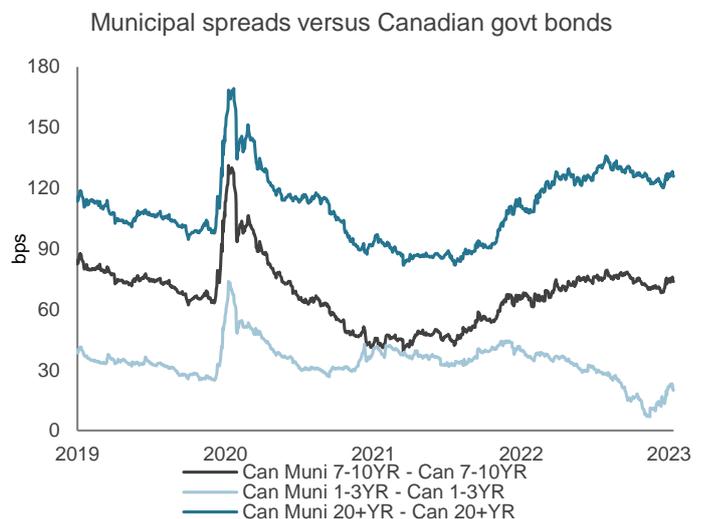


Chart 6: Muni spreads across all maturities widened in March, but the move was greatest in the short term, as short govt yields fell sharply, reflecting heightened risk aversion after banking woes.



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Canadian Corporate Bonds

Chart 1: Yields on Canadian HY bonds have remained more stable than US HY, despite the market turbulence in March, with Canadian yields decoupling from those of the US.

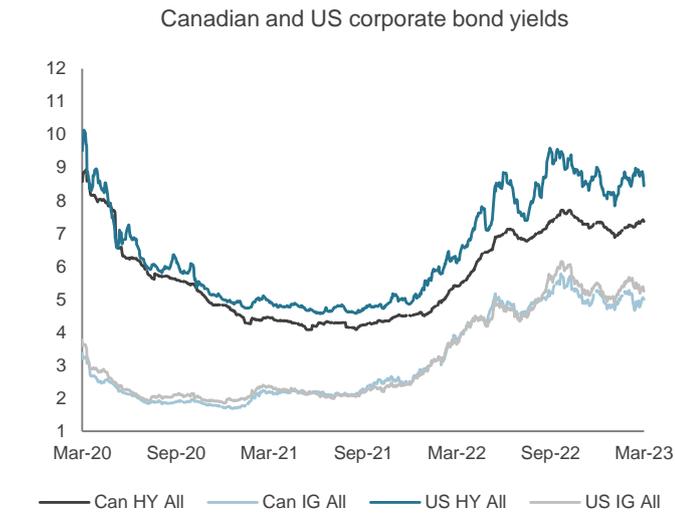


Chart 2: IG spreads widened in March amid investor risk aversion, though interestingly, financials remained resilient and are close to converging with other sectors, despite the sell-off in AT1 bonds.

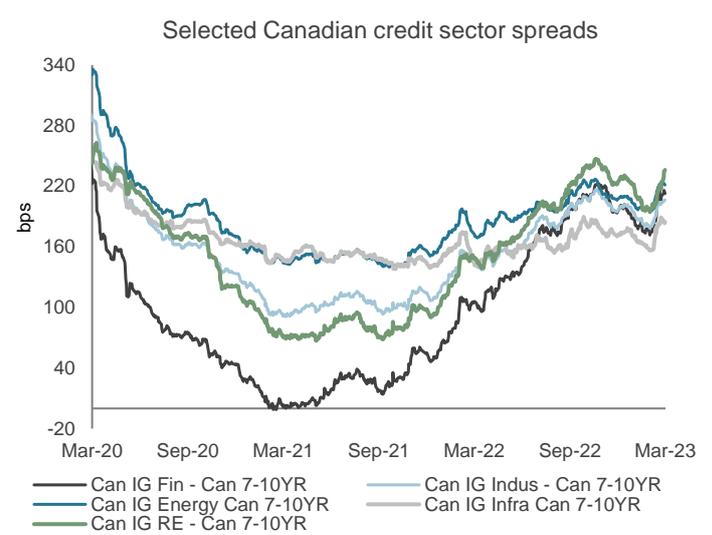


Chart 3: The back-up in Canadian and US HY highlights the level of risk aversion following the banking woes in March, though tightening in US HY spreads at month-end was greater than Canadian peers.

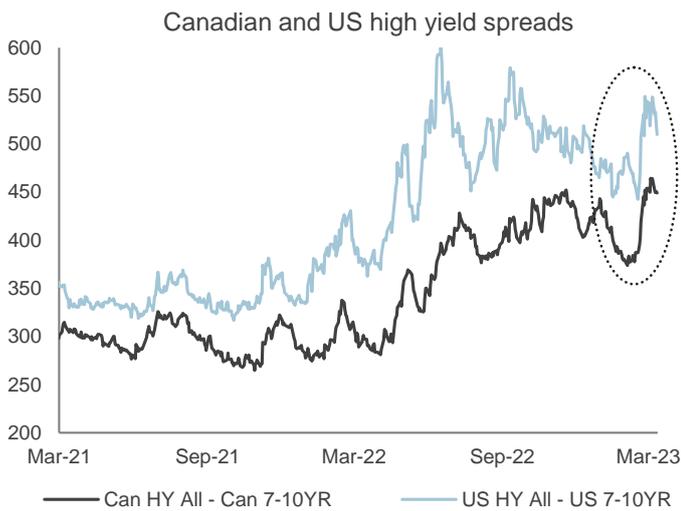


Chart 4: AAA corporate bond spreads have risen more than their BBB-rated peers since 2021 and are close to converging with their A-rated equivalents following the spike in March.

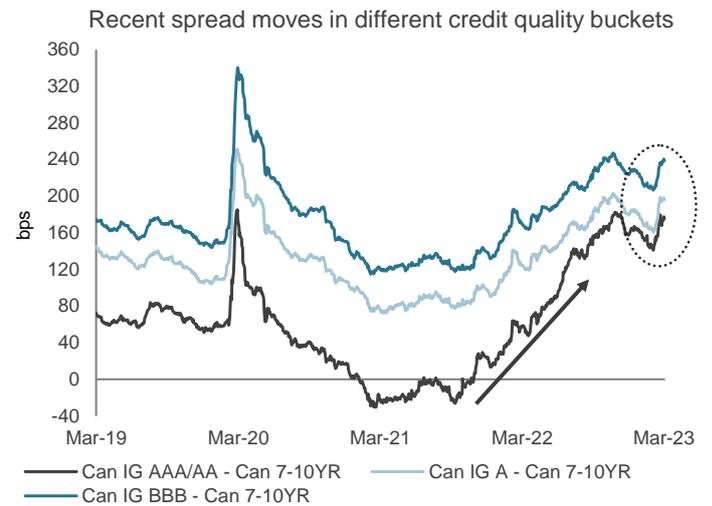


Chart 5: The spread tightening for AAA corporates has been much smaller than for lower quality credits, especially in BBBs, which have narrowed by 169bp during the last 12 months.

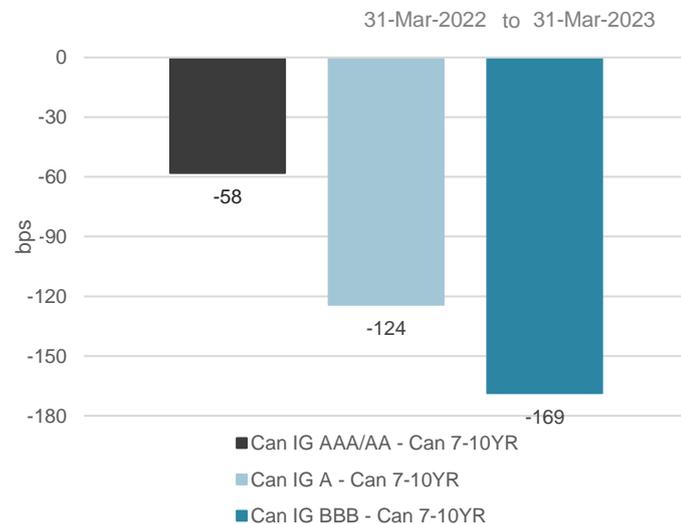
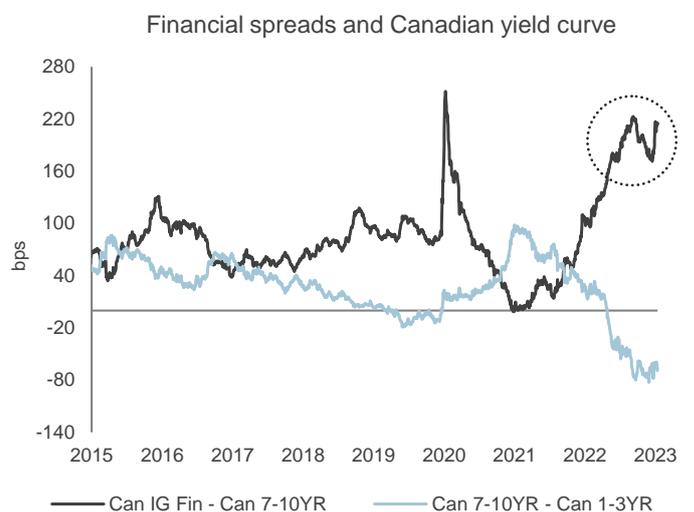


Chart 6: Financial spreads have shown strong negative correlation to the yield curve. But in March strains in the banking sector caused a little curve steepening, and financial spreads to widen.



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Global Yields, Curves and Spread Analysis

Chart 1: Nominal 7-10-year yields declined sharply after the US banking crisis broke on March 8, and the flight to quality developed. Declines in US yields were broadly matched throughout the G7.

