REFERENCE:

Tab 4, Section 4.4.2, pg. 14 and MFR 65, pg. 1.

PREAMBLE TO IR (IF ANY):

MH indicates that the economic and financial indicators used in the Financial Forecast Scenario provided in Appendix 4.1, are from the Spring of 2022.

MH indicates that it updates interest rates on a quarterly basis (MFR 65, Page 1).

QUESTION:

Please provide an analysis of the differences between the Spring 2022 interest rates used in the Financial Forecast Scenario and the MH Fall 2022 update of interest rates.

RESPONSE:

Table 1 compares Manitoba Hydro's consensus forecasts between the Summer 2022 interest rates used in the Amended Financial Forecast Scenario, with the most up-to-date Winter 2022 update of interest rates that reflects a consensus view as at the end of December 31, 2022. Interest rate changes from Summer 2022 to Winter 2022 range from -15 basis points to +105 basis points for short-term Canadian interest rates and from -10 basis points to 30 basis points for long-term Canadian interest rates.

Table 1 Comparison of Forecast Interest Rates*

	MH Short-Term Cdn Interest Rate			MH Long-Term Cdn 10 Yr+ Interest Rate**		
	Winter 2022	Summer 2022	Increase/ (Decrease)	Winter 2022	Summer 2022	Increase/ (Decrease)
2022/23	3.25	2.45	0.80	4.10	4.20	(0.10)
2023/24	4.00	2.95	1.05	4.00	4.05	(0.05)
2024/25	2.95	2.50	0.45	3.90	3.85	0.05
2025/26	2.30	2.15	0.15	3.90	3.80	0.10
2026/27	2.30	2.10	0.20	4.00	3.85	0.15
2027/28	2.30	2.15	0.15	4.05	3.95	0.10
& on	2.35	2.50	(0.15)	4.25	3.95	0.30

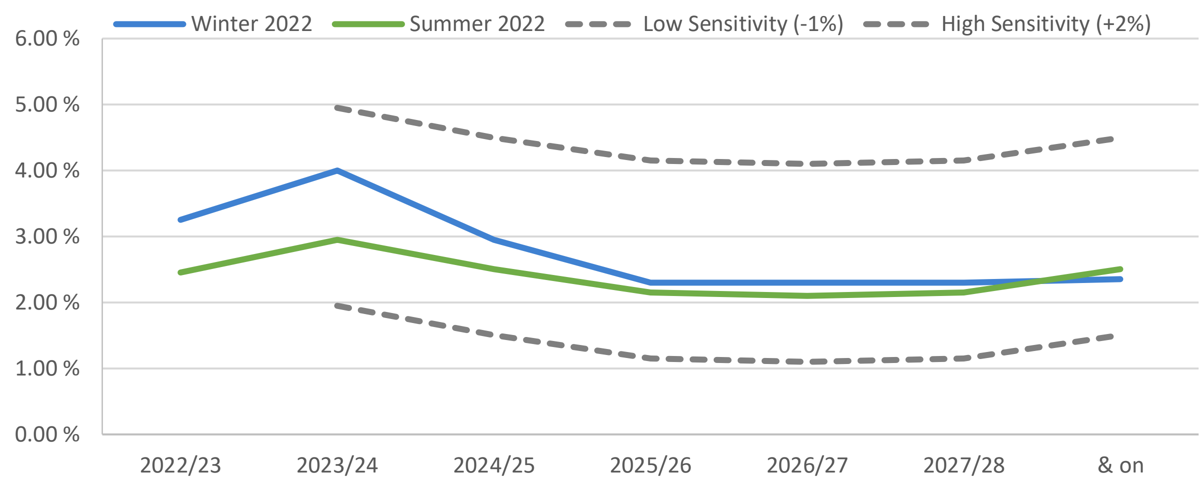
*Not including the Provincial Guarantee Fee
**2022/23 represents average of the remaining quarters

Figures 1 and 2 below provide a comparison between the Summer 2022 and Winter 2022 consensus interest rate forecast and include the interest rate sensitivity ranges as described in Section 4.4.3 of Tab 4:

- MH Short-Term Cdn Interest Rate: a decrease of 1% (low) and increase of 2% (high) from the Summer 2022 consensus interest rate forecast, and
- MH Long-Term Cdn 10+ Year Interest Rate: a decrease of 1% (low) and increase of 1% (high) from the Summer 2022 consensus interest rate forecast.

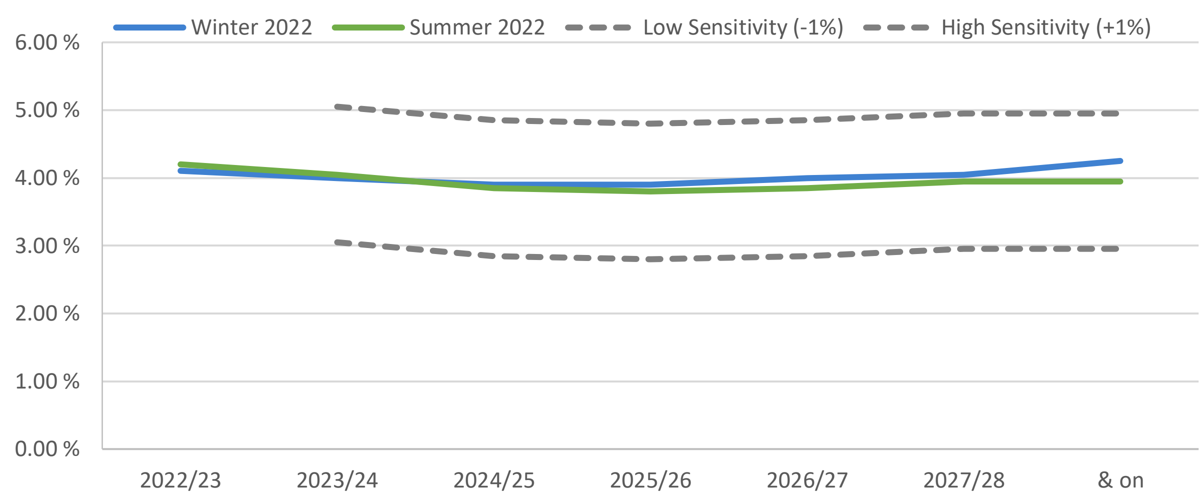
Figures 1 and 2 below demonstrate that the Winter 2022 consensus interest rate forecast is within the bands established in the sensitivity analysis found in Appendix 4.4 (Amended).

Figure 1 MH Short-Term Cdn Interest Rate



Rates do not include the PGF

Figure 2 MH Long-Term Cdn 10+ Year Interest Rate



Rates do not include the PGF

The forecast of interest rates and exchange rates from Winter 2022 are presented in both calendar year (Table 2) and fiscal year (Table 3) format and reflect the consensus benchmark rates as at the end of December 2022. The benchmark interest rates and exchange rates shown in Table 2 represent a 4-quarter average for the calendar year.

Table 2 Canada/US Financial Indicators – Calendar Year

WINTER 2022									
	CANADA					UNITED STATES			
Year	Cdn 90 Day T-Bill Rate %	Cdn LT Bond 5 Yr Rate %	Cdn LT Bond 10 Yr Rate %	Cdn LT Bond 30 Yr Rate %	Cdn LT Bond 10 Yr+ Rate %	US 90 Day T-Bill Rate %	US LT Bond 5 Yr Rate %	US LT Bond 10 Yr Rate %	Cdn$/US$
2016	0.50	0.75	1.26	1.92	1.59	0.32	1.34	1.84	1.33
2017	0.70	1.39	1.79	2.28	2.03	0.95	1.91	2.33	1.30
2018	1.40	2.14	2.26	2.33	2.30	1.97	2.75	2.91	1.30
2019	1.66	1.51	1.55	1.77	1.66	2.10	1.96	2.14	1.33
2020	0.43	0.57	0.72	1.19	0.96	0.37	0.54	0.89	1.34
2021	0.12	1.00	1.40	1.88	1.64	0.04	0.86	1.44	1.25
2022	2.30	2.81	2.80	2.83	2.82	2.08	3.00	2.95	1.30
Forecast									
2023	4.20	3.10	3.05	3.05	3.05	4.65	3.60	3.60	1.35
2024	3.15	2.75	2.90	2.95	2.95	3.55	3.00	3.25	1.30
2025	2.35	2.45	2.85	2.85	2.95	2.60	2.75	3.10	1.29
2026	2.30	2.45	2.85	2.95	3.00	2.45	2.70	3.10	1.29
2027	2.30	2.45	2.90	3.05	3.05	2.45	2.70	3.10	1.29
2028	2.30	2.50	3.05	3.35	3.30	2.45	2.70	3.25	1.28
2029	2.40	2.55	3.20	3.35	3.30	2.55	3.00	3.50	1.28

The benchmark interest rates and exchange rate values shown in Table 3 represent a 4-quarter average for the fiscal year.

Table 3 Canada/US Financial Indicators – Fiscal Year

WINTER 2022									
	CANADA					UNITED STATES			
Year	Cdn 90 Day T-Bill Rate %	Cdn LT Bond 5 Yr Rate %	Cdn LT Bond 10 Yr Rate %	Cdn LT Bond 30 Yr Rate %	Cdn LT Bond 10 Yr+ Rate %	US 90 Day T-Bill Rate %	US LT Bond 5 Yr Rate %	US LT Bond 10 Yr Rate %	Cdn$/US$
2016/17	0.51	0.87	1.39	2.02	1.70	0.40	1.48	1.97	1.31
2017/18	0.87	1.62	1.91	2.26	2.09	1.19	2.06	2.41	1.28
2018/19	1.53	2.06	2.16	2.27	2.21	2.19	2.73	2.88	1.31
2019/20	1.56	1.36	1.39	1.60	1.49	1.78	1.63	1.83	1.33
2020/21	0.14	0.47	0.75	1.28	1.01	0.10	0.40	0.88	1.32
2021/22	0.21	1.31	1.62	2.00	1.81	0.11	1.16	1.60	1.25
Forecast									
2022/23	3.25	3.15	3.05	3.05	3.05	3.15	3.50	3.40	1.32
2023/24	4.00	3.00	3.00	3.00	3.00	4.50	3.45	3.50	1.34
2024/25	2.95	2.65	2.85	2.95	2.95	3.30	2.90	3.20	1.30
2025/26	2.30	2.45	2.85	2.90	3.00	2.55	2.70	3.10	1.29
2026/27	2.30	2.45	2.85	3.00	3.05	2.45	2.70	3.10	1.29
2027/28	2.30	2.45	2.95	3.10	3.10	2.45	2.70	3.10	1.29
2028/29 & on	2.35	2.50	3.05	3.35	3.30	2.50	2.75	3.30	1.28

Tables 4 through 6 summarize Manitoba Hydro's forecasted Canadian and US interest rates, as at the end of December 2022 on a fiscal year basis. Where applicable, relevant credit spreads, average margin level and the PGF of 0.50% are added to the consensus benchmark rates to arrive at Manitoba Hydro's forecasted borrowing costs.

When calculating Manitoba Hydro's fixed and floating long-term debt interest rates for the 2022/23 forecast (Table 5 and Table 6), quarters that have occurred on an actual basis are excluded from the fiscal year average.

Table 4 Canadian Short-Term Interest Rate: Winter 2022

	CDN SHORT-TERM INTEREST RATE			
	Consensus Benchmark 90 Day Cdn T-Bill Rate % *	Manitoba Spread	Provincial Guarantee Fee	MH Interest Rate %*
2022/23	3.25		0.50	3.75
2023/24	4.00		0.50	4.50
2024/25	2.95		0.50	3.45
2025/26	2.30		0.50	2.80
2026/27	2.30		0.50	2.80
2027/28	2.30		0.50	2.80
2028/29 & on	2.35		0.50	2.85

*Rounded to the nearest 5 basis points.

Table 5: Canadian Long-Term Interest Rate: Winter 2022

	CDN FLOATING DEBT INTEREST RATE						CDN FIXED DEBT INTEREST RATE			
	Consensus Benchmark 90 Day Cdn T-Bill Rate %*	Spread from Cdn T-Bill to Cdn BA Rate	Cdn 90 Day BA Rate %*	Average Margin Level	Provincial Guarantee Fee	MH Interest Rate %*	Consensus Benchmark Long-Term 10 Yr+ Rate %*	Manitoba Spread	Provincial Guarantee Fee	MH Interest Rate %*
2022/23	4.25	0.61	4.85	0.50	0.50	5.85	3.15	0.96	0.50	4.60
2023/24	4.00	0.50	4.50	0.50	0.50	5.50	3.00	0.95	0.50	4.50
2024/25	2.95	0.42	3.35	0.50	0.50	4.35	2.95	0.94	0.50	4.40
2025/26	2.30	0.42	2.70	0.50	0.50	3.70	3.00	0.94	0.50	4.40
2026/27	2.30	0.42	2.70	0.50	0.50	3.70	3.05	0.94	0.50	4.50
2027/28	2.30	0.42	2.70	0.50	0.50	3.70	3.10	0.94	0.50	4.55
2028/29 & on	2.35	0.42	2.75	0.50	0.50	3.75	3.30	0.94	0.50	4.75

*Rounded to the nearest 5 basis points.

** Figures may not add to total due to rounding

Table 6: US Long-Term Interest Rate: Winter 2022

	US FLOATING DEBT INTEREST RATE						US FIXED DEBT INTEREST RATE			
	Consensus Benchmark 90 Day US T-Bill Rate %*	Spread from US T-Bill to 6-Month LIBOR Rate	6 Month LIBOR Rate %*	Average Margin Level	Provincial Guarantee Fee	MH Interest Rate %*	Consensus Benchmark Long-Term 10 Yr Rate %*	Manitoba Spread	Provincial Guarantee Fee	MH Interest Rate %*
2022/23	4.65	0.47	5.10	0.41	0.50	6.00	3.75	0.65	0.50	4.90
2023/24	4.50	0.41	4.90	0.41	0.50	5.80	3.50	0.61	0.50	4.60
2024/25	3.30	0.37	3.70	0.41	0.50	4.60	3.20	0.58	0.50	4.30
2025/26	2.55	0.37	2.90	0.41	0.50	3.80	3.10	0.58	0.50	4.15
2026/27	2.45	0.37	2.80	0.41	0.50	3.75	3.10	0.58	0.50	4.15
2027/28	2.45	0.37	2.80	0.41	0.50	3.70	3.10	0.58	0.50	4.20
2028/29 & on	2.50	0.37	2.85	0.41	0.50	3.75	3.30	0.58	0.50	4.35

*Rounded to the nearest 5 basis points.

** Figures may not add to total due to rounding

Tables 7 through 9 depict the sources used to derive the Canadian and US benchmark interest rate forecast for each quarter of the 2022/23 to 2024/25 periods as shown in Tables 3 through 6.

For forecasters that provided end of period rates, rates are adjusted to a comparable average period basis. For example, end of period rates for Q1 and Q2 are averaged for a Q2 average period forecast.

Table 7: Winter 2022 Rates – Canadian

	Cdn 90 Day T-Bill Rate %											
	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	1.59	3.14	4.06	4.40	4.45	4.45	4.45	3.80	3.80	3.80	3.80	
IHS Markit	1.59	3.14	4.06	4.57	4.49	4.53	4.41	4.01	3.76	3.51	3.18	2.68
The Conference Board of Canada	1.59	3.14	4.06	4.39	4.38	4.36	4.05	3.75	3.20	2.70	2.30	2.21
Stokes Economics	1.59	3.14	4.06	4.00	4.00	4.00	4.00	3.10	3.10	3.10	3.10	2.90
Desjardins	1.59	3.14	4.06	4.10	4.10	4.10	4.10	2.65	2.65	2.65	2.65	2.25
CIBC	1.59	3.14	4.06	4.17	4.05	4.00	3.93	3.70	3.40	3.09	2.76	
National Bank	1.59	3.14	4.06	4.24	4.23	3.98	3.50	3.19	3.08	2.97	2.86	
Royal Bank of Canada	1.59	3.14	4.06	4.19	4.15	4.15	4.03	3.70	3.38	3.13	2.93	
Scotiabank	1.59	3.14	4.06	4.19	4.15	4.13	3.88	3.43	3.05	2.90	2.90	
TD Bank	1.59	3.14	4.06	4.37	4.50	4.32	3.82	3.25	2.82	2.51	2.26	2.10
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.25**				**4.00**				**2.95**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**4.25**				N/A				N/A			

	Cdn LT 10 Yr+ Rate %											
	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	2.94	2.96	3.21	3.19	3.28	3.15	3.03					
IHS Markit	2.94	2.96	3.21	2.88	2.81	2.74	2.69	2.65	2.58	2.51	2.47	2.45
The Conference Board of Canada	2.94	2.96	3.21	3.45	3.45	3.45	3.45	3.45	3.42	3.42	3.38	3.37
Stokes Economics	2.94	2.96	3.21	3.35	3.35	3.35	3.35	3.40	3.40	3.40	3.40	3.70
Desjardins	2.94	2.96	3.21	3.03	2.74	2.68	2.63	2.53	2.43	2.38	2.35	2.35
CIBC	2.94	2.96	3.21	3.35	3.44	3.44	3.34	3.17	2.96	2.79	2.68	
National Bank	2.94	2.96	3.21	3.02	2.73	2.68	2.68	2.72	2.77	2.81	2.85	
Royal Bank of Canada	2.94	2.96	3.21	3.08	2.86	2.83	2.79	2.76	2.74	2.73	2.73	
Scotiabank	2.94	2.96	3.21	3.08	2.98	3.19	3.40	3.51	3.55	3.58	3.60	
TD Bank	2.94	2.96	3.21	3.08	2.86	2.84	2.81	2.79	2.76	2.75	2.75	
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.05**				**3.00**				**2.95**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**3.15**				N/A				N/A			

*When calculating long-term debt interest rates, quarters that have occurred on an actual basis are excluded from the fiscal year average.

Table 8: Winter 2022 Components of Cdn LT 10 Yr+ Rate

	Cdn LT 10 Yr Rate %											
	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	2.95	2.99	3.18	3.20	3.30	3.15	3.05	2.95	2.95	2.95	2.95	
IHS Markit	2.95	2.99	3.18	2.88	2.80	2.72	2.67	2.62	2.56	2.49	2.44	2.42
The Conference Board of Canada	2.95	2.99	3.18	3.35	3.35	3.35	3.35	3.33	3.30	3.23	3.18	3.17
Stokes Economics	2.95	2.99	3.18	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.60
Desjardins	2.95	2.99	3.18	3.03	2.73	2.68	2.63	2.53	2.43	2.38	2.35	2.35
CIBC	2.95	2.99	3.18	3.33	3.38	3.35	3.25	3.10	2.90	2.73	2.58	
National Bank	2.95	2.99	3.18	3.03	2.73	2.68	2.68	2.72	2.76	2.79	2.83	
Royal Bank of Canada	2.95	2.99	3.18	3.08	2.83	2.78	2.73	2.68	2.63	2.60	2.60	
Scotiabank	2.95	2.99	3.18	3.08	2.93	3.13	3.35	3.45	3.48	3.50	3.53	
TD Bank	2.95	2.99	3.18	3.08	2.83	2.78	2.73	2.68	2.63	2.60	2.60	2.60
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.05**				**3.00**				**2.85**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**3.15**				N/A				N/A			

	Cdn LT 30 Yr Rate %											
	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	2.92	2.94	3.24	3.18	3.25	3.15	3.00					
IHS Markit	2.92	2.94	3.24	2.88	2.82	2.75	2.71	2.67	2.61	2.54	2.50	2.47
The Conference Board of Canada												
Stokes Economics	2.92	2.94	3.24	3.40	3.40	3.40	3.40	3.50	3.50	3.50	3.50	3.80
Desjardins	2.92	2.94	3.24	3.04	2.75	2.68	2.63	2.53	2.43	2.38	2.35	2.35
CIBC	2.92	2.94	3.24	3.37	3.50	3.53	3.43	3.24	3.01	2.86	2.79	
National Bank	2.92	2.94	3.24	3.02	2.73	2.68	2.68	2.73	2.78	2.83	2.88	
Royal Bank of Canada	2.92	2.94	3.24	3.09	2.90	2.88	2.85	2.85	2.85	2.85	2.85	
Scotiabank	2.92	2.94	3.24	3.09	3.03	3.25	3.45	3.58	3.63	3.65	3.68	
TD Bank	2.92	2.94	3.24	3.09	2.90	2.90	2.90	2.90	2.90	2.90	2.90	
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.05**				**3.00**				**2.95**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**3.15**				N/A				N/A			

*When calculating long-term debt interest rates, quarters that have occurred on an actual basis are excluded from the fiscal year average.

Table 9: Winter 2022 Rates - US

US T-Bill Rate %

	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	1.10	2.75	4.18	4.90	5.05	5.05	5.05	4.35	4.35	4.35	4.35	
IHS Markit	1.10	2.75	4.18	4.60	4.77	4.67	4.60	4.55	4.31	3.83	3.35	3.05
The Conference Board of Canada	1.10	2.75	4.18	4.72	4.88	4.79	4.39	3.84	3.33	2.87	2.59	2.52
Stokes Economics	1.10	2.75	4.18	4.50	4.50	4.50	4.50	3.60	3.60	3.60	3.60	3.10
Desjardins	1.10	2.75	4.18	4.60	4.60	4.60	4.60	2.90	2.90	2.90	2.90	2.35
CIBC	1.10	2.75	4.18	4.69	4.93	4.88	4.83	4.53	3.98	3.60	3.40	
National Bank	1.10	2.75	4.18	4.51	4.58	4.28	3.68	3.27	3.11	2.94	2.78	
Royal Bank of Canada	1.10	2.75	4.18	4.61	4.78	4.63	4.38	4.13	3.88	3.63	3.38	
Scotiabank	1.10	2.75	4.18	4.61	4.80	4.80	4.65	4.25	3.75	3.25	2.88	
TD Bank	1.10	2.75	4.18	4.66	4.90	4.78	4.40	3.90	3.40	2.95	2.63	2.43
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.15**				**4.50**				**3.30**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**4.65**				N/A				N/A			

US LT 10 Yr Rate %

	2022 Actuals			2023				2024				2025
Forecaster	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO	2.93	3.11	3.83	3.85	3.90	3.70	3.55	3.35	3.35	3.35	3.35	
IHS Markit	2.93	3.11	3.83	3.70	3.62	3.54	3.49	3.44	3.38	3.31	3.26	3.24
The Conference Board of Canada												
Stokes Economics	2.93	3.11	3.83	3.90	3.90	3.90	3.90	3.80	3.80	3.80	3.80	3.80
Desjardins	2.93	3.11	3.83	3.72	3.48	3.33	3.18	2.90	2.68	2.65	2.65	2.65
CIBC	2.93	3.11	3.83	3.97	4.03	3.90	3.75	3.63	3.48	3.30	3.10	
National Bank	2.93	3.11	3.83	3.64	3.30	3.13	3.00	2.95	2.95	2.95	2.95	
Royal Bank of Canada	2.93	3.11	3.83	3.82	3.70	3.60	3.50	3.40	3.30	3.23	3.18	
Scotiabank	2.93	3.11	3.83	3.57	3.28	3.35	3.43	3.48	3.53	3.58	3.60	
TD Bank	2.93	3.11	3.83	3.72	3.53	3.45	3.35	3.23	3.08	2.95	2.85	2.78
	2022/23				2023/24				2024/25			
AVERAGE OF FISCAL YEAR QUARTERS	**3.40**				**3.50**				**3.20**			
2022/23 AVERAGE OF REMAINING 1 QUARTER*	**3.75**				N/A				N/A			

*When calculating long-term debt interest rates, quarters that have occurred on an actual basis are excluded from the fiscal year average.

Copies of the publicly available and private sector forecasts are provided as Attachment 1 to this response.

Canadian Economic Outlook | Our key forecasts for the Canadian economy **December 16, 2022**

Canadian Economic Outlook for Dec. 16, 2022

A Publication of BMO Capital Markets Economic Research • Douglas Porter, CFA, Chief Economist, BMO Financial Group

		2021 Q1	Q2	Q3	Q4	2022 Q1	Q2	Q3	Q4	2023 Q1	Q2	Q3	Q4	2021	2022	2023	2024
Production	**q/q % chng : a.r.**																
Real GDP (chain-weighted)		5.3	-2.3	5.8	6.9	2.8	3.2	2.9	0.6	-1.5	-1.8	0.0	1.5	5.0	3.5	0.0	1.5
Final Sales		5.8	-6.9	9.5	2.8	0.6	-3.5	2.7	1.7	0.7	-0.4	0.7	2.0	4.0	1.1	0.7	1.7
Final Domestic Demand		6.4	-0.6	7.4	3.7	3.0	2.4	-0.6	0.9	0.4	-0.3	0.7	2.0	5.8	2.7	0.5	1.7
Consumer Spending		2.1	-2.0	20.7	1.3	2.3	9.5	-1.0	1.2	-0.1	-1.5	0.3	1.4	5.1	4.8	0.5	1.4
Durables		-4.2	-10.2	-2.3	-1.2	8.0	-14.4	-8.2	1.0	-2.0	-2.0	0.0	2.0	8.5	-3.1	-2.6	1.3
Nondurables		3.2	-8.3	2.9	-2.8	3.2	2.5	-3.9	0.8	-1.0	-2.0	0.0	2.0	1.1	0.1	-0.7	1.2
Services		2.4	5.7	30.4	4.0	1.1	17.8	3.8	1.5	1.0	-1.1	0.5	1.0	5.1	8.6	1.9	1.5
Government Spending		7.3	2.0	2.1	3.0	0.7	-2.2	3.9	3.1	3.0	3.0	3.0	3.4	5.5	1.4	2.8	3.0
Business Investment		-0.2	22.7	3.9	14.7	7.7	17.0	4.3	3.0	1.0	1.0	1.0	2.5	4.3	10.3	2.8	2.1
Non-residential Construction		17.5	10.0	5.2	15.1	13.3	13.8	11.7	3.0	1.0	1.0	1.0	2.5	0.8	11.6	3.5	2.0
Machinery and Equipment		-22.5	47.5	1.9	14.0	-1.3	23.1	-7.6	3.0	1.0	1.0	1.0	2.5	9.9	8.1	1.6	2.3
Residential Construction		38.0	-15.1	-31.0	11.7	8.8	-31.5	-15.4	-9.5	-5.0	-5.0	-5.0	1.5	14.9	-10.6	-8.9	-0.3
Exports		4.9	-19.0	3.6	16.2	-7.6	8.1	8.6	4.2	-0.5	-0.5	2.0	2.0	1.4	2.8	2.5	1.8
Imports		8.6	0.4	-3.0	20.4	0.2	29.5	-1.5	1.9	-1.2	0.0	2.0	2.0	7.8	8.3	1.8	1.9
Inventory Change	2012$ blns : a.r.	-17.7	4.7	-11.7	8.1	20.1	54.7	56.4	51.2	39.0	31.2	27.5	24.8	-4.1	45.6	30.6	25.1
Contrib. to GDP Growth	ppts : a.r.	0.2	4.3	-3.2	4.1	2.6	6.6	0.2	-1.1	-2.2	-1.4	-0.7	-0.5	1.0	2.4	-0.7	-0.3
Net Exports	2012$ blns : a.r.	-3.7	-37.8	-27.2	-34.2	-47.1	-80.0	-63.9	-60.5	-59.1	-59.9	-60.2	-60.5	-25.7	-62.9	-59.9	-61.2
Contrib. to GDP Growth	ppts : a.r.	-1.3	-6.0	2.0	-1.3	-2.5	-6.7	3.5	0.8	0.3	-0.2	0.0	0.0	-2.0	-1.9	0.2	0.0
Nominal GDP	$ blns : a.r.	2,423	2,463	2,530	2,622	2,720	2,830	2,811	2,815	2,826	2,834	2,851	2,879	2,510	2,794	2,848	2,953
Growth	q/q % chng : a.r.	18.9	6.7	11.5	15.3	15.8	17.2	-2.7	0.6	1.6	1.1	2.5	4.0	13.6	11.3	1.9	3.7
Real GDP	y/y % chng	0.5	12.1	4.3	3.9	3.2	4.7	3.9	2.4	1.3	0.0	-0.7	-0.5				
Inflation	**q/q % chng : a.r.**																
GDP Price Index		13.0	9.3	5.2	7.9	13.0	13.3	-5.4	0.0	3.1	3.0	2.6	2.4	8.2	7.5	1.9	2.2
CPI All Items		3.2	4.6	5.4	5.7	7.4	11.3	4.1	3.6	2.8	4.0	3.6	2.7	3.4	6.7	4.0	2.6
Ex. Food and Energy		1.4	4.1	4.1	3.3	4.8	7.6	5.4	3.4	4.7	4.6	4.4	3.2	2.3	4.9	4.6	2.9
Food Prices		0.8	3.7	5.5	7.9	10.1	11.1	9.7	7.7	4.0	3.5	2.3	2.1	2.2	8.7	5.4	2.1
Energy Prices		35.3	19.7	18.1	24.6	38.4	55.5	-21.9	-8.6	-17.1	-0.4	-1.2	-1.2	19.1	22.2	-6.8	0.0
Services		1.7	3.8	4.3	2.8	4.4	8.7	6.6	3.2	4.1	3.6	3.4	3.2	2.2	5.0	4.3	2.7
CPI All Items	y/y % chng	1.4	3.3	4.1	4.7	5.8	7.5	7.2	6.6	5.4	3.7	3.5	3.3				
CPIX8	y/y % chng	1.4	2.6	3.5	3.8	4.9	6.0	6.0	5.8	5.0	3.6	2.9	2.8	2.7	5.7	3.6	2.4
New Core CPIs	y/y % chng : avg.	1.9	2.5	3.1	3.4	4.2	5.3	5.5	5.3	5.0	4.2	3.7	3.3	2.7	5.1	4.0	2.6
Financial	**% : quarterly avg.**																
Overnight Rate		0.25	0.25	0.25	0.25	0.33	1.17	2.75	3.92	4.50	4.50	4.50	4.50	0.25	2.04	4.50	3.88
3-Month T-Bill		0.08	0.11	0.16	0.10	0.39	1.43	2.91	3.95	4.40	4.45	4.45	4.45	0.11	2.15	4.40	3.80
90-Day BAs		0.44	0.43	0.44	0.48	0.86	1.99	3.65	4.65	5.10	5.15	5.15	5.05	0.45	2.80	5.10	4.30
10-Year Bond Yield		1.13	1.49	1.24	1.58	1.92	2.98	3.01	3.15	3.20	3.30	3.15	3.05	1.36	2.75	3.15	2.95
10-Year BBB Corporate Spread	ppts	1.71	1.66	1.59	1.55	1.86	2.16	2.22	2.35	2.40	2.50	2.40	2.30	1.63	2.15	2.40	2.13
90 Day Canada/U.S. Spread	bps	3	8	11	5	9	33	16	-27	-51	-64	-64	-64	7	8	-60	-55
10 Year Canada/U.S. Spread	bps	-18	-10	-9	4	-2	5	-10	-67	-65	-60	-56	-51	-8	-18	-58	-42
Foreign Trade	**$ blns : a.r.**																
Current Account Balance		-0.8	-9.5	-15.4	-1.3	3.7	10.6	-44.4	-40.0	-36.4	-36.4	-38.6	-40.6	-6.7	-17.5	-38.0	-41.0
Share of GDP		0.0	-0.4	-0.6	0.0	0.1	0.4	-1.6	-1.4	-1.3	-1.3	-1.4	-1.4	-0.3	-0.6	-1.3	-1.4
Merchandise Balance		5.1	-2.3	5.8	10.2	32.8	41.5	6.7	10.0	12.0	12.0	12.1	12.3	4.7	22.7	12.1	12.6
Non-Merchandise Balance		-5.9	-7.2	-21.2	-11.5	-29.1	-30.9	-51.1	-49.9	-48.4	-48.4	-50.8	-52.8	-11.4	-40.3	-50.1	-53.6
US$	US¢/C$: qtr. avg.	79.0	81.4	79.4	79.4	79.0	78.4	76.6	73.8	74.5	75.2	75.9	76.7	79.8	76.9	75.6	77.7
	C$/US$: qtr. avg.	1.266	1.228	1.260	1.260	1.266	1.276	1.306	1.355	1.342	1.329	1.317	1.304	1.254	1.301	1.323	1.286
Yen	¥/C$: qtr. avg.	83.7	89.1	87.4	90.2	91.8	101.6	105.9	104.4	100.0	100.0	100.0	100.0	87.6	100.9	100.0	98.9
Euro	C$/€ : qtr. avg.	1.53	1.48	1.48	1.44	1.42	1.36	1.31	1.38	1.42	1.42	1.43	1.43	1.48	1.37	1.42	1.44
Corp. Profits Before Tax	y/y % chng	143.7	158.8	17.6	31.1	10.6	16.9	4.2	-10.1	-22.3	-30.0	-13.4	-10.7	68.2	5.5	-20.0	3.0
Corp. Profits After Tax	y/y % chng	47.3	54.7	9.5	20.8	9.3	17.8	13.6	0.0	-9.6	-20.0	-13.4	-10.7	30.8	10.0	-13.6	3.0
Personal Income	y/y % chng	5.5	1.6	4.5	4.8	5.9	6.3	7.2	8.3	5.0	3.3	2.2	2.4	4.1	6.9	3.2	3.4
Real Disposable Income	y/y % chng	7.1	-3.4	1.3	0.4	-0.5	-1.7	-1.0	1.3	-1.4	-0.7	-0.7	-0.2	1.2	-0.5	-0.8	1.1
Savings Rate	% : quarterly avg.	14.0	14.1	9.3	6.5	8.8	5.1	5.7	5.0	4.6	4.6	4.4	4.4	11.0	6.1	4.5	4.2
Other Indicators	**quarterly avg.**																
Unemployment Rate	percent	8.4	7.9	7.2	6.3	5.8	5.1	5.2	5.1	5.5	6.0	6.4	6.5	7.4	5.3	6.1	6.5
Housing Starts	000s : a.r.	304	279	262	261	244	271	282	261	229	226	223	220	277	264	225	210
Existing Home Sales	y/y % chng	49.6	92.7	-11.4	-4.0	-12.3	-23.8	-29.0	-37.7	-36.5	-17.0	-0.8	6.0	20.7	-25.3	-15.0	7.0
MLS Home Price Index	y/y % chng	19.8	25.4	23.6	28.1	27.2	14.8	3.7	-6.8	-14.3	-13.2	-10.7	-8.6	23.2	12.1	-12.0	0.3
Motor Vehicle Sales	mlns : a.r.	1.78	1.77	1.59	1.54	1.65	1.62	1.45	1.48	1.52	1.60	1.70	1.78	1.67	1.55	1.65	1.95
Employment Growth	q/q % chng : a.r.	1.5	2.5	6.8	6.2	3.2	3.9	-1.3	2.4	-0.6	-0.5	0.6	1.6	5.1	3.7	0.5	1.3
Industrial Production	q/q % chng : a.r.	6.8	-4.4	5.6	5.6	3.5	7.3	1.4	1.4	-0.6	-1.6	0.1	1.0	4.5	4.0	0.5	1.2
Federal Budget Balance	% of FY GDP													-3.6	-1.3	-1.1	-0.9

Bolded values represent forecasts

BMO Capital Markets
We're here to help.™

General Disclosures

BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Europe p.l.c, and Bank of Montreal (China) Co. Ltd, the institutional broker dealer business of BMO Capital Markets Corp. (Member FINRA and SIPC) and the agency broker dealer business of Clearpool Execution Services, LLC (Member FINRA and SIPC) in the U.S., and the institutional broker dealer businesses of BMO Nesbitt Burns Inc. (Member Investment Industry Regulatory Organization of Canada and Member Canadian Investor Protection Fund) in Canada and Asia, Bank of Montreal Europe p.l.c. (authorised and regulated by the Central Bank of Ireland) in Europe and BMO Capital Markets Limited (authorised and regulated by the Financial Conduct Authority) in the UK and Australia. BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such Information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Economic Publications

Our publications are disseminated via email and may also be available via our web site https://economics.bmo.com. Please contact your BMO Financial Group Representative for more information.