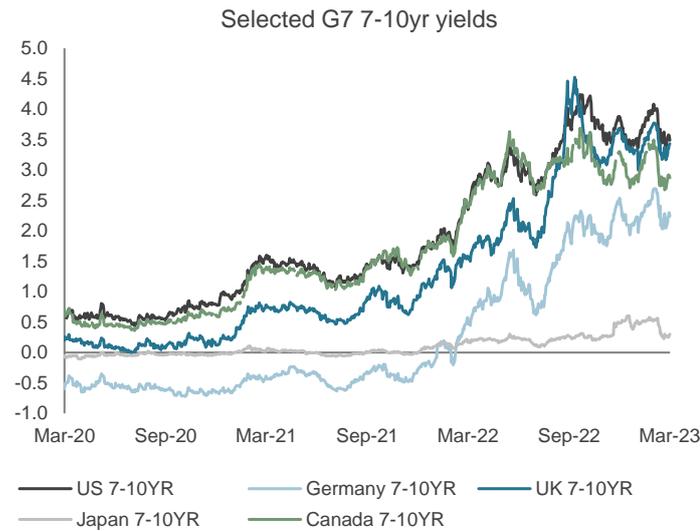


Chart 3: 10s/2s yield curves generally steepened, as 2-year yields collapsed on lower G7 rate expectations. Japan was an exception, with 2-year yields already at the lower bound, so the curve flattened.

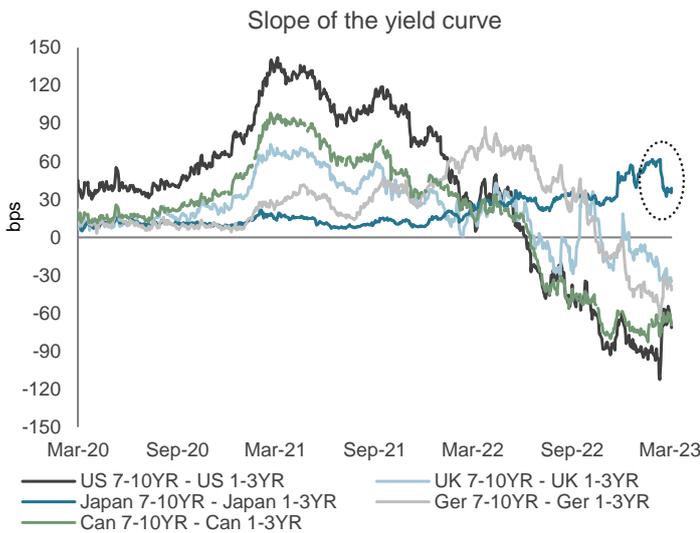


Chart 5: 7-10-year breakevens reversed their February increases, as nominal yields fell a little more than real yields, and investors scaled back inflation expectations after the deflationary banking shocks.

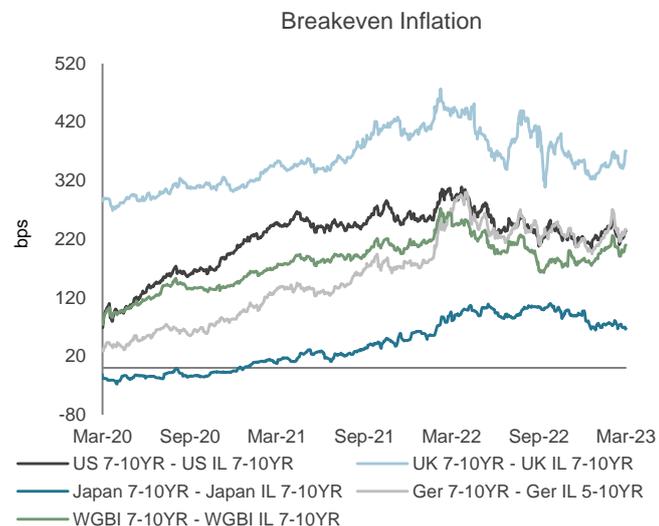


Chart 2: Real 7-10-year yields also fell sharply after the banking crisis, though not as much as conventionals, as the latter proved a safe haven of choice. Real yields remain well above 2020-22 levels.

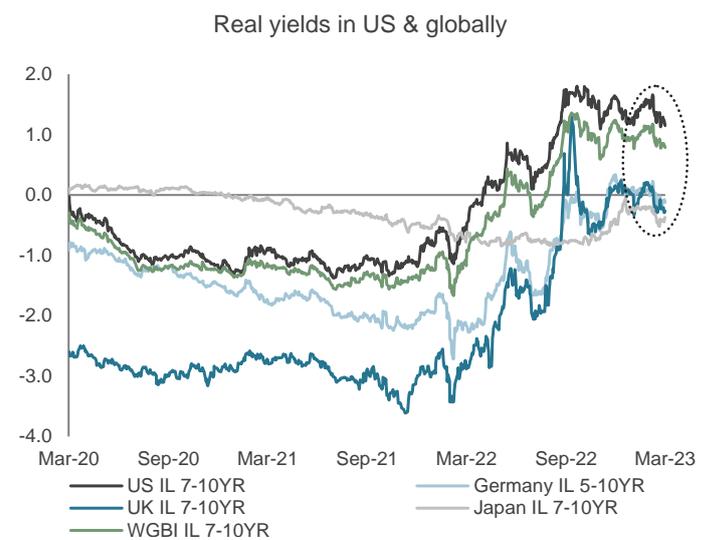


Chart 4: The 20s+/2s yield curves steepened as 2-year yields fell, excluding Japan. But note that long-dated yields also fell, as the banking crisis was seen as a deflationary event.

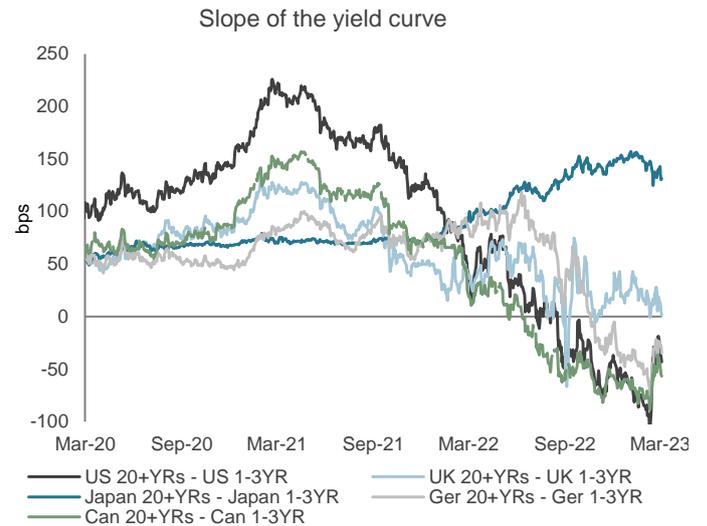


Chart 6: Short run inflation breakevens fell sharply, reflecting the collapse in 2-year nominal yields, and lower inflation prospects, if a credit crunch develops. Longer dated breakevens fell, but by less.



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Yield Spread and Credit Spread Analysis

Chart 1: G7 and global 7-10yr yields broadly fell together in March, so US spreads barely moved, despite banking woes being centered in the US. The demise of Credit Suisse in Europe may explain this.

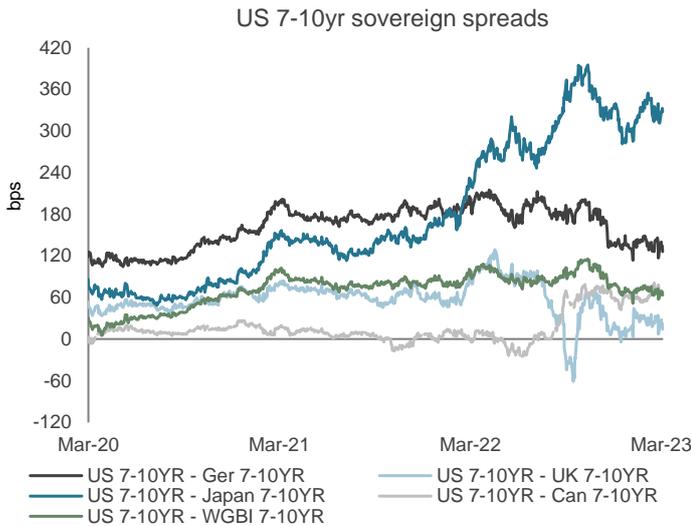


Chart 2: Peripheral Eurozone 7-10yr yield spreads were also quite stable in March, as Italian yields tracked core Eurozone yields lower. The ECB stated it would provide bank liquidity if needed.

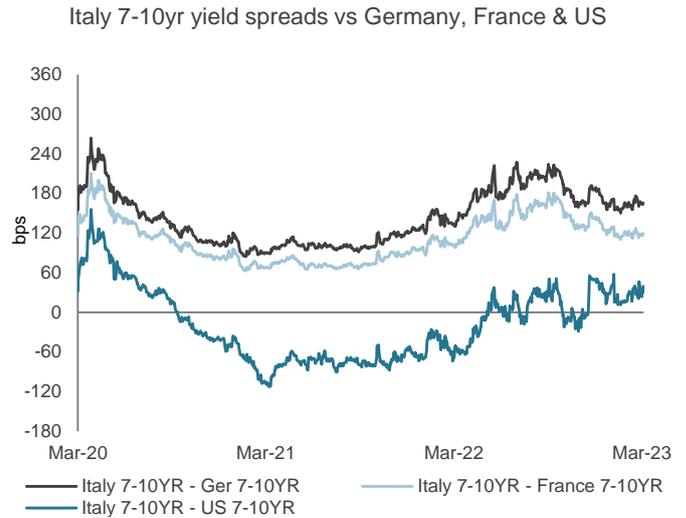


Chart 3: EM 7-10-year yield spreads widened in March, on the view cross border flows may fall in a banking crisis, but moves were modest, as the Fed agreed to offer overnight dollar swaps.

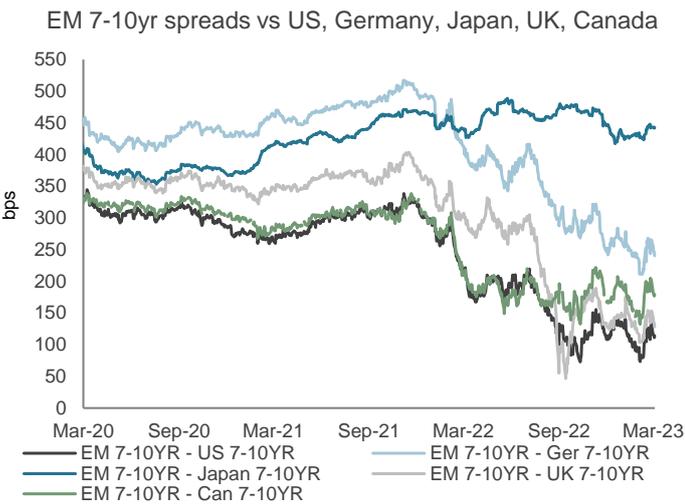


Chart 4: China 7-10-year sovereign spreads increased in March, as G7 yields fell more after the banking shocks. This demonstrates the low correlation between Chinese and G7 government bonds.

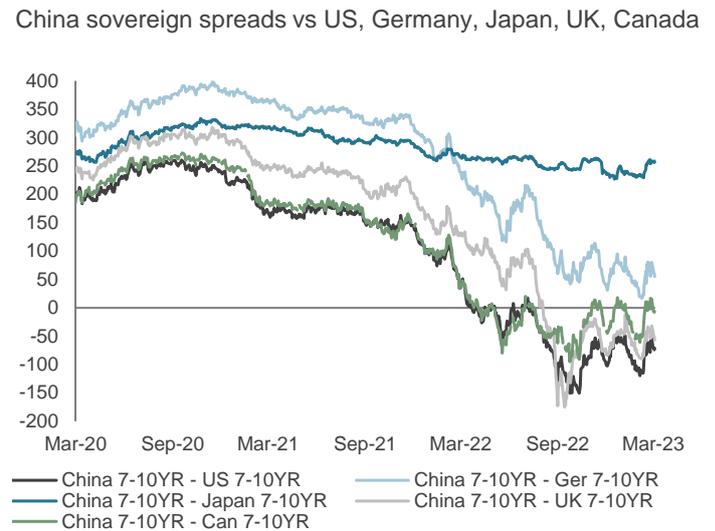


Chart 5: Unsurprisingly, high yield financial spreads spiked more than other credit spreads in the Eurozone and US, after the shock to the AT1 market from the bail-in of Credit Suisse AT1 holders.

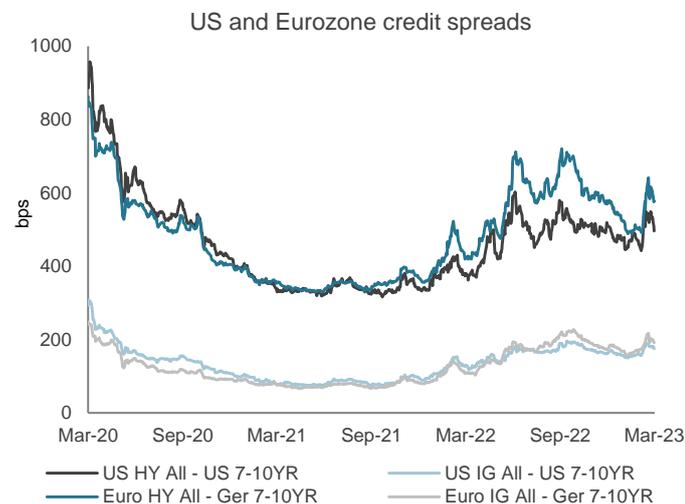
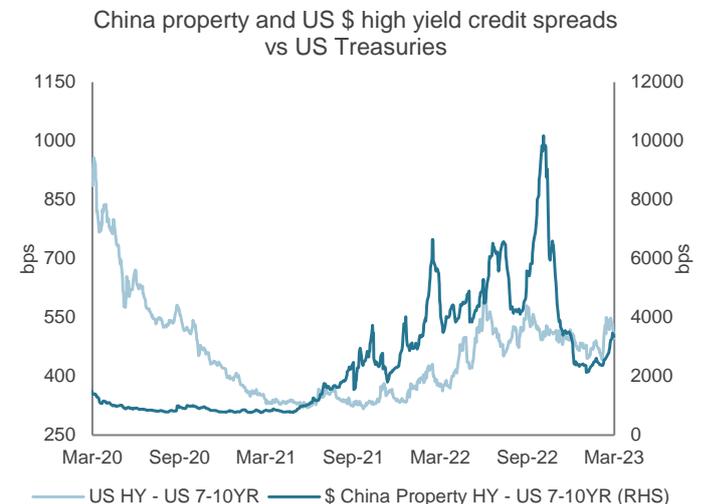


Chart 6: Chinese \$ HY spreads rose above 3000bps, tracking the widening spreads of US HY in March, as the flight-to-safety drove investors from risky HY bonds to the safety of Treasuries.



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Global Bond Market Returns – 3M & 12M % (CAD, LC, TR) as of March 31, 2023

The turmoil in the banking sector in March, which revived fears of the GFC, prompted a flight to safety in government bonds. Longer dated conventional and real return bonds benefitted most and registered mid to high single digit returns. 12M returns for conventional and real return bonds improved perceptibly, but remain deeply negative, notably in long gilts.

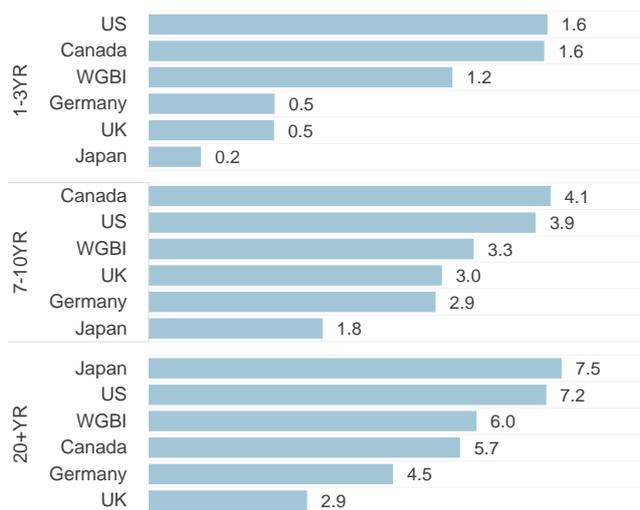
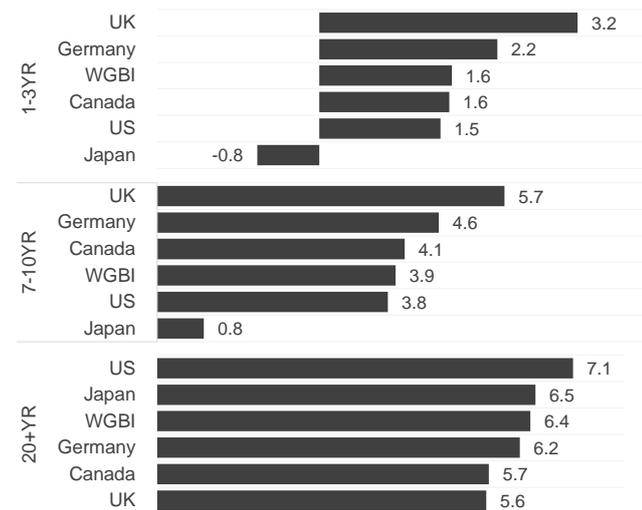
The rally in conventional and inflation-linked bonds in March resulted in positive returns across most regions and maturities in Q1, except for short JGBs. Canadian conventional bonds with 20-yr maturities gained 6% compared to a loss of 0.4% for real return equivalents over 3M, while Tips, UK and German inflation-linked equivalents returned about 7-9%, in Canadian dollar terms.

However, over 12M, returns for long maturities remained negative, especially for long UK conventional and index-linked gilts, down 41%, after they struggled to recover from their rapid sell-off following the 'mini-budget' last September.

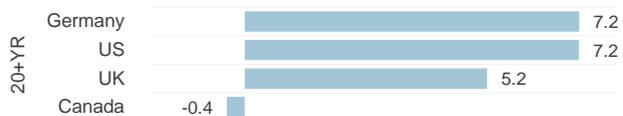
CONVENTIONAL BONDS

3M CAD

3M LCY



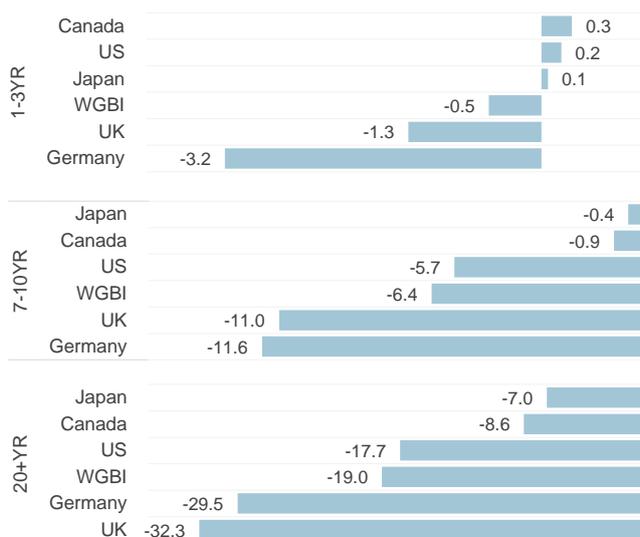
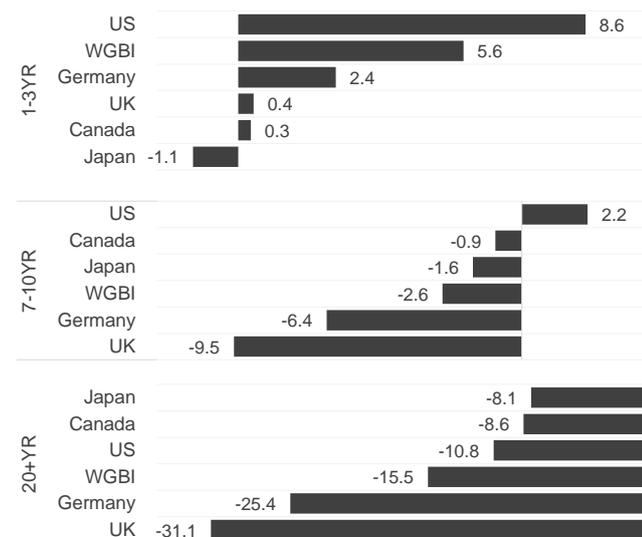
INFLATION LINKED BONDS



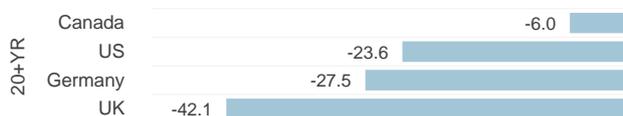
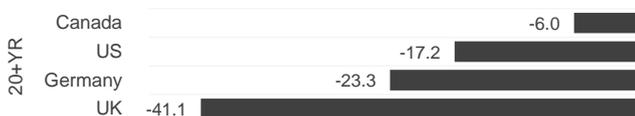
CONVENTIONAL BONDS