Additional Matters

This report is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Its contents have not been reviewed by any regulatory authority. BMO Capital Markets does not represent that this report may be lawfully distributed or that any financial products may be lawfully offered or dealt with, in compliance with regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder.

To Australian residents: BMO Capital Markets Limited is exempt from the requirement to hold an Australian financial services licence under the Corporations Act and is regulated by the UK Financial Conduct Authority under UK laws, which differ from Australian laws. This document is only intended for wholesale clients (as defined in the Corporations Act 2001) and Eligible Counterparties or Professional Clients (as defined in Annex II to MiFID II).

To Canadian Residents: BMO Nesbitt Burns Inc. furnishes this report to Canadian residents and accepts responsibility for the contents herein subject to the terms set out above. Any Canadian person wishing to effect transactions in any of the securities included in this report should do so through BMO Nesbitt Burns Inc.

To E.U. Residents: In an E.U. Member State this document is issued and distributed by Bank of Montreal Europe plc which is authorised and regulated in Ireland and operates in the E.U. on a passported basis. This document is only intended for Eligible Counterparties or Professional Clients, as defined in Annex II to "Markets in Financial Instruments Directive" 2014/65/EU ("MiFID II").

To U.K. Residents: In the UK this document is published by BMO Capital Markets Limited which is authorised and regulated by the Financial Conduct Authority. The contents hereof are intended solely for the use of, and may only be issued or passed on to, (I) persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (II) high net worth entities falling within Article 49(2)(a) to (d) of the Order (all such persons together referred to as "relevant persons"). The contents hereof are not intended for the use of and may not be issued or passed on to retail clients.

To Hong Kong Residents: This document is issued and distributed in Hong Kong by Bank of Montreal ("BMO"). BMO is an authorized institution under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong) and a registered institution with the Securities and Futures Commission (CE No. AAK809) under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). This material has not been reviewed or approved by any regulatory authority in Hong Kong. Accordingly the material must not be issued, circulated or distributed in Hong Kong other than (1) except for "structured products" as defined in the Securities and Futures Ordinance, in circumstances which do not constitute it as a "Prospectus" as defined in the Companies Ordinance or which do not constitute an offer to the public within the meaning of that Ordinance, or (2) to Professional investors as defined in the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules made thereunder. Unless permitted by the securities laws of Hong Kong, no person may issue in Hong Kong, or have in its possession for issue in Hong Kong this material or any other advertisement, invitation or document relating to the products other than to a professional investor as defined the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules.

To Israeli residents: BMO Capital Markets is not licensed under the Israeli Law for the Regulation of Investment Advice, Investment Marketing and Portfolio Management of 1995 (the "Advice Law") nor does it carry insurance as required thereunder. This document is to be distributed solely to persons that are qualified clients (as defined under the Advice Law) and qualified investors under the Israeli Securities Law of 1968. This document represents the analysis of the analyst but there is no assurance that any assumption or estimation will materialize.

To Korean Residents: This material is not provided to make a recommendation for specific Korean residents to enter into a contract for trading financial investment instruments, for investment advising, for discretionary investment, or for a trust, nor does it constitute advertisement of any financial business or financial investment instruments towards Korean residents. The material is not provided as advice on the value of financial investment instruments or any investment decision for specific Korean residents. The provision of the material does not constitute engaging in the foreign exchange business or foreign exchange brokerage business regulated under the Foreign Exchange Transactions Act of Korea.

To PRC Residents: This material does not constitute an offer to sell or the solicitation of an offer to buy any financial products in the People's Republic of China (excluding Hong Kong, Macau and Taiwan, the "PRC"). BMO and its affiliates do not represent that this material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any applicable registration or other requirements in the PRC, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. This material may not be distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations.

Singapore Residents: This document has not been registered as a prospectus with the Monetary Authority of Singapore and the material does not constitute an offer or sale, solicitation or invitation for subscription or purchase of any shares or financial products in Singapore. Accordingly, BMO and its affiliates do not represent that this document and any other materials produced in connection therewith may lawfully be circulated or distributed, whether directly or indirectly, to persons in Singapore. This document and the material do not and are not intended to constitute the provision of financial advisory services, whether directly or indirectly, to persons in Singapore. This document and any information contained in this report shall not be disclosed to any other person. If you are not an accredited investor, please disregard this report. BMO Singapore Branch does not accept legal responsibility for the contents of the report. In Asia, Bank of Montreal is licensed to conduct banking and financial services in Hong Kong and Singapore. Certain products and services referred to in this document are designed specifically for certain categories of investors in a number of different countries and regions. Such products and services would only be offered to these investors in those countries and regions in accordance with applicable laws and regulations. The Information is directed only at persons in jurisdictions where access to and use of such information is lawful.

To Thai Residents: The contents hereof are intended solely for the use of persons qualified as Institutional Investors according to Notification of the Securities and Exchange Commission No. GorKor. 11/2547 Re: Characteristics of Advice which are not deemed as Conducting Derivatives Advisory Services dated 23 January 2004 (as amended). BMO and its affiliates do not represent that the material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any regulatory requirements in Thailand, or pursuant to an exemption available under any applicable laws and regulations.

To U.S. Residents: BMO Capital Markets Corp. furnishes this report to U.S. residents and accepts responsibility for the contents herein, except to the extent that it refers to securities of Bank of Montreal.

These documents are provided to you on the express understanding that they must be held in complete confidence and not republished, retransmitted, distributed, disclosed, or otherwise made available, in whole or in part, directly or indirectly, in hard or soft copy, through any means, to any person, except with the prior written consent of BMO Capital Markets.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., (Member FDIC). Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets.

A member of BMO Financial Group

U.S. Economic Outlook | Our key forecasts for the U.S. economy **December 16, 2022**

U.S. Economic Outlook for Dec. 16, 2022

A Publication of BMO Capital Markets Economic Research • Douglas Porter, CFA, Chief Economist, BMO Financial Group

		2021				2022				2023							
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023	2024
Production	**q/q % chng : a.r.**																
Real GDP (chain-weighted)		6.3	7.0	2.7	7.0	-1.6	-0.6	2.9	1.5	-1.2	-2.0	0.0	0.5	5.9	2.0	0.0	1.3
Final Sales		9.2	7.9	0.7	1.9	-1.8	1.3	4.0	1.3	-1.4	-2.1	0.1	0.5	5.7	1.3	0.1	1.3
Final Domestic Demand		9.9	8.2	1.7	2.0	1.3	0.2	0.9	2.7	-1.1	-1.8	0.2	0.6	6.7	1.7	0.1	1.3
Consumer Spending		10.8	12.1	3.0	3.1	1.3	2.0	1.7	3.5	-1.3	-2.4	0.1	0.6	8.3	2.8	0.3	1.3
Durables		44.7	10.6	-22.0	5.1	7.6	-2.8	-0.3	6.0	-2.0	-5.0	0.0	0.5	18.5	0.1	-0.6	1.1
Nondurables		14.9	12.2	1.7	0.7	-4.4	-2.5	-0.1	3.0	-1.0	-3.0	0.0	0.8	8.8	-0.4	-0.4	1.3
Services		4.0	12.3	9.2	3.5	2.1	4.6	2.7	3.0	-1.2	-1.5	0.2	0.5	6.3	4.4	0.6	1.4
Government Spending		6.5	-3.0	-0.2	-1.0	-2.3	-1.6	3.0	2.0	0.1	1.7	1.1	0.0	0.6	-0.8	1.1	1.3
Business Investment		8.9	9.9	0.6	1.1	7.9	0.1	5.1	2.9	-0.7	-1.9	-0.2	1.5	6.4	3.7	0.7	1.4
Non-residential Construction		1.9	-2.5	-6.7	-12.7	-4.3	-12.7	-6.9	-6.0	-2.0	-4.0	-3.0	1.0	-6.4	-8.1	-4.4	0.7
Equipment		6.1	14.0	-2.2	1.6	11.4	-2.0	10.7	2.0	-2.0	-4.0	-1.0	1.4	10.3	4.6	0.2	1.1
Intellectual Property		15.6	12.6	7.4	8.1	10.8	8.9	5.8	7.0	1.0	1.0	1.5	1.7	9.7	8.7	3.3	1.9
Residential Construction		11.6	-4.9	-5.8	-1.1	-3.1	-17.8	-26.8	-13.0	-6.0	-4.0	-1.0	1.0	10.7	-9.8	-9.8	0.9
Exports		0.4	4.9	-1.1	23.5	-4.6	13.8	15.3	-4.5	-2.0	-3.0	1.0	1.6	6.1	7.1	0.8	1.4
Imports		7.6	7.9	6.6	18.6	18.4	2.2	-7.3	5.0	-0.5	-1.0	1.2	1.7	14.1	8.8	0.0	1.5
Inventory Change	2012$ blns : a.r.	-83.0	-143.6	-48.6	197.6	214.5	110.2	49.6	60.0	70.0	70.0	65.0	65.0	-19.9	104.0	67.5	61.5
Contrib. to GDP Growth	ppts : a.r.	-2.5	-0.7	2.0	5.0	0.1	-1.9	-1.0	0.2	0.2	0.0	-0.1	0.0	0.2	0.6	-0.2	0.0
Net Exports	2012$ blns : a.r.	-1,164.5	-1,203.9	-1,267.5	-1,297.6	-1,488.7	-1,430.5	-1,264.7	-1,342.2	-1,350.4	-1,360.1	-1,365.4	-1,371.8	-1,233.4	-1,381.5	-1,361.9	-1,387.2
Contrib. to GDP Growth	ppts : a.r.	-1.0	-0.6	-1.1	-0.2	-3.1	1.2	2.9	-1.5	-0.2	-0.2	-0.1	-0.1	-1.3	-0.8	0.1	-0.1
Nominal GDP	$ blns : a.r.	22,314	23,047	23,550	24,349	24,741	25,249	25,699	25,921	26,054	26,133	26,299	26,498	23,315	25,402	26,246	27,197
Growth	q/q % chng : a.r.	11.7	13.8	9.0	14.3	6.6	8.5	7.3	3.5	2.1	1.2	2.6	3.1	10.7	9.0	3.3	3.6
Real GDP	y/y % chng	1.2	12.5	5.0	5.7	3.7	1.8	1.9	0.5	0.7	0.3	-0.4	-0.7				
Inflation	**q/q % chng : a.r.**																
GDP Price Index		5.2	6.3	6.2	6.8	8.3	9.0	4.3	2.0	3.3	3.3	2.6	2.5	4.5	6.8	3.4	2.3
Core PCE Deflator		3.2	6.1	4.9	4.8	5.6	4.7	4.6	3.9	4.1	3.5	3.1	2.9	3.5	5.0	3.8	2.8
CPI All Items		4.1	8.2	6.7	7.9	9.2	10.5	5.7	3.6	4.5	4.2	2.9	2.9	4.7	8.0	4.5	2.7
Ex. Food and Energy		1.4	7.8	5.3	5.6	6.5	6.6	6.4	4.5	4.3	3.7	3.2	3.0	3.6	6.2	4.4	2.9
Food Prices		2.4	4.3	7.7	9.4	10.3	12.6	12.4	8.1	7.0	4.2	3.3	2.7	3.9	10.0	6.9	2.9
Energy Prices		49.4	21.9	21.4	32.2	38.9	50.8	-10.4	-12.5	1.4	9.6	-1.4	2.1	20.8	25.2	0.6	-1.1
Services		2.1	5.0	3.6	4.6	6.0	8.9	7.8	6.3	4.7	3.8	3.2	3.0	2.8	6.2	5.2	3.0
CPI All Items	y/y % chng	1.9	4.8	5.3	6.7	8.0	8.6	8.3	7.2	6.0	4.5	3.8	3.6				
Ex. Food and Energy	y/y % chng	1.4	3.7	4.1	5.0	6.3	6.0	6.3	6.0	5.5	4.8	4.0	3.6				
Core PCE Deflator	y/y % chng	1.7	3.5	3.9	4.7	5.3	5.0	4.9	4.7	4.3	4.0	3.7	3.4				
Financial	**% : quarterly avg.**																
Fed Funds Rate		0.13	0.13	0.13	0.13	0.21	0.96	2.63	3.79	4.79	5.13	5.13	5.13	0.13	1.90	5.04	4.42
90-Day T-Bill		0.05	0.02	0.05	0.05	0.30	1.10	2.75	4.25	4.90	5.05	5.05	5.05	0.05	2.10	5.00	4.35
1-Year T-Bill		0.08	0.06	0.08	0.20	0.96	2.20	3.40	4.60	4.95	5.00	4.90	4.80	0.10	2.80	4.90	4.20
10-Year Bond Yield		1.32	1.59	1.33	1.54	1.94	2.93	3.10	3.80	3.85	3.90	3.70	3.55	1.44	2.95	3.75	3.35
10-Year BBB Corporate Spread	ppts	1.30	1.20	1.13	1.16	1.37	1.68	1.90	1.82	1.90	2.31	2.41	2.36	1.20	1.69	2.24	2.23
Foreign Trade	**$ blns : a.r.**																
Current Account Balance		-755	-826	-905	-899	-1,130	-1,004	-874	-950	-964	-981	-993	-1,002	-846	-990	-985	-1,020
Share of GDP		-3.4	-3.6	-3.8	-3.7	-4.6	-4.0	-3.4	-3.7	-3.7	-3.8	-3.8	-3.8	-3.6	-3.9	-3.8	-3.8
Merchandise Balance		-1,061	-1,070	-1,090	-1,140	-1,367	-1,242	-1,128	-1,204	-1,217	-1,231	-1,242	-1,254	-1,090	-1,235	-1,236	-1,284
Non-Merchandise Balance		306	244	185	241	237	238	254	254	253	250	249	252	244	246	251	263
Yen	¥/US$: qtr. avg.	106	109	110	114	116	130	138	142	134	133	132	130	110	131	132	127
Euro	US$/€ : qtr. avg.	1.21	1.21	1.18	1.14	1.12	1.06	1.01	1.02	1.06	1.07	1.08	1.10	1.18	1.05	1.08	1.12
Pound	US$/£ : qtr. avg.	1.38	1.40	1.38	1.35	1.34	1.26	1.18	1.18	1.24	1.25	1.26	1.27	1.38	1.24	1.25	1.29
Trade-Wt. Dollar (broad)	Jan. '97 = 100	112.3	111.8	113.3	115.0	115.5	119.1	123.7	125.0	121.9	121.0	120.1	119.3	113.1	120.8	120.6	117.5
WTI Spot	US$/bbl : qtr. avg.	57.8	66.1	70.6	77.4	94.4	108.6	92.6	84.4	87.5	92.5	90.0	90.0	68.0	95.0	90.0	80.0
Henry Hub Spot	US$/mmbtu : qtr. avg.	3.6	2.9	4.4	4.8	4.7	7.5	8.0	5.9	6.0	5.5	5.5	5.0	3.9	6.5	5.5	3.5
Incomes	**y/y % chng**																
Pre-Tax Profits w/IVA,CCA		16.1	39.2	15.3	22.3	10.9	7.7	4.4	2.7	1.7	-3.0	-1.7	-0.4	22.6	6.3	-0.9	2.9
Personal Income		16.1	2.1	4.9	6.9	-3.5	3.2	4.1	4.8	5.2	4.8	4.3	3.7	7.4	2.1	4.5	4.4
Real Disposable Income		14.5	-4.4	-1.5	-0.4	-12.8	-5.6	-4.3	-2.5	0.3	0.8	0.7	0.3	1.9	-6.5	0.5	1.9
Savings Rate	% : quarterly avg.	20.4	10.8	9.1	7.3	4.3	3.2	2.8	2.6	2.9	3.4	3.5	3.5	12.0	3.2	3.3	3.8
Other Indicators	**quarterly avg.**																
Unemployment Rate	percent	6.2	5.9	5.1	4.2	3.8	3.6	3.5	3.7	4.2	4.8	5.0	5.1	5.4	3.7	4.8	4.9
Housing Starts	mlns : a.r.	1.58	1.59	1.57	1.68	1.72	1.65	1.46	1.42	1.38	1.35	1.34	1.37	1.61	1.56	1.36	1.41
Existing Home Sales	mlns : a.r.	6.29	5.95	6.07	6.20	6.06	5.37	4.77	4.37	4.26	4.28	4.33	4.42	6.13	5.14	4.32	4.74
Home Prices (Case-Shiller)	y/y % chng	12.3	17.2	19.6	18.4	20.2	20.1	13.2	5.1	-4.8	-13.2	-13.5	-9.8	16.9	14.4	-10.4	-0.5
Motor Vehicle Sales	mlns : a.r.	16.9	16.8	13.4	13.2	14.3	13.4	13.5	14.6	13.6	13.6	14.5	15.0	15.1	14.0	14.2	15.5
Civilian Employment Growth	q/q % chng : a.r.	1.7	2.8	4.7	5.2	6.9	1.1	1.1	-0.3	-0.7	-1.1	-0.1	0.8	3.2	3.7	-0.2	0.8
Industrial Production	q/q % chng : a.r.	3.1	6.5	3.5	4.8	4.7	5.0	1.7	0.1	-1.4	-2.4	0.7	1.4	4.9	4.0	-0.1	1.5
CBO Budget Deficit	% of GDP													-12.4	-5.5	-4.5	-4.7

Bolded values represent forecasts

BMO Capital Markets
We're here to help.™

General Disclosures

BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Europe p.l.c, and Bank of Montreal (China) Co. Ltd, the institutional broker dealer business of BMO Capital Markets Corp. (Member FINRA and SIPC) and the agency broker dealer business of Clearpool Execution Services, LLC (Member FINRA and SIPC) in the U.S., and the institutional broker dealer businesses of BMO Nesbitt Burns Inc. (Member Investment Industry Regulatory Organization of Canada and Member Canadian Investor Protection Fund) in Canada and Asia, Bank of Montreal Europe p.l.c. (authorised and regulated by the Central Bank of Ireland) in Europe and BMO Capital Markets Limited (authorised and regulated by the Financial Conduct Authority) in the UK and Australia. BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such Information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Economic Publications

Our publications are disseminated via email and may also be available via our web site https://economics.bmo.com. Please contact your BMO Financial Group Representative for more information.

Additional Matters

This report is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Its contents have not been reviewed by any regulatory authority. BMO Capital Markets does not represent that this report may be lawfully distributed or that any financial products may be lawfully offered or dealt with, in compliance with regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder.

To Australian residents: BMO Capital Markets Limited is exempt from the requirement to hold an Australian financial services licence under the Corporations Act and is regulated by the UK Financial Conduct Authority under UK laws, which differ from Australian laws. This document is only intended for wholesale clients (as defined in the Corporations Act 2001) and Eligible Counterparties or Professional Clients (as defined in Annex II to MiFID II).

To Canadian Residents: BMO Nesbitt Burns Inc. furnishes this report to Canadian residents and accepts responsibility for the contents herein subject to the terms set out above. Any Canadian person wishing to effect transactions in any of the securities included in this report should do so through BMO Nesbitt Burns Inc.

To E.U. Residents: In an E.U. Member State this document is issued and distributed by Bank of Montreal Europe plc which is authorised and regulated in Ireland and operates in the E.U. on a passported basis. This document is only intended for Eligible Counterparties or Professional Clients, as defined in Annex II to "Markets in Financial Instruments Directive" 2014/65/EU ("MiFID II").

To U.K. Residents: In the UK this document is published by BMO Capital Markets Limited which is authorised and regulated by the Financial Conduct Authority. The contents hereof are intended solely for the use of, and may only be issued or passed on to, (I) persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (II) high net worth entities falling within Article 49(2)(a) to (d) of the Order (all such persons together referred to as "relevant persons"). The contents hereof are not intended for the use of and may not be issued or passed on to retail clients.

To Hong Kong Residents: This document is issued and distributed in Hong Kong by Bank of Montreal ("BMO"). BMO is an authorized institution under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong) and a registered institution with the Securities and Futures Commission (CE No. AAK809) under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). This material has not been reviewed or approved by any regulatory authority in Hong Kong. Accordingly the material must not be issued, circulated or distributed in Hong Kong other than (1) except for "structured products" as defined in the Securities and Futures Ordinance, in circumstances which do not constitute it as a "Prospectus" as defined in the Companies Ordinance or which do not constitute an offer to the public within the meaning of that Ordinance, or (2) to Professional investors as defined in the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules made thereunder. Unless permitted by the securities laws of Hong Kong, no person may issue in Hong Kong, or have in its possession for issue in Hong Kong this material or any other advertisement, invitation or document relating to the products other than to a professional investor as defined the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules.

To Israeli residents: BMO Capital Markets is not licensed under the Israeli Law for the Regulation of Investment Advice, Investment Marketing and Portfolio Management of 1995 (the "Advice Law") nor does it carry insurance as required thereunder. This document is to be distributed solely to persons that are qualified clients (as defined under the Advice Law) and qualified investors under the Israeli Securities Law of 1968. This document represents the analysis of the analyst but there is no assurance that any assumption or estimation will materialize.

To Korean Residents: This material is not provided to make a recommendation for specific Korean residents to enter into a contract for trading financial investment instruments, for investment advising, for discretionary investment, or for a trust, nor does it constitute advertisement of any financial business or financial investment instruments towards Korean residents. The material is not provided as advice on the value of financial investment instruments or any investment decision for specific Korean residents. The provision of the material does not constitute engaging in the foreign exchange business or foreign exchange brokerage business regulated under the Foreign Exchange Transactions Act of Korea.

To PRC Residents: This material does not constitute an offer to sell or the solicitation of an offer to buy any financial products in the People's Republic of China (excluding Hong Kong, Macau and Taiwan, the "PRC"). BMO and its affiliates do not represent that this material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any applicable registration or other requirements in the PRC, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. This material may not be distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations.

Singapore Residents: This document has not been registered as a prospectus with the Monetary Authority of Singapore and the material does not constitute an offer or sale, solicitation or invitation for subscription or purchase of any shares or financial products in Singapore. Accordingly, BMO and its affiliates do not represent that this document and any other materials produced in connection therewith may lawfully be circulated or distributed, whether directly or indirectly, to persons in Singapore. This document and the material do not and are not intended to constitute the provision of financial advisory services, whether directly or indirectly, to persons in Singapore. This document and any information contained in this report shall not be disclosed to any other person. If you are not an accredited investor, please disregard this report. BMO Singapore Branch does not accept legal responsibility for the contents of the report. In Asia, Bank of Montreal is licensed to conduct banking and financial services in Hong Kong and Singapore. Certain products and services referred to in this document are designed specifically for certain categories of investors in a number of different countries and regions. Such products and services would only be offered to these investors in those countries and regions in accordance with applicable laws and regulations. The Information is directed only at persons in jurisdictions where access to and use of such information is lawful.

To Thai Residents: The contents hereof are intended solely for the use of persons qualified as Institutional Investors according to Notification of the Securities and Exchange Commission No. GorKor. 11/2547 Re: Characteristics of Advice which are not deemed as Conducting Derivatives Advisory Services dated 23 January 2004 (as amended). BMO and its affiliates do not represent that the material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any regulatory requirements in Thailand, or pursuant to an exemption available under any applicable laws and regulations.

To U.S. Residents: BMO Capital Markets Corp. furnishes this report to U.S. residents and accepts responsibility for the contents herein, except to the extent that it refers to securities of Bank of Montreal.

These documents are provided to you on the express understanding that they must be held in complete confidence and not republished, retransmitted, distributed, disclosed, or otherwise made available, in whole or in part, directly or indirectly, in hard or soft copy, through any means, to any person, except with the prior written consent of BMO Capital Markets.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., (Member FDIC). Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets.

A member of BMO Financial Group

Rates Scenario for December 15, 2022

A Publication of BMO Capital Markets Economic Research · Douglas Porter, CFA, Chief Economist, BMO Financial Group

Forecast Summary

(avg.)	Actual	Forecasts									
	2022	2022	2023							2023	
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Q3	Q4
BoC overnight[1]	3.75	4.25[2]	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
10-yr Canadas	3.17	2.85	3.00	3.20	3.35	3.35	3.30	3.25	3.20	3.15	3.05
Fed funds[1]	3.88	4.38[2]	4.38	4.88	5.13	5.13	5.13	5.13	5.13	5.13	5.13
10-yr Treasuries	3.89	3.50	3.70	3.85	4.00	3.95	3.90	3.85	3.80	3.70	3.55
C$ per US$	1.35	1.35	1.35	1.34	1.34	1.33	1.33	1.33	1.32	1.32	1.30
US$/€	1.02	1.05	1.05	1.06	1.06	1.07	1.07	1.08	1.08	1.08	1.10
US$/£	1.17	1.23	1.23	1.24	1.24	1.24	1.25	1.25	1.25	1.26	1.27
¥/US$	142	135	135	134	134	133	133	133	132	132	130

[1] end of period; [2] actual value

Sources: BMO Economics, Haver Analytics

ECONOMIC RESEARCH
economics.bmo.com

Michael Gregory, CFA, Deputy Chief Economist
michael.gregory@bmo.com

Jennifer Lee, Senior Economist
jennifer.lee@bmo.com

Canada-U.S. Rates Outlook

Michael Gregory, CFA, Deputy Chief Economist

- Compared to the last Rates Scenario (November 9), **we've lifted our forecast for the terminal fed funds target range by 25 bps to 5.00%-to-5.25%**. **We continue to look for a terminal Bank of Canada policy rate of 4.50%**, with both peaks reached in 2023Q1.
- After last March's inaugural (quarter-point) rate hikes by both central banks, we've been consistently impressed and occasionally surprised by the hawkishness of their rhetoric and the aggressiveness of their actions. They've talked the talk and walked the walk. Consequently, against the background of stubborn core inflation and wage growth, we've been regularly increasing our forecasts. The key catalyst this month was the FOMC's 'dot plot' which showed 17 of 19 participants now projecting a 2023-end fed funds rate above 5.00% compared to none just three months previously.
- As policy rates stabilize during Q1, we **look for real GDP growth to grind to a halt** in both countries (0% average growth in 2023), probably displaying mild downturns for at least a couple quarters (enough to be considered short and shallow recessions). Nevertheless, we still expect the Fed and BoC to remain on hold for the rest of the year, assessing the impacts of their rate hike campaigns on inflation. We judge there'll be enough progress made to forestall further rate hikes but not enough to encourage rate cuts until early 2024. In both economies, we see the key inflation metrics still running above 3% by the end of next year, but on clear tracks to 2%.
- The **key risk to the inflation outlook** comes from **wage growth** and **excess labour demand**, for the U.S. in particular. South of the border, the annual change in average hourly earnings increased by two-tenths to 5.1% in November and to 5.8% for production and nonsupervisory employees. The (non-smoothed) Atlanta Fed Wage Growth Tracker also increased by two-tenths to 6.5%. Meanwhile, the annual changes in the Employment Cost Index and productivity-adjusted unit labour costs were both sporting '5 handles' in Q3. These wage paces portend stubborn underlying inflation readings (despite the recent pair of lower-than-expected core CPI results), and they require weaker labour demand conditions to rein them in. Meanwhile, payroll employment expanded by a sturdy

263k in November with labour demand (payrolls + openings) in October just shy of its cycle high. At the December 14 press conference, Chair Powell repeated that *"the labor market continues to be out of balance, with demand substantially exceeding the supply of available workers"*.

- In Canada, the annual change in average hourly wages was steady at 5.6% in November, a pre-pandemic high. However, the growth in the Bank of Canada's 'wage common' metric was a relatively benign 3.1% in Q3. Although household employment expanded by a low 10.1k in November, this followed a strong 108.3k in October. Meanwhile, with job vacancies hovering near the one million mark since the spring, labour demand north of the border also remains sturdy and wage-inflation prone. *"Canada's labour market remains tight"* is how the BoC described it on December 7.
- Both central banks are hoping that (policy-induced) weakening labour demand will fall more on the job openings side than on payrolls (minimizing the rise in the unemployment rate), slowing wage growth in its wake. If the peaks we posit don't do the trick (which is where the net risk still tilts), we would brace for even higher policy rates along with deeper economic downturns.
- ***Federal Reserve:*** On December 14, and as signalled, the FOMC raised the target range for the fed funds rate by 50 bps to 4.25%-to-4.50%, a 15-year high. This was the seventh consecutive action for a cumulative 425 bps, which is the most aggressive tightening over a 10-month period since the Fed began targeting fed funds in the 1980s.
- The policy statement repeated that *"ongoing increases in the target range will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time"*. In the presser, Chair Powell reiterated that *"reducing inflation is likely to require a sustained period of below-trend growth and some softening of labor market conditions"* and that *"we will stay the course, until the job is done"*. In other words, more rate hikes are coming. **We look for another 50 bps on February 1 and a further 25 bps on March 22.**
- In the Summary of Economic Projections and amid the wave of above-5% projections mentioned earlier, the median fed funds forecast is 5.125% and it wouldn't take much to raise it further (just three participants increasing their at-the-median calls). Reflecting the raised profile for policy rates, median real GDP growth was revised down for 2023 (by 0.7 ppts to 0.5% Q4/Q4) with the jobless rate revised up (by 0.2 ppts to 4.6% in Q4). But, despite the tighter policy, slower growth and higher joblessness, the median inflation projections were still lifted meaningfully (PCE by 0.3 ppts to 3.1% Q4/Q4 and core PCE by 0.4 ppts to 3.5%). This emphasizes how sticky the FOMC is now perceiving the underlying inflation process to be, and where the net risk to our Fed call rests… the upside.
- ***Bank of Canada:*** On December 7, the Bank increased the target for the overnight rate by 50 bps to 4.25%, also the highest level in 15 years. Like the Fed, this was the seventh consecutive action but for a cumulative 400 bps, which, for the BoC, is the most aggressive tightening over such an interval since 1981. Signalling the possibility that this latest rate hike could be the last, the policy statement said: *"Looking ahead, Governing Council will be considering whether the policy interest rate needs to rise further to bring supply and demand back into balance and return inflation to target*." This contrasts to the previous statement (October 26) which said that *"the Governing Council expects that the policy interest rate will need to rise further*".
- In a subsequent speech (December 12), Governor Macklem said: "*We are trying to balance the risks of over- and under-tightening monetary policy. If we raise rates too much, we could drive the economy into an unnecessarily painful recession and undershoot the inflation target. If we don't raise them enough, inflation will remain elevated, and households and business will come to expect persistently high inflation. With inflation running well above target, this is the greater risk."* To mitigate this latter risk and in the wake of what we expect will still be stubborn core inflation readings, **we look for a final 25 bp rate hike on January 25**.