12M CAD

12M LCY



INFLATION LINKED BONDS



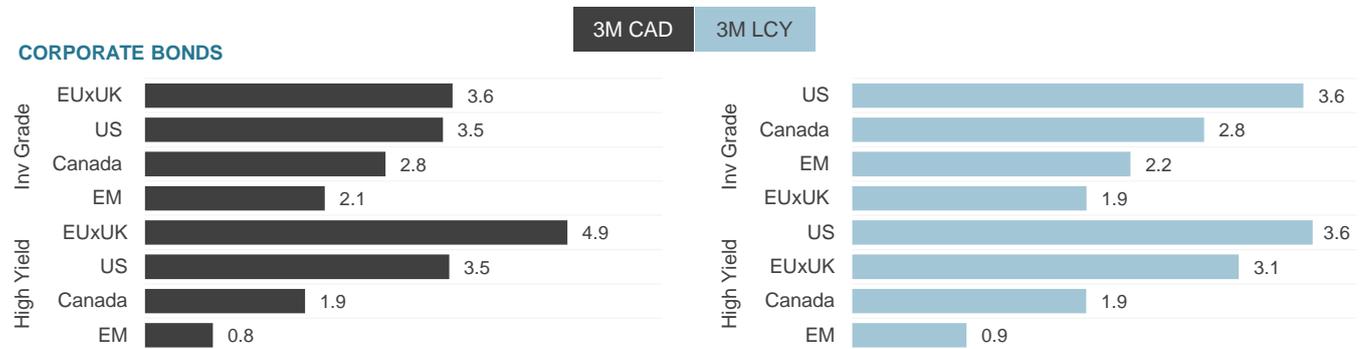
Source: FTSE Russell. All data as of March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

Corporate Bond Returns – 3M & 12M % (CAD, LCY) as of March 31, 2023

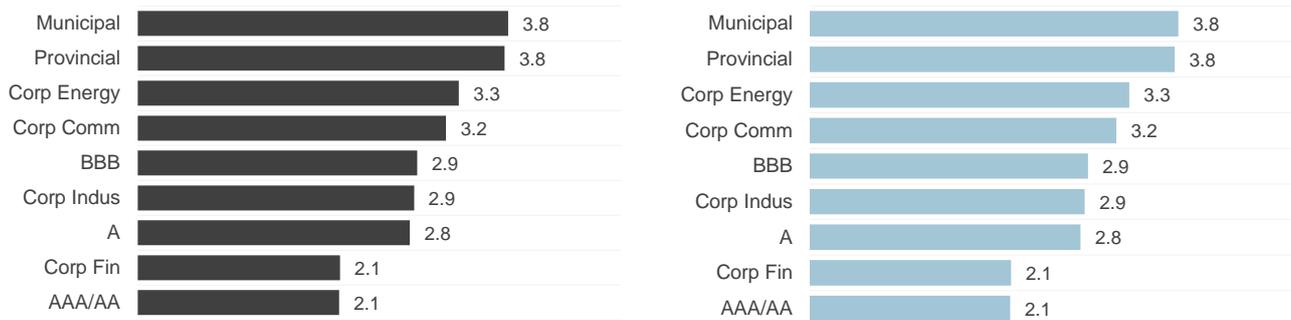
Investment grade (IG) corporates outperformed high yield (HY) credits in Q1, except in Europe. In Canada, provinces and municipals rebounded, while, financials underperformed other sectors, following the March turbulence in the banking sector. Over 12M, returns for provis and munis were negative, while those for EM and US IG & HY credits were up 2-5%.

IG corporates outperformed HY credits in Q1, though the difference in returns was surprisingly small, given heightened risk-aversion in March, as was the strength of Euro HY, up 5%. Over 12M, EM and US credits have gained 4-7% in Canadian dollars.

Following a lacklustre 2022, provinces and municipals have recovered over the last three months, returning about 4%.



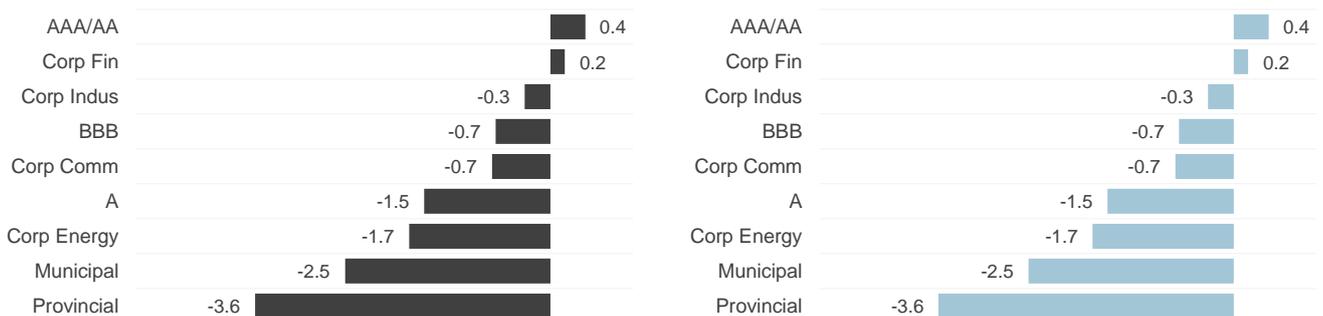
CANADA SPOTLIGHT



CORPORATE BONDS



CANADA SPOTLIGHT



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 March 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 – 3M & 12M % (CAD, TR) as of March 31, 2023

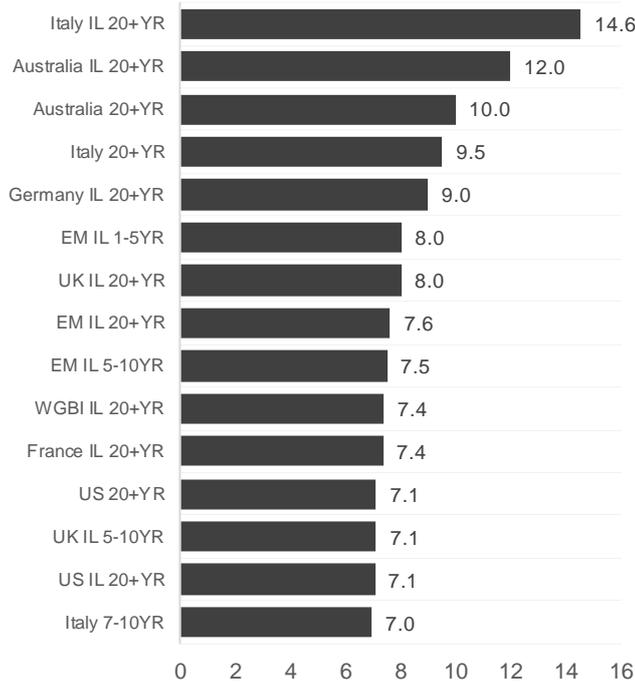
Government bonds with long maturities were the main beneficiaries of risk aversion in March. Short-term JGBs and long Canadian real return bonds were flat or modestly negative. Over 12M, returns for long real return and sovereign bonds remained negative, by as much as 41%, for a Canadian dollar based investor.

Conventional and inflation-linked bonds with long maturities registered the highest returns in Q1, benefiting from risk aversion in March and reversing some of the deeply negative returns from 2022. Long UK IL gilts were still down 41% over 12M.

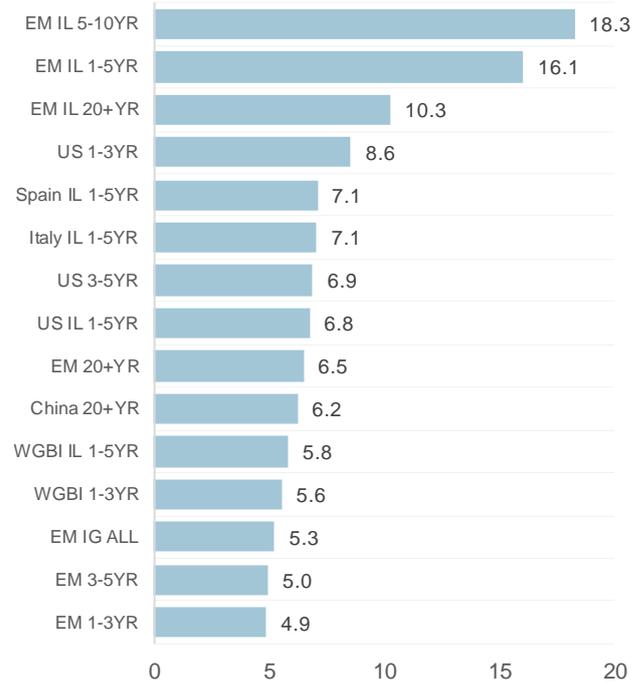
EM inflation-linked bonds have made substantial gains, of up to 18%, in the last 12 months, followed closely by short US Treasuries, up 9%, while long sovereign bonds have lost some 10-41%, in Canadian dollar terms.

3M CAD 12M CAD

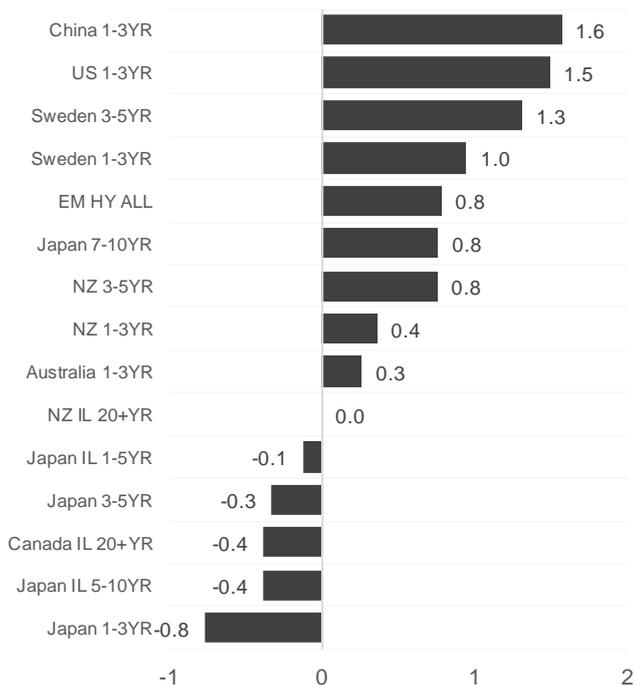
Top 15



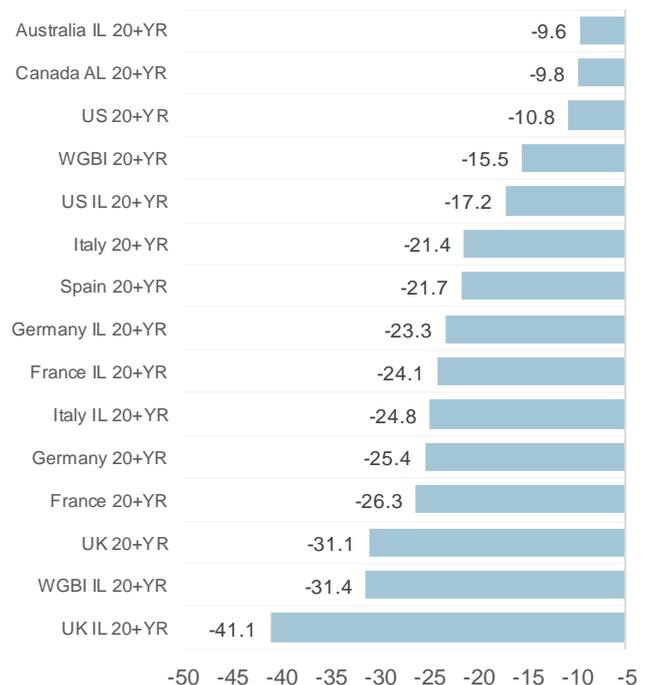
Top 15



Bottom 15



Bottom 15



Source: FTSE Russell. All data as of March 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 performed strongly in Q1, as extra duration boosted returns, after the marked 2022 underperformance.

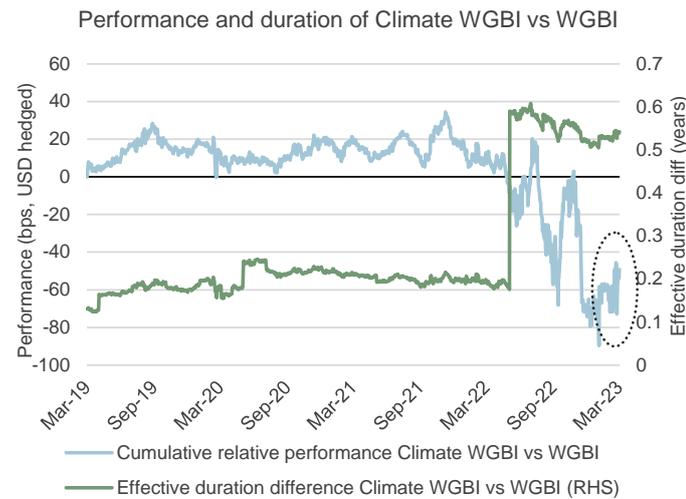


Chart 2: Japan's overweight, and the US underweight, are the most significant in the climate WGBI, driving 2022-23 performance.

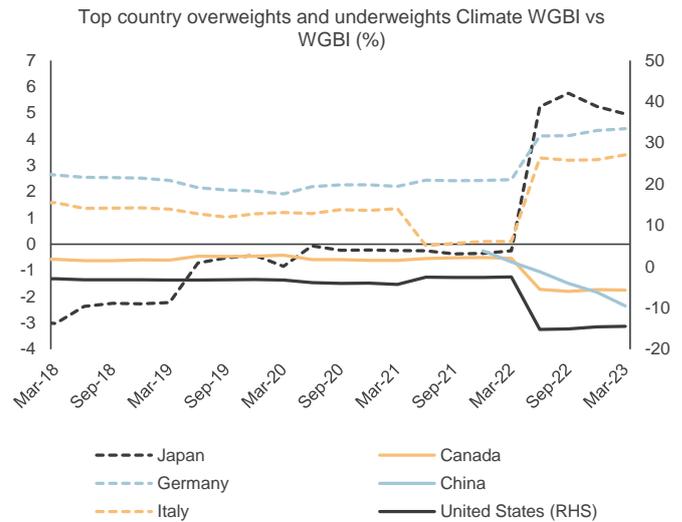


Chart 3: Climate WGBI has a lower yield to maturity versus WGBI, reflecting the higher weight of lower yielding Europe and Japan.

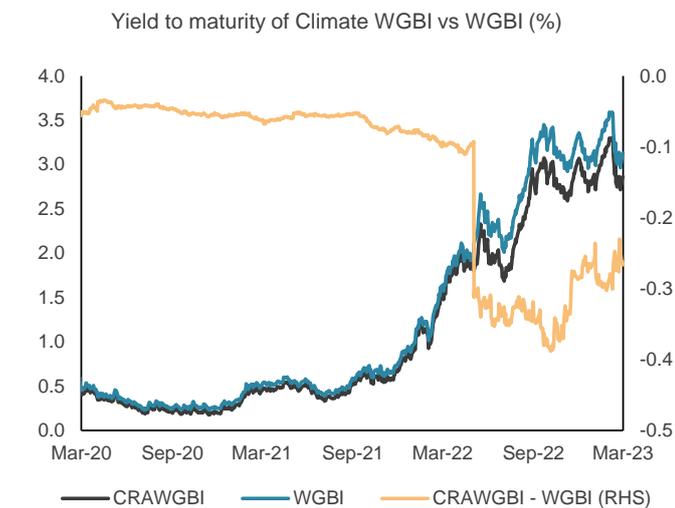


Chart 4: Big differences in Credit Quality: Climate WGBI has a lower weight in AA and a higher weight in AAA, A & BBB vs WGBI.

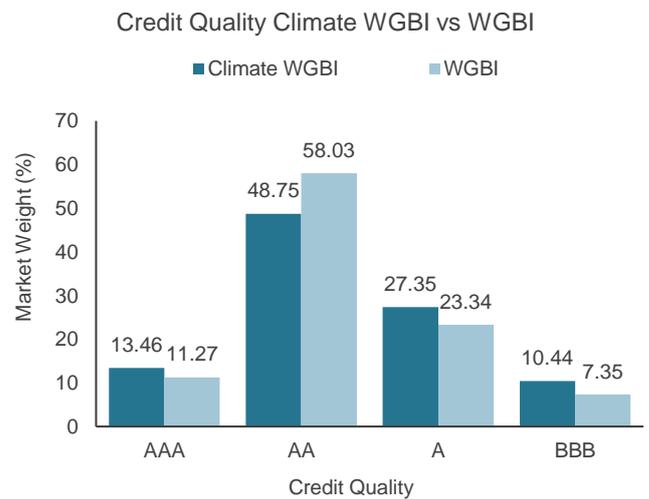


Chart 5: The "greenium" is more evident again in climate-WGBI after the March rally, and tends to be cyclical, increasing in rallies.

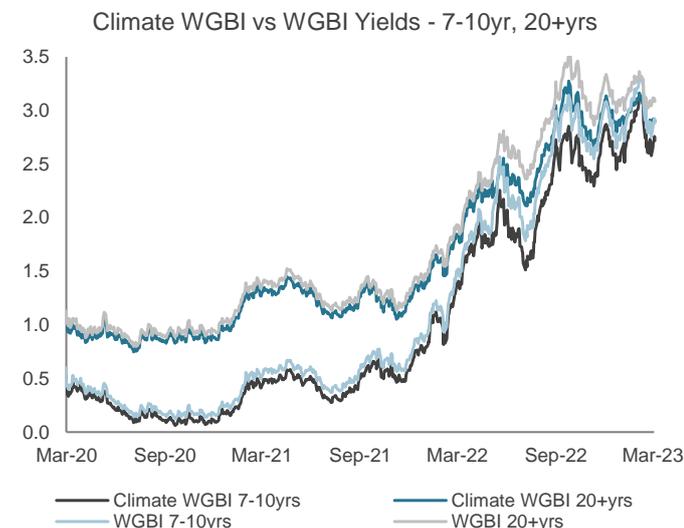
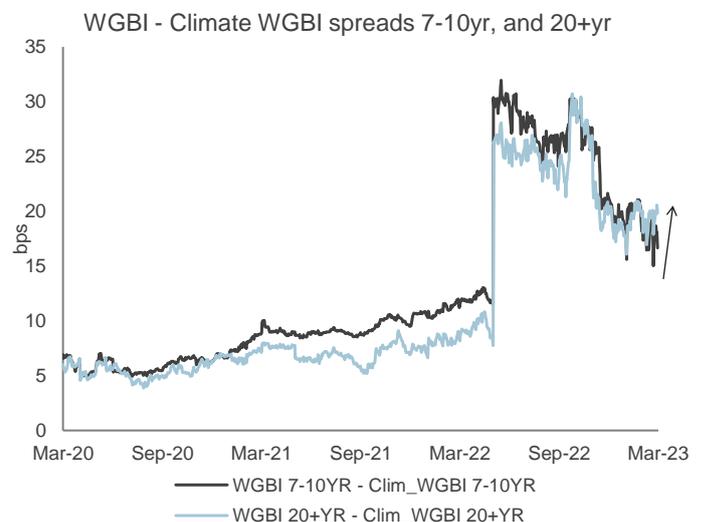


Chart 6: Long WGBI yields trade above long climate-WGBI yields, after the March rallies, after trading through for a protracted period.