- ***Bond yields:*** October is standing as the high-water mark for 10-year Treasury yields this cycle, on a monthly average basis, at just under 4%. Although spot yields have since rallied back to the mid-3% range, we judge the market will take another run at 4%, as the Fed continues to tighten through March and stickiness becomes a common description of core inflation and wage growth. However, these levels, like October's, should prove to be fleeting with an economic downturn unfolding in 2023 and policy rate cuts teed up for 2024. It could be a round trip for 10-year yields, ending next year where they are ending this year. Canada 10-year yields should take their cues from their U.S. counterparts, with a slight bias towards less negative spreads.
- ***U.S. dollar:*** The trade-weighted greenback averaged its highest level on record in October (series started in 1973), surpassing the previous peak at the onset of the pandemic in April 2020. The dollar weakened in November and is on track to do so again in December. After the Fed's relatively aggressive policy approach had strengthened the greenback, the prospects for reduced (if not ended) rate hikes are tarnishing some of its lustre. While global economic and geopolitical risks should continue to drive the currency as well, short of any flare-ups on those fronts, we look for the U.S. dollar's modest depreciation to continue next year (by almost 3% over the course of 2023).
- ***Canadian dollar:*** The dominant driver of the loonie these days is the U.S. dollar. When the greenback hit its record high in October, the Canadian dollar averaged C$1.370 (US$0.730). To put this in context, in the past 18 years, the currency has only been this weak (or weaker) on two occasions, March-May 2020 at the onset of the pandemic and December 2015-February 2016 owing to the collapse in oil prices. But as the big dollar has since turned around, so, too, has the loonie, and we expect this trend to continue in 2023. After averaging around C$1.350 this December (US$0.741), we look for the Canadian dollar to appreciate 3.7% to C$1.300 (US$0.769) by the end of next year.

Overseas

Jennifer Lee, Senior Economist

- The **good news** is: It looks like economic growth for 2022 was not as bad as everyone feared. The **bad news** is: Recession calls are getting pushed into late 2022 and 2023. This uncertainty is making central bankers' jobs that much more difficult as they continue to tighten in efforts to battle inflation rates that are far, far from target. But the year is ending with a notable twist as policymakers are all over the map, with some super hawkish and others less so.
- On the uber-hawkish end is, surprisingly, the **ECB**. It raised rates 50 bps on December 15, a move which was widely expected. But, in efforts to appease those who wanted 75 bps (Austria, Netherlands, Slovakia, for example), it inserted some new language into the press statement. Citing upside risks to inflation, rates still need to rise "*significantly*" and at a "*steady pace*" to levels that are "*sufficiently restrictive*". It all goes back to inflation, where the risks are still "*primarily on the upside*", while the risks to growth are still on the downside, *"especially in the near term*". And, in a rare moment of clarity, one that could be construed as forward guidance, President Lagarde said that 50 bp moves can be expected for a period of time. The rate hike was very much a hawkish one.
- Meantime, in Britain, the **BoE** also raised its Bank Rate 50 bps to 3.50% in December, but that rate hike was very much a dovish one. Look no further than the vote itself: six members of the Committee voted for the 50 bp move, while one voted for a 75 bp jump, and the other two put their hands up for no change. And, armed with the knowledge of what the Treasury plans to do on the fiscal front, the Bank tweaked its GDP estimates a bit higher for Q4 and tweaked its CPI forecasts lower for Q2 of next year. Inflation looks to have peaked, but it is still expected to stay "*very high*" in coming months. So, more rate hikes are coming, with more "*forceful*" actions if needed.
- The **RBA** wrapped up the year with a 25 bp rate hike, bringing the cash rate (which began the year at 0.10%) to a decade high of 3.1%, the third in a row of that magnitude following three consecutive 50 bp hikes. Although the pace of tightening has slowed, the Bank's job is not finished. Even though inflation finally pulled back in October

to 6.9% from the third quarter's 32-year highs, that is still more than double the upper end of the 2%-to-3% target range. Indeed, more work needs to be done and the RBA warned that it "*expects to increase interest rates further*" but it is "*not on a pre-set course*". We look for another 25 bp hike in February, and perhaps one more, albeit modest, hike of 15 bps in March, leaving the cash rate at an even 3.50%. Depending on how China fares as it reopens, there may be more work for the RBA if commodity prices come under pressure.

- All year, the standout in the crowd has been the **BoJ** as it remained firmly glued to the sidelines with its easy monetary policy stance of negative rates (-0.1%), keeping 10-year JGB yields at around 0%, and purchases of ETFs and J-REITs and corporate bonds. We thought that the Bank would have tweaked its policy a little, such as by widening the band around 10-year bonds, but to no avail. Even as the JPY plunged to 32-year lows of ¥150 at one point in October, and the core CPI hit a 41-year high of 3.6%, the Bank did not blink, though the Summary of Opinions from the last meeting in October indicated that some are getting a little uncomfortable with the side effects of their policies. In any event, the official word remains that it will continue down this path until inflation stabilizes around 2%. But, the Board will probably revisit its policies once Governor Kuroda steps down in April. Although radical changes are unlikely, there is always a possibility of some tweaks.
- Actually, the **PBoC** stands with Japan in that it is dovish; but, there is a difference in that the PBoC is making changes. As recently as November, it cut the reserve requirements for most banks by 25 bps, the first such move since April. And, in August, it trimmed its one-year loan prime rate (LPR) by 5 bps to 3.65%, and its 5-year LPR by 15 bps to 4.30%. China's economy has struggled mightily under the weight of COVID restrictions and slower demand by its global customers. Look for further easing in 2023, but the government has taken a step in the right direction by easing restrictions on its zero-COVID policies. The hope now is that there will not be another resurgence in cases, particularly around the Lunar New Year.

Foreign Exchange Forecasts

(local currency per US$: avg.)	Actual 2022 Nov	Forecast 2022 Dec	2023 Jan	Feb	Mar	Apr	May	Jun	Jul	2023 Q3	Q4
Canadian Dollar											
C$ per US$	1.35	1.35	1.35	1.34	1.34	1.33	1.33	1.33	1.32	1.32	1.30
US$ per C$[1]	0.743	0.741	0.743	0.745	0.748	0.750	0.752	0.755	0.757	0.759	0.767
Trade-weighted	120.3	118.4	118.6	118.8	119.1	119.3	119.5	119.7	120.0	120.2	120.9
U.S. Dollar											
Trade-weighted[2]	125.0	122.4	122.1	121.9	121.6	121.3	121.0	120.7	120.4	120.1	119.3
European Currencies											
Euro[1]	1.02	1.05	1.05	1.06	1.06	1.07	1.07	1.08	1.08	1.08	1.10
Danish Krone	7.31	7.05	7.05	7.00	7.00	6.95	6.95	6.90	6.90	6.85	6.80
Norwegian Krone	10.16	9.75	9.75	9.70	9.70	9.65	9.65	9.60	9.60	9.55	9.50
Swedish Krone	10.70	10.30	10.25	10.25	10.20	10.15	10.10	10.10	10.05	10.00	9.90
Swiss Franc	0.97	0.92	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.90
U.K. Pound[1]	1.17	1.23	1.23	1.24	1.24	1.24	1.25	1.25	1.25	1.26	1.27
Asian Currencies											
Chinese Yuan	7.18	6.98	6.97	6.97	6.96	6.95	6.95	6.94	6.93	6.93	6.91
Japanese Yen	142	135	135	134	134	133	133	133	132	132	130
Korean Won	1,362	1,305	1,305	1,300	1,300	1,300	1,295	1,295	1,290	1,290	1,285
Indian Rupee	81.7	82.2	82.2	82.2	82.1	82.1	82.1	82.1	82.1	82.0	82.0
Singapore Dollar	1.39	1.35	1.35	1.35	1.35	1.35	1.34	1.34	1.34	1.34	1.34
Malaysian Ringgit	4.61	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.35
Thai Baht	36.4	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
Philippine Peso	57.6	55.8	55.7	55.7	55.6	55.6	55.5	55.5	55.4	55.4	55.2
Taiwan Dollar	31.4	30.5	30.5	30.5	30.4	30.4	30.4	30.4	30.3	30.3	30.2
Indonesian Rupiah	15,673	15,580	15,570	15,560	15,550	15,545	15,535	15,525	15,515	15,505	15,480
Other Currencies											
Australian Dollar[1]	0.660	0.675	0.676	0.678	0.679	0.680	0.681	0.683	0.684	0.685	0.689
New Zealand Dollar[1]	0.606	0.635	0.636	0.638	0.639	0.640	0.641	0.643	0.644	0.645	0.649
Mexican Peso	19.45	19.75	19.70	19.65	19.55	19.50	19.45	19.40	19.30	19.25	19.05
Brazilian Real	5.27	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.20	5.20	5.20
South African Rand	17.5	17.4	17.3	17.3	17.3	17.2	17.2	17.2	17.1	17.1	17.0
Cross Rates											
Versus Canadian Dollar											
Euro (C$/€)	1.37	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.43	1.43	1.43
U.K. Pound (C$/£)	1.58	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.65	1.65
Japanese Yen (¥/C$)	106	100	100	100	100	100	100	100	100	100	100
Australian Dollar (C$/A$)	0.89	0.91	0.91	0.91	0.91	0.91	0.91	0.90	0.90	0.90	0.90
Versus Euro											
U.K. Pound (£/€)	0.87	0.85	0.85	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.87
Japanese Yen (¥/€)	145	142	142	142	142	142	142	142	143	143	143

[1] (US$ per local currency); [2] Federal Reserve Broad Index

Sources: BMO Economics, Haver Analytics

Rates Scenario | Rates Scenario for December 15, 2022

Interest Rate Forecasts

(% : avg.)	Actual	Forecasts									
	2022	2022	2023							2023	
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Q3	Q4
Canada											
Overnight target (period end)	3.75	4.25[7]	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Overnight target	3.75	4.14[7]	4.30	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CORRA[2]	3.76	4.15	4.30	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
3-month bills	3.97	4.10	4.30	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45
6-month	4.20	4.25	4.40	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55
1-year	4.32	4.30	4.45	4.65	4.60	4.55	4.50	4.50	4.45	4.40	4.30
2-year bonds	3.95	3.80	3.95	4.15	4.05	4.00	3.95	3.85	3.80	3.75	3.55
3-year	3.83	3.50	3.65	3.85	3.80	3.75	3.70	3.65	3.60	3.55	3.40
5-year	3.37	3.00	3.20	3.35	3.35	3.35	3.35	3.30	3.30	3.30	3.25
7-year	3.17	2.80	2.95	3.15	3.15	3.15	3.15	3.15	3.15	3.10	3.10
10-year	3.17	2.85	3.00	3.20	3.35	3.35	3.30	3.25	3.20	3.15	3.05
30-year	3.21	2.85	3.00	3.20	3.35	3.30	3.25	3.20	3.20	3.15	3.00
1m BA	4.30	4.60	4.80	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.95
3m BA	4.66	4.85	5.00	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.05
Prime rate	5.95	6.34	6.50	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70
United States											
Fed funds target (period end)	3.88	4.38[7]	4.38	4.88	5.13	5.13	5.13	5.13	5.13	5.13	5.13
Fed funds target	3.81	4.15[7]	4.38	4.85	5.01	5.13	5.13	5.13	5.13	5.13	5.13
EFFR[3]	3.78	4.11	4.35	4.83	5.00	5.13	5.13	5.13	5.13	5.13	5.13
SOFR[4]	3.73	4.09	4.32	4.82	4.99	5.12	5.12	5.12	5.12	5.12	5.12
3-month bills	4.32	4.50	4.65	5.00	5.05	5.05	5.05	5.05	5.05	5.05	5.05
6-month	4.61	4.75	4.85	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15
1-year	4.73	4.65	4.80	5.00	5.05	5.05	5.00	4.95	4.90	4.90	4.80
2-year notes	4.50	4.25	4.40	4.55	4.65	4.60	4.50	4.45	4.40	4.30	4.10
3-year	4.34	4.00	4.15	4.30	4.40	4.35	4.30	4.25	4.20	4.10	3.95
5-year	4.06	3.70	3.85	4.00	4.15	4.10	4.05	4.00	3.95	3.90	3.80
7-year	3.99	3.60	3.75	3.95	4.10	4.05	4.00	3.95	3.90	3.85	3.70
10-year	3.89	3.50	3.70	3.85	4.00	3.95	3.90	3.85	3.80	3.70	3.55
30-year bonds	4.00	3.55	3.70	3.85	4.00	3.95	3.90	3.85	3.80	3.75	3.55
1m LIBOR[5]	3.94	4.30	4.50	5.00	5.10	5.20	5.20	5.20			
3m LIBOR[5]	4.65	4.75	4.90	5.25	5.30	5.35	5.35	5.35			
6m LIBOR[5]	5.12	5.20	5.30	5.60	5.60	5.60	5.60	5.60			
12m LIBOR[5]	5.56	5.55	5.65	5.85	5.95	5.90	5.85	5.85			
Prime rate	6.93	7.27	7.50	7.98	8.13	8.25	8.25	8.25	8.25	8.25	8.25
Other G7											
ECB Refi[1]	2.00	2.50[7]	2.50	3.00	3.50	3.50	3.75	3.75	3.75	3.75	3.75
10yr Bund	2.07	1.80	1.80	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.90
BoE Repo[1]	3.00	3.50[7]	3.50	4.00	4.25	4.25	4.25	4.25	4.25	4.25	4.25
SONIA[6]	2.86	3.21	3.44	3.92	4.03	4.20	4.20	4.20	4.20	4.20	4.20
10yr Gilt	3.29	3.00	3.00	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.10
BoJ O/N[1]	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
10yr JGB	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

[1] end of period; [2] Canadian Overnight Repo Rate Average; [3] Effective Fed Funds Rate; [4] Secured Overnight Financing Rate; [5] Most LIBOR rates ceased being published by the provider as of December 31, 2021—However, some USD tenors will continue being published until June 30, 2023 including overnight along with 1, 3, 6 and 12 months; [6] Sterling Overnight Index Average; [7] actual value

Sources: BMO Economics, Haver Analytics

General Disclosures

Conference Board of Canada - October 31, 2022

Description:	(Average Aggregation) Exchange Rate (U.S./Canada)	(Average Aggregation) Canada - 3 Month Treasury Bill ()	(Average Aggregation) Canada, Federal Bonds: 5 Years ()	(Average Aggregation) Canada, Federal Bonds: 10 Years ()	(Average Aggregation) Canada, Federal Bonds: Long-Term ()	(Average Aggregation) United States - 3 Month Treasury Bill ()
Mnemonic:	PFX	RTB90	RGOC5	RGOC10	RGOCL	USRTB90
2023	1.28523125	3.527233	3.76366425	3.7421095	3.7529425	3.79663202
2024	1.29084625	2.61265	3.18880375	3.4959285	3.614262	2.95704869
2025	1.30159625	2.20994	2.8031775	3.17311475	3.366449	2.51965285
2026	1.311038	2.2099405	2.80317775	3.17311475	3.36644875	2.51965285
2027	1.31392825	2.20994075	2.80317775	3.17311475	3.366449	2.51965285
2028	1.3102005	2.2099375	2.8031755	3.173113	3.366447	2.519653
2029	1.3087375	2.20993925	2.8031765	3.1731135	3.36644775	2.519653

CIBC CAPITAL MARKETS

Economics

ECONOMIC INSIGHTS

October 20, 2022

Provincial outlook: Where are the headwinds strongest?

by **Andrew Grantham** andrew.grantham@cibc.com and **Karyne Charbonneau** karyne.charbonneau@cibc.com

The Canadian economy is facing plenty of headwinds at the moment. Rapidly rising interest rates are bringing a correction in the housing market, and are expected to restrain wider consumer spending ahead as well. Meanwhile, a slowing global economy and supply chain issues are impacting manufacturing, and services companies are struggling with limited labour availability.

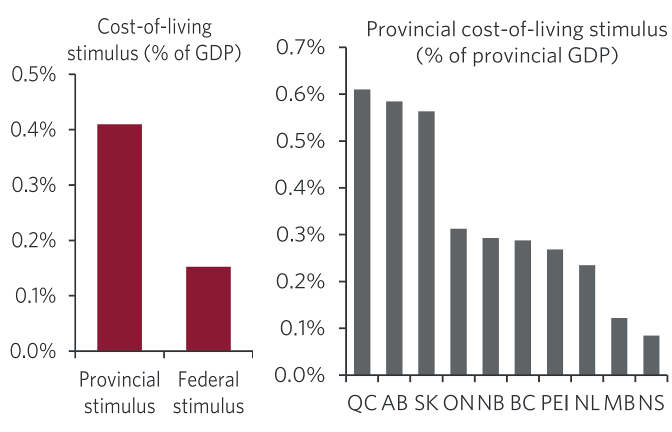
However, not all provinces will be impacted equally by these risks. Commodity-rich areas such as Saskatchewan and Alberta should see less of a slowing in consumer spending and housing due to the wealth being created within those economies, while Atlantic Canada appears to be holding onto gains in interprovincial migration linked to increased work-from-home capabilities and the diversification of their economies. That leaves areas of the country with the most indebted households, such as Ontario and BC, or the tightest labour markets, such as Quebec, to struggle the most for growth ahead.

"Helping" with the cost of living

High inflation has been a problem for every province, and is eating away at some of the savings built up during the pandemic. However, the responses of provincial governments to "help" households with the cost of living increases has varied. We use quotation marks because, although these policies are put in place to help, where they are not well focussed they will also be adding to inflationary pressures.

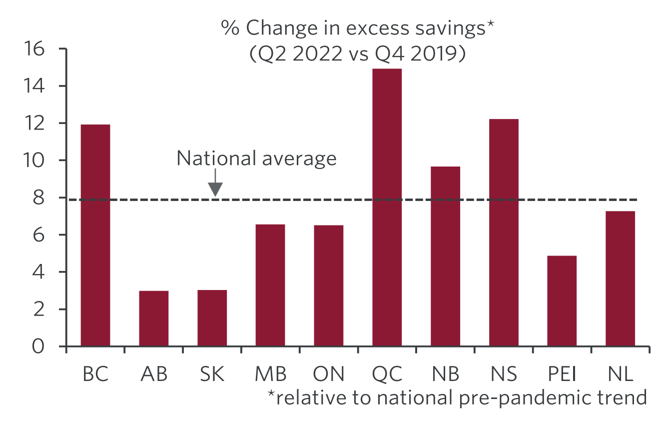
On aggregate, the stimulus provided by provincial governments this year has been more than twice that delivered at the Federal level (Chart 1). The largest stimulus has been doled out by Quebec although, with that province already having the tightest labour market and highest accumulated savings (Chart 2), the extra stimulus could simply prevent inflation from easing as quickly as in other parts of the country. Gains to the volume of economic activity will likely be muted.

Chart 1: Provincial cost of living stimulus has exceeded Federal help (L), particularly in Quebec, Alberta and Saskatchewan (R)



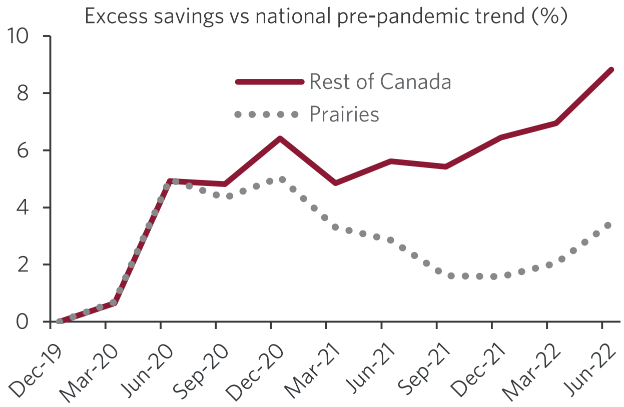
Source: Government Finance agencies, CIBC

Chart 2: Accumulated savings were already highest in Quebec, but were low in Alberta, Saskatchewan



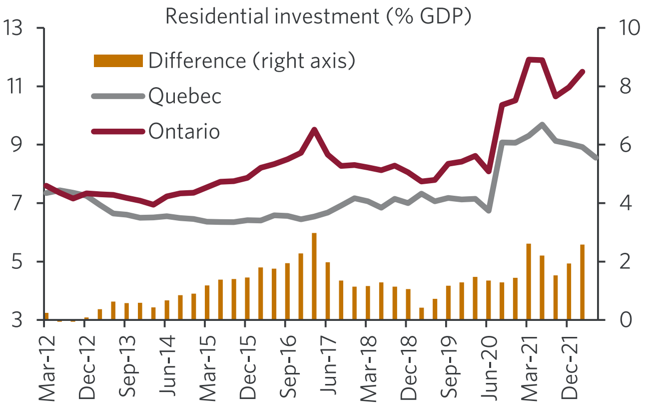
Source: Haver, CIBC

Chart 3: Excess savings in Saskatchewan, Alberta, Manitoba had already been largely run down by end 2021



Source: Haver, CIBC

Chart 5: Residential investment saw a bigger increase as a proportion of GDP in Ontario than in Quebec

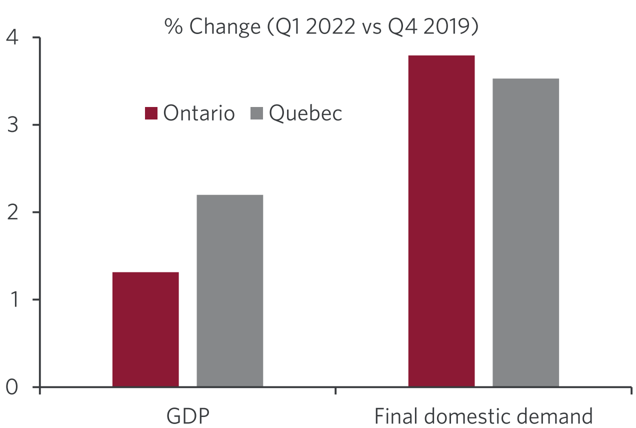


Source: Provincial finance agencies, Haver, CIBC

Coming close to Quebec in terms of cost-of-living stimulus are Alberta and Saskatchewan, as those provinces have distributed some of the tax take from high commodity prices to households. However, the stimulus here may add to the volume of economic activity, rather than just top up already bloated savings accounts.

Because Federal support received by households during the pandemic was proportionately less generous in provinces where wages tend to be above the national average, the build up of savings in Alberta and Saskatchewan was smaller. Indeed, excess savings had more or less been run down before the end of last year, before the provincial stimulus and an improving labour market helped add to them again (Chart 3). With labour markets in these provinces also not as tight as in Quebec, there seems to be greater scope for provincial fiscal stimulus to support the volume of economic activity rather than only adding to inflationary pressures.

Chart 4: Ontario's GDP recovery has been slower than Quebec's, despite strength in domestic demand



Source: Provincial finance agencies, Haver, CIBC

New risks emerge for Ontario and BC

For Ontario, this year and next were supposed to represent a period of above-average growth as supply chain issues, which have impacted the auto industry particularly hard, faded. The impact of those supply chain issues on Ontario's GDP can easily be seen when comparing its recovery with Quebec's (the only other province for which quarterly figures are available). Early this year, Ontario's GDP recovery was trailing Quebec's by around 1%, despite a slightly stronger rebound in final domestic demand (Chart 4). That highlights just how much weakness in exports and inventories impacted Ontario's overall growth rate last year.

However, even though supply chain issues in the auto industry are starting to ease, progress has been fairly slow. Moreover, new risks have emerged for the Ontario economy, stemming from rapidly rising interest rates. Those interest rate increases are quickly cooling housing resale and renovation activity, and with those sectors becoming an even larger share of the Ontario economy up until the first quarter of this year, that means a bigger negative impact on overall growth (Chart 5).

The impact of higher interest rates will also be felt more broadly. After years of chasing higher house prices by taking on larger mortgages, households in BC and Ontario have higher debt levels and by extension pay the most interest to service that debt (Chart 6). With interest rates now rising on revolving debt, and with term debt coming due having to be refinanced at higher rates, households in these provinces will find their ability to spend on other items being squeezed particularly hard.

Chart 6: Years of debt accumulation leave BC and Ontario households most vulnerable to higher interest rates

Source: Statistics Canada, CIBC

Canadians moving to the Atlantic, reversing demographic woes

As we move beyond the next few turbulent quarters, trend growth in each province will be determined by demographics and the outlook for the labour force. With population aging and the bulk of baby boomers nearing retirement, many provinces, especially those with an older population, will need to rely on international or interprovincial migration. This is particularly true for the Atlantic provinces, but also for Quebec and British Columbia.

Ontario has a relatively young population, in part due to strong immigration. As the new home of almost half of the 270k international migrants coming to Canada in the second quarter of this year, the province remains a very popular destination. However, the unaffordability of housing in the province, which worsened considerably during the pandemic, has resulted in an exodus of existing residents towards other provinces, particularly in the Atlantic region (Chart 7). This trend, which started during the pandemic, shows no sign of slowing, as the second quarter of this year marked the largest net drop in interprovincial migration for Ontario in more than 50 years.

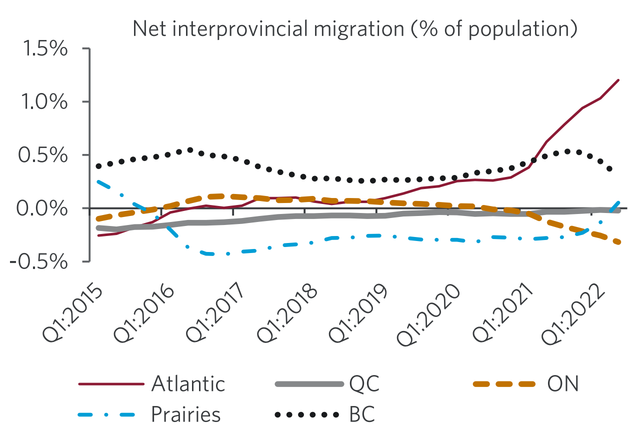
While these interprovincial losses offset only a fraction of the gains from international immigration in Ontario, they are a significant boon for the Atlantic provinces. The Atlantic's older population long spelled trouble for future growth, but in at least a partial reversal of fortune, the pandemic has turned the region into an attractive destination for Canadians seeking more affordable house prices. The work-from-home revolution has opened up options to many people across the country, who are no longer tied to a location because of work.

As of June 2022, about 18% of Canadians who worked did so exclusively from home. Of those, almost 20% lived far enough from their worksite that they could not commute on a daily basis. In fact, across Canada, about 5% of those working from home reported to a worksite outside their province of residence, a proportion that is much higher in the Atlantic provinces and in the Prairies (Chart 8). With an estimated 40% of jobs in Canada that could be done remotely, the Atlantic provinces could benefit from a large pool of working-age people making it their home even if their work is, at least initially, in other provinces. According to Statistics Canada's population projection, interprovincial migration, which would have been a drag based on trends observed just a few years ago, could now drive almost half of the population growth in the region in the coming years.

Housing market to reflect demographic shift

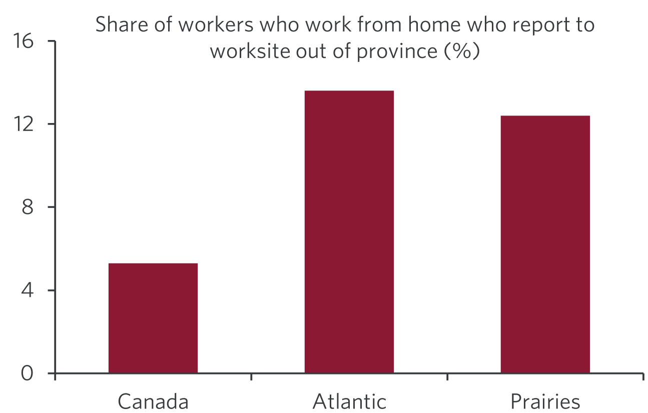
The outlook for population growth in each province is also reflected in the longer-term outlook for housing demand. In the short run, provincial housing markets will continue to be driven by the correction induced by the rapid rise in interest rates, the size of which depends on how inflated local markets had become during the pandemic. Ontario and British Columbia are seeing a rapid adjustment, while sales, and prices, are holding up better in the Prairies and in the Atlantic provinces (Chart 9).

Chart 7: Interprovincial migration has become a big boost to Atlantic Canada population



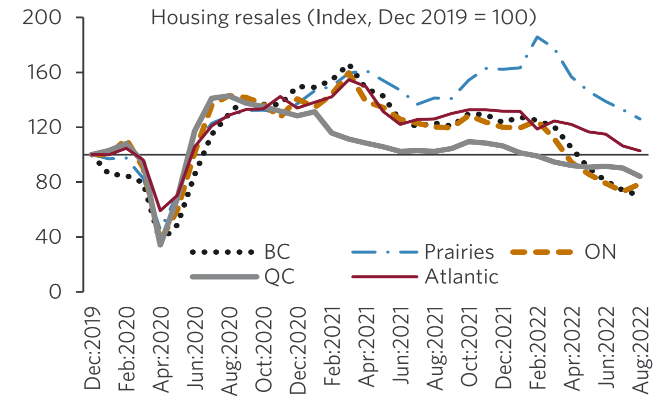
Source: Statistics Canada, CIBC

Chart 8: Many workers in Prairies and Atlantic Canada report to head office outside of province



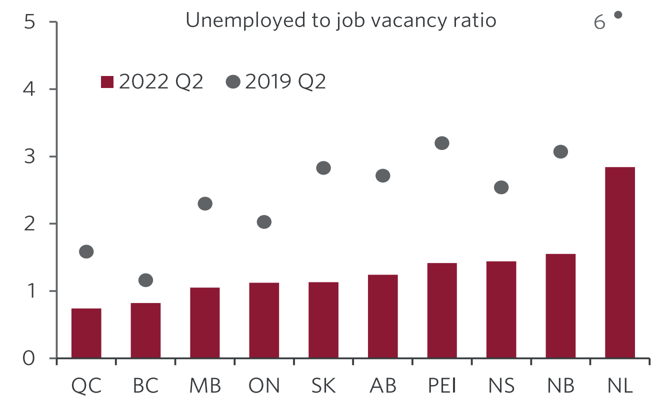
Source: Statistics Canada, CIBC

Chart 9: Housing resale activity still in line or above pre-pandemic levels in Atlantic Canada and Prairies



Source: CREA, Haver, CIBC

Chart 10: Post-pandemic Quebec has the tightest labour market



Source: Statistics Canada, CIBC

For the latter, this partially reflects continued strong demand from migration, both international and interprovincial, which added more to the population of the Atlantic provinces in the last year than to any other region in Canada.

Over 2023 and 2024, housing activity in Ontario and British Columbia could remain depressed as households continue to bear the weight of high interest rates. The slowdown in sales activity in 2022 will translate into weaker housing starts next year, given the typical lags. The situation should be better in the Atlantic and Prairies, where strong demand could see housing starts hold steady or even increase. In the long run however, high immigration in Ontario and BC means that housing construction will have to rebound. The large housing supply imbalances make that a requirement, although construction activity might continue to be impeded by labour shortages, putting upward pressure on prices once again by 2024 if mortgage rates have eased by that point.

Tight labour markets across the country

Trends in international and interprovincial immigration are particularly important today because staffing shortages have been a defining feature of the pandemic recovery. While all provinces face tighter conditions than three years ago, the ratio of unemployed to vacancies ranges widely (Chart 10). By this measure, labour markets in the Atlantic provinces are not currently as tight as elsewhere in the country. However, that partially reflects the high proportion of seasonal jobs, which leads to a structurally higher number of unemployed for each vacancy. Quebec and BC both have fewer unemployed than job vacancies, which has resulted in strong wage pressure and will also be limiting real growth rates in those provinces.

As we look ahead, Atlantic provinces may see a tightening in labour market conditions if work-from-home staff moving to the region create demand without filling in-province vacancies. Wage inflation, which has already been high in the Maritimes over the past three years, could also remain elevated as local firms compete with out-of-province employers. This would work to further close the wage gap between the region and the rest of the country.

Where the headwinds are strongest

As we look ahead to 2023 and 2024 the headwinds facing the Canadian economy will likely be felt most strongly in provinces with high exposure to housing and household debt (Ontario, BC) and in those with very tight labour markets and little population growth (Quebec).

Of course commodity-producing areas of the country will likely fare better thanks to higher prices and the desire of developed countries to find non-Russian alternatives (Table 1). However, unlike the pre-2014 period, this growth is not expected to come from large scale investments in the oil industry. Instead, the wealth being created by the resource sector is helping to fuel growth in other areas, and limiting the slowdown in housing demand.

On the east coast, the gains made during the pandemic in attracting workers from other provinces, and the technology, business and other such jobs they had, doesn't appear to be abating (or reversing) as quickly as we had previously expected. This will support overall growth within Atlantic Canada relative to what may have been expected pre-pandemic. However, with those newcomers also creating demand for housing and consumer-facing services, inflation in the region is also likely to remain firmer than what was typically seen prior to 2020.