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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	1.60	1.72	2.05	3.41	1.60	1.72	0.31	-7.42
	7-10YR	4.07	4.19	3.96	5.35	4.07	4.19	-0.87	-8.51
	20+YR	5.68	5.80	2.60	3.97	5.68	5.80	-8.64	-15.68
Inflation-Linked	20+YR	-0.38	-0.27	2.57	3.94	-0.38	-0.27	-5.99	-13.23
Corporate	1-3YR	1.95	2.07	3.08	4.46	1.95	2.07	0.87	-6.90
	7-10YR	3.35	3.48	4.79	6.19	3.35	3.48	0.15	-7.57
	20+YR	4.16	4.29	4.69	6.09	4.16	4.29	-5.14	-12.45
AAA/AA	1-3YR	1.85	1.97	2.66	4.03	1.85	1.97	0.87	-6.90
	7-10YR	2.84	2.96	3.81	5.20	2.84	2.96	-0.52	-8.19
	20+YR	4.48	4.61	3.96	5.35	4.48	4.61	-8.20	-15.28
	All	2.08	2.20	2.89	4.27	2.08	2.20	0.42	-7.32
A	1-3YR	1.91	2.03	3.06	4.44	1.91	2.03	0.68	-7.08
	7-10YR	3.40	3.52	4.66	6.06	3.40	3.52	-0.10	-7.80
	20+YR	4.25	4.38	4.44	5.84	4.25	4.38	-5.71	-12.98
	All	2.81	2.93	3.68	5.07	2.81	2.93	-1.52	-9.11
BBB	1-3YR	2.02	2.14	3.19	4.57	2.02	2.14	1.07	-6.72
	7-10YR	3.39	3.51	4.96	6.37	3.39	3.51	0.34	-7.39
	20+YR	4.02	4.14	5.05	6.46	4.02	4.14	-4.27	-11.65
	All	2.89	3.01	4.14	5.54	2.89	3.01	-0.66	-8.32
Sectors	Comm	3.19	3.31	4.96	6.36	3.19	3.31	-0.70	-8.36
	Energy	3.32	3.44	4.56	5.96	3.32	3.44	-1.70	-9.28
	Fin	2.09	2.21	3.12	4.50	2.09	2.21	0.17	-7.55
	Indus	2.86	2.98	3.96	5.35	2.86	2.98	-0.31	-7.99
	Infra	3.87	4.00	4.16	5.55	3.87	4.00	-3.81	-11.22
	RE	2.28	2.40	3.19	4.57	2.28	2.40	0.09	-7.62
	Secur	1.84	1.96	2.66	4.03	1.84	1.96	0.31	-7.42
Provinces (All)	1-3YR	1.89	2.01	2.49	3.86	1.89	2.01	0.93	-6.85
	7-10YR	3.89	4.01	4.25	5.65	3.89	4.01	0.35	-7.38
	20+YR	4.64	4.76	3.50	4.88	4.64	4.76	-7.68	-14.80
	All	3.79	3.92	3.47	4.86	3.79	3.92	-3.56	-10.99
Ontario	1-3YR	1.87	1.99	2.48	3.85	1.87	1.99	0.97	-6.81
	7-10YR	3.94	4.06	4.36	5.76	3.94	4.06	0.48	-7.26
	20+YR	4.81	4.94	3.79	5.18	4.81	4.94	-7.33	-14.47
	All	3.79	3.91	3.59	4.97	3.79	3.91	-3.00	-10.47
Alberta	1-3YR	1.92	2.04	2.49	3.86	1.92	2.04	0.91	-6.87
	7-10YR	3.79	3.92	4.07	5.46	3.79	3.92	0.19	-7.53
	20+YR	4.04	4.17	2.27	3.64	4.04	4.17	-9.76	-16.71
	All	3.39	3.51	2.85	4.22	3.39	3.51	-4.26	-11.64
Quebec	1-3YR	1.92	2.04	2.55	3.92	1.92	2.04	0.90	-6.87
	7-10YR	3.89	4.01	4.21	5.60	3.89	4.01	0.15	-7.57
	20+YR	4.61	4.73	3.48	4.86	4.61	4.73	-7.44	-14.57
	All	3.90	4.03	3.54	4.92	3.90	4.03	-3.95	-11.35
BC	1-3YR	1.88	2.00	2.23	3.59	1.88	2.00	0.90	-6.88
	7-10YR	3.90	4.02	4.21	5.60	3.90	4.02	0.38	-7.36
	20+YR	4.57	4.69	3.36	4.74	4.57	4.69	-8.08	-15.16
	All	3.90	4.02	3.38	4.76	3.90	4.02	-3.98	-11.38

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 March 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	1.60	0.99	1.61	1.49	1.61	1.49	0.20	8.57
	7-10YR	3.68	3.06	3.92	3.79	3.92	3.79	-5.71	2.16
	20+YR	4.76	4.14	7.25	7.12	7.25	7.12	-17.67	-10.79
	IG All	2.63	2.02	3.58	3.45	3.58	3.45	-5.56	2.33
	HY All	1.09	0.49	3.65	3.53	3.65	3.53	-3.34	4.74
UK	1-3YR	0.59	2.13	0.51	3.19	0.51	3.19	-1.35	0.38
	7-10YR	2.65	4.21	2.97	5.71	2.97	5.71	-11.04	-9.48
	20+YR	5.51	7.12	2.89	5.63	2.89	5.63	-32.32	-31.13
EUR	IG All	0.74	2.59	1.86	3.57	1.86	3.57	-7.62	-2.26
	HY All	-0.41	1.39	3.06	4.90	3.06	4.90	-4.10	1.07
Japan	1-3YR	0.07	1.81	0.21	-0.77	0.21	-0.77	0.07	-1.12
	7-10YR	1.91	3.68	1.76	0.77	1.76	0.77	-0.43	-1.61
	20+YR	3.18	4.98	7.52	6.47	7.52	6.47	-6.97	-8.08
China	1-3YR	0.33	0.71	0.52	1.57	0.52	1.57	2.42	2.43
	7-10YR	0.45	0.84	0.80	1.85	0.80	1.85	3.02	3.03
	20+YR	1.38	1.77	0.91	1.97	0.91	1.97	6.23	6.25
EM	1-3YR	0.49	1.22	0.85	2.48	0.85	2.48	3.11	4.89
	7-10YR	1.16	1.98	2.30	3.57	2.30	3.57	3.76	4.60
	20+YR	1.45	2.19	1.82	2.84	1.82	2.84	5.58	6.51
	IG All	1.24	0.63	2.21	2.09	2.21	2.09	-2.85	5.26
	HY All	-0.47	-1.07	0.91	0.79	0.91	0.79	-3.68	4.36
Germany	1-3YR	0.95	2.80	0.51	2.20	0.51	2.20	-3.20	2.41
	7-10YR	2.97	4.86	2.90	4.63	2.90	4.63	-11.56	-6.43
	20+YR	5.29	7.22	4.45	6.21	4.45	6.21	-29.52	-25.43
Italy	1-3YR	0.99	2.85	1.06	2.76	1.06	2.76	-2.40	3.26
	7-10YR	2.78	4.67	5.19	6.95	5.19	6.95	-10.62	-5.44
	20+YR	3.92	5.82	7.70	9.51	7.70	9.51	-25.68	-21.37
Spain	1-3YR	1.03	2.88	0.87	2.56	0.87	2.56	-3.24	2.37
	7-10YR	2.87	4.76	3.29	5.03	3.29	5.03	-11.15	-5.99
	20+YR	4.24	6.16	4.39	6.15	4.39	6.15	-25.96	-21.67
France	1-3YR	0.96	2.81	0.83	2.53	0.83	2.53	-3.41	2.19
	7-10YR	2.67	4.56	2.90	4.63	2.90	4.63	-11.46	-6.33
	20+YR	4.53	6.45	3.49	5.22	3.49	5.22	-30.32	-26.28
Sweden	1-3YR	0.95	0.92	0.59	0.95	0.59	0.95	-1.60	-4.18
	7-10YR	3.51	3.48	1.57	1.93	1.57	1.93	-6.74	-9.19
	20+YR					0.00	0.00	0.00	0.00
Australia	1-3YR	1.47	0.18	1.64	0.27	1.64	0.27	0.97	-2.43
	7-10YR	4.77	3.44	6.97	5.52	6.97	5.52	-0.04	-3.41
	20+YR	7.32	5.95	11.51	10.00	11.51	10.00	-6.20	-9.36
NZ	1-3YR	0.87	1.26	1.58	0.36	1.58	0.36	0.73	-1.82
	7-10YR	3.04	3.44	2.90	1.68	2.90	1.68	-3.60	-6.04
Canada	1-3YR	1.36	1.36	1.60	1.60	1.60	1.60	0.31	0.31
	7-10YR	3.83	3.83	4.07	4.07	4.07	4.07	-0.87	-0.87
	20+YR	4.01	4.01	5.68	5.68	5.68	5.68	-8.64	-8.64

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

Source: FTSE Russell. All data as of March 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	2.14	1.53	2.34	2.22	2.34	2.22	-1.46	6.77
	5-10YR	3.79	3.18	4.23	4.11	4.23	4.11	-5.85	2.01
	20+YR	3.43	2.82	7.18	7.05	7.18	7.05	-23.62	-17.24
UK	1-5YR	1.48	3.03	1.04	3.74	1.04	3.74	2.34	4.13
	5-10YR	3.38	4.96	4.33	7.12	4.33	7.12	-5.92	-4.27
	20+YR	9.54	11.21	5.20	8.01	5.20	8.01	-42.15	-41.13
EUxUK	1-5YR	0.49	2.34	0.72	2.42	0.72	2.42	-3.00	2.62
	5-10YR	1.18	3.04	2.66	4.39	2.66	4.39	-7.76	-2.41
	20+YR	3.94	5.85	7.18	8.98	7.18	8.98	-27.52	-23.31
Japan	1-5YR	0.26	2.00	0.86	-0.12	0.86	-0.12	2.99	1.77
	5-10YR	1.36	3.12	0.60	-0.38	0.60	-0.38	1.81	0.60
EM	1-5YR	-0.04	1.43	4.70	8.01	4.70	8.01	16.33	16.07
	5-10YR	0.48	1.92	3.75	7.50	3.75	7.50	17.12	18.29
	20+YR	3.85	6.16	2.94	7.62	2.94	7.62	5.33	10.30
Germany	1-5YR	0.49	2.34	0.72	2.42	0.72	2.42	-3.00	2.62
	5-10YR	1.18	3.04	2.66	4.39	2.66	4.39	-7.76	-2.41
	20+YR	3.94	5.85	7.18	8.98	7.18	8.98	-27.52	-23.31
Italy	1-5YR	0.72	2.57	1.42	3.13	1.42	3.13	1.21	7.08
	5-10YR	1.21	3.07	4.70	6.46	4.70	6.46	-4.55	0.99
	20+YR	4.25	6.17	12.66	14.56	12.66	14.56	-28.96	-24.84
Spain	1-5YR	0.58	2.43	1.21	2.91	1.21	2.91	1.24	7.11
	5-10YR	1.23	3.09	2.73	4.45	2.73	4.45	-5.32	0.17
France	1-5YR	0.52	2.37	0.89	2.58	0.89	2.58	-2.04	3.64
	5-10YR	1.28	3.15	2.81	4.53	2.81	4.53	-6.52	-1.09
	20+YR	3.91	5.82	5.58	7.35	5.58	7.35	-28.24	-24.08
Sweden	1-5YR	0.68	0.65	1.33	1.70	1.33	1.70	3.70	0.98
	5-10YR	1.67	1.64	1.80	2.17	1.80	2.17	-2.29	-4.86
Australia	1-5YR	2.29	0.98	3.94	2.53	3.94	2.53	5.92	2.36
	5-10YR	4.14	2.81	7.22	5.76	7.22	5.76	4.20	0.70
	20+YR	9.09	7.70	13.53	11.99	13.53	11.99	-6.44	-9.59
NZ	5-10YR	3.18	3.57	4.80	3.55	4.80	3.55	2.58	-0.02
	20+YR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	20+YR	0.64	0.64	-0.38	-0.38	-0.38	-0.38	-5.99	-5.99

Indices used: FTSE Canada RRB Canada Bond Index.