Provincial forecast tables

	Table 1: Real GDP (Y/Y % chg)				Table 2: Nominal GDP (Y/Y % change)				Table 3: Unemployment rate (%)			
Province	2021E	2022F	2023F	2024F	2021F	2022F	2023F	2024F	2021A	2022F	2023F	2024F
British Columbia	5.9	2.8	0.6	1.1	13.4	7.8	2.3	3.3	6.5	4.8	5.4	5.5
Alberta	5.1	4.2	1.3	1.7	22.1	23.2	1.1	4.5	8.6	5.9	5.8	5.5
Saskatchewan	0.0	4.3	1.6	1.9	13.0	22.3	1.4	4.9	6.5	4.9	5.0	4.7
Manitoba	1.5	3.4	1.1	1.4	7.5	8.7	2.6	3.4	6.4	4.8	5.3	5.2
Ontario	4.4	2.8	0.3	1.3	10.9	8.8	2.0	3.5	8.0	5.5	5.9	5.9
Québec	5.6	2.9	0.5	1.2	12.1	8.9	2.2	3.4	6.1	4.2	4.8	5.0
New Brunswick	5.3	1.9	0.6	1.1	11.3	6.9	2.1	3.1	8.9	7.4	8.0	7.7
Nova Scotia	5.8	1.7	0.8	1.3	11.8	6.7	2.3	3.3	8.4	6.8	7.5	7.2
Prince Edward Island	6.6	1.5	1.1	1.4	12.6	6.5	2.6	3.4	9.3	7.4	8.2	7.9
Newfoundland and Labrador	1.2	3.3	0.9	1.5	14.2	21.3	1.1	4.0	12.9	11.1	11.0	10.8
Canada	4.5	3.1	0.6	1.4	13.0	11.3	1.9	3.7	7.4	5.3	5.7	5.7

Source: Statistics Canada, CMHC, CIBC.

Table 4: Canada forecast detail (real % change, SAAR, unless otherwise noted)

Variable	22Q1A	22Q2F	22Q3F	22Q4F	23Q1F	23Q2F	23Q3F	23Q4F	2021A	2022F	2023F
Real GDP Growth (AR)	3.1	3.3	0.5	0.0	-0.2	0.6	1.4	1.3	4.5	3.1	0.6
Real Final Domestic Demand (AR)	3.5	2.9	0.6	0.7	0.6	0.5	1.4	1.3	5.6	3.1	0.9
Household Consumption (AR)	2.6	9.7	2.7	1.2	0.7	0.2	1.7	1.1	5.0	5.5	1.6
All Items CPI Inflation (Y/Y)	5.8	7.5	7.2	7.0	5.5	2.8	2.5	2.1	3.4	6.9	3.2
Unemployment Rate (%)	5.8	5.1	5.2	5.3	5.5	5.7	5.9	5.9	7.4	5.3	5.7

Table 5: US forecast detail (real % change, SAAR, unless otherwise noted)

Variable	22Q1A	22Q2A	22Q3F	22Q4F	23Q1F	23Q2F	23Q3F	23Q4F	2021A	2022F	2023F
Real GDP Growth (AR)	-1.6	-0.6	2.0	1.5	-0.2	0.3	1.4	0.7	5.9	1.8	0.7
Real Final Sales (AR)	-1.8	1.4	2.1	1.3	0.2	1.0	1.8	0.9	5.7	1.1	1.1
All Items CPI Inflation (Y/Y)	8.0	8.6	8.3	7.3	5.3	2.9	2.1	1.8	4.7	8.1	3.0
Core CPI Inflation (Y/Y)	6.3	6.0	6.3	5.8	4.3	3.3	2.3	1.9	3.6	6.1	2.9
Unemployment Rate (%)	3.8	3.6	3.6	3.7	4.0	4.2	4.1	4.2	5.4	3.7	4.1

Table 6: Canadian interest rates (end of period)

Variable	2022 19-Oct	2022 Dec	2023 Mar	2023 Jun	2023 Sep	2023 Dec	2024 Jun	2024 Dec
Overnight target rate	3.25	4.25	4.25	4.25	4.25	4.25	3.50	3.00
98-Day Treasury Bills	3.91	4.15	4.10	4.00	4.00	3.85	3.25	2.60
2-Year Government Bond	4.10	4.35	4.00	3.75	3.55	3.10	2.50	2.25
10-Year Government Bond	3.44	3.60	3.40	3.20	3.00	2.90	2.75	2.60
30-Year Government Bond	3.42	3.50	3.45	3.25	3.10	3.00	2.75	2.45
Canada - US T-Bill Spread	-0.08	-0.10	-0.15	-0.10	-0.05	-0.15	-0.40	-0.55
Canada - US 10-Year Bond Spread	-0.64	-0.30	-0.30	-0.20	-0.20	-0.20	-0.25	-0.20
Canada Yield Curve (10-year — 2-year)	-0.67	-0.75	-0.60	-0.55	-0.55	-0.20	0.25	0.35

Table 7: US Interest rates (end of period)

Variable	2022 19-Oct	2022 Dec	2023 Mar	2023 Jun	2023 Sep	2023 Dec	2024 Jun	2024 Dec
Federal funds rate	3.125	4.375	4.375	4.375	4.375	4.375	3.875	3.375
91-Day Treasury Bills	3.99	4.25	4.25	4.10	4.05	4.00	3.65	3.15
2-Year Government Note	4.52	4.55	4.40	4.25	3.90	3.70	3.00	2.60
10-Year Government Note	4.08	3.90	3.70	3.40	3.20	3.10	3.00	2.80
30-Year Government Bond	4.08	3.80	3.50	3.30	3.15	3.00	2.75	2.60
US Yield curve (10-year — 2-year)	-0.44	-0.65	-0.70	-0.85	-0.70	-0.60	0.00	0.20

Table 8: Foreign exchange rates

Exchange rate	2022 19-Oct	2022 Dec	2023 Mar	2023 Jun	2023 Sep	2023 Dec	2024 Jun	2024 Dec
CAD-USD	0.73	0.72	0.73	0.73	0.75	0.76	0.76	0.78
USD-CAD	1.38	1.38	1.37	1.37	1.34	1.32	1.32	1.28
USD-JPY	150	140	138	136	135	130	127	124
EUR-USD	0.98	0.98	1.00	1.02	1.04	1.06	1.09	1.10
GBP-USD	1.12	1.09	1.11	1.12	1.14	1.17	1.21	1.23
AUD-USD	0.63	0.63	0.64	0.64	0.64	0.65	0.67	0.69
USD-CNY	7.23	7.10	7.10	7.00	7.00	6.90	6.85	6.80
USD-BRL	5.28	5.70	5.90	5.70	5.50	5.30	5.50	6.00
USD-MXN	20.1	21.5	21.0	21.5	21.3	21.5	22.0	22.5

Contacts:

Avery Shenfeld
416 594-7356
avery.shenfeld@cibc.com

Benjamin Tal
416 956-3698
benjamin.tal@cibc.com

Andrew Grantham
416 956-3219
andrew.grantham@cibc.com

Karyne Charbonneau
613 552-1341
karyne.charbonneau@cibc.com

Katherine Judge
416 956-6527
katherine.judge@cibc.com

FICC Strategy
Ian Pollick
416 594-7057
ian.pollick@cibc.com

CIBC Capital Markets
PO Box 500
161 Bay Street, Brookfield Place
Toronto, Canada, M5J 2S8
Bloomberg @ CIBC

economics.cibccm.com

CIBC CAPITAL MARKETS

Economics and FICC Strategy

FORECAST UPDATE

November 21, 2022

Forecast Details

Table 1: Canadian interest rates (end of period)

Variable	2022 21-Nov	2022 Dec	2023 Mar	2023 Jun	2023 Sep	2023 Dec	2024 Jun	2024 Dec
Overnight target rate	3.75	4.25	4.25	4.25	4.25	4.25	3.50	3.00
98-Day Treasury Bills	4.04	4.15	4.10	4.00	4.00	3.85	3.25	2.60
2-Year Government Bond	3.95	4.15	4.00	3.90	3.75	3.30	2.75	2.30
10-Year Government Bond	3.09	3.30	3.35	3.40	3.30	3.20	2.80	2.50
30-Year Government Bond	3.17	3.30	3.45	3.55	3.50	3.35	2.90	2.75
Canada - US T-Bill Spread	-0.16	-0.20	-0.85	-0.90	-0.85	-0.95	-0.45	-0.70
Canada - US 10-Year Bond Spread	-0.73	-0.80	-0.70	-0.60	-0.50	-0.50	-0.60	-0.50
Canada Yield Curve (10-year — 2-year)	-0.87	-0.85	-0.65	-0.50	-0.45	-0.10	0.05	0.20

Table 2: US Interest rates (end of period)

Variable	2022 21-Nov	2022 Dec	2023 Mar	2023 Jun	2023 Sep	2023 Dec	2024 Jun	2024 Dec
Federal funds rate (midpoint of target range)	3.875	4.375	4.875	4.875	4.875	4.875	3.875	3.375
91-Day Treasury Bills	4.20	4.35	4.95	4.90	4.85	4.80	3.70	3.30
2-Year Government Note	4.54	4.70	4.90	4.75	4.50	4.10	3.40	2.80
10-Year Government Note	3.82	4.10	4.05	4.00	3.80	3.70	3.40	3.00
30-Year Government Bond	3.90	4.40	4.45	4.30	4.10	3.90	3.90	3.60
US Yield curve (10-year — 2-year)	-0.72	-0.60	-0.85	-0.75	-0.70	-0.40	0.00	0.20

Contacts:

Avery Shenfeld
416 594-7356
avery.shenfeld@cibc.com

Benjamin Tal
416 956-3698
benjamin.tal@cibc.com

Andrew Grantham
416 956-3219
andrew.grantham@cibc.com

Karyne Charbonneau
613 552-1341
karyne.charbonneau@cibc.com

Katherine Judge
416 956-6527
katherine.judge@cibc.com

FICC Strategy
Ian Pollick
416 594-7057
ian.pollick@cibc.com

CIBC Capital Markets
PO Box 500
161 Bay Street, Brookfield Place
Toronto, Canada, M5J 2S8
Bloomberg @ CIBC

economics.cibccm.com

IHS Markit - December 8, 2022

Table 24, Interest Rates
(Percent)

	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	28Q1	28Q2	28Q3	28Q4	29Q1	29Q2	29Q3	29Q4
Government of Canada																												
Treasury Bills																												
3 Months	4.57	4.49	4.53	4.41	4.01	3.76	3.51	3.18	2.68	2.26	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01
6 Months	4.70	4.62	4.66	4.54	4.14	3.89	3.64	3.31	2.81	2.39	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14
Bonds																												
1-3 Years	4.32	4.24	4.26	4.15	3.81	3.58	3.36	3.07	2.64	2.28	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.06
3-5 Years	3.50	3.42	3.39	3.31	3.13	3.00	2.86	2.71	2.51	2.35	2.26	2.26	2.25	2.25	2.25	2.25	2.25	2.25	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.23	2.23	2.23
5 Years	3.24	3.16	3.11	3.04	2.92	2.81	2.71	2.60	2.47	2.37	2.32	2.31	2.31	2.31	2.31	2.31	2.30	2.30	2.30	2.30	2.30	2.29	2.29	2.29	2.29	2.29	2.29	2.29
5-10 Years	2.89	2.82	2.74	2.69	2.63	2.57	2.50	2.45	2.42	2.40	2.40	2.39	2.39	2.39	2.38	2.38	2.38	2.38	2.37	2.37	2.37	2.37	2.37	2.36	2.36	2.36	2.36	2.36
10 Years	2.88	2.80	2.72	2.67	2.62	2.56	2.49	2.44	2.42	2.41	2.40	2.40	2.39	2.39	2.39	2.39	2.38	2.38	2.38	2.38	2.37	2.37	2.37	2.37	2.37	2.36	2.36	2.36
10+ Years	2.88	2.83	2.77	2.73	2.69	2.63	2.57	2.52	2.50	2.49	2.49	2.49	2.48	2.48	2.48	2.48	2.48	2.47	2.47	2.47	2.47	2.46	2.46	2.46	2.46	2.46	2.46	2.46
30 Years	2.88	2.82	2.75	2.71	2.67	2.61	2.54	2.50	2.47	2.46	2.46	2.46	2.46	2.45	2.45	2.45	2.45	2.44	2.44	2.44	2.44	2.43	2.43	2.43	2.43	2.43	2.43	2.43

IHS Markit - December 8, 2022

Table 25, Financial Aggregates and US Interest Rates

	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	28Q1	28Q2	28Q3	28Q4	29Q1	29Q2	29Q3	29Q4
US Interest Rates (Percent)																												
Federal Funds	4.52	4.85	4.85	4.86	4.86	4.65	4.15	3.65	3.34	3.07	2.84	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
3-Month T-Bills	4.60	4.77	4.67	4.60	4.55	4.31	3.83	3.35	3.05	2.80	2.58	2.38	2.37	2.37	2.37	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
3-Month Comm. Paper	4.43	4.85	4.85	4.85	4.85	4.65	4.18	3.70	3.40	3.15	2.93	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.73	2.73	2.73	2.72	2.72	2.72	2.73	2.73	2.73
3-Month Euro Deposit Rate	5.13	5.28	5.16	5.08	5.03	4.77	4.27	3.78	3.47	3.21	2.98	2.78	2.77	2.77	2.77	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
Bank Prime Rate	7.69	8.00	8.00	8.00	8.00	7.78	7.28	6.78	6.46	6.20	5.96	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.74	5.75	5.74	5.74	5.74	5.74	5.74	5.74	5.75
5-year Treasury Notes	3.85	3.77	3.65	3.53	3.39	3.25	3.15	3.07	3.01	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.99	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98
10-Year Treasury Notes	3.70	3.62	3.54	3.49	3.44	3.38	3.31	3.26	3.24	3.22	3.22	3.22	3.21	3.21	3.21	3.20	3.20	3.20	3.20	3.19	3.19	3.19	3.19	3.19	3.18	3.18	3.18	3.18
30-year Treasury Bonds	3.80	3.77	3.74	3.73	3.73	3.71	3.68	3.66	3.64	3.63	3.63	3.62	3.61	3.61	3.60	3.60	3.59	3.59	3.58	3.58	3.58	3.57	3.57	3.57	3.57	3.57	3.56	3.56

IHS Markit - December 8, 2022

Table 26, Exchange Rates and Determinants

	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	28Q1	28Q2	28Q3	28Q4	29Q1	29Q2	29Q3	29Q4
Canada-US Exchange Rate																												
Nominal Exchange Rate																												
US$/C$	0.753	0.742	0.751	0.753	0.741	0.751	0.762	0.771	0.789	0.800	0.805	0.808	0.809	0.810	0.809	0.811	0.812	0.812	0.812	0.812	0.812	0.811	0.812	0.813	0.813	0.814	0.813	0.812
Annual Percent Change	8.1	-6.2	5.0	1.1	-6.2	5.5	6.2	4.9	9.6	5.9	2.3	1.4	0.6	0.2	0.0	0.6	0.5	0.1	0.0	0.2	-0.1	-0.4	0.4	0.2	0.3	0.1	-0.1	-0.4
C$/US$	1.327	1.349	1.332	1.329	1.350	1.332	1.312	1.297	1.267	1.249	1.242	1.238	1.236	1.235	1.235	1.234	1.232	1.232	1.232	1.231	1.231	1.232	1.231	1.231	1.230	1.229	1.229	1.231
Annual Percent Change	-7.5	6.6	-4.8	-1.1	6.6	-5.2	-5.8	-4.7	-8.7	-5.6	-2.2	-1.3	-0.6	-0.2	0.0	-0.6	-0.5	-0.1	0.0	-0.2	0.1	0.4	-0.4	-0.2	-0.3	-0.1	0.1	0.4

Conference Board of Canada - December 19, 2022

Description:	Exchange Rate (U.S./Canada)	Canada - 3 Month Treasury Bill ()	Canada, Federal Bonds: 5 Years ()	United States - 3 Month Treasury Bill ()	Canada, Federal Bonds: 10 Years ()	Canada, Federal Bonds: Long-Term ()
Mnemonic:	PFX	RTB90	RGOC5	USRTB90	RGOC10	RGOCL
2023.01	1.371398	4.389941	3.555512	4.723403	3.348647	3.45198
2023.02	1.375923	4.379942	3.550568	4.879653	3.346174	3.449508
2023.03	1.370401	4.355774	3.538178	4.785903	3.349979	3.453312
2023.04	1.362727	4.046606	3.400121	4.390069	3.35095	3.454284
2024.01	1.337419	3.752439	3.301455	3.837986	3.331617	3.454951
2024.02	1.331224	3.203275	3.200733	3.327986	3.301257	3.42459
2024.03	1.32591	2.703274	3.070178	2.871736	3.225979	3.419312
2024.04	1.32447	2.301607	2.851956	2.59257	3.181868	3.375201
2025.01	1.325876	2.20994	2.803177	2.519653	3.172479	3.365812
2025.02	1.330788	2.209938	2.803176	2.519653	3.172478	3.365811
2025.03	1.331975	2.209941	2.803178	2.519653	3.172479	3.365812
2025.04	1.333345	2.209941	2.803178	2.519653	3.172479	3.365812
2026.01	1.33654	2.20994	2.803177	2.519653	3.172478	3.365811
2026.02	1.341569	2.209941	2.803178	2.519653	3.172479	3.365812
2026.03	1.342846	2.209941	2.803178	2.519653	3.172479	3.365812
2026.04	1.345012	2.20994	2.803177	2.519653	3.172478	3.365811
2027.01	1.346398	2.209942	2.803178	2.519653	3.172479	3.365812
2027.02	1.348302	2.209943	2.803179	2.519653	3.17248	3.365812
2027.03	1.346415	2.209941	2.803178	2.519653	3.172479	3.365812
2027.04	1.342897	2.209942	2.803179	2.519653	3.17248	3.365812

Desjardins

ECONOMIC STUDIES | DECEMBER 12, 2022

#1 MEILLEUR PRÉVISIONNISTE GLOBAL – CANADA
FOCUS ECONOMICS ANALYST FORECAST AWARDS 2022
#1 BEST OVERALL FORECASTER – CANADA

ECONOMIC & FINANCIAL OUTLOOK

The Global Recession Is at Our Doorstep

HIGHLIGHTS

- Some of the supply chain snarls that have been hampering economic growth and fuelling inflation appear to be easing. However, there are a number of signs that the global economy will dip into a recession next year. We expect real GDP to contract as early as Q4 2022 in the eurozone as energy uncertainty continues to keep inflation high. The same is true in the United Kingdom, where real GDP fell in the third quarter.
- In the US, the situation is expected to deteriorate in 2023 as interest rate hikes and other factors really start to bite. The economy may dip into a recession next year, posting three quarters of GDP contraction, job losses and rising unemployment.
- Recent Canadian economic data have come in much better than we anticipated when we released our last forecast in October. But we think it's a bit of a head fake. Our outlook for next year continues to be for a short and shallow recession, albeit one that could stretch into the third quarter. Risks to the outlook also continue to be tilted to the downside, as households are increasingly coming up against the reality of higher costs of servicing their mortgages.
- The rate hike announced by the Bank of Canada on December 7 should be the last of the tightening cycle, and we forecast rate cuts starting at the end of next year. In the US, we expect the Federal Reserve will raise rates further in the first quarter of 2023.
- According to a number of indicators, Quebec's economy is heading for a major downturn. While real GDP has posted three sharp declines since March, it's too soon to say whether the province is already in a recession. But it will be eventually. It looks like 2023 will be a tough year, as households and businesses really start to feel the pinch of higher interest rates.
- A housing-led Canadian economic downturn will have the worst effects on provinces most reliant on real estate. By contrast, net oil-producing provinces should benefit from relatively little exposure to real estate, solid commodity production and prices, and major project activity.
- Persistent inflation remains the biggest risk to the global economy, as it would force many central banks to raise interest rates to higher-than-expected levels. Moreover, the global economic slowdown could be worse than expected if more countries are dragged into recession. High inflation and rising borrowing costs could further chill consumer and business demand. If households adjusted to higher debt servicing costs by reducing their expenditures more significantly, growth would suffer more. Canada could be hit hard if the global economy takes a dive, hurting exports and terms of trade. A bigger jump in unemployment and interest rates could also mean a steeper housing correction in Canada.

CONTENTS

Jimmy Jean, Vice-President, Chief Economist and Strategist
Royce Mendes, Managing Director and Head of Macro Strategy • Randall Bartlett, Senior Director of Canadian Economics
Tiago Figueiredo, Associate – Macro Strategy • Hélène Bégin, Principal Economist • Marc Desormeaux, Principal Economist
Benoit P. Durocher, Principal Economist • Francis Généreux, Principal Economist • Hendrix Vachon, Principal Economist
Desjardins, Economic Studies: 514-281-2336 or 1 866-866-7000, ext. 5552336 • desjardins.economics@desjardins.com • desjardins.com/economics

RISKS INHERENT IN OUR SCENARIOS

Persistent inflation remains the biggest risk to the global economy, as it would force many central banks to raise interest rates to higher-than-expected levels. And if central banks don't respond forcefully enough, high inflation could become even more entrenched and difficult to tame in the medium term, requiring even more aggressive monetary policy. The global economic slowdown could be worse than expected if more countries are pulled into recession. High inflation and rising borrowing costs could further chill consumer and business demand. Canada could be hit hard if the global economy takes a dive, hurting exports and terms of trade. A bigger jump in unemployment and interest rates could also mean a steeper housing correction in Canada. Europe's economy is especially vulnerable due to sky-high energy prices and potential energy supply shortages from the war in Ukraine. Although prices for oil, some foods and other commodities have moderated, the war in Ukraine remains a major source of uncertainty in our forecast. We'll also need to continue to keep a close eye on China, where the country's zero-COVID policy and resulting business closures could again disrupt global supply chains and cause further domestic unrest. Then there are the risks to financial stability. A deeper economic downturn could mean more bankruptcies and sharper corrections in risky assets. Investors could demand higher risk premiums and be more critical of government decisions that could worsen the state of public finances or undermine the work of central banks. The US dollar could also continue to appreciate, particularly against the currencies of countries considered more economically and financially fragile, in turn exacerbating these vulnerabilities.

TABLE 1
World GDP growth (adjusted for PPP) and inflation rate

IN %	WEIGHT*	REAL GDP GROWTH 2022f	2023f	2024f	INFLATION RATE 2022f	2023f	2024f
Advanced economies	**38.7**	**2.5**	**0.0**	**1.8**	**7.3**	**4.3**	**2.0**
United States	15.7	2.0	0.1	2.0	8.1	3.3	2.2
Canada	1.4	3.6	0.2	1.0	6.9	3.2	2.0
Quebec	*0.3*	*2.9*	*-0.2*	*1.2*	*6.5*	*3.1*	*2.1*
Ontario	*0.5*	*3.4*	*-0.3*	*1.0*	*7.0*	*3.1*	*2.0*
Japan	3.7	1.1	1.1	1.4	2.2	1.6	0.7
United Kingdom	2.3	4.3	-1.5	1.2	8.9	6.4	3.1
Euro zone	11.9	3.2	-0.7	1.4	8.7	6.3	2.2
Germany	*3.3*	*1.7*	*-1.5*	*1.2*	*8.5*	*7.3*	*2.5*
France	*2.3*	*2.4*	*-0.8*	*1.5*	*5.8*	*4.5*	*1.8*
Italy	*1.8*	*3.7*	*-0.6*	*1.2*	*8.0*	*5.5*	*1.6*
Other countries	4.2	2.9	0.9	2.5	5.9	4.1	2.0
Australia	*1.0*	*3.9*	*1.6*	*2.5*	*6.5*	*4.6*	*2.5*
Emerging and developing economies	**61.3**	**3.2**	**3.3**	**4.5**	**8.2**	**6.0**	**4.0**
North Asia	26.8	3.9	4.8	5.4	4.3	3.7	3.0
China	*18.6*	*2.9*	*4.7*	*5.2*	*2.5*	*2.5*	*2.2*
India	*7.0*	*6.8*	*5.4*	*6.3*	*6.9*	*5.2*	*4.8*
South Asia	5.1	4.9	3.9	4.8	5.2	4.2	2.8
Latin America	5.8	2.8	0.8	2.6	8.2	5.0	3.6
Mexico	*1.8*	*2.1*	*0.9*	*2.5*	*8.8*	*4.8*	*3.7*
Brazil	*2.3*	*2.6*	*0.6*	*2.4*	*6.2*	*5.1*	*3.7*
Eastern Europe	8.1	-1.4	-0.2	3.0	26.5	16.1	9.3
Russia	*3.3*	*-4.6*	*-3.1*	*1.7*	*12.9*	*6.5*	*5.2*
Other countries	15.5	3.6	3.0	4.1	9.7	8.6	6.0
South Africa	*0.6*	*1.6*	*1.0*	*2.1*	*6.9*	*5.9*	*4.7*
World	**100.0**	**3.0**	**2.0**	**3.5**	**7.8**	**5.3**	**3.2**

f: forecasts; PPP: Purchasing Power Parities, exchange rate that equates the costs of a broad basket of goods and services across countries; * 2021.
Sources: World Bank, Consensus Forecasts and Desjardins Economic Studies

FINANCIAL FORECASTS

Global sovereign yields have moved lower, reflecting some early indications that inflation across most jurisdictions is moderating. Risks to financial stability and uncertainty around the lags in monetary policy are enough motivation to slow down the pace of rate hikes. Policy makers have offset their communications regarding slower rate increases by also conveying a desire to keep rates higher for longer. We now expect the Bank of Canada to pause its hiking cycle at the end of this year and have forecast rate cuts starting at the end of next year. Although the Canadian curve remains inverted, we expect the curve to gradually steepen in 2023 and 2024. In the US, we expect the Federal Reserve will raise rates further in the first quarter of 2023 before pausing and cutting rates at the end of the year. Risk assets have moved higher over the period, reflecting the decline in global yields. However, they are likely to remain on the backfoot given that inflation, rate hikes and weaker economic growth will likely weigh on earnings growth. US dollar weakness has lifted currencies, but the Canadian dollar continues to lag relative to global peers, reflecting the view that the Bank of Canada will be unable to raise rates as high as the Federal Reserve.

TABLE 2
Summary of financial forecasts

	2022		2023				2024			
END OF PERIOD IN % (EXCEPT IF INDICATED)	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Key interest rate										
United States	3.25	4.50	5.00	5.00	5.00	4.75	3.75	3.00	2.50	2.50
Canada	3.25	4.25	4.25	4.25	4.25	3.75	3.25	2.75	2.25	2.25
Euro zone	1.25	2.75	3.25	3.25	3.25	3.00	2.50	2.00	1.50	1.50
United Kingdom	2.25	3.50	4.00	4.00	4.00	3.75	3.25	2.75	2.25	2.00
Federal bonds										
United States										
2-year	4.26	4.45	4.20	4.00	3.65	3.40	2.85	2.65	2.50	2.50
5-year	4.08	3.85	3.75	3.60	3.50	3.15	2.70	2.60	2.60	2.60
10-year	3.80	3.65	3.55	3.40	3.25	3.10	2.70	2.65	2.65	2.65
30-year	3.76	3.65	3.55	3.40	3.25	3.05	2.85	2.85	2.85	2.85
Canada										
2-year	3.79	3.85	3.60	3.45	3.15	2.90	2.45	2.30	2.25	2.20
5-year	3.32	3.10	3.00	2.95	2.90	2.85	2.45	2.30	2.30	2.25
10-year	3.16	2.85	2.75	2.70	2.65	2.60	2.45	2.40	2.35	2.35
30-year	3.09	2.85	2.80	2.70	2.65	2.60	2.45	2.40	2.35	2.35
Currency market										
Canadian dollar (USD/CAD)	1.38	1.37	1.39	1.39	1.37	1.33	1.30	1.28	1.27	1.27
Canadian dollar (CAD/USD)	0.72	0.73	0.72	0.72	0.73	0.75	0.77	0.78	0.79	0.79
Euro (EUR/USD)	0.98	1.03	0.99	1.00	1.03	1.05	1.07	1.09	1.11	1.13
British pound (GBP/USD)	1.12	1.19	1.14	1.15	1.18	1.21	1.23	1.25	1.27	1.30
Yen (USD/JPY)	145	136	132	127	122	118	114	112	111	110
Stock markets (level and growth)*										
United States – S&P 500	3,700		Target: 3,750 (+1.4%)				Target: 4,000 (+6.7%)			
Canada – S&P/TSX	18,800		Target: 19,250 (+2.4%)				Target: 20,600 (+7.0%)			
Commodities (annual average)										
WTI oil (US$/barrel)	95 (83*)		78 (80*)				85 (84*)			
Gold (US$/ounce)	1,795 (1,730*)		1,730 (1,680*)				1,615 (1,560*)			

f: forecasts; WTI: West Texas Intermediate; * End of year.
Sources: Datastream and Desjardins, Economic Studies

Overseas

Supply Chain Issues Are Easing, but the Global Economy Won't Escape a Recession

FORECASTS

Some of the supply chain snarls that have been hampering economic growth and fuelling inflation appear to be easing. However, there are a number of signs that the global economy will dip into a recession next year. We expect real GDP to contract as early as Q4 2022 in the eurozone as energy uncertainty continues to keep inflation high. The same is true in the United Kingdom, where real GDP fell in the third quarter. Even China's economy is slated to shrink at the end of this year as authorities continue to grapple with the pandemic and the country's zero-COVID policy disrupts economic activity. World GDP is expected to post anemic growth of just 2.0% in 2023—a level compatible with a global recession. The world economy should then bounce back in 2024, growing by 3.5%.

Supply Chain Issues Have Eased

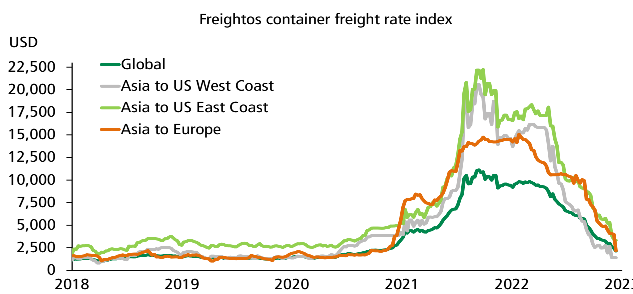
One of the biggest economic impacts of the pandemic has been supply chain problems. They've created an imbalance between supply and demand for goods and—most importantly—sky-high inflation throughout most of the world. It seems that some of these problems are going away, however. After spiking during the pandemic, freight costs are almost back to normal, especially for container shipping between Asia and the US West Coast (graph 1). Yes, we could still see hiccups like the latest round of COVID lockdowns in China that could disrupt supply chains again. But prices for some commodities are falling, and demand for goods is coming back into balance in advanced economies, which should improve the functioning of global markets. If inflation is going to come down, global supply pressures have to let up, and until just recently they were (graph 2).

We expect commodity price pressures to continue to ease as well. And as the global economy slows and demand for oil weakens, oil prices should fall. However, low government inventories and uncertainty around production by OPEC+ and other producers could partially offset this downward pressure. Prices for a number of other commodities such as metals and agricultural products are also expected to decline in the coming months as the global recession takes hold. European natural gas prices have come off their spring highs due to elevated inventories and mild weather in recent months. But the situation could change quickly if Europe gets hit with a cold winter.

China Is Still Grappling with COVID-19

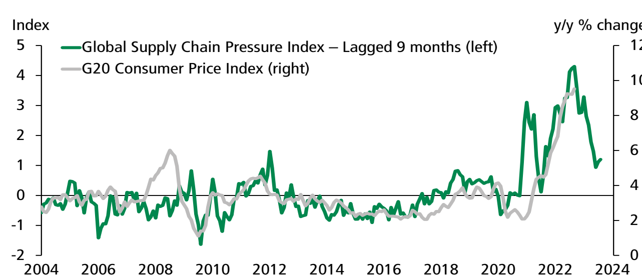
More and more countries are lifting their remaining public health measures and moving on from the pandemic. But not China. The country saw a record number of cases recently as Chinese authorities vacillate over their zero-COVID policy (graph 3 on page 5). After lifting a few lockdowns, they had to reinstate some. That said, Chinese authorities appear to be bending to protester demands, and COVID restrictions are being eased. Against this uncertain backdrop, China's

GRAPH 1
International container shipping costs have fallen dramatically



Sources: Freightos, Datastream and Desjardins Economic Studies

GRAPH 2
Resolving supply chain issues should slow global inflation



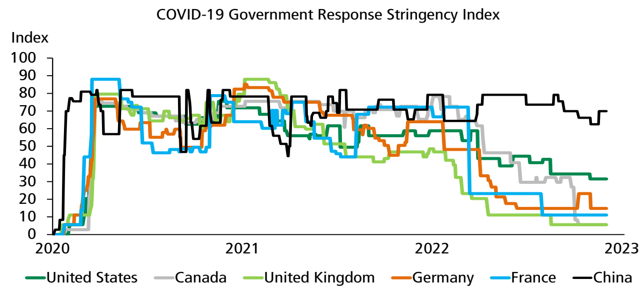
Sources: Federal Reserve Bank of New York, Organisation for Economic Co-operation and Development, and Desjardins Economic Studies manufacturing PMI fell to 48.0 in November and the non-manufacturing index dipped to 46.7 (graph 4). Meanwhile retail sales were down 0.5% year-over-year in October—the first decline since spring—and the real estate market continues to correct. Global spending on goods is also expected to drop, further darkening China's economic outlook. China's real GDP will likely contract in the fourth quarter this year, bringing annual GDP growth to 2.9%. We forecast growth of 4.7% in 2023 and 5.2% in 2024.

The Eurozone and the United Kingdom: The Recession Is Already Here

Despite being hobbled by the war in Ukraine, Europe's economy fared well through the third quarter. It posted annualized real GDP growth of 0.8% in Q3, and its labour market is holding up. (Unemployment is lower than in June.) But there's a sense that everything is about to change. A number of leading indicators already suggest the economy is contracting significantly. Consumer and business confidence is low, as are purchasing managers' indexes. Germany's ifo index is down, and the OECD's leading indicator for the eurozone has plummeted (graph 5). Everything points to imminent declines in real GDP or its major components. Inflation also remains very high in the eurozone, forcing the European Central Bank to continue raising interest rates despite the recession and ongoing energy crisis. We expect the recession to last until at least Q3 2023.

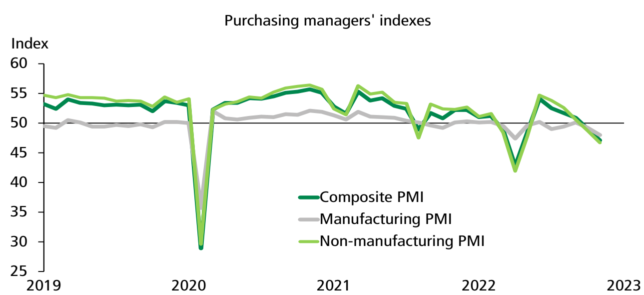
Meanwhile UK real GDP contracted an annualized 0.7% in the third quarter, and it looks like the slide has just begun. The cost of living crisis, political uncertainty, higher interest rates and Brexit are already weakening the economy and causing the UK to lag behind other countries. And the government of new Prime Minister Rishi Sunak is taking a rather restrictive approach to fiscal policy. We therefore expect the recession to last until the second half of 2023 in the United Kingdom as well.

GRAPH 3
Public health measures are much stricter in China



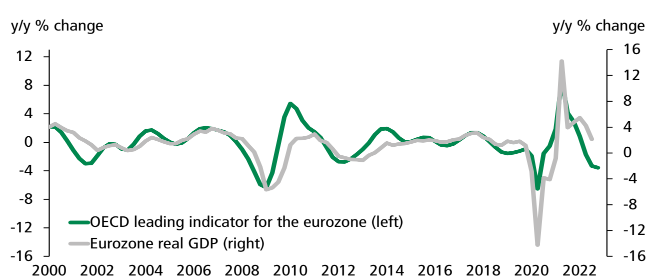
Sources: University of Oxford, Datastream and Desjardins Economic Studies

GRAPH 4
China's PMIs have started to fall again



Sources: National Bureau of Statistics of China and Desjardins Economic Studies

GRAPH 5
Leading indicators point to imminent declines in eurozone real GDP



Sources: Organisation for Economic Co-operation and Development, Eurostat and Desjardins Economic Studies

United States

The US Economy Is About to Enter a Rough Patch

FORECASTS
After contracting in the first half of 2022, US real GDP grew by a robust 2.9% in the third quarter. While further growth is expected the rest of this year, the situation is expected to deteriorate in 2023 as interest rate hikes and other factors really start to bite. The US economy may dip into a recession next year, posting three quarters of GDP contraction, job losses and rising unemployment. This should continue to bring down inflation. We predict the economy will begin to recover in late 2023 and bounce back strong in 2024.

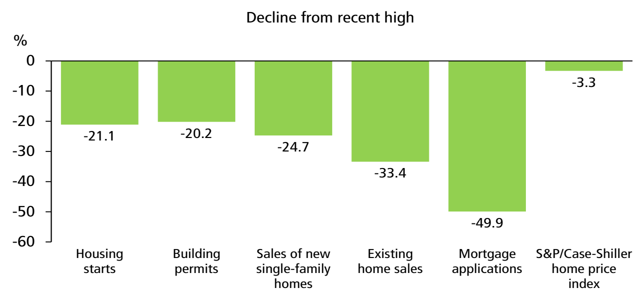
After falling 1.6% in Q1 and 0.6% in Q2, US real GDP finally entered positive territory in the third quarter, rising at an annualized rate of 2.9%. While these declines were due to negative contributions from international trade and business inventories respectively, the Q3 gain came on the back of improved net exports, stronger business investment and resilient real consumption.

Other economic data paints a gloomier near-term picture, however. The Conference Board and most other leading indicators have been trending lower for several months and are now consistent with declines in US real GDP. But we're not talking catastrophe here, especially not in the short term. The fourth quarter is off to a strong start after robust retail sales and real consumption in October. It looks as though post-Thanksgiving sales numbers were pretty solid, though we'll have to see more official data before we know for sure. Consumer confidence has also picked up after the summer doldrums, helped by lower gas prices and the gradual letup in inflation.

But the Federal Reserve's (Fed) aggressive monetary tightening means the US economy will likely contract next year. Rising interest rates are already having an effect, especially in the housing sector. Since peaking after the first wave of COVID-19, real residential investment has fallen 15.6% over the past six quarters. That's a lot, but it's probably not over yet. Housing starts are off 21.1% from their high. Existing home sales are down 31.7%, and sales of new single-family homes are lower by 24.7%. With 30-year mortgage rates temporarily over 7%, mortgage applications have plummeted 49.9%. Existing home prices have also started to fall, though as of the latest data from September, they're down just 3.3% from their June high (graph 6). We expect this price slide to continue over the next year.

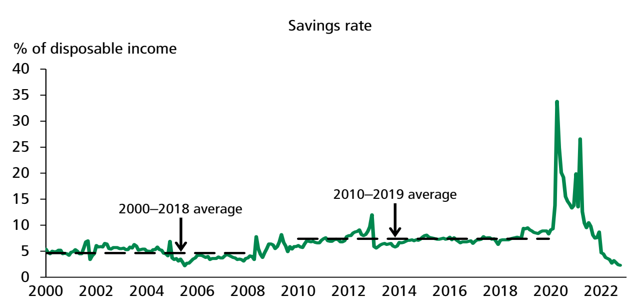
Higher interest rates should also take a bite out of real consumption. Spending on durable goods was already down in the second and third quarters of this year. Expect a temporary rebound in the fourth quarter due to improved car dealer inventories and discounts from other businesses looking to reduce elevated inventory levels. But it will likely get more difficult after that. Households are slowly whittling away at the financial cushion they built up during the pandemic. The savings rate recently fell to just 2.3%, the lowest level since 2005 (graph 7). Accumulated savings are supporting consumption, but they won't last forever. That's because inflation is eating away at personal income and, more importantly, the labour market is expected to slow or contract next year. We also see the unemployment rate rising nearly 2 percentage points from its 3.5% cyclical low.

GRAPH 6
Most US housing market indicators are down sharply



Sources: U.S. Census Bureau, National Association of Realtors, Mortgage Bankers Association, Standard & Poor's and Desjardins Economic Studies

GRAPH 7
Americans are saving less



Sources: Bureau of Economic Analysis and Desjardins Economic Studies

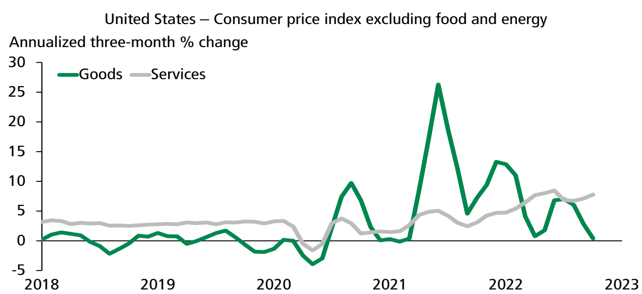
TABLE 3
United States: Major economic indicators

QUARTERLY ANNUALIZED VARIATION IN % (EXCEPT IF INDICATED)	2022 Q3	2022 Q4f	2023 Q1f	2023 Q2f	2023 Q3f	2023 Q4f	ANNUAL AVERAGE 2021	2022f	2023f	2024f
Real GDP (2012 US$)	**2.9**	**1.7**	**-0.6**	**-2.0**	**-0.6**	**1.7**	**5.9**	**2.0**	**0.1**	**2.0**
Personal consumption expenditures	1.7	3.8	0.5	-1.5	-0.3	1.3	8.3	2.8	0.9	1.7
Residential construction	-26.8	-11.7	-9.4	-7.9	-4.9	-0.8	10.7	-9.7	-11.6	0.5
Business fixed investment	5.1	4.5	-0.1	-1.6	-0.7	2.6	6.4	3.8	1.2	3.2
Inventory change (US$B)	49.6	40.0	0.0	-50.0	-75.0	-50.0	-19.4	103.5	-43.8	6.2
Public expenditures	3.0	1.0	0.7	0.7	0.7	0.7	0.6	-0.8	0.9	0.7
Exports	15.3	-1.5	-1.5	-1.5	-1.5	2.0	6.1	7.3	1.6	1.9
Imports	-7.3	5.0	-2.0	-4.0	-3.0	2.0	14.1	8.8	-1.4	1.5
Final domestic demand	0.9	2.7	0.0	-1.5	-0.4	1.3	6.7	1.7	0.4	1.7
Other indicators										
Nominal GDP	7.3	5.5	1.4	-1.0	1.5	3.6	10.7	9.1	3.0	4.0
Real disposable personal income	0.9	1.7	0.2	-1.5	-1.0	0.5	1.9	-6.5	0.0	1.6
Employment according to establishments	3.1	2.1	0.6	-0.9	-1.2	-0.5	2.8	4.1	0.8	0.3
Unemployment rate (%)	3.6	3.7	4.0	4.5	5.0	5.3	5.4	3.7	4.7	5.3
Housing starts[1] (thousands of units)	1,458	1,402	1,327	1,270	1,255	1,260	1,605	1,557	1,278	1,302
Corporate profits*[2]	4.4	3.0	0.0	-7.5	-7.0	-6.0	22.6	6.4	-5.2	3.2
Personal saving rate (%)	2.8	2.2	2.4	2.4	2.2	2.0	11.9	3.1	2.6	2.2
Total inflation rate*	8.3	7.3	5.9	3.4	2.4	1.9	4.7	8.1	3.3	2.2
Core inflation rate*[3]	6.3	6.1	5.1	3.8	2.7	1.9	3.6	6.2	3.4	1.8
Current account balance (US$B)	-888	-924	-918	-899	-886	-890	-846	-987	-898	-899

f: forecasts; * Annual change; [1] Annualized basis; [2] Before taxes; [3] Excluding food and energy.
Sources: Datastream and Desjardins, Economic Studies

As economic conditions deteriorate, inflation will to continue to moderate. The US consumer price index was up 7.7% year-over-year in October. That's still very high, but it's down from June's 9.1% peak. The improvement is mostly coming from the goods side for now, as the inflationary effects of supply chain issues and changes in consumer habits during the pandemic are increasingly becoming a thing of the past (graph 8). Inflation should be back near the Fed's 2% target by the end of 2023, allowing the Fed to start cutting interest rates. In 2024, US real GDP growth should therefore strengthen on the rebalancing of economic conditions and lower inflation and interest rates.

GRAPH 8
Pressure has eased on goods prices but not service prices



Sources: Bureau of Labor Statistics and Desjardins Economic Studies

Canada

Economic Outlook: The Calm Before the Economic Storm

FORECASTS

Recent Canadian economic data have come in much better than we anticipated when we released our last forecast in October. But we think it's a bit of a head fake. Our outlook for next year continues to be for a short and shallow recession, albeit one that could stretch into the third quarter. Risks to the outlook also continue to be tilted to the downside, as households are increasingly coming up against the reality of higher costs of servicing their mortgages. This said, we are more optimistic about 2024, as eventual interest rate cuts spur renewed activity.

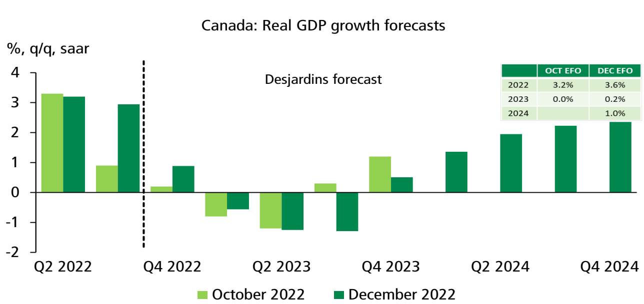
The Canadian economy never ceases to surprise. What looked like a sure bet on rapidly decelerating growth going into the end of 2022 has proven to be less of a certainty than we had earlier anticipated. Indeed, the third quarter outperformed our earlier expectations, and the fourth quarter looks on track to do the same. So, with real GDP growth in the second half of 2022 having come in stronger than expected in October, we've had to revise up our outlook for the year (graph 9). This has also helped to set a more positive tone going into next year, as the "handoff" to 2023—the impact that quarterly growth this year has on the annual rate of growth next year—is higher as well.

But take a look under the recent real GDP numbers, and it is clear that the Canadian economy is rapidly cooling. For instance, domestic demand contracted in the third quarter of this year as a result of declines in both consumption and investment. And as we outlined recently, we think positive data so far in the fourth quarter have likely been a bit of a head fake. As such, we anticipate this recent bout of good economic news to be the calm before the storm. Indeed, we continue to expect a recession in 2023 that is just as deep, if not deeper, than we were forecasting back in October (graph 9).

This moribund outlook for 2023 reflects broad-based weakness (graph 10). However, it is primarily the result of higher interest rates weighing on interest-rate sensitive parts of the Canadian economy, notably housing and consumption. The Bank of Canada is acutely aware of the long and variable lags with which monetary policy impacts the economy, and has been increasingly highlighting this in recent speeches and research. Indeed, the potential non-linear impacts of higher interest rates on the economy pose a meaningful downside risk to the outlook. We touched on this in a recent note which considered what a 1990s-style scenario could look like, where households slash consumption to ensure they can meet their higher mortgage costs. And it doesn't look good. While we don't think the outlook is likely to develop along the lines of this downside scenario, it does reinforce the notion that risks to our baseline forecast are tilted to the downside.

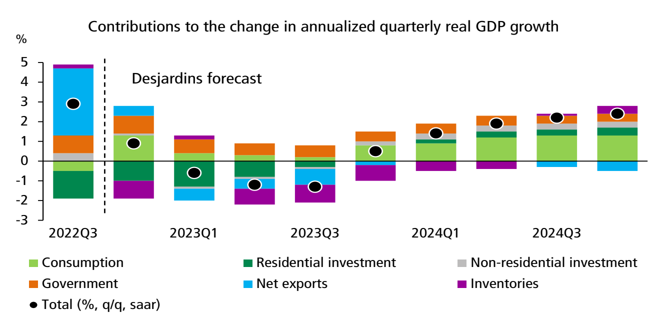
However, the outlook isn't all doom and gloom. In providing "inflation relief," federal and provincial governments have given income support to Canadians, with the general lean toward lower-income households. This should somewhat buttress the economy against the impending downturn. And with Canada ending 2022 having a tight labour market and consumers

GRAPH 9
We continue to expect a recession in Canada in 2023



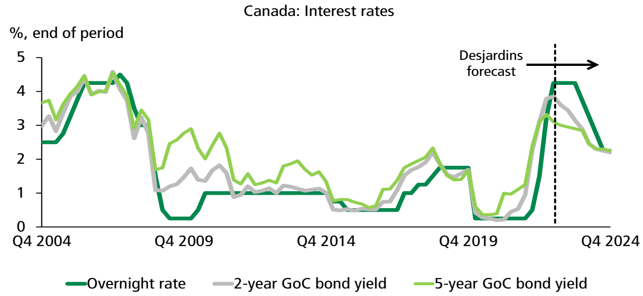
Sources: Statistics Canada and Desjardins Economic Studies

GRAPH 10
Economic weakness should be increasingly broad-based in 2023



Sources: Statistics Canada and Desjardins Economic Studies with savings in the bank, there is good reason to expect the slowdown in 2023 will be short lived. Elevated levels of immigration, particularly of economic immigrants, should also support higher growth over the medium term (see our recent note here). Further, inflation looks to be past its peak, and as such we expect the Bank of Canada to settle in for a prolonged pause. But as inflation cools on the back of slowing domestic and global demand, markets will anticipate that central banks will take their feet off the brake (graph 11). This will cause longer-term bond yields to move lower, helping to spur renewed growth in Canada and beyond, thereby underpinning a rebound in 2024.

GRAPH 11
This current hiking cycle is expected to come to an end in December



Sources: Bank of Canada and Desjardins Economic Studies

TABLE 4
Canada: Major economic indicators

QUARTERLY ANNUALIZED VARIATION IN % (EXCEPT IF INDICATED)	2022		2023				ANNUAL AVERAGE			
	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	2021	2022f	2023f	2024f
Real GDP (2012 $)	**2.9**	**0.9**	**-0.6**	**-1.2**	**-1.3**	**0.5**	**5.0**	**3.6**	**0.2**	**1.0**
Final consumption expenditure [of which:]	0.8	2.8	1.4	1.1	0.8	1.6	5.4	3.9	1.7	1.7
Household consumption expenditure	*-1.0*	*2.4*	*0.7*	*0.5*	*0.2*	*1.5*	*5.1*	*4.8*	*1.3*	*1.7*
Governments consumption expenditure	*5.3*	*3.8*	*2.9*	*2.6*	*2.1*	*1.8*	*6.4*	*1.6*	*2.8*	*1.8*
Gross fixed capital formation [of which:]	-4.8	-3.4	-5.3	-3.6	-1.1	0.9	7.4	-0.9	-3.9	1.5
Residential structures	*-15.4*	*-10.5*	*-13.2*	*-8.9*	*-3.0*	*-0.3*	*14.9*	*-10.7*	*-11.7*	*0.8*
Non-residential structures	*11.7*	*3.3*	*-1.4*	*-1.2*	*-1.2*	*1.0*	*0.8*	*11.6*	*2.1*	*1.4*
Machinery and equipment	*-7.6*	*-2.8*	*-1.7*	*-2.8*	*-1.8*	*1.8*	*9.9*	*7.7*	*-1.3*	*2.9*
Intellectual property products	*1.0*	*2.1*	*2.0*	*2.0*	*2.0*	*2.0*	*4.0*	*0.1*	*2.2*	*2.1*
Governments gross fixed capital formation	*-4.0*	*1.5*	*1.4*	*2.1*	*2.3*	*2.4*	*0.9*	*0.1*	*0.7*	*2.4*
Investment in inventories (2012 $B)	56.4	51.0	52.3	47.9	42.8	38.5	-4.1	45.5	45.4	34.7
Exports	8.6	2.4	-2.7	-3.3	-2.1	1.1	1.4	2.6	0.4	1.6
Imports	-1.7	0.7	-0.9	-1.9	0.5	1.7	7.8	8.2	1.1	2.4
Final domestic demand	-0.6	1.3	-0.2	0.0	0.4	1.4	5.8	2.7	0.4	1.7
Other indicators										
Nominal GDP	-2.7	3.8	0.3	-1.0	1.6	2.9	13.6	11.5	1.6	2.9
Real disposable personal income	0.3	3.2	-1.5	1.1	-1.0	-0.9	1.2	-0.2	0.0	1.7
Employment	-1.3	2.3	-0.3	-0.9	0.3	0.9	4.8	3.7	0.2	1.2
Unemployment rate (%)	5.2	5.3	5.7	6.3	7.0	7.2	7.4	5.3	6.5	6.7
Housing starts[1] (thousands of units)	283	245	203	187	183	180	271	261	188	178
Corporate profits*[2]	16.3	1.9	-8.5	-23.0	-16.0	-11.3	35.8	11.4	-15.0	-0.7
Personal saving rate (%)	5.7	5.8	5.3	5.5	5.2	4.5	10.9	6.3	5.1	5.1
Total inflation rate*	7.2	6.9	5.4	2.9	2.6	2.1	3.4	6.9	3.2	2.0
Core inflation rate*[3]	5.4	5.3	4.8	3.3	2.6	2.3	2.3	5.0	3.2	2.1
Current account balance ($B)	-11.1	-4.8	-6.0	-7.4	-7.7	-8.4	-6.7	-12.3	-29.5	-36.6

f: forecasts; * Annual change; [1] Annualized basis; [2] Before taxes; [3] Excluding food and energy.
Sources: Datastream and Desjardins Economic Studies

Quebec

Is Quebec Already on the Brink of a Recession?

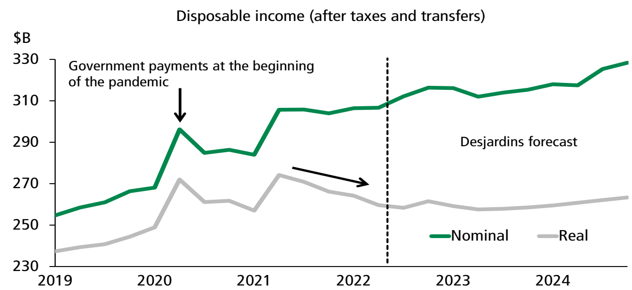
FORECASTS
According to a number of indicators, Quebec's economy is heading for a major downturn. While real GDP has posted three sharp declines since March, it's too soon to say whether the province is already in a recession. But it will be eventually. It looks like 2023 will be a tough year, as households and businesses really start to feel the pinch of higher interest rates. The real estate market was hit first, and consumption is expected to start cooling shortly despite the government's fiscal support measures. The global economic downturn should also slow exports and business investment. The labour market has proved resilient so far, limiting the economic damage. But it's already shaky, and a few quarters of real GDP declines are likely. However, the economic recovery should begin in late 2023 and pick up steam in 2024.

Consumers are being squeezed by high inflation, which is reducing real income (graph 12) despite a number of relief measures from the Quebec government. This year, individuals in the province received $740 million in January, $3.2 billion in the spring and $3.5 billion in early December. In 2023, Québec Pension Plan benefits will go up 6.5%, and certain government fee increases will be capped at 3%. These measures and others announced by the federal and provincial governments are intended to help households contend with the rising cost of living and higher interest rates.

Consumer spending remained strong in the first half of this year. But durable goods purchases are showing signs of slowing and are expected to decline in the coming quarters. Less than 10% of Quebecers think it's a good time to make a major purchase (graph 13), a 20-year low. The recent string of interest rate hikes has been especially painful as it has driven up the cost of buying goods on credit. Other types of goods spending and service spending stand to slow as well. Overall household spending is expected to grow between 1.5% and 2.0% in 2023 compared to nearly 5% in 2022. Consumer spending will likely be slightly stronger in 2024 as lower interest rates fuel the economic recovery.

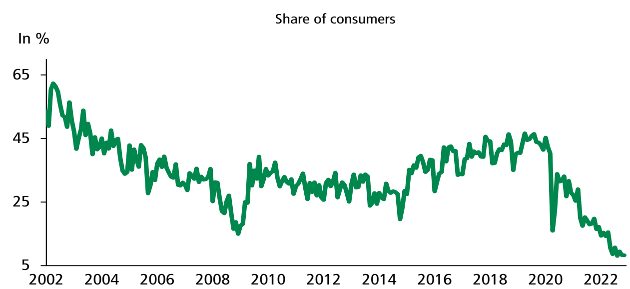
During Quebec's last recession in 2008–2009, excluding the 2020 pandemic shock, consumer spending fell about 2% on an annualized basis for two straight quarters. Consumers should fare better this time around as the labour market remains tight and the savings rate hovers around 10%. Quebec employers added 28,100 jobs in November, and the jobless rate hit a record low of 3.8%. But deteriorating economic conditions will push unemployment up to around 6% by the end of 2023 (graph 14 on page 11). Even if real GDP weakens for a few quarters, we should see limited job losses as there aren't enough workers to meet demand. In this tight job market, most businesses with the financial wherewithal will try to hold on to staff and hire any workers who become available. We're already seeing this in the

GRAPH 12
Despite government payments to individuals in 2022, real personal incomes are down in Quebec



Sources: Institut de la statistique du Québec and Desjardins Economic Studies

GRAPH 13
Durable goods are about to take a hit as not many consumers in Quebec think it's a good time to make a major purchase



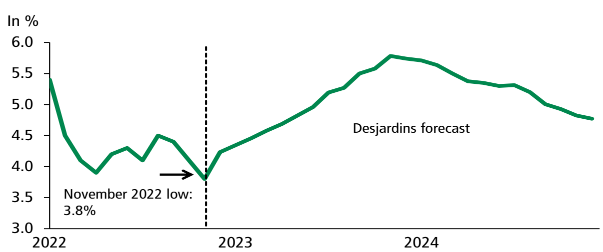
Sources: Conference Board of Canada and Desjardins Economic Studies

TABLE 5
Quebec: Major economic indicators

ANNUAL AVERAGE IN % (EXCEPT IF INDICATED)	2020	2021	2022f	2023f	2024f
Real GDP (2012 $)	**-5.0**	**6.0**	**2.9**	**-0.2**	**1.2**
Final consumption expenditure [of which:]	-3.3	5.9	3.9	2.1	2.0
Household consumption expenditure	*-5.7*	*5.4*	*4.5*	*1.8*	*2.0*
Governments consumption expenditure	*2.0*	*7.3*	*2.6*	*2.7*	*2.0*
Gross fixed capital formation [of which:]	-1.0	7.2	-0.3	-5.2	-0.2
Residential structures	*2.8*	*12.9*	*-10.3*	*-13.8*	*-2.0*
Non-residential structures	*0.6*	*-1.5*	*6.5*	*-3.0*	*-2.0*
Machinery and equipment	*-15.1*	*20.3*	*10.0*	*-3.0*	*-1.0*
Intellectual property products	*0.1*	*7.1*	*2.1*	*3.8*	*3.8*
Governments gross fixed capital formation	*0.5*	*-3.5*	*5.5*	*3.0*	*3.0*
Investment in inventories (2012 $M)	-6,550	-431	9,000	6,000	5,000
Exports	-7.8	2.9	2.5	0.0	2.3
Imports	-7.9	6.8	2.0	1.2	2.5
Final domestic demand	-2.9	6.2	3.0	0.5	1.5
Other indicators					
Nominal GDP	-1.9	11.8	10.3	2.8	3.3
Real disposable personal income	8.5	1.9	-1.5	-1.0	2.0
Weekly earnings	7.9	2.9	4.2	4.1	3.7
Employment	-4.8	4.1	2.6	0.6	1.3
Unemployment rate (%)	8.9	6.1	4.3	5.1	5.2
Personal saving rate (%)	17.6	14.6	8.9	6.0	5.8
Retail sales	0.4	14.4	8.0	3.1	3.8
Housing starts[1] (thousands of units)	53.4	67.8	60.0	47.0	49.0
Total inflation rate	0.8	3.8	6.5	3.1	2.1

f: forecasts; [1] Annualized basis.
Sources: Statistics Canada, Institut de la statistique du Québec, Canada Mortgage and Housing Corporation and Desjardins, Economic Studies

GRAPH 14
Quebec's unemployment rate will likely rise in 2023 before gradually coming down in 2024



Sources: Statistics Canada and Desjardins Economic Studies

construction industry, where employment has been fairly stable so far despite a significant drop in activity.

Quebec's housing market continues to cool. Existing home sales are down, and the average sale price is already 6.7% off its April peak. The frenzy is over, and bidding wars have become less common. The share of homes selling at least 10% above list has fallen from about 30% in April to less than 5% in October.[1] In areas that saw the most bidding wars through this spring, especially near the Island of Montreal and the Outaouais, prices are correcting sharply. Prices are holding up better in eastern and central Quebec. Provincewide, the average price is expected to decline by 17% by the end of 2023. The slowdown in new construction is also far from over. Housing starts are down nearly 10% this year and will likely drop by about 20% in 2023. But residential investment is expected to gradually bounce back in 2024, supporting the overall economic recovery.

[1] According to the Quebec Professional Association of Real Estate Brokers.

Ontario and Other Provinces

Inflation Relief Measures Offer Some Relief from Recession, If Not from Inflation

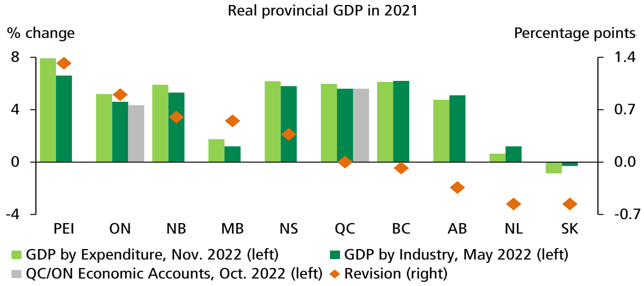
FORECASTS

A housing-led Canadian economic downturn will have the worst effects on provinces most reliant on real estate. By contrast, net oil-producing provinces should benefit from relatively little exposure to real estate, solid commodity production and prices, and major project activity. Affordability measures laid out since the spring budgets should boost national growth by about 0.1 ppts in 2022. Higher national immigration targets should support growth in all provinces, with the greatest gains to those with better economic prospects and ability to integrate newcomers into the labour market.

As the effects of this year's rate hikes work their way through the economy, we still expect Canada's largest province to see the most pronounced slowdown. Ontario's underperformance continued in the third quarter of this year. Home prices are further below their peak than in any other province. Total employment is almost 40k lower than the May 2022 high despite two consecutive monthly gains in October and November. The risk of a housing market spillover into the financial sector remains omnipresent. And national automobile output and motor vehicles and parts exports fell in Q3, which does not bode well for Ontario's principal export industry. Vehicle production is set to rise next year, but softer domestic demand in the US will hold back gains in external shipments from all provinces.

However, it's not all bad news for Canada's most populous province. Upward revisions to historical GDP mean positive handoff effects for growth rates this year. As in Canada's Q3 2022 economic accounts, Statistics Canada revised the 2021 expansion significantly higher in Ontario. Real GDP growth in 2021 was also revised substantially better for Prince Edward Island (PEI) and moderately improved in New Brunswick, Manitoba and Nova Scotia (graph 15).

GRAPH 15
Historical revisions should boost Ontario, PEI growth



Sources: Statistics Canada, Ontario Ministry of Finance, Institut de la Statistique du Québec, and Desjardins Economic Studies

Commodity prices are poised to stay high and continue to propel expansions in Canada's natural resources-producing regions. Alberta drilling activity is trending higher and at some of its highest levels since before the 2014–15 oil price correction. The government recently raised its production forecasts for 2023 and 2024, particularly for conventional oil. Saskatchewan has also lifted projections for crude output. In the potash sector, it should continue to benefit from rising production, high prices, and the ongoing Janssen mine construction. Newfoundland and Labrador's Terra Nova offshore oil field is scheduled to come back online next year. And in BC, still-high prices for metals and natural gas should offset some of the drag from housing. However, China's new lockdown measures do not bode well for base metals demand or trade in Canada's westernmost province.

The strength of commodity prices has also bolstered government revenues (alongside better-than-expected economic growth and inflation) and enabled new measures to address affordability challenges. We estimate that the sum of provincial household transfers (including those in Quebec) announced since the spring budget season make up 0.4% of nominal GDP in FY2023 (with impacts between 0.1% and 1% at the provincial level). That should boost the national annual growth rate by about 0.1 ppts in 2022. The risk remains that these measures exacerbate or prolong inflationary pressures. See our commentary on the Alberta and Ontario mid-year updates and our Ontario recession report for details.

In the Maritimes, expectations that interprovincial in-migration will ease towards historical averages still underpin the economic slowdown forecast for the next two years. Infrastructure outlays to meet the needs of growing populations and rebuilding after Hurricane Fiona are also key. The question is whether projects can progress on schedule amid elevated input costs and acute labour shortages. Nova Scotia's Q1 fiscal update cut building infrastructure spending plans by $130M (17%), primarily due to health sector project delays.

Higher national immigration targets should boost all provinces' expansions, but the strength of the effect will vary by region. For one thing, newcomers to the Prairies have tended to fare better in the labour market than those who settle elsewhere. That trend could well continue given the strong economic prospects in Alberta, Saskatchewan and Manitoba versus other provinces. Moreover, recessions tend to have lagged and lasting impacts on where newcomers settle. For instance, the portion of immigrants who landed in Alberta dropped during and after the 2015–16 provincial downturn; Ontario's share then surged. By contrast, during the severe 1990s recession, Ontario's share stagnated, to the benefit of BC.