Source: FTSE Russell. All data as of March 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 March 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	3.58	2.87	3.03	
	3M Ago	3.90	3.30	3.31	
	6M Ago	3.65	3.19	3.13	
	12M Ago	2.24	2.38	2.40	
IL	Current			1.28	
	3M Ago			1.33	
	6M Ago			1.43	
	12M Ago			0.34	
Provincial	Current	3.72	3.54	4.08	3.84
	3M Ago	4.03	3.97	4.32	4.15
	6M Ago	3.87	3.88	4.19	4.03
	12M Ago	2.57	2.97	3.31	3.05
Ontario	Current	3.74	3.54	4.07	3.83
	3M Ago	4.05	3.97	4.32	4.15
	6M Ago	3.89	3.88	4.20	4.03
	12M Ago	2.55	2.97	3.32	3.02
Quebec	Current	3.69	3.53	4.04	3.83
	3M Ago	3.99	3.96	4.28	4.13
	6M Ago	3.85	3.86	4.16	4.02
	12M Ago	2.59	2.96	3.27	3.07
Alberta	Current	3.69	3.52	4.10	3.82
	3M Ago	3.99	3.95	4.29	4.11
	6M Ago	3.85	3.85	4.13	3.97
	12M Ago	2.62	2.95	3.26	3.03
BC	Current	3.67	3.51	4.05	3.80
	3M Ago	3.97	3.95	4.28	4.12
	6M Ago	3.87	3.86	4.15	4.00
	12M Ago	2.56	2.96	3.27	3.05
Municipal	Current	3.77	3.61	4.29	3.96
	3M Ago	4.08	4.05	4.58	4.29
	6M Ago	3.94	3.94	4.44	4.16
	12M Ago	2.62	3.05	3.49	3.14
Corporate	Current	4.99	4.88	5.08	5.00
	3M Ago	5.28	5.18	5.33	5.27
	6M Ago	5.18	5.18	5.24	5.20
	12M Ago	3.39	4.01	4.24	3.76
High Yield	Current				7.37
	3M Ago				7.34
	6M Ago				7.38
	12M Ago				5.39

		1-5YR	5-10YR	20+YR	All Mat
AAA/AA	Current	4.64	4.50	4.58	4.63
	3M Ago	4.94	4.70	4.78	4.89
	6M Ago	4.76	4.65	4.67	4.74
	12M Ago	2.83	3.47	3.80	2.96
A	Current	4.91	4.56	4.80	4.83
	3M Ago	5.16	4.92	5.06	5.10
	6M Ago	5.09	4.91	4.96	5.03
	12M Ago	3.40	3.70	3.97	3.62
BBB	Current	5.26	5.08	5.49	5.27
	3M Ago	2.09	1.68	1.82	5.54
	6M Ago	2.11	1.82	1.95	5.47
	12M Ago	-1.42	-0.28	0.39	4.07
Comm	Current	4.82	5.55	5.01	5.12
	3M Ago	5.18	5.78	5.31	5.42
	6M Ago	5.27	5.78	5.23	5.46
	12M Ago	4.02	4.77	3.43	4.14
Energy	Current	5.01	5.03	5.18	5.09
	3M Ago	5.31	5.35	5.42	5.37
	6M Ago	5.23	5.30	5.37	5.31
	12M Ago	3.43	4.23	4.36	4.11
Financial	Current	4.99	4.99	5.25	5.00
	3M Ago	5.26	5.10	5.45	5.25
	6M Ago	5.16	5.15	5.18	5.16
	12M Ago	3.33	3.85	4.15	3.43
Industrial	Current	4.88	4.78	5.23	4.94
	3M Ago	5.26	5.09	5.45	5.26
	6M Ago	5.14	5.06	5.39	5.18
	12M Ago	3.47	3.89	4.42	3.83
Infrastructure	Current	4.50	4.46	4.83	4.72
	3M Ago	4.83	4.80	5.10	5.01
	6M Ago	4.68	4.81	4.97	4.91
	12M Ago	3.03	3.62	4.00	3.83
Securitization	Current	4.93			4.93
	3M Ago	5.25			5.25
	6M Ago	5.02			5.02
	12M Ago	3.16			3.16

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 March 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	4.20	3.72	3.49	3.76	1.44	1.17	1.53	5.25	8.45
	3M Ago	4.54	4.13	3.88	4.11	2.09	1.68	1.82	5.50	9.00
	6M Ago	4.31	4.18	3.83	3.95	2.11	1.82	1.95	5.72	9.55
	12M Ago	2.20	2.49	2.35	2.54	-1.68	-0.66	0.01	3.64	6.10
UK	Current	3.79	3.55	3.43	3.80	0.00	-0.27	0.35		
	3M Ago	3.50	3.65	3.69	3.92	-0.68	0.15	0.49		
	6M Ago	4.39	4.44	4.16	3.72	-0.88	0.08	-0.16		
	12M Ago	1.38	1.52	1.66	1.80	-4.36	-2.98	-1.84		
Japan	Current	-0.09	0.02	0.30	1.22	-1.30	-0.51			
	3M Ago	0.03	0.15	0.48	1.50	-1.22	-0.54			
	6M Ago	-0.07	0.01	0.26	1.27	-1.37	-0.78			
	12M Ago	-0.06	-0.01	0.21	0.94	-1.22	-0.74			
China	Current	2.31	2.56	2.84	3.25					
	3M Ago	2.28	2.53	2.85	3.26					
	6M Ago	2.06	2.42	2.79	3.21					
	12M Ago	2.24	2.50	2.86	3.40					
EM	Current	3.62	4.37	4.69	4.52	2.59	3.67	5.15	5.77	11.18
	3M Ago	3.78	4.38	4.95	4.61	2.79	3.04	5.15	5.92	11.40
	6M Ago	3.70	4.31	5.05	4.78	2.51	3.42	5.19	6.09	13.35
	12M Ago	3.39	4.16	4.63	4.91	2.28	2.91	4.93	4.09	10.46
Germany	Current	2.69	2.36	2.24	2.33	-0.02	-0.12	-0.15		
	3M Ago	2.56	2.53	2.54	2.51	0.40	0.34	0.18		
	6M Ago	1.66	1.82	2.03	2.11	-0.52	-0.10	-0.07		
	12M Ago	-0.17	0.52	0.81	1.00	-4.17	-2.12	-1.62		
Italy	Current	3.27	3.43	3.88	4.34	0.45	1.50	1.74		
	3M Ago	3.34	3.72	4.38	4.72	1.16	2.19	2.18		
	6M Ago	2.87	3.45	4.16	4.37	-0.14	2.02	2.10		
	12M Ago	0.31	1.84	2.68	3.19	-3.37	-0.33	0.78		
France	Current	2.83	2.66	2.70	3.17	-0.29	0.05	0.53		
	3M Ago	2.85	2.82	2.97	3.30	0.15	0.44	0.77		
	6M Ago	1.91	2.12	2.46	2.99	-0.58	0.21	0.63		
	12M Ago	-0.08	0.77	1.32	1.93	-3.64	-1.60	-0.47		
Sweden	Current	2.85	2.56	2.25		0.09	0.32			
	3M Ago	2.80	2.65	2.37		-0.24	0.25			
	6M Ago	2.31	2.41	2.22		-0.72	-0.23			
	12M Ago	0.70	1.59	1.72		-1.55	-1.08			
Australia	Current	3.03	3.00	3.27	3.82	0.01	0.82	1.43		
	3M Ago	3.43	3.62	4.01	4.37	0.60	1.45	1.88		
	6M Ago	3.44	3.64	3.87	4.10	0.80	1.58	2.01		
	12M Ago	1.66	2.97	3.27	3.72	-0.38	0.63	1.30		
NZ	Current	4.78	4.37	4.23	4.37	1.04	1.72			
	3M Ago	5.00	4.62	4.46	4.54	1.54	2.06			
	6M Ago	4.20	4.25	4.30	4.62	1.21	2.13			
	12M Ago	2.68	3.39	3.47	3.85	0.35	1.41			
Canada	Current	3.58		2.87	3.03			1.28	5.00	7.37
	3M Ago	3.90		3.30	3.31			1.33	5.27	7.34
	6M Ago	3.65		3.19	3.13			1.43	5.20	7.38
	12M Ago	2.24		2.38	2.40			0.34	3.76	5.39

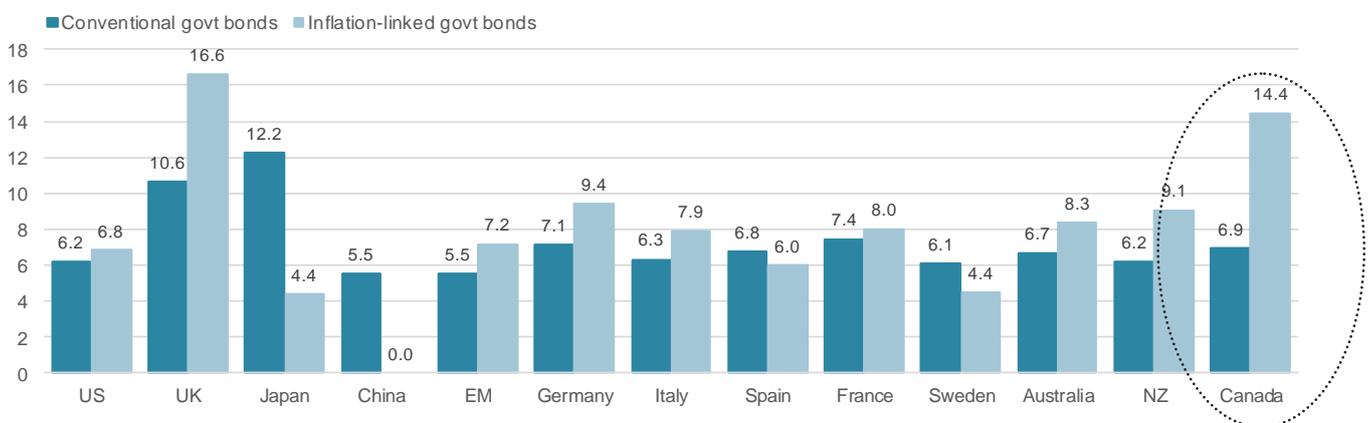
Source: FTSE Russell. All data as of March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors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