TABLE 6

Ontario: Major economic indicators

ANNUAL AVERAGE IN % (EXCEPT IF INDICATED)	2020	2021	2022f	2023f	2024f
Real GDP (2012 $)	**-4.7**	**5.2**	**3.4**	**-0.3**	**1.0**
Final consumption expenditure [of which:]	-5.7	5.0	4.7	0.7	1.8
Household consumption expenditure	*-7.9*	*4.4*	*5.6*	*0.1*	*1.8*
Governments consumption expenditure	*0.2*	*1.3*	*2.1*	*1.8*	*1.7*
Gross fixed capital formation [of which:]	3.4	8.8	-4.9	-6.3	2.3
Residential structures	*8.9*	*14.3*	*-14.3*	*-16.0*	*2.0*
Non-residential structures	*0.8*	*2.3*	*7.6*	*-2.1*	*1.6*
Machinery and equipment	*-11.7*	*12.8*	*3.8*	*-1.1*	*3.7*
Intellectual property products	*1.4*	*3.7*	*-1.9*	*1.2*	*2.1*
Governments gross fixed capital formation	*6.9*	*6.8*	*1.1*	*0.4*	*2.4*
Investment in inventories (2012 $M)	-7,749	3,462	10,955	10,250	9,000
Exports	-7.7	1.3	4.8	1.9	0.4
Imports	-8.3	5.7	5.2	0.4	1.9
Final domestic demand	-3.7	5.9	2.3	-0.8	1.9
Other indicators					
Nominal GDP	-2.9	10.3	10.3	0.8	2.7
Real disposable personal income	8.8	1.3	-0.8	-1.5	1.7
Weekly earnings	8.0	1.6	4.7	4.9	2.6
Employment	-4.7	4.9	4.2	0.0	1.1
Unemployment rate (%)	9.5	8.0	5.7	7.2	7.4
Personal saving rate (%)	15.0	12.4	7.1	5.4	5.3
Retail sales	-3.5	9.3	11.7	1.5	2.2
Housing starts[1] (thousands of units)	81.3	99.6	91.9	64.0	58.0
Total inflation rate*	0.6	3.5	7.0	3.1	2.0

f: forecasts; * Annual change; [1] Annualized basis.
Sources: Statistics Canada, Ontario's Ministry of Finance, Canada Mortgage and Housing Corporation and Desjardins Economic Studies

TABLE 7
Canada: Major economic indicators by province

ANNUAL AVERAGE IN % (EXCEPT IF INDICATED)	2020	2021	2022f	2023f	2024f
Real GDP growth – Canada	**-5.2**	**5.0**	**3.6**	**0.2**	**1.0**
Atlantic	-3.5	4.6	1.8	0.4	0.5
Quebec	-5.0	6.0	2.9	-0.2	1.2
Ontario	-4.7	5.2	3.4	-0.3	1.0
Manitoba	-4.4	1.8	2.2	0.7	0.8
Saskatchewan	-4.8	-0.9	5.2	1.2	1.1
Alberta	-8.0	4.8	4.9	1.3	1.3
British Columbia	-3.0	6.1	3.9	-0.1	1.2
Total inflation rate – Canada	**0.7**	**3.4**	**6.9**	**3.2**	**2.0**
Atlantic	0.2	4.0	7.2	3.4	2.1
Quebec	0.8	3.8	6.5	3.1	2.1
Ontario	0.6	3.5	7.0	3.1	2.0
Manitoba	0.5	3.2	7.9	3.7	2.1
Saskatchewan	0.6	2.6	6.8	3.7	2.1
Alberta	1.1	3.2	6.6	3.4	2.0
British Columbia	0.8	2.8	7.0	3.4	2.0
Employment growth – Canada	**-5.1**	**4.8**	**3.7**	**0.2**	**1.2**
Atlantic	-4.1	3.9	3.2	0.2	0.0
Quebec	-4.8	4.1	2.6	0.6	1.3
Ontario	-4.7	4.9	4.2	0.0	1.1
Manitoba	-3.7	3.5	2.5	0.2	1.0
Saskatchewan	-4.6	2.6	3.3	0.4	1.2
Alberta	-6.5	5.2	5.0	0.4	1.3
British Columbia	-6.5	6.6	3.1	0.4	1.2
Unemployment rate – Canada	**9.6**	**7.4**	**5.3**	**6.5**	**6.7**
Atlantic	10.8	9.6	7.7	8.4	8.7
Quebec	8.9	6.1	4.3	5.1	5.2
Ontario	9.5	8.0	5.7	7.2	7.4
Manitoba	8.0	6.4	4.6	5.6	5.8
Saskatchewan	8.3	6.5	4.6	6.0	6.3
Alberta	11.5	8.6	5.7	6.9	7.2
British Columbia	9.0	6.5	4.7	5.7	5.9
Retail sales growth – Canada	**-1.3**	**11.8**	**8.3**	**2.5**	**3.5**
Atlantic	0.0	14.1	6.6	2.1	2.9
Quebec	0.4	14.4	8.0	3.1	3.8
Ontario	-3.5	9.3	11.7	1.5	2.2
Manitoba	-0.3	13.3	7.9	3.0	4.2
Saskatchewan	0.3	14.6	6.9	4.0	5.4
Alberta	-2.1	11.5	6.8	4.2	6.0
British Columbia	1.2	12.6	3.2	2.7	3.8
Housing starts – Canada (thousands of units)	**216.7**	**271.2**	**261.1**	**188.5**	**178.2**
Atlantic	10.3	12.1	12.2	8.1	8.1
Quebec	53.4	67.8	60.0	47.0	49.0
Ontario	81.3	99.6	91.9	64.0	58.0
Manitoba	7.3	8.0	8.0	5.5	4.8
Saskatchewan	3.1	4.2	4.4	3.5	3.0
Alberta	24.0	31.9	38.9	28.0	26.0
British Columbia	37.7	47.6	44.9	32.0	29.0

f: forecasts
Sources: Statistics Canada, Institut de la statistique du Québec, Ontario's Ministry of Finance, Canada Mortgage and Housing Corporation and Desjardins Economic Studies

Medium-Term Issues and Forecasts

What Will Be the New Normal for the Economy?

In 2023 and 2024, many countries will fall into a recession, then recover. After that, economic growth should return to its potential pace, which is determined by structural factors such as demographic trends and productivity. For some economies, this may mean slower average growth than in the previous economic cycle. But other factors could also play a role. These include a more challenging global environment with a high risk of conflict and the possibility of less trade globalization. The energy transition should become a greater focus as well. And after falling in 2024, interest rates should stabilize, but at higher levels than before the pandemic.

Lower Potential Growth

Slower demographic trends in many countries are expected to limit potential economic growth over the medium to long term. With more immigrants arriving in Canada, the nation's worker pool could maintain a good pace of growth. Quebec will have a harder time on this front, however. We could see productivity—a key variable of economic growth—accelerate and partially offset today's labour shortages, but that's still a big maybe. Productivity has been pretty disappointing for many years.

Unfortunately, there's no magic formula for boosting productivity. But economists do agree that it can be stimulated through productive investments and new technologies that add value to economic growth. Workforce training and education are also key. Optimizing the various regulatory constraints to reduce unwanted economic impacts could help, too.

Ultimately, we estimate that economic growth will be just shy of 2% in Canada by 2027. We expect it to be closer to 1.5% in Quebec and around 2% in the United States. Despite growth rates lower than previous economic cycles, workers should maintain the upper hand in the job market, especially in Quebec. Because of the province's anemic labour force growth, Quebec's unemployment rate could be back around 4% in the medium term.

Other Thoughts on the Next Cycle

Unfortunately, the global geopolitical balance has shifted. For proof, look no further than the war in Ukraine and tensions with China. The end of the Cold War, German reunification and China's opening to the West all contributed to the economic boom of the 1990s and early 2000s. At the same time, we saw increased globalization, when many economies benefitted from lower trade barriers and greater capital mobility. We expect very few gains in this area over the next few years, and we could even see declines.

The KOF Swiss Economic Institute publishes indexes of major globalization trends. According to the institute, heightened tension among world powers and greater US protectionism had already slowed globalization sharply before the pandemic (graph 16). More limited access to certain international markets could not only hurt economic growth, but also eventually make inflation a bit tougher to control. This argues for keeping interest rates higher than they were in the previous economic cycle.

GRAPH 16
The pace of globalization has already slowed considerably

Sources: KOF Swiss Economic Institute and Desjardins Economic Studies

The world needs to make the energy transition, but it could also make it harder to keep inflation on target. The energy transition will require huge investments. While this will likely have a positive impact on economic growth, it could also create inflationary pressure. This could be a problem, especially if the transition happens faster than production capacities and resources can handle. On the other hand, if the transition doesn't happen fast enough, climate change could be even costlier.

TABLE 8

Major medium-term economic and financial indicators

IN % (EXCEPT IF INDICATED)	ANNUAL AVERAGE 2021	2022f	2023f	2024f	2025f	2026f	2027f	AVERAGES 2017–2021	2022–2027f
United States									
Real GDP (var. in %)	5.9	2.0	0.1	2.0	3.0	2.4	2.1	2.1	1.9
Total inflation rate (var. in %)	4.7	8.1	3.3	2.2	2.2	2.0	2.0	2.5	3.3
Unemployment rate	5.4	3.7	4.7	5.3	4.9	4.5	4.2	5.1	4.6
S&P 500 index (var. in %)[1]	26.9	-22.4	1.4	6.7	6.0	4.0	4.0	17.0	-0.1
Federal funds rate	0.25	1.85	4.95	3.25	2.50	2.50	2.50	1.21	2.93
Prime rate	3.25	4.85	7.95	6.25	5.50	5.50	5.50	4.21	5.93
Treasury bills – 3-month	0.05	2.05	4.60	2.90	2.35	2.35	2.35	1.09	2.77
Federal bonds – 10-year	1.43	2.90	3.40	2.70	2.65	2.65	2.65	1.94	2.83
– 30-year	2.05	3.05	3.40	2.90	2.85	2.85	2.85	2.44	2.98
WTI oil (US$/barrel)	68	95	78	85	82	80	78	56	83
Gold (US$/ounce)	1,800	1,797	1,720	1,615	1,565	1,605	1,645	1,499	1,658
Canada									
Real GDP (var. in %)	5.0	3.6	0.2	1.0	2.1	1.8	1.7	1.4	1.7
Total inflation rate (var. in %)	3.4	6.9	3.2	2.0	2.0	2.0	2.0	2.0	3.0
Employment (var. in %)	4.8	3.7	0.2	1.2	2.0	1.6	1.3	1.1	1.7
Employment (thousands)	867	690	31	234	406	318	265	191	324
Unemployment rate	7.4	5.3	6.5	6.7	5.9	5.7	5.7	7.0	6.0
Housing starts (thousands of units)	217	271	188	178	194	213	224	226	211
S&P/TSX index (var. in %)[1]	21.7	-11.4	2.4	7.0	6.0	5.0	5.0	7.5	2.3
Exchange rate (US$/C$)	0.80	0.77	0.73	0.78	0.78	0.77	0.77	0.77	0.77
Overnight funds	0.25	1.90	4.20	2.80	2.25	2.25	2.25	0.93	2.61
Prime rate	2.45	4.10	6.40	5.00	4.45	4.45	4.45	3.13	4.81
Mortgage rate – 1-year	2.80	4.45	6.50	5.15	4.60	4.50	4.30	3.26	4.92
– 5-year	4.79	5.65	6.75	6.25	5.90	5.80	5.70	5.01	6.01
Treasury bills – 3-month	0.11	2.15	4.10	2.65	2.25	2.20	2.20	0.85	2.59
Federal bonds – 2-year	0.48	2.85	3.40	2.40	2.20	2.20	2.20	1.13	2.54
– 5-year	0.95	2.70	2.95	2.40	2.25	2.25	2.25	1.32	2.47
– 10-year	1.36	2.70	2.70	2.40	2.35	2.35	2.35	1.55	2.48
– 30-year	1.85	2.75	2.70	2.40	2.35	2.35	2.35	1.90	2.48
Yield spreads (Canada—United States)									
Treasury bills – 3-month	0.06	0.10	-0.50	-0.25	-0.10	-0.15	-0.15	-0.24	-0.18
Federal bonds – 10-year	-0.07	-0.20	-0.70	-0.30	-0.30	-0.30	-0.30	-0.39	-0.35
– 30-year	-0.20	-0.30	-0.70	-0.50	-0.50	-0.50	-0.50	-0.54	-0.50
Quebec									
Real GDP (var. in %)	6.0	2.9	-0.2	1.2	2.1	1.7	1.5	1.9	1.5
Total inflation rate (var. in %)	3.8	6.5	3.1	2.1	2.0	2.0	2.0	1.9	2.9
Employment (var. in %)	4.1	2.6	0.6	1.3	2.0	1.4	1.2	1.1	1.5
Employment (thousands)	169	112	25	55	90	65	55	13	67
Unemployment rate	6.1	4.3	5.1	5.2	4.5	4.2	3.9	6.3	4.5
Retail sales (var. in %)	14.4	8.0	3.1	3.8	5.5	5.2	5.0	4.9	5.1
Housing starts (thousands of units)	68	60	47	49	51	52	53	53	52
Ontario									
Real GDP (var. in %)	5.2	3.4	-0.3	1.0	2.5	2.3	1.7	1.5	1.8
Total inflation rate (var. in %)	3.5	7.0	3.1	2.0	2.1	2.0	2.0	2.0	3.0
Employment (var. in %)	4.9	4.2	0.0	1.1	1.7	1.7	1.4	1.3	1.7
Employment (thousands)	343	311	0	88	132	130	112	89	129
Unemployment rate	8.0	5.7	7.2	7.4	7.0	6.6	6.4	7.0	6.7
Retail sales (var. in %)	9.3	11.7	1.5	2.2	4.4	3.8	3.8	4.0	4.6
Housing starts (thousands of units)	100	92	64	58	65	73	78	81	72

f: forecasts; WTI: West Texas Intermediate; [1] Variations are based on observation of the end of period.
Sources: Datastream, Statistics Canada, Institut de la statistique du Québec, Ontario's Ministry of Finance, Canada Mortgage and Housing Corporation and Desjardins Economic Studies

Monthly Economic Monitor

Economics and Strategy

NATIONAL BANK OF CANADA
FINANCIAL MARKETS

December 2022 / January 2023

Summary

By Matthieu Arseneau, Jocelyn Paquet and Daren King

- For some months now China's economy has been struggling in the face of two different but interdependent headwinds: a marked slowdown in the real estate sector and a very strict anti-Covid policy. So it is with great relief that markets have welcomed the measures Beijing has taken in recent weeks to attack these problems. What could really change the picture is China's new approach to the pandemic. But the transition to living with the virus could be tough; a million people could succumb to Covid from now until sufficient herd immunity is reached. The economic fallout will likely be substantial. Fortunately this state of things is likely to be temporary. As herd immunity gradually develops, we see an acceleration of Chinese growth in the second half of 2023, when abolition of public-health measures will really begin to bear fruit. Until then, the rest of the world is unlikely to offer much to offset the weakness of Chinese growth. In the Eurozone a long-awaited recession seems finally under way, with October volume retail sales showing the largest monthly decline in 10 years outside of the pandemic period. Emerging economies, meanwhile, continue to suffer from highly aggressive monetary tightening and are also likely to slow in the coming months. Given these conditions we have slightly lowered our outlook for 2023 growth, from 2.2% to 2.1%. For 2024 our forecast is unchanged at +2.9%.

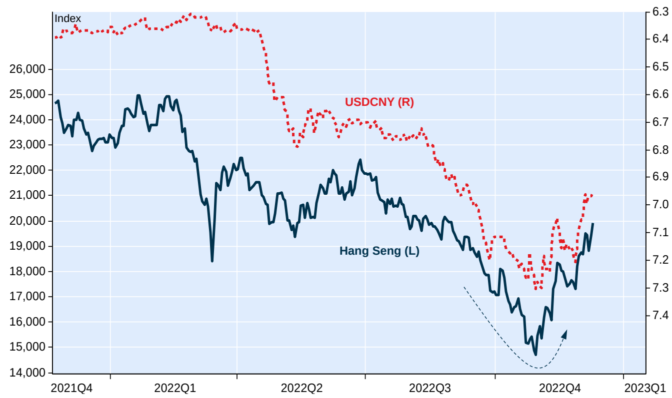
- Two weeks before the big day, markets got an early Christmas present from the Bureau of Labor Statistics – a second straight monthly report showing inflation below what the consensus had expected. The recent path of prices should have led the Federal Reserve to communicate a less hawkish stance, but at its most recent monetary policy meeting, for a reason that escapes us, the central bank instead hardened its tone. This change seems to us hard to justify when leading economic indicators are signalling a distinct slowdown of growth. The Fed, insensitive to these spikes of weakness, seems rather preoccupied by the vigour of employment. We do not deny that the labour market remains strong, but keep in mind that it is a coincident indicator, not a leading indicator like real estate and manufacturing. And even in employment data a certain slowing is now being felt. In such a context, we think the central bank will be obliged to end its monetary tightening phase no later than at its first monetary policy meeting of 2023 if it is to avoid making recession almost inevitable. But even a Fed change of course would not prevent a substantial slowing of growth next year. Our base case scenario includes two quarters of contraction, Q2 and Q3. For 2023 as a whole we see real GDP growth of just 0.2%. Fed rate cuts in the second half of 2023 should then allow acceleration of growth to 1.1% in 2024.

- Manœuvres for the landing of the economy have continued. The Bank of Canada raised its policy rate for a seventh straight time in December. However, cooling domestic demand and labor market and slowing inflation have prompted it to greater prudence about the next steps and it is no longer telegraphing further hikes as in its previous communications. It now affirms that the Governing Council will evaluate whether it will be necessary to raise the policy rate further. This is prudent, since the Bank acted with haste and the time lag for transmission of monetary policy means there is a risk it has gone too far. We will unfortunately know only a posteriori whether it has done so. One thing is certain: we are now seeing a marked slowdown in residential real estate, leading to extremely rapid deflation. Consumers have been struck simultaneously by loss of purchasing power, an interest-payment shock and an unprecedented negative wealth effect. In our view, interest rates will not need to be kept at current levels for very long to brake inflation and we accordingly expect the Bank to be obliged to lower them in the second half of next year. Given the monetary tightening, we anticipate stagnation of the economy over the next three quarters and anemic growth of 0.7% in 2023 as a whole.

World: China reopens … for better and for worse

For some months now China's economy has been struggling in the face of two different but interdependent headwinds: a marked slowdown in the real estate sector and a very strict anti-Covid policy. So it is with great relief that markets have welcomed the measures Beijing has taken in recent weeks to attack these problems.

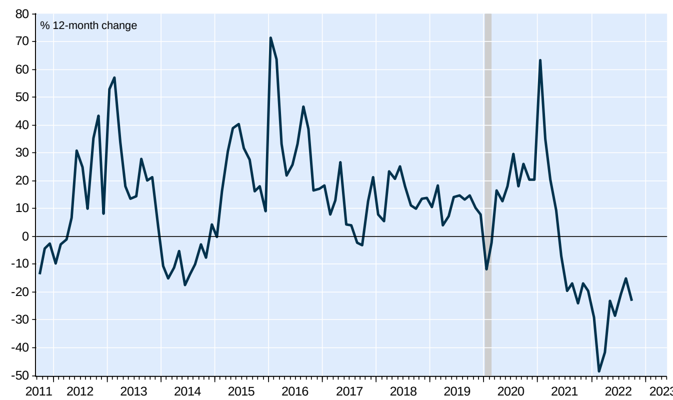
China: Investors reassured by announced easing measures
Hang Seng equity index and USDCNY



NBF Economics and Strategy (Bloomberg data)

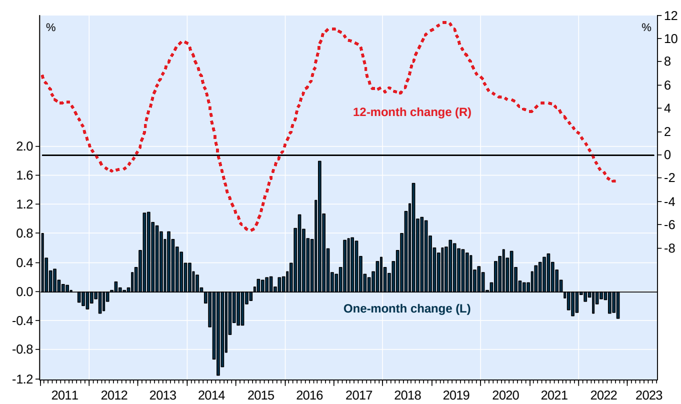
First, the Chinese central bank and regulatory authorities (the Banking and Insurance Regulatory Commission) obliged banks to extend the payback periods of certain loans to real estate promoters, giving the latter more room to manoeuvre financially and thus to finish projects under construction. Lenders were also encouraged to grant homebuyers more time to pay down their mortgage debt. Many homebuyers had ceased making payments in recent weeks, fearing that their purchases would never be delivered. (In China, buyers of a real estate asset often start making payments before construction is finished.) That situation threatened to trigger a negative feedback loop, with loss of confidence threatening to exacerbate promoters' problems by depressing demand and prices.

China: Can the new measures brake the housing-market decline? (1)
12-month change in new-home sales (square metres)



NBF Economics and Strategy (Bloomberg data)

China: Can the new measures brake the housing-market decline? (2)
12-month and one-month changes of new-home prices in 70 large cities



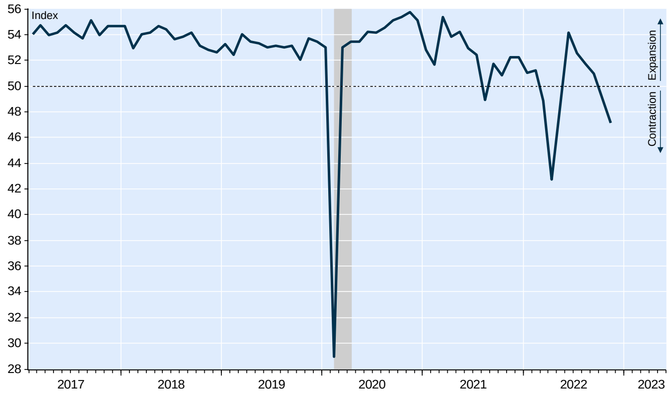
NBF Economics and Strategy (Bloomberg data)

It's still too soon to say whether the measures put in place will suffice to clot the hemorrhaging in the housing sector, but they should at least revive the confidence of potential buyers.

What could really change the picture is China's new approach to the pandemic. On December 7 its State Council announced various measures to ease its zero-Covid policy. First, people with the virus but with few or no symptoms were authorized to isolate at home rather than in centralized quarantine facilities. The requirement to show proof of a negative test result to gain access to certain public places was also revoked and the isolation period for visitors from abroad was reduced from 10 days to eight days.

This about-face by the authorities was certainly encouraged by the wave of demonstrations that swept China last month, but we suspect that the economic slowdown caused by the most recent lockdowns also played an important role. The contraction of the private sector indeed seems to have accelerated in November, judging by the composite PMI published by the China Federation of Logistics & Purchasing.

China: Accelerating contraction of the private sector
Composite PMI



NBF Economics and Strategy (Bloomberg data)

November imports data also show the extent of the damage done to domestic demand by public-heath restrictions.

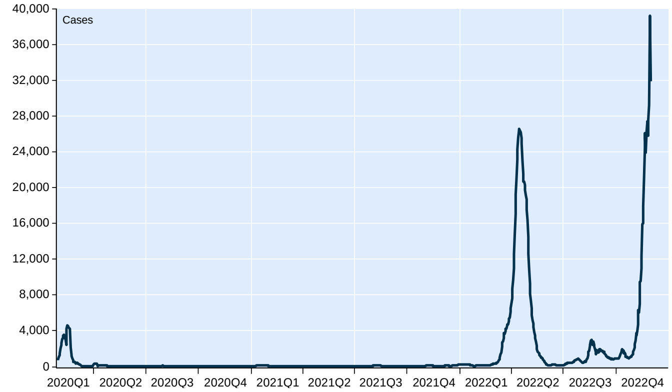
China: Health-care restrictions have stifled domestic demand
12-month change in total imports (in USD)

NBF Economics and Strategy (Bloomberg data)

And though earlier this year the slack of Chinese households may have been partly offset by strong foreign demand, an export-based growth model no longer works in a world of global slowdown. To continue growing in 2023, the Chinese economy will need support from strong consumer spending. One more reason to end the zero-Covid policy.

The transition to living with the virus could be tough. The easing of public-health restrictions comes at a time when the new-case count is rising sharply. (Some attribute the slackening of recent days to a marked drop in the number of tests carried out rather than to a decline of infections.)

China: Toward a flare-up of cases?
New cases of Covid-19, 7-day moving average



NBF Economics and Strategy (data from Our World in Data)

A number of factors suggest that the picture could deteriorate rapidly. First, only 40% of people aged 80 or older have had the third dose of the vaccine required for effective protection against the Omicron variant. These people are susceptible to a serious form of the disease and could increase pressure on a hospital system under-equipped to meet an upsurge of cases. (The shortfall in intensive-care capacity is especially worrisome.) In addition, the coming Chinese new year and the millions of trips people typically make for the occasion could help the virus spread across the country.

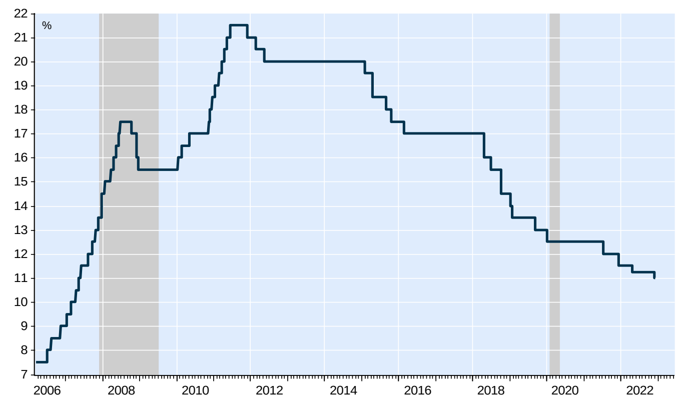
So a short but extremely intense wave is in the cards if China revokes its public-health measures all at once. A million people could succumb to Covid from now until sufficient herd immunity is reached. Since we think these numbers will be unacceptable to the Chinese Communist Party, we see a partial reopening punctuated by partial lockdowns for the health-care system to catch its breath. That would bring a slightly longer but less severe wave of infection. The economic fallout would still be substantial. We expect many households to limit their activities even in places where restrictions are completely lifted. At least, Beijing seems to be preparing the ground for such a scenario by boosting its monetary stimulation. In late November the People's Bank of China said it would cut the bank reserve requirement ratio by 25 basis points effective December 5, injecting about US$70 billion into the economy.

Monthly Economic Monitor

Economics and Strategy

NATIONAL BANK OF CANADA FINANCIAL MARKETS

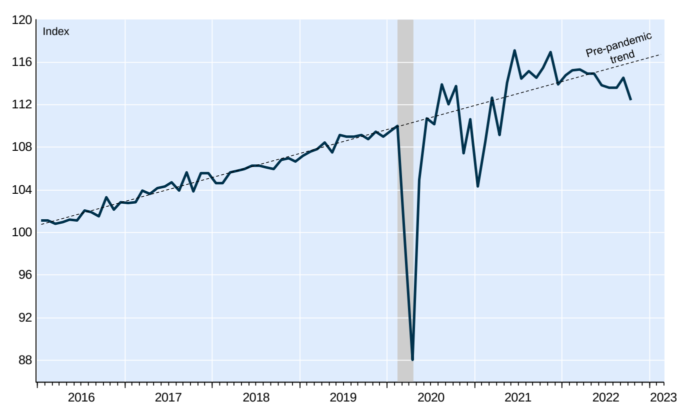
China: An increase of monetary stimulus
Mandatory reserve rate for largest banks



NBF Economics and Strategy (Bloomberg data)

Fortunately this state of things is likely to be temporary. As herd immunity gradually develops, we see an acceleration of Chinese growth in the second half of 2023, when abolition of public-health measures will really begin to bear fruit. Until then, the rest of the world is unlikely to offer much to offset the weakness of Chinese growth. In the Eurozone a long-awaited recession seems finally under way, with October volume retail sales showing the largest monthly decline in 10 years outside of the pandemic period. Emerging economies, meanwhile, continue to suffer from highly aggressive monetary tightening and are also likely to slow in the coming months.

Eurozone: Consumer spending is losing steam
Real retail sales



NBF Economics and Strategy (Bloomberg data)

Given these conditions we have slightly lowered our outlook for 2023 growth, from 2.2% to 2.1%. For 2024 our forecast is unchanged at +2.9%.

World Economic Outlook

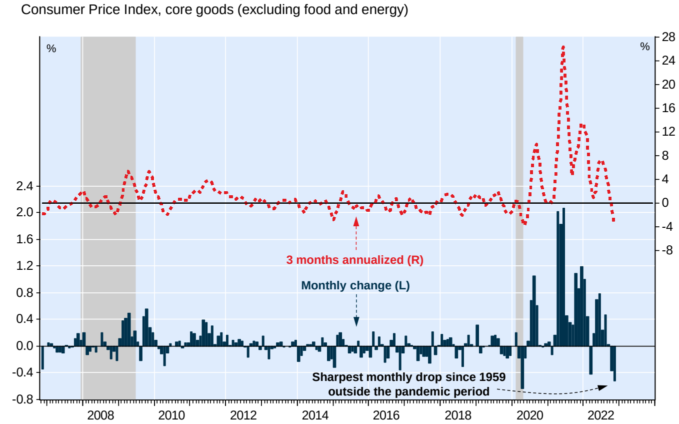
	2022	2023	2024
Advanced Economies	**2.5**	**0.2**	**1.2**
United States	1.9	0.2	1.1
Eurozone	3.2	-0.8	0.7
Japan	1.4	1.3	1.2
UK	4.3	-1.4	0.9
Canada	3.5	0.7	1.5
Australia	3.8	1.2	1.8
Korea	2.6	1.5	2.4
Emerging Economies	**3.6**	**3.5**	**4.1**
China	3.0	4.7	4.8
India	6.8	6.0	6.7
Mexico	2.8	1.0	2.0
Brazil	3.0	0.9	1.9
Russia	-3.5	-2.5	2.0
World	**3.1**	**2.1**	**2.9**

NBF Economics and Strategy (data via NBF and Conensus Economics)

U.S.: A Christmas present from the BLS

Two weeks before the big day, markets got an early Christmas present from the Bureau of Labor Statistics – a second straight monthly report showing inflation below what the consensus had expected. The Consumer Price Index was up only 0.1% in November after a monthly increase of 0.4% in October. A 1.6% decline of energy costs certainly contributed to this slowdown, but it was not the only factor – the core inflation index showed the smallest rise since August 2021 (+0.2%). Prices for goods excluding food and energy were down 0.5% from October, a decline matched only once before since 1959, during the first wave of the pandemic. Over three months ending November this indicator fell at an annual rate of 3.5%.

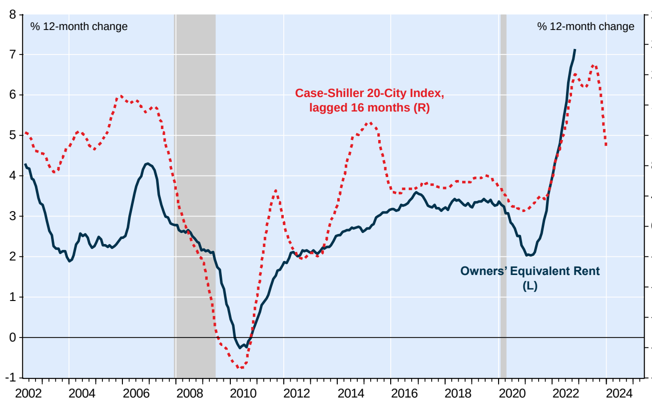
U.S.: Rapid declines of prices for core goods
Consumer Price Index, core goods (excluding food and energy)



NBF Economics & Strategy (Refinitiv data)

The cost of non-energy services, meanwhile, continued to rise substantially in November (+0.4%). This figure is misleading, however, because it includes large gains in two categories that react with a long lag time to price variations in the field: rents (+0.6%) and owners' equivalent rent (+0.7%). This last segment generally follows rather closely the path of home price indexes such as that published by S&P CoreLogic, but with a lag of about a year and a half.

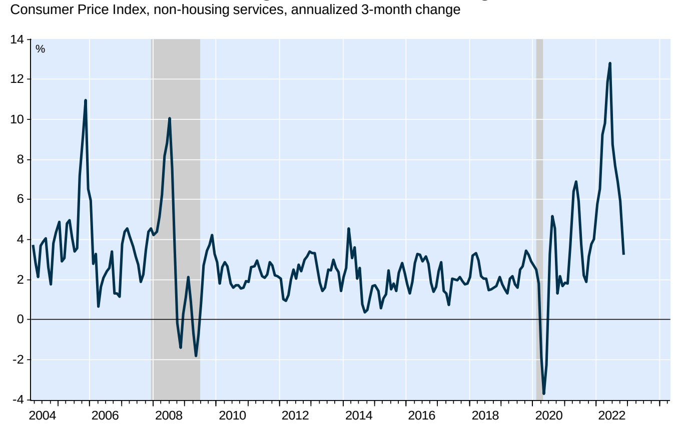
U.S.: The rise of housing costs is about to slow
Owners' equivalent rent (CPI) vs. S&P CoreLogic Case-Shiller 20-City Composite Home price Index



NBF Economics & Strategy (Bloomberg data)

Because of this lag, there is now a substantial divergence between housing indicators included in the CPI and those that follow the path of the real estate market day by day. In this light, and given current market conditions of declining home prices and stabilizing rents, we think core service prices as reported by the BLS provide an overly alarmist view of current inflationary pressures. When the housing component (which will inevitably slow in the coming months) is excluded, services inflation seems much less of a problem.