Appendix – Duration and Market Value (USD, Bn)

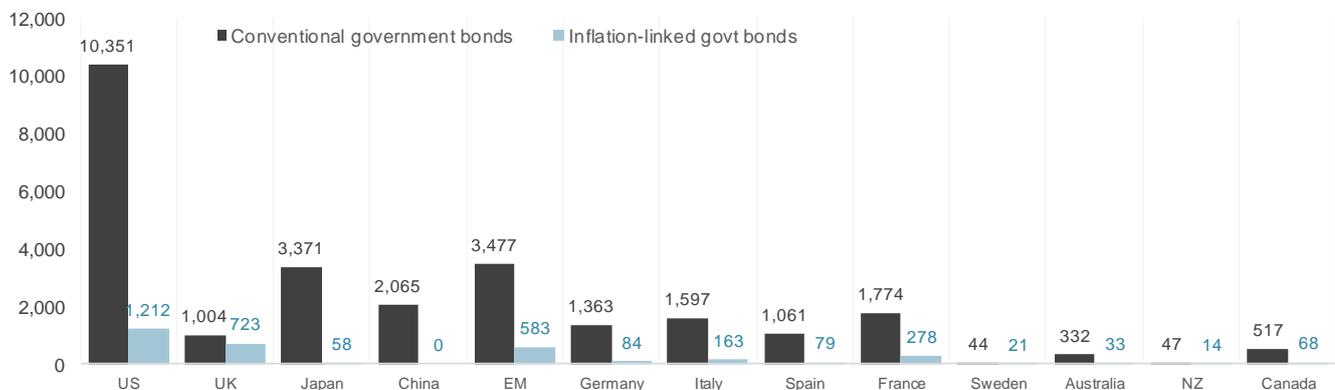
	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.6	17.7	6.2	2,245.2	1,053.2	1,303.1	10,351.1	7.0	22.0	6.8	397.6	126.3	1211.8
UK	3.8	7.6	19.4	10.6	121.3	139.2	298.2	1,004.0	6.9	28.9	16.6	130.4	274.9	722.6
Japan	3.9	7.9	24.0	12.2	367.3	402.5	753.5	3,370.8	6.8		4.4	26.9		57.6
China	3.6	7.4	17.5	5.5	467.4	330.4	239.6	2,064.5						
EM	3.4	6.9	15.8	5.5	755.22	605.26	333.30	3,477.0	5.5	13.6	7.2	114.9	145.6	583.2
Germany	3.9	7.8	20.6	7.1	292.80	199.08	145.33	1,362.7	6.7	22.2	9.4	30.5	18.9	84.3
Italy	3.6	7.3	16.6	6.3	315.08	274.48	145.63	1,597.0	6.7	26.7	7.9	55.1	5.5	163.4
Spain	3.7	7.5	17.6	6.8	203.35	189.57	102.51	1,061.5	7.2		6.0	22.4		79.3
France	3.7	7.6	20.1	7.4	328.23	338.37	212.79	1,774.1	6.7	24.6	8.0	118.0	20.2	278.1
Sweden	3.5	8.0		6.1	7.69	9.21		43.7	6.2		4.4	9.9		21.2
Australia	3.5	7.8	18.2	6.7	56.56	90.63	16.39	331.8	7.5	23.0	8.3	9.8	2.9	33.4
NZ	3.4	7.7	17.6	6.2	8.92	6.63	2.37	46.9	6.6		9.1	3.2		14.2
Canada		7.4	17.1	6.9		160.20	104.50	517.1		14.4	14.4		67.7	67.7

	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	11.3	8.7	7.2	6.9	7.2	75.2	454.2	2,437.4	3,362.5	6,329.3	4.1	1,161.3
Euro	6.2	5.0	4.7	4.3	4.5	10.3	180.2	1,095.2	1,453.7	2,739.4	3.1	426.1
EM		5.6	4.8	5.0	5.0		37.91	219.94	350.3	608.1	3.5	203.3

Average Duration



Total Market Value (USD Billions)



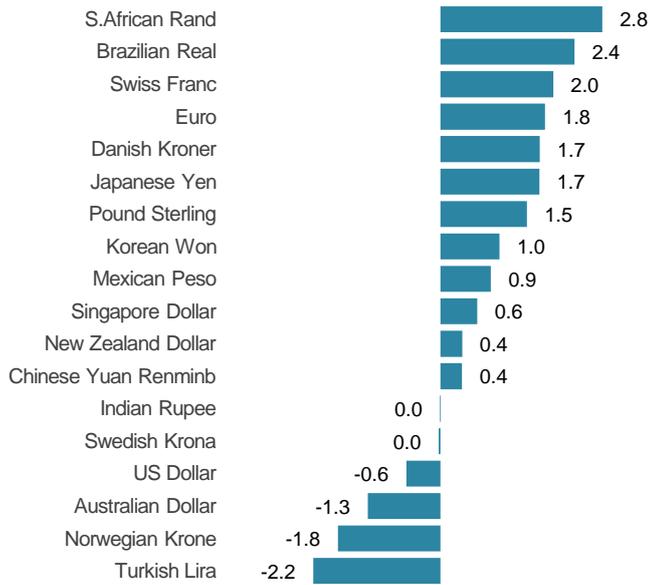
Data as of 2023-03-31

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

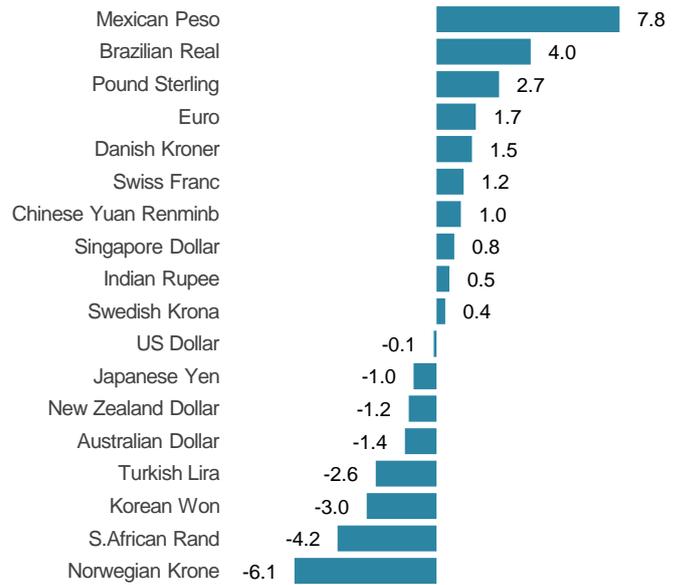
Source: FTSE Russell. All data as of March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indexes used for each market. For professional investors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

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

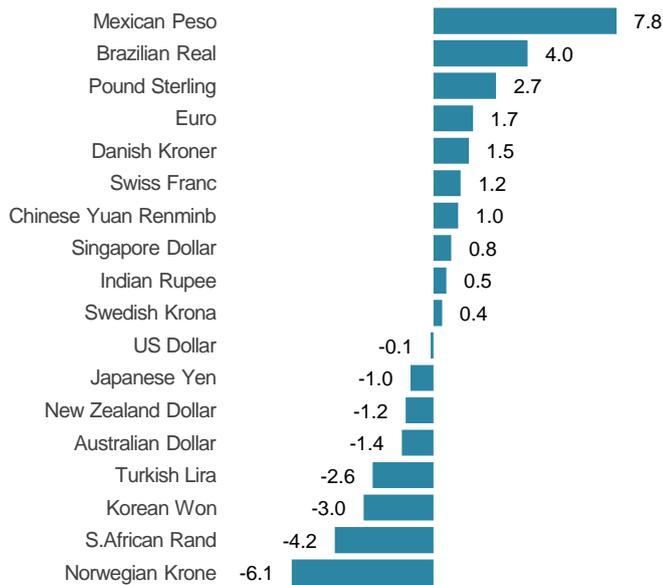
FX Moves vs CAD - 1M



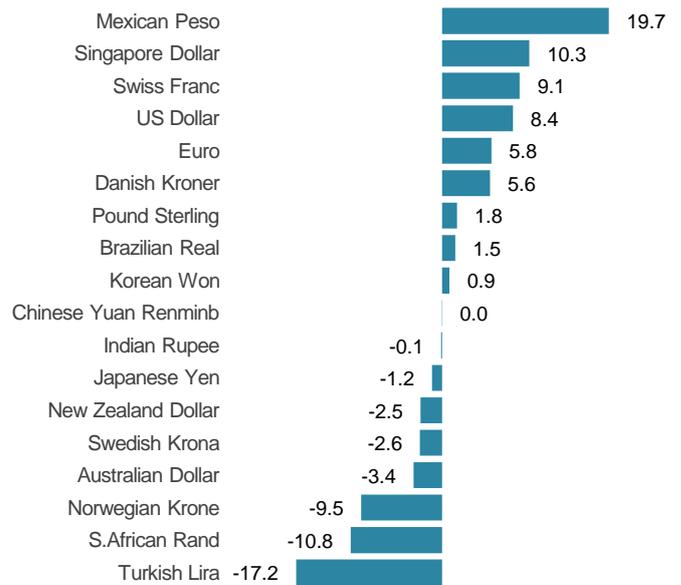
FX Moves vs CAD - 3M



FX Moves vs CAD - YTD



FX Moves vs CAD - 12M



Source: FTSE Russell and Refinitiv. All data as of March 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 – 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

Total Returns

Growth/Inflation

Financial Conditions

Govt. Bonds

Corporate Bonds

Spreads

Inflation-Linked

Credit/Equities

Appendix



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