U.S.: Prices for non-housing services are stabilizing
Consumer Price Index, non-housing services, annualized 3-month change



NBF Economics & Strategy (Bloomberg data)

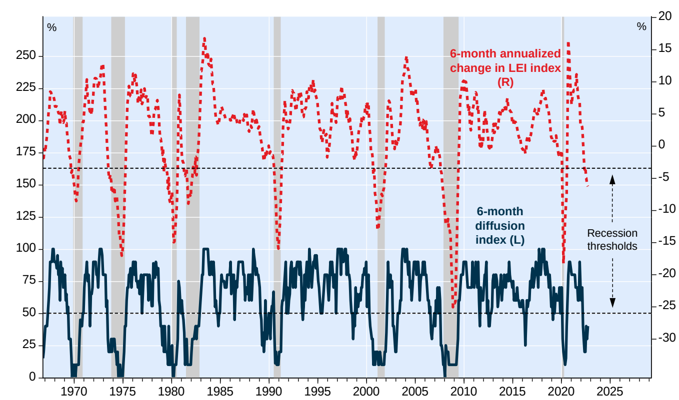
The recent path of prices should have led the Federal Reserve to communicate a less hawkish stance, but at its most recent monetary policy meeting, for a reason that escapes us, the central bank instead hardened its tone. It not only hiked its policy rates by 50 basis points, which had been expected, but also revised up its expected endpoints for these rates. The dot plot released immediately after the meeting showed FOMC members expecting the upper limit of the target range for fed funds rates to top out at 5.25%, 50 basis points above the expectation in the September dot plot.

An increasing discrepancy between the Fed's tone and economic reality
FOMC participants' views of appropriate policy rate (current target range in gray: 4.25%-4.50%)

NBF Economics & Strategy (Federal Reserve data)

This change seems to us hard to justify when leading economic indicators are signalling a distinct slowdown of growth.

U.S.: Leading indicators signal a distinct slowdown
Index of leading economic indicators and diffusion index, last observation October 2022



NBF Economics & Strategy (source: Conference Board via Refinitiv)

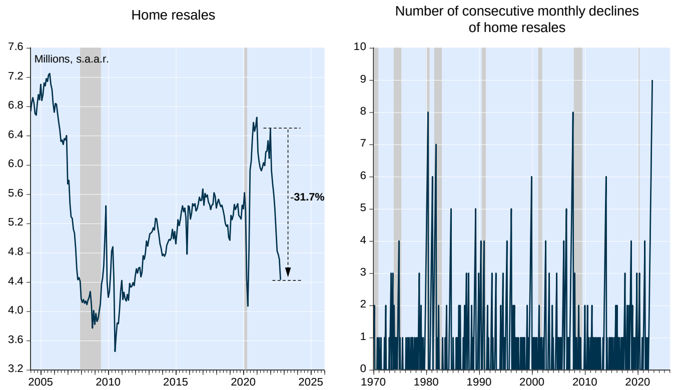
Annual inflation remains very high, of course, but as we showed above, the recent trend is rather encouraging. Elsewhere, the impact of previous rate hikes is being cruelly felt, notably in the real estate market ...

Monthly Economic Monitor

Economics and Strategy

NATIONAL BANK OF CANADA FINANCIAL MARKETS

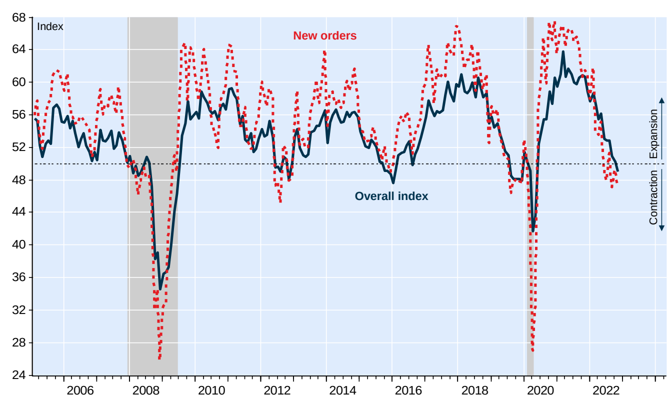
U.S.: The home-resale market is slowing rapidly



NBF Economics & Strategy (Datastream data)

… and in manufacturing.

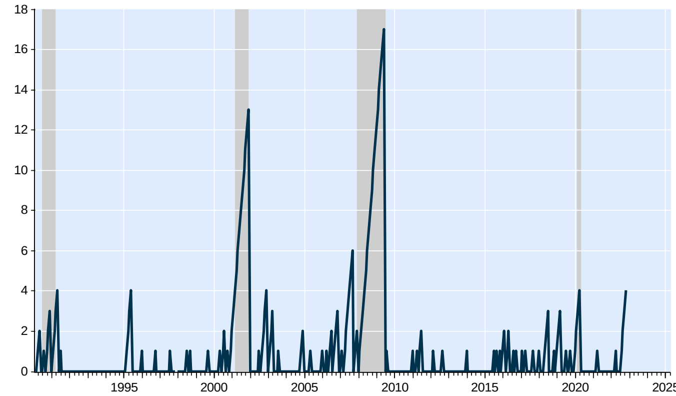
U.S.: Manufacturing stalls
ISM Manufacturing PMI



NBF Economics & Strategy (Refinitiv data)

The Fed, insensitive to these spikes of weakness, seems rather preoccupied by the vigour of employment. We do not deny that the labour market remains strong, but keep in mind that it is a coincident indicator, not a leading indicator like real estate and manufacturing. And even in employment data a certain slowing is now being felt. While the payroll survey signalled further gains in November (+263,000), the household survey showed a second consecutive decline (-138,000). In addition, temporary-help jobs – a good leading indicator of overall employment – were down for a fourth month in a row. We note here that since the early 1990s this indicator has never fallen five months in a row without the economy falling into recession.

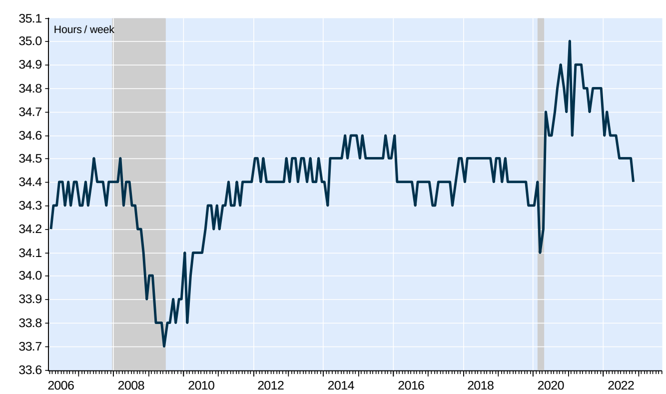
U.S.: Signs of weakness in the November employment report (1)
Number consecutive monthly declines in number of positions in temporary-help services



NBF Economics & Strategy (Bloomberg data)

Another sign of cooling to come is a decline in the number of weekly hours worked.

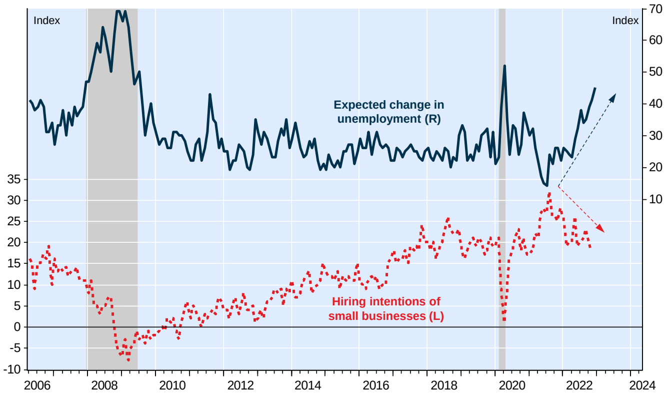
U.S.: Signs of weakness in the November employment report (2)
Average hours worked weekly



NBF Economics & Strategy (Bloomberg data)

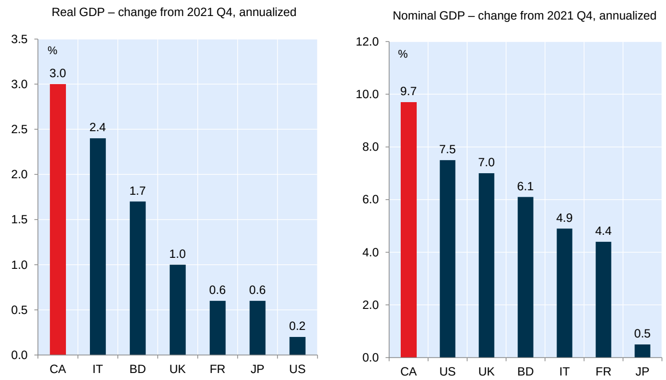
In light of this information, we anticipate considerable slowing of employment growth in coming months, a view consistent with the expectations of small businesses and households.

U.S.: Employment outlooks less optimistic
Hiring intentions of small businesses (NFIB survey) vs. change in unemployment expected by consumers over the next 12 months (U of Michigan survey)



NBF Economics & Strategy (Bloomberg data)

Canada: Outperformance so far in 2022
Annualized % change in nominal and real GDP from 2021Q4 to 2022Q3



NBF Economics and Strategy (data via Refinitiv)

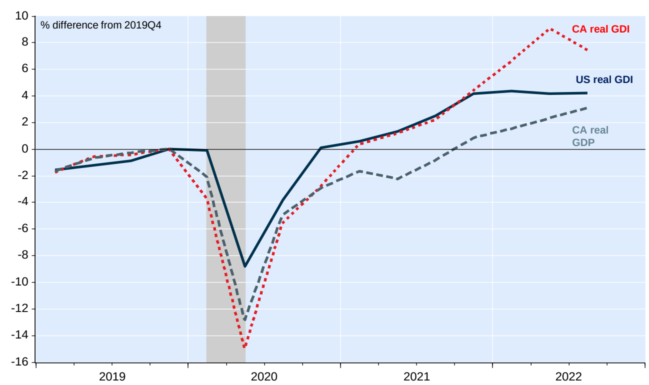
If this scenario materializes, we think the central bank will be obliged to end its monetary tightening phase no later than at its first monetary policy meeting of 2023 if it is to avoid making recession almost inevitable. But even a Fed change of course would not prevent a substantial slowing of growth next year. Our base case scenario includes two quarters of contraction, Q2 and Q3. For 2023 as a whole we see real GDP growth of just 0.2%. Fed rate cuts in the second half of 2023 should then allow acceleration of growth to 1.1% in 2024.

Canada: Last turn of the screw?

In December the Bank of Canada raised its policy rate for a seventh consecutive time, to 4.25% – the highest since 2008 and well above the 2%-3% range the central bank considers neutral. The Ukraine war has left Canada in a unique position in 2022. As elsewhere, soaring inflation launched the central bank on a very steep tightening phase that is already weighing on various parts of the economy. On the other hand, Canada benefits from the sanctions imposed on Russia because of its large resource sector. The upshot is that over the year to date the Canadian economy has shown the best performance of the G7 countries in both real and nominal terms, since its terms of trade have improved considerably in step with soaring prices for raw materials.

An alternative to GDP as a measure of the path of the national economy is gross domestic income. When this measure, which includes wages, profits and taxes, is corrected for inflation by an index of domestic prices that excludes terms of trade, we obtain real gross domestic income as a good indicator of the purchasing power of these incomes. Despite a decline in Q3 due to a retreat of raw materials prices, this purchasing power is now 7.4% above its pre-pandemic level, well above the 3.0% indicated by real GDP and better than the U.S. performance of 4.2%.

Canada: Gross domestic income growing faster than GDP
Real gross domestic income (GDI) in Canada and U.S. and real gross domestic product (GDP) of Canada



NBF Economics and Strategy (data via Statcan and FRED)

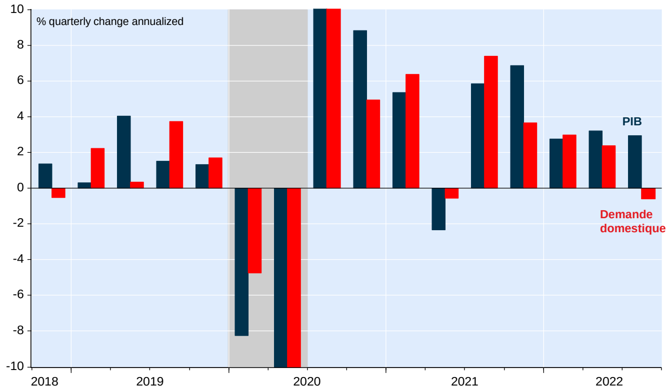
Signs of weakness have nevertheless begun showing in the last few months. In Q3, economic growth was certainly still solid at 2.9% annualized, well above expectations. But without the contribution of international trade the economy would have shrunk: domestic demand contracted at 0.6% annualized.

Monthly Economic Monitor

Economics and Strategy

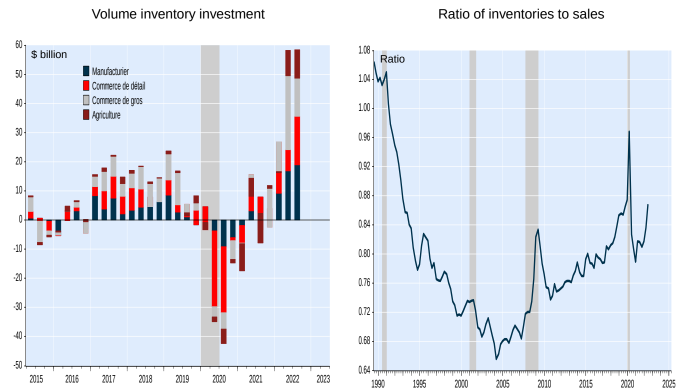
NATIONAL BANK OF CANADA
FINANCIAL MARKETS

Canada: Q3 jump in GDP masks a weakness in demand
Gross domestic product and domestic demand



NBF Economics and Strategy (data via Statistics Canada)

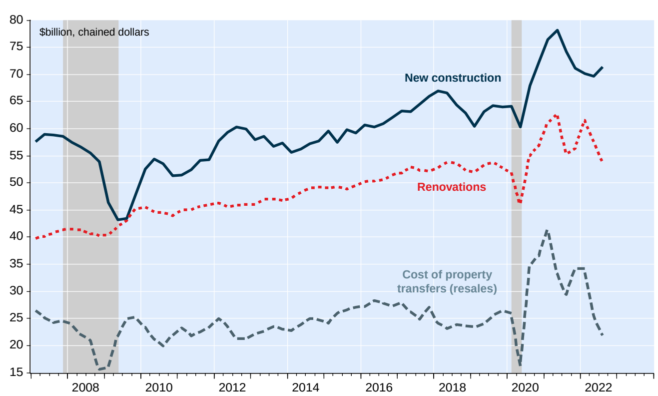
Canada: Inventory rebuilding is over



NBF Economics and Strategy (data via Datastream)

First, consumer spending retreated in the third quarter, ending a frenzy of goods purchasing as purchasing power declined and interest-rate shock hit the fan. Residential investment, the GDP component most sensitive to interest rates, contracted sharply for a second consecutive quarter and this sector will continue to weigh on growth in quarters to come. The resale market continued its retreat in the fourth quarter and the up-trend of housing inventory for sale suggests that homebuilding will moderate in 2023. As for renovation, many households had brought forward their projects earlier in the pandemic, resulting in a subsequent retreat amplified by the rise of interest rates.

Canada: Residential real estate a brake to growth
Components of residential investment – in real terms

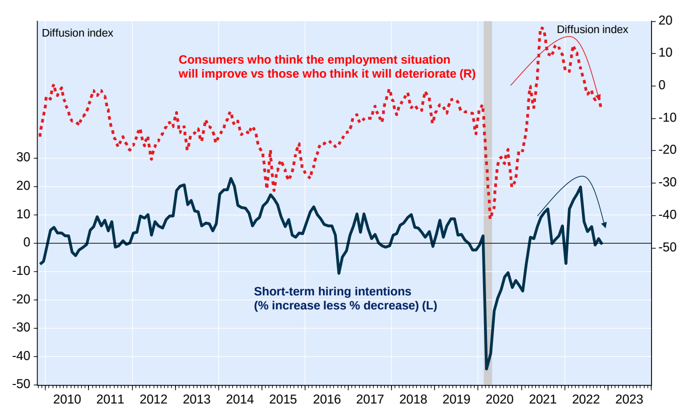


NBF Economics and Strategy (data via Statistics Canada)

We also note that a source of growth in 2022 to date is on the verge of becoming a brake. The country's economy has been stimulated in the last two quarters by frenzied inventory investment, which had languished early in the pandemic but set new records in each of the last two quarters. With the inventory-to-sales ratio returning to its pre-pandemic level, we must expect a significant moderation that will weigh on growth in the coming quarters.

The labour market, meanwhile, has recovered in recent months after weakening earlier this year. Full-time employment and private-sector employment were both up for a third straight month in November. Despite this recovery, total employment shows only a modest gain of 26,000 over the last six months. That's very little. Historically, consumers have been accurate in their perceptions of labour-market turnarounds. The most recent Conference Board data show a fading of optimism about the labour-market outlook. The indicator is essentially back to its pre-pandemic level after reaching historic highs in 2021. Meanwhile, the most recent CFIB survey shows a fading of small-business hiring intentions. Firms expecting to increase their work force are about equal in number to those expecting to reduce their head counts. In other words, an overall hiring freeze.

Canada: Small businesses and employees anticipate a slowdown
Full-time hiring intentions in the next 3-4 months and expected average wages

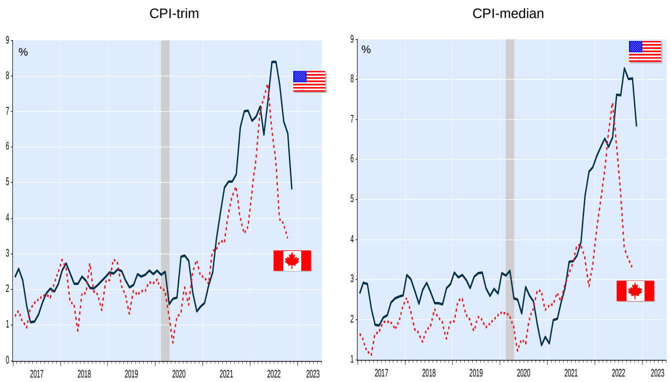


NBF Economics and Strategy (data via CFIB)

Apart from the cooling of domestic demand and the labour market, there is reason to think the path of inflation in recent months is good news for the Bank of Canada. Inflationary pressures are much less acute and widespread than they were earlier this year. From July to October, CPI-median rose at 3.4%

and CPI-trim at 3.3%, paces that compare favorably with those observed south of the border.

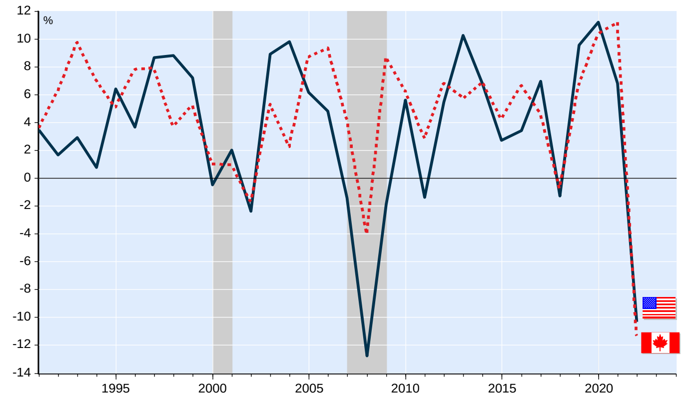
Canada-U.S.: Core inflation is easing
Annualized 3-month change in core inflation measures



NBF Economics and Strategy (data via Statistics Canada, FRED)

Manœuvres for the landing of the economy have continued. The Bank of Canada raised its policy rate for a seventh straight time in December. However, recent economic data have prompted it to greater prudence about the next steps and it is no longer telegraphing further hikes as in its previous communications. It now affirms that the Governing Council will evaluate whether it will be necessary to raise the policy rate further. This is prudent, since the Bank acted with haste and the time lag for transmission of monetary policy means there is a risk it has gone too far. We will unfortunately know only a posteriori whether it has done so. One thing is certain: we are now seeing a marked slowdown in residential real estate, leading to extremely rapid deflation. Consumers have been struck simultaneously by loss of purchasing power, an interest-payment shock and an unprecedented negative wealth effect. In our view, interest rates will not need to be kept at current levels for very long to brake inflation and we accordingly expect the Bank to be obliged to lower them in the second half of next year. Given the monetary tightening, we anticipate stagnation of the economy over the next three quarters and anemic growth of 0.7% in 2023 as a whole.

Canada: Inflation has amplified the loss of wealth
Change in household net wealth deflated by CPI, US vs CA – annual except for 2022 (first three quarters)



NBF Economics and Strategy (data via Statistics Canada and Refinitiv)

United States
Economic Forecast

*(Annual % change)**	*2020*	*2021*	*2022*	*2023*	*2024*	*Q4/Q4 2022*	*Q4/Q4 2023*	*Q4/Q4 2024*
Gross domestic product (2012 $)	(2.8)	5.9	1.9	0.2	1.1	0.5	(0.4)	2.1
Consumption	(3.0)	8.3	2.8	1.0	0.6	2.1	(0.2)	1.6
Residential construction	7.2	10.7	(9.9)	(10.9)	3.6	(16.1)	(3.0)	6.0
Business investment	(4.9)	6.4	3.8	2.1	0.5	4.6	(0.1)	1.9
Government expenditures	2.6	0.6	(0.8)	1.6	2.1	0.1	1.7	2.0
Exports	(13.2)	6.1	7.0	(0.2)	0.3	4.2	(2.3)	2.2
Imports	(9.0)	14.1	9.0	0.6	0.1	4.8	(0.8)	2.2
Change in inventories (bil. $)	(54.6)	(19.4)	113.6	20.0	32.5	80.0	0.0	50.0
Domestic demand	(1.9)	6.7	1.7	0.7	1.0	1.2	0.0	1.9
Real disposable income	6.2	1.9	(6.6)	(0.2)	0.7	-2.9	-0.6	1.8
Payroll employment	(5.8)	2.8	4.1	0.8	0.0	3.3	-0.5	0.6
Unemployment rate	8.1	5.4	3.7	4.2	4.7	3.7	4.6	4.7
Inflation	1.3	4.7	8.0	3.1	3.2	7.1	1.9	3.3
Before-tax profits	(5.9)	22.6	6.2	(2.6)	3.7	2.3	-1.9	5.6
Current account (bil. $)	(619.7)	(940.2)	(1,024.9)	(933.8)	(917.5)	...	...	...

** or as noted*

Financial Forecast**

	Current 12/16/22	*Q1 2023*	*Q2 2023*	*Q3 2023*	*Q4 2023*	*2022*	*2023*	*2024*
Fed Fund Target Rate	4.50	4.75	4.75	4.50	3.50	4.00	3.50	3.00
3 month Treasury bills	4.20	4.60	4.55	4.00	3.35	4.35	3.35	2.70
Treasury yield curve								
2-Year	4.17	4.15	3.75	3.35	2.95	4.25	2.95	2.60
5-Year	3.61	3.55	3.40	3.10	3.00	3.65	3.00	2.75
10-Year	3.48	3.40	3.20	3.05	2.95	3.45	2.95	2.95
30-Year	3.53	3.40	3.25	3.15	3.10	3.45	3.10	3.15
Exchange rates								
U.S.$/Euro	1.06	1.05	1.06	1.08	1.09	1.03	1.09	1.12
YEN/U.S.$	137	135	130	125	124	140	124	119

*** end of period*

Quarterly pattern

	Q1 2022 actual	*Q2 2022 actual*	*Q3 2022 actual*	*Q4 2022 forecast*	*Q1 2023 forecast*	*Q2 2023 forecast*	*Q3 2023 forecast*	*Q4 2023 forecast*
Real GDP growth (q/q % chg. saar)	(1.6)	(0.6)	2.9	1.2	0.0	(1.1)	(1.4)	0.7
CPI (y/y % chg.)	8.0	8.6	8.3	7.1	5.1	3.2	2.2	1.9
CPI ex. food and energy (y/y % chg.)	6.3	6.0	6.3	6.0	5.1	4.1	3.0	2.6
Unemployment rate (%)	3.8	3.6	3.6	3.7	3.8	4.1	4.4	4.6

National Bank Financial

Canada
Economic Forecast

(Annual % change)*	2020	2021	2022	2023	2024	Q4/Q4 2022	Q4/Q4 2023	Q4/Q4 2024
Gross domestic product (2012 $)	(5.1)	5.0	3.5	0.7	1.5	2.3	0.4	2.0
Consumption	(6.3)	5.1	4.8	1.1	1.4	3.0	0.8	1.6
Residential construction	5.0	14.9	(10.4)	(9.9)	1.2	(12.3)	(6.5)	5.9
Business investment	(11.6)	4.3	10.1	1.4	1.7	6.9	0.6	1.9
Government expenditures	1.9	5.6	1.3	1.8	2.1	1.1	1.8	2.3
Exports	(8.9)	1.4	2.7	4.1	2.3	3.0	2.8	2.1
Imports	(9.3)	7.8	7.8	1.1	2.0	5.1	1.3	2.0
Change in inventories (millions $)	(23,493)	(4,148)	40,284	16,625	12,000	30,000	14,500	10,500
Domestic demand	(3.8)	5.8	2.7	0.3	1.6	1.4	0.4	2.1
Real disposable income	7.6	1.2	(0.4)	0.3	1.3	1.8	0.8	1.5
Employment	(5.1)	4.8	3.7	0.6	0.9	2.0	0.2	1.1
Unemployment rate	9.6	7.4	5.3	5.9	6.3	5.2	6.2	6.4
Inflation	0.7	3.4	6.8	2.8	2.2	6.5	1.9	2.2
Before-tax profits	(1.4)	35.8	11.3	(8.2)	3.5	1.3	(1.9)	5.2
Current account (bil. $)	(47.6)	(6.7)	8.0	(5.0)	(10.0)	....	....	....

** or as noted*

Financial Forecast**

	Current 12/16/22	Q1 2023	Q2 2023	Q3 2023	Q4 2023	2022	2023	2024
Overnight rate	4.25	4.25	4.25	4.25	3.75	4.25	3.75	3.00
3 month T-Bills	4.20	4.25	4.20	3.75	3.25	4.25	3.25	2.80
Treasury yield curve								
2-Year	3.67	3.70	3.40	3.15	2.95	3.80	2.95	2.60
5-Year	2.92	2.90	2.75	2.70	2.65	3.00	2.65	2.70
10-Year	2.82	2.75	2.70	2.65	2.70	2.80	2.70	2.85
30-Year	2.88	2.75	2.70	2.65	2.70	2.80	2.70	2.90
CAD per USD	1.37	1.35	1.30	1.25	1.24	1.36	1.24	1.27
Oil price (WTI), U.S.$	74	76	76	77	80	75	80	75

*** end of period*

Quarterly pattern

	Q1 2022 actual	Q2 2022 actual	Q3 2022 forecast	Q4 2022 forecast	Q1 2023 forecast	Q2 2023 forecast	Q3 2023 forecast	Q4 2023 forecast
Real GDP growth (q/q % chg. saar)	2.8	3.2	2.9	0.2	0.2	(0.3)	0.6	1.2
CPI (y/y % chg.)	5.8	7.5	7.2	6.5	4.8	2.5	2.1	1.9
CPI ex. food and energy (y/y % chg.)	4.0	5.1	5.4	5.3	4.7	3.5	2.6	2.6
Unemployment rate (%)	5.8	5.1	5.2	5.2	5.5	5.9	6.1	6.2

National Bank Financial

Provincial economic forecast

	Real GDP (% growth) 2020	2021	2022f	2023f	2024f	Nominal GDP (% growth) 2020	2021	2022f	2023f	2024f
Newfoundland & Labrador	-4.6	0.6	1.6	0.7	0.9	-10.0	17.7	12.3	-1.5	-0.1
Prince Edward Island	-1.6	7.9	2.1	0.8	1.2	1.4	14.3	8.9	1.6	2.3
Nova Scotia	-3.5	6.2	2.2	0.6	1.1	0.0	10.9	8.2	0.9	2.6
New Brunswick	-2.7	5.9	1.8	0.5	0.8	-1.6	13.8	7.7	0.1	1.3
Quebec	-5.0	6.0	3.4	0.7	1.2	-1.9	11.8	10.2	1.4	3.7
Ontario	-4.7	5.2	3.4	0.6	1.6	-2.9	10.3	9.8	1.3	3.8
Manitoba	-4.4	1.8	3.5	0.6	1.2	-1.3	8.4	10.6	0.4	2.7
Saskatchewan	-4.8	-0.9	4.6	1.0	1.3	-7.6	13.1	24.1	-2.0	-1.1
Alberta	-8.0	4.8	4.5	1.2	1.7	-15.7	26.2	17.4	-2.9	0.5
British Columbia	-3.0	6.1	3.1	0.7	1.6	-0.7	14.2	9.0	-0.1	2.7
Canada	-5.3	5.0	3.5	0.7	1.5	-4.6	13.6	11.3	0.2	2.8

	Employment (% growth) 2020	2021	2022f	2023f	2024f	Unemployment rate (%) 2020	2021	2022f	2023f	2024f
Newfoundland & Labrador	-5.9	3.0	3.6	-0.3	-0.1	14.1	12.9	10.9	11.6	11.6
Prince Edward Island	-3.2	3.7	6.3	-0.1	0.9	10.6	9.4	7.3	8.9	10.0
Nova Scotia	-4.7	5.4	3.3	0.5	0.7	9.7	8.4	6.6	7.0	7.0
New Brunswick	-2.6	2.6	2.2	0.4	0.5	10.0	9.0	7.3	7.6	7.7
Quebec	-4.8	4.2	2.6	0.5	1.0	8.8	6.1	4.4	4.7	5.0
Ontario	-4.7	4.9	4.2	0.5	1.0	9.5	8.0	5.7	6.6	6.9
Manitoba	-3.7	3.5	2.4	0.3	0.9	8.0	6.4	3.9	5.4	5.9
Saskatchewan	-4.6	2.6	3.3	0.8	0.7	8.3	6.5	3.6	4.4	5.2
Alberta	-6.5	5.2	5.1	1.0	1.0	11.5	8.6	5.6	6.0	6.4
British Columbia	-6.5	6.6	3.1	0.5	0.8	9.0	6.5	4.7	5.5	5.7
Canada	-5.1	4.8	3.7	0.6	0.9	9.6	7.4	5.3	5.9	6.3

	Housing starts (000) 2020	2021	2022f	2023f	2024f	Consumer Price Index (% growth) 2020	2021	2022f	2023f	2024f
Newfoundland & Labrador	0.8	1.3	1.6	1.1	1.0	0.2	3.7	6.4	2.4	2.3
Prince Edward Island	1.1	1.2	1.0	0.9	0.9	0.0	5.1	8.9	2.7	2.3
Nova Scotia	4.9	6.0	5.3	4.5	4.5	0.3	4.1	7.4	2.6	2.2
New Brunswick	3.6	4.0	4.5	3.0	3.0	0.2	3.8	7.2	2.7	2.2
Quebec	54.2	71.2	62.5	52.5	49.0	0.8	3.8	6.6	3.1	2.2
Ontario	81.3	101.2	93.0	79.5	75.5	0.6	3.5	6.8	2.7	2.2
Manitoba	7.3	8.0	7.6	7.2	6.9	0.5	3.2	7.8	2.9	2.2
Saskatchewan	3.1	4.3	4.6	3.3	3.0	0.6	2.6	6.7	2.8	2.2
Alberta	24.1	32.1	38.7	30.3	29.8	1.1	3.2	6.5	2.5	2.2
British Columbia	38.0	47.7	45.5	33.0	31.9	0.8	2.8	6.9	3.1	2.2
Canada	218.4	276.8	264.3	215.3	205.5	0.7	3.4	6.8	2.8	2.2

e: estimate f: forecast

Historical data from Statistics Canada and CMHC, National Bank of Canada's forecast.

Monthly Economic Monitor

Economics and Strategy

NATIONAL BANK OF CANADA FINANCIAL MARKETS

Economics and Strategy

Montreal Office
514-879-2529

Stéfane Marion
Chief Economist and Strategist
stefane.marion@nbc.ca

Matthieu Arseneau
Deputy Chief Economist
matthieu.arseneau@nbc.ca

Kyle Dahms
Economist
kyle.dahms@nbc.ca

Daren King CFA
Economist
daren.king@nbc.ca

Jocelyn Paquet
Economist
jocelyn.paquet@nbc.ca

Alexandra Ducharme
Economist
alexandra.ducharme@nbc.ca

Angelo Katsoras
Geopolitical Analyst
angelo.katsoras@nbc.ca

Toronto Office
416-869-8598

Warren Lovely
Chief Rates and Public Sector Strategist
warren.lovely@nbc.ca

Taylor Schleich
Rates Strategist
taylor.Schleich@nbc.ca

Alpa Atha
Fixed Income Economist
alpa.atha@nbc.ca

UK Residents

This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorised and regulated by the Financial Conduct Authority and has its registered office at 70 St. Mary Axe, London, EC3A 8BE.

NBF is not authorised by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

U.S. Residents

With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") which is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC), an affiliate of NBF, accepts responsibility for its contents, subject to any terms set out above. To make further inquiry related to this report, or to effect any transaction, United States residents should contact their NBCFI registered representative.

This report is not a research report and is intended for Major U.S. Institutional Investors only.

This report is not subject to U.S. independence and disclosure standards applicable to research reports.

HK Residents

With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA")which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to, those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc, is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

RBC Economics & Thought Leadership

Financial Markets Monthly

December 12, 2022

rbc.com/economics

Past the peak

Inflation is slowly starting to retreat from multi-decade highs, helped by falling energy prices and in some cases government relief programs. Oil prices are now at year-to-date lows (WTI is more than 40% below its post-invasion peak) as global growth concerns mount and Russian supply holds up in the face of fresh sanctions. Fading energy base effects will see headline inflation rates continue to ease in 2023. Core inflation is proving stickier and wage growth has picked up as labour markets remain resilient, suggesting it's too early for central banks to declare victory in their campaigns to quash inflation. But with economic activity slowing and more attention being paid to the lagged impact of rate hikes, peak policy rates are in sight. We think the BoC will be the first to move to the sidelines in January, having opened the door to a pause at last week's meeting. The Fed, BoE and ECB are expected to hike by 50 bps this week but should signal in one way or another that their tightening cycles are nearing an end. Along with the RBA we don't see these central banks raising rates beyond the first quarter of 2023.

As they approach terminal policy rates, central banks are likely to follow the Fed's cue and emphasize the need to keep monetary policy restrictive for a period of time. With above-target inflation delaying any response to an economic slowdown, we think most central banks will be on hold throughout next year. The Fed, having taken its tightening cycle the furthest, will likely be the first to cut rates in late-2023. Longer-term government bonds have already started to rally and we think the short-end will do so next year as market focus shifts from remaining rate hikes to eventual cuts. That will reverse some of the curve flattening seen in recent months—yield curves are now deeply inverted in the US and Canada, and more recently in the UK and Germany, as at least a mild recession now looks unavoidable.

Central bank near-term bias

The BoC landed on the hawkish side of consensus with a 50 bp hike in December but softened its guidance on further rate hikes. We expect it will hit pause in January and hold the overnight rate at 4.25% next year.

The Fed looks set to dial back to a 50 bp hike in December after four consecutive 75 bp hikes. We expect some further tightening in Q1/23 and will be watching December's dot plot to gauge the committee's expectations around further hikes.

After a one-off 75 bp hike in November we expect the BoE will revert to a 50 bp increase in December, taking monetary policy further into restrictive territory amid too-high inflation and firming wage growth. We expect one final 25 bp hike early next year.

We see the ECB opting for a 50 bp hike in December to get monetary policy close to estimates of neutral. We look for rates to rise into restrictive territory early next year (terminal deposit rate at 2.50%) and think QT will begin in April.

The RBA hiked by 25 bps again in December and left its forward guidance unchanged, suggesting it's not ready to pause its tightening cycle just yet. We expect further hikes in Q1/23 leaving the terminal cash rate at 3.60%

Josh Nye | Senior Economist | 416-974-3979 | josh.nye@rbc.com

Highlights

▲ The BoC watered down its tightening bias in December.

▲ Year-over-year inflation rates remain sticky but near-term measures are showing some slowing.

▲ Canada's trend job growth has slowed but the unemployment rate remains low.

▲ Q3 GDP surprised to the upside but momentum has slowed in recent months.

BoC signals a pause after one more oversized hike

After a dovish surprise in October, the BoC landed on the hawkish side of consensus in December with a second consecutive 50 bp hike. That lifted the overnight rate to 4.25%—a cumulative 400 bp increase since March. While the rate decision itself was hawkish, the accompanying policy statement leaned dovish with the BoC shifting to an even softer tightening bias than we envisioned: "Governing Council will be considering whether the policy interest rate needs to rise further." That clearly opens the door to a pause as soon as the next meeting in January, and in our view frames that decision as between 0 and 25 bps.

Near-term focus will be on whether the BoC is done its tightening cycle (more on that below) but we think the bigger question for markets is how long it holds the overnight rate at its terminal level. While the Fed has emphasized it will need to keep monetary policy "at a restrictive level for some time," the BoC has provided less medium-term guidance. While we expect Canada's economy will slip into recession in the first half of next year, a starting point of excess demand and above-target inflation will keep the BoC from reacting to that slowdown as quickly as it has in past cycles. We think monetary policy will be on hold throughout 2023 though yields are likely to decline over the course of the year as eventual rate cuts come into view.

Further evidence that inflation is turning a corner

Canadian inflation has been fairly steady in recent months with headline CPI stuck around 7% and core inflation generally closer to 5% year-over-year. But monthly inflation readings have started to slow with core measures running below 4% on an annualized basis. In its December policy statement the BoC pointed to that as "an early indicator that price pressures may be losing momentum." Diffusion measures also suggest the breadth of inflation has started to narrow, a sign that widespread inflationary pressure isn't becoming entrenched. With economic activity slowing we think those trends will continue in the coming months, supporting a pause by the BoC in January. But fully returning inflation to target will be a slow process—we don't see core inflation getting back to the BoC's 1-3% target range until 2024. Headline inflation will come down faster as base effects from rising food and energy prices fade—we think all items CPI will be close to 2% by the end of next year.

Canada's labour market holding up, but for how long?

We think recent resilience in Canada's labour market was one of the reasons the BoC opted for another oversized hike in December. Canada's economy added an on-consensus 10,000 jobs in November, avoiding giving back any of the unexpectedly strong 108,000 gain seen in the prior month. It remains the case that trend employment growth has slowed—an average of just 4,000 positions added in the past six months—but sluggish labour force growth has kept the unemployment rate close to 5%. Strong demand for labour has pushed wages higher, and whether the LFS (wage growth north of 5%) or SEPH data (around 4%) are closer to reality, the recent pace is faster than is consistent with the BoC's 2% inflation target. Labour costs haven't been a major driver of inflation to date with pay gains barely keeping pace with the rising cost of living. But the BoC will want to see some of the heat coming out of Canada's labour market to ensure wages are growing at a more sustainable pace.

The labour market is a lagging indicator, so the BoC also needs to focus on GDP trends in deciding when to pause its tightening cycle. Canadian GDP growth was unexpectedly strong in Q3 with a nearly 3% annualized increase coming in well ahead of our forecast and the BoC's. The surprise was due to upward revisions to monthly growth estimates over the summer—it remains the case that momentum has slowed in recent months with GDP edging up just 0.1% in September and October's flash reading coming in flat. Details of the Q3 increase left much to be desired with final domestic demand actually declining in the quarter. Consumer spending fell as a pullback in goods sales offset ongoing recovery in services spending, while housing remained a notable drag. Growth was driven entirely by further inventory accumulation (not a sustainable source of growth) and an increase in exports that will be tough to sustain in a challenging global growth environment. Housing is expected to remain a near-term drag and we think consumer spending growth will remain weak as debt servicing costs absorb a growing share of household income. We continue to look for slower growth in the final quarter of this year before Canada's economy enters a recession in the first half of 2023.

US consumer showing resilience

Consumer spending, which represents two-thirds of the US economy, is showing surprising resilience in the face of tightening financial conditions. Inflation-adjusted spending rose an annualized 4.8% in the three months to October, the fastest pace in a year. But we think that momentum will be difficult to sustain. The recent increase in durables spending was driven by a jump in auto sales that was partially retraced in November. Higher interest rates will continue to make those big-ticket purchases less attractive. And recent spending growth has been funded by a decline in household savings. In fact, October's 2.3% savings rate was one of the lowest on record as consumers dipped into excess savings accumulated during the pandemic. While there's still a savings pool to draw from, weak consumer confidence and negative wealth effects (home prices have started to decline, on top of a sharp pullback in equity and bond markets this year) could make households less comfortable running down their rainy-day funds.

Real income growth has done little to support consumer spending—inflation-adjusted disposable income was actually down 3% year-over-year in October. While headline inflation has peaked, we see it continuing to exceed wage growth (which has been steady around 5%) through the first quarter of next year. And there are tentative signs that labour demand is softening, suggesting wage growth will also start to slow in 2023. While payroll gains have been stronger than expected—averaging 323,000 in the past six months—the separate household survey shows a sharp slowing with average employment gains of just 7,000 over that period. It's worth noting that payrolls tend to be slower to respond to turning points in the labour market. Jobless claims have ticked higher in recent weeks, and the Fed's latest Beige Book noted scattered layoffs in sectors like tech, finance and real estate. Labour markets were still described as tight though some districts saw some relaxation of wage pressures.

Fed ready to slow its tightening cycle

In a late-November speech, Chair Powell discussed easing in core goods inflation and early signals that housing services inflation will eventually turn disinflationary. But he noted only tentative signs of rebalancing in the labour market, with wages still rising significantly faster than is consistent with 2% inflation. With labour costs being a key driver of inflation in core services ex housing, Powell said the Fed has "a long way to go in restoring price stability." He reiterated his view that interest rates will have to move higher than the Fed's dot plot suggested in September (when all participants saw the terminal fed funds rate below 5%). But minutes from the November meeting show that view was only shared by "various" participants, suggesting upward revisions to December's dot plot might not be so widespread.

The minutes also showed "a substantial majority of participants" thought it would soon be appropriate to slow the pace of rate hikes, cementing market expectations (and our own) for a 50 bp increase in December. After that we see the Fed delivering some further tightening in early-2023 but hitting pause as economic and inflation data show greater evidence of slowing. The Fed has emphasized that interest rates will have to be held "at a restrictive level for some time," but we think cuts are likely in the later stages of 2023. As market focus shifts from near-term hikes to eventual easing, we see Treasury yields drifting lower next year and some of the current yield curve inversion (which has deepened in recent months) being unwound over the next year.

Highlights

▲ US consumer spending growth has picked up in recent months…

▲ …with households drawing down some of the excess savings built up during the pandemic.

▲ Payroll gains have been stronger than expected but the separate household survey points to sluggish hiring.

▲ Minutes of the Fed's November meeting suggest Powell overstated the committee's increase in terminal rate expectations.

Highlights

▲ The UK's Q3 GDP decline likely marks the start of a four-quarter slowdown.

▲ UK inflation would be roughly 2 ppts higher if it weren't for government energy support.

▲ Euro area consumer confidence has fallen sharply this year amid war and rising inflation.

▲ We think Australia's economy will see slower growth but avoid a recession next year.

UK recession underway amid challenging consumer outlook

UK GDP fell 0.2% (non-annualized) in Q3, kicking off what we expect will be a recession that extends into the second half of next year. Some of the Q3 pullback reflected an extra public holiday, though a half percent decline in household spending was greater than that factor alone would suggest. Consumers are clearly feeling the pinch of sharply rising inflation. Even with the government's energy price guarantee partially shielding households from market prices—without it, CPI would be running at 13% rather than today's 11%—real pay growth is still deeply negative. And consumer confidence is now weaker than it was in the depths of the pandemic and global financial crisis, despite record low unemployment. While we think inflation has peaked, it's likely to decline more slowly than in other advanced economies as energy support becomes less generous in the spring—headline inflation isn't expected to slow below 4% until 2024. We look for the BoE to revert to a 50 bp hike in December (November's 75 bps was a one-off) and think the central bank will opt for another 25 bp increase in February before hitting pause on its tightening cycle with the Bank Rate at 3.75%. The impact of that tightening will continue to build in 2023. The BoE estimates around one quarter of mortgages will reach the end of their fixed-rate term between the current quarter and the end of next year, which will mean a significant increase in mortgage costs. A debt servicing hit combined with ongoing cost of living challenges should result in mild GDP declines continuing over the first half of next year.

Surveys point to euro area slowdown heading into 2023

Euro area PMI data continue to suggest the currency bloc began to slow in Q4 with both manufacturing and services indices in contractionary territory. Consumer confidence has ticked up in the past two months but remains deeply depressed. Sentiment was dealt a blow early in the year with Russia's invasion of Ukraine, and has soured further as energy prices pushed inflation to multi-decade highs. Headline inflation is likely past its peak but remained at 10% in November, running well ahead of wage growth. This cost of living shock is expected to weigh on consumer spending, resulting in GDP declines in the current quarter and early next year. We expect this slowdown will begin to ease as inflation moderates, and increased fiscal support from the NGEU recovery plan will help. We look for a 50 bp hike by the ECB in December, lifting the deposit rate to 2% which we think is close to neutral. We expect rate hikes to continue at a slower pace in the first quarter of 2023 before the ECB hits pause after its March meeting. The central bank is already shrinking its balance sheet through TLTRO redemptions, and we expect it will add to that by beginning to reduce its APP holdings next spring, shortly after its final rate hike. We should get details from the ECB at its upcoming meeting but at this stage expect passive QT by limiting reinvestment rather than outright asset sales.

RBA not ready to hit pause just yet

Australia's economy continued to expand at a steady pace with Q3 GDP rising 0.6% (non-annualized) led by gains in consumer spending and business investment. The former was helped by further normalization in the household savings rate, although there is still little evidence of consumers dipping into the substantial savings accumulated during the pandemic. Housing has felt the greatest drag from rising rates—residential investment was down nearly 4% year-over-year in Q3—but we think the impact on consumer spending will mount as a relatively high share of variable rate mortgages accelerates pass-through of the RBA's rapid rate hikes (+300 bps in the past eight months). As in other countries, consumer confidence has fallen sharply with rising borrowing costs and high inflation dampening any positive sentiment around a strong labour market. A moderation in consumer spending and further pullback in housing are central to our forecast for GDP growth to slow to 1.5% next year from 3.6% this year. The RBA hiked by another 25 bps in December and left its forward guidance unchanged, suggesting it has no intention to pause its tightening cycle in the near term. However, the statement noted "substantial" tightening already delivered and lags in monetary policy transmission, in our view indicating a more data dependent approach with monetary policy now in restrictive territory. We look for a further 50 bps of hikes in Q1/23 but see the RBA pausing thereafter as the Australian economy's recent resilience begins to fade.

Interest rate outlook

%, end of period

	Actual			Forecast								
	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4
Canada												
Overnight	0.50	1.50	3.25	4.25	4.25	4.25	4.25	4.25	3.75	3.50	3.25	3.00
Three-month	0.60	2.08	3.58	4.15	4.15	4.15	4.15	3.90	3.50	3.25	3.00	2.85
Two-year	2.29	3.09	3.80	3.90	3.75	3.65	3.60	3.30	3.00	2.90	2.80	2.70
Five-year	2.41	3.11	3.33	3.15	3.05	2.95	2.85	2.75	2.70	2.65	2.60	2.55
10-year	2.40	3.23	3.17	2.90	2.85	2.80	2.75	2.70	2.65	2.60	2.60	2.60
30-year	2.38	3.14	3.09	2.90	2.90	2.90	2.85	2.85	2.85	2.85	2.85	2.85
United States												
Fed funds*	0.38	1.63	3.13	4.38	4.88	4.88	4.63	4.38	4.13	3.88	3.63	3.38
Three-month	0.52	1.72	3.33	4.70	4.80	4.75	4.50	4.25	4.00	3.75	3.50	3.25
Two-year	2.28	2.92	4.22	4.50	4.25	4.10	3.85	3.65	3.35	3.05	2.80	2.55
Five-year	2.42	3.01	4.06	4.00	3.70	3.50	3.40	3.30	3.20	3.10	3.00	2.95
10-year	2.32	2.98	3.83	3.75	3.75	3.65	3.55	3.45	3.35	3.25	3.20	3.15
30-year	2.44	3.14	3.79	4.00	4.00	3.90	3.90	3.85	3.80	3.75	3.70	3.65
United Kingdom												
Bank rate	0.75	1.25	2.25	3.50	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Two-year	1.36	1.85	4.29	3.25	3.10	3.00	2.90	2.80	2.70	2.65	2.60	2.60
Five-year	1.40	1.88	4.40	3.25	3.10	3.00	3.00	2.90	2.80	2.75	2.70	2.70
10-year	1.60	2.22	4.08	3.10	3.00	2.90	2.90	2.80	2.70	2.65	2.60	2.60
30-year	1.77	2.59	3.82	3.50	3.40	3.25	3.25	3.10	3.05	3.00	3.00	3.00
Euro area**												
Deposit Rate	-0.50	-0.50	0.75	2.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Two-year	-0.08	0.64	1.78	2.00	2.00	1.90	1.80	1.75	1.70	1.65	1.60	1.60
Five-year	0.37	1.09	1.98	1.80	1.75	1.70	1.60	1.60	1.50	1.45	1.40	1.40
10-year	0.55	1.36	2.12	1.90	1.80	1.75	1.75	1.75	1.65	1.60	1.55	1.50
30-year	0.67	1.63	2.10	1.80	1.80	1.70	1.70	1.70	1.60	1.55	1.50	1.50
Australia												
Cash target rate	0.10	0.85	2.35	3.10	3.60	3.60	3.60	3.60	3.60	3.35	3.10	3.10
Two-year	1.78	2.73	3.43	3.10	3.00	3.00	2.90	2.75	2.65	2.50	2.50	2.50
10-year	2.84	3.66	3.90	3.55	3.35	3.25	3.35	3.35	3.35	3.35	3.40	3.35
New Zealand												
Cash target rate	1.00	2.00	3.00	4.00	5.00	5.25	5.00	4.50	4.25	4.00	3.75	3.50
Two-year swap	3.27	4.06	4.76	5.20	5.00	4.50	4.10	3.70	3.60	3.50	3.40	3.30
10-year swap	3.38	4.10	4.50	4.35	4.20	4.15	4.00	3.80	3.75	3.70	3.65	3.60
Yield curve***												
Canada	11	14	-63	-100	-90	-85	-85	-60	-35	-30	-20	-10
United States	4	6	-39	-75	-50	-45	-30	-20	0	20	40	60
United Kingdom	24	37	-21	-15	-10	-10	0	0	0	0	0	0
Eurozone	63	72	34	-10	-20	-15	-5	0	-5	-5	-5	-10
Australia	106	93	47	45	35	25	45	60	70	85	90	85
New Zealand	11	4	-26	-85	-80	-35	-10	10	15	20	25	30

*Midpoint of 25 basis point range, **Yields refer to German government bonds, *** Two-year/10-year spread in basis points,
Source: Reuters, RBC Economics

Economic outlook

Growth outlook

% change, quarter-over-quarter in real GDP

	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	2021	2022F	2023F	2024F
Canada*	2.8	3.2	2.9	0.5	-0.5	-1.0	0.2	0.5	1.5	2.0	2.6	2.8	5.0	3.5	0.4	1.3
United States*	-1.6	-0.6	2.9	0.3	0.0	-1.2	-1.5	0.5	1.0	1.5	2.0	2.0	5.9	1.9	0.0	0.7
United Kingdom	0.7	0.2	-0.2	-0.4	-0.4	-0.3	0.0	0.1	0.2	0.2	0.3	0.3	7.5	4.4	-0.9	0.6
Euro Area	0.6	0.8	0.3	-0.4	-0.3	0.2	0.4	0.4	0.4	0.5	0.5	0.5	5.3	3.3	0.2	1.7
Australia	0.4	0.9	0.6	0.6	0.2	0.2	0.2	0.3	0.6	0.9	0.9	1.0	5.2	3.6	1.5	1.8

*annualized

Inflation outlook

% change, year-over-year

	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	2021	2022F	2023F	2024F
Canada	5.8	7.5	7.2	6.7	5.2	3.1	2.4	2.1	2.4	2.3	2.1	1.9	3.4	6.8	3.2	2.2
United States	8.0	8.6	8.3	7.3	5.3	3.2	2.4	2.1	2.3	2.3	2.2	1.9	4.7	8.1	3.2	2.2
United Kingdom	6.2	9.2	10.0	10.7	9.8	8.0	6.7	4.6	4.2	1.6	1.4	1.3	2.6	9.0	7.3	2.1
Euro Area	6.1	8.0	9.3	10.3	8.6	7.0	5.7	3.5	2.8	2.6	2.3	2.2	2.6	8.5	6.2	2.5
Australia	5.1	6.1	7.3	7.4	6.6	6.0	5.7	5.4	5.2	5.0	4.7	4.4	2.9	6.5	5.9	4.8

Source: Statistics Canada, Bureau of Economic Analysis, Bureau of Labor Statistics, Office for National Statistics, Statistical Office of the European Communities, Australian Bureau of Statistics, Statistics New Zealand, RBC Economics

Currency outlook

Level, end of period

	Actuals							Forecast				
	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4
Canadian dollar	1.26	1.24	1.27	1.26	1.25	1.29	1.38	1.38	1.40	1.39	1.38	1.36
Euro	1.17	1.19	1.16	1.14	1.11	1.05	0.98	0.97	0.95	0.98	1.02	1.05
U.K. pound sterling	1.38	1.38	1.35	1.35	1.31	1.22	1.12	1.08	1.04	1.08	1.13	1.17
Japanese yen	111	111	111	115	122	136	145	150	155	147	145	143
Australian dollar	0.76	0.75	0.72	0.73	0.75	0.69	0.64	0.64	0.64	0.65	0.65	0.66

Canadian dollar cross-rates

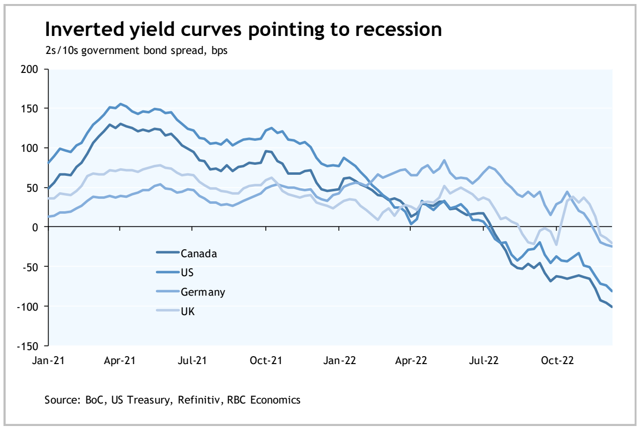
	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	23Q4
EUR/CAD	1.47	1.47	1.47	1.44	1.38	1.35	1.36	1.34	1.33	1.36	1.41	1.43
GBP/CAD	1.73	1.71	1.71	1.71	1.64	1.57	1.54	1.49	1.46	1.50	1.56	1.59
CAD/JPY	88	90	88	91	97	105	105	109	111	106	105	105
AUD/CAD	0.95	0.93	0.92	0.92	0.94	0.89	0.89	0.88	0.90	0.90	0.90	0.90

Rates are expressed in currency units per US dollar and currency units per Canadian dollar, except the euro, UK pound, Australian dollar, and New Zealand dollar, which are expressed in US dollars per currency unit and Canadian dollars per currency unit.

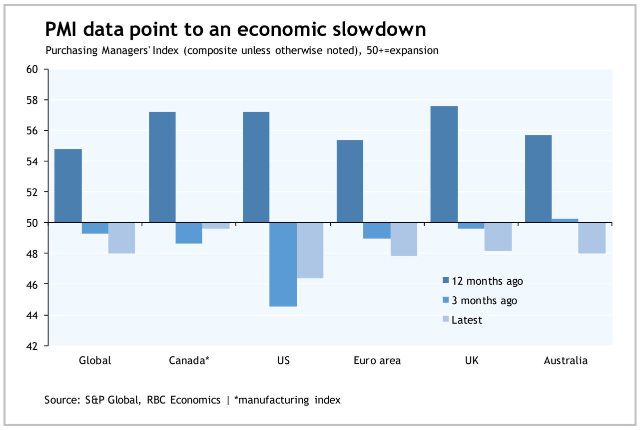
Source: Bloomberg, RBC Economics

Charts we're watching

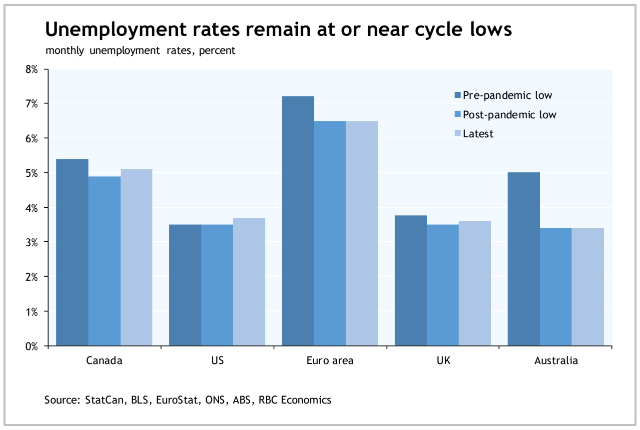
Shorter-term government bond yields have generally moved sideways as central banks approach terminal policy rates, while expectations of slowing growth and inflation, and eventually rate cuts, have seen longer-term bonds rally. Deeply inverted yield curves in Canada and the US, and to a lesser extent the UK and Germany, flag an impending economic downturn.



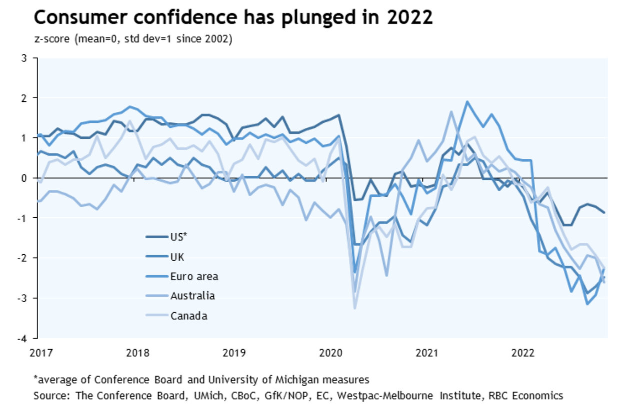
Purchasing managers' indices point to a slowdown in economic activity in both the manufacturing and services sectors in many countries. Output and new orders have softened, though on the positive side, fewer order backlogs and slower price increases suggest less inflationary pressure.



While surveys and some hard data point to a slowing economy, labour markets have generally remained resilient with unemployment rates at or near post-pandemic (and in some cases record) lows. Tight labour markets are contributing to rising wages, though in most cases pay growth hasn't kept up with inflation.



Despite firm labour market conditions, declines in real earnings, negative wealth effects from falling asset prices, and rising debt servicing costs have consumers feeling pessimistic about the economic outlook. We expect slower consumer spending will see most of these economies (not Australia) slip into recession.



Scotiabank.

GLOBAL ECONOMICS

SCOTIABANK'S FORECAST TABLES

December 8, 2022

Contributors

Jean-François Perrault
SVP & Chief Economist
Scotiabank Economics
416.866.4214
jean-francois.perrault@scotiabank.com

René Lalonde
Director, Modelling and Forecasting
Scotiabank Economics
416.862.3174
rene.lalonde@scotiabank.com

Outlook Evolving Largely as Expected

- **There are few changes to the outlook relative to our last publication. Most of the changes reflect the fact that incoming data for industrialized countries has been somewhat more positive than expected in recent weeks, leading to minor upward revisions to 2022 forecasts. In some cases, growth dynamics imply that some of this strength has led to small increases to 2023 forecasts. The general narrative remains the same as earlier articulated, the global economy is expected to slow rapidly owing to the combined impacts of still-elevated commodity prices for commodity importers, the deterioration in purchasing power from higher inflation, the policy response to lower inflation, the challenges faced in China and of course remaining uncertainties from Russia's war on Ukraine.**

- **On the inflation front, recent data in Canada and the US suggest the expected slowing is underway, increasing confidence that central banks in those countries are near terminal rates. In Canada, the Bank of Canada is signalling a pause as it waits to assess the impact of its policy actions on inflation and growth. This is in line with our previous forecast, and we continue to expect that the BoC's next move will be a cut late in 2023 given the expected slowing in both inflation and growth. A similar dynamic is forecast for the US, though we continue to expect that the Fed will lift rates to 5% early next year before eventually beginning rate cuts late in 2023. A series of additional cuts are expected in 2024.**

For more details on our forecast narrative, please refer to our **October forecast**.

International

	2010–19	2020	2021	2022f	2023f	2024f	2010–19	2020	2021	2022f	2023f	2024f
	Real GDP (annual % change)						Consumer Prices (annual % change, unless noted)					
World (based on purchasing power parity)	3.7	-3.0	6.4	3.1	2.1	2.6						
Canada	2.3	-5.1	5.0	3.6	0.8	1.5	1.6	0.7	3.4	6.8	4.1	1.9
United States	2.3	-2.8	5.9	1.9	0.6	1.5	1.8	1.3	4.7	8.1	5.0	2.6
Mexico	2.7	-8.2	4.8	2.8	0.8	1.9	4.0	3.4	5.7	8.0	6.3	4.2
United Kingdom	2.0	-11.0	7.5	4.3	-0.9	1.2	2.2	0.9	2.6	9.0	6.9	3.0
Eurozone	1.4	-6.2	5.5	3.3	-0.5	1.5	1.4	0.3	2.6	8.5	6.6	3.0
Germany	2.0	-4.1	2.7	1.7	-0.9	1.6	1.4	0.4	3.2	8.8	7.5	3.2
France	1.4	-7.9	7.2	2.5	-0.1	1.4	1.3	0.5	2.1	6.0	5.2	3.0
China	7.7	2.3	8.1	3.2	4.4	4.5	2.7	0.2	0.9	2.2	2.2	1.9
India	7.0	-7.1	8.7	6.8	6.1	6.8	6.8	4.6	5.5	6.9	5.1	4.4
Japan	1.2	-4.7	1.7	1.7	1.6	1.3	0.6	-1.2	-0.2	2.0	1.4	1.0
South Korea	3.3	-0.9	4.1	2.6	2.0	2.7	1.7	0.5	2.5	5.5	3.8	2.3
Australia	2.6	-2.3	4.9	3.8	1.9	1.8	2.1	0.9	2.8	6.5	4.8	2.9
Thailand	3.6	-6.1	1.5	2.8	3.7	3.6	1.5	-0.3	1.2	6.3	2.8	1.5
Brazil*	1.4	-3.3	5.2	3.0	0.8	1.7	5.8	3.2	8.3	9.1	5.6	4.2
Colombia	3.7	-7.0	11.0	8.0	2.0	3.0	3.7	2.5	3.5	10.1	8.9	4.6
Peru	4.5	-11.0	13.6	2.8	2.4	2.2	2.8	1.8	4.0	7.8	6.4	3.3
Chile	3.3	-6.0	12.0	2.7	-1.7	2.8	3.0	3.1	4.5	11.7	7.1	3.2

Commodities

	2010–19	2020	2021	2022f	2023f	2024f
	(annual average)					
WTI Oil (USD/bbl)	74	39	68	98	94	75
Brent Oil (USD/bbl)	82	43	70	104	100	80
WCS - WTI Discount (USD/bbl)	-18	-12	-13	-17	-19	-16
Nymex Natural Gas (USD/mmbtu)	3.39	2.02	3.84	6.69	5.00	4.25
Copper (USD/lb)	3.10	2.80	4.23	3.95	3.50	4.00
Zinc (USD/lb)	1.02	1.03	1.36	1.58	1.40	1.40
Nickel (USD/lb)	7.00	6.25	8.37	11.21	9.25	9.00
Iron Ore (USD/tonne)	101	109	160	120	90	90
Metallurgical Coal (USD/tonne)	179	127	204	360	200	180
Gold, (USD/oz)	1,342	1,771	1,799	1,826	1,800	1,600
Silver, (USD/oz)	21.64	20.48	25.15	23.00	24.00	23.00

Sources: Scotiabank Economics, Statistics Canada, BEA, BLS, IMF, Bloomberg.
*Consumer Prices: average of quarterly y/y% change

Scotiabank. SCOTIABANK'S FORECAST TABLES

December 8, 2022

North America

	2010–19	2020	2021	2022f	2023f	2024f	2010–19	2020	2021	2022f	2023f	2024f
	Canada (annual % change, unless noted)						United States (annual % change, unless noted)					
Real GDP	2.3	-5.1	5.0	3.6	0.8	1.5	2.3	-2.8	5.9	1.9	0.6	1.5
Consumer spending	2.5	-6.1	5.0	4.7	1.3	1.7	2.2	-3.0	8.3	2.7	0.3	1.4
Residential investment	2.5	5.0	14.9	-9.6	-7.4	8.7	4.5	7.2	10.7	-9.4	-10.7	3.3
Business investment*	3.0	-9.8	4.2	7.4	-4.6	10.4	5.1	-4.9	6.4	3.6	0.4	0.9
Government	1.1	1.9	5.5	1.2	1.4	1.6	0.1	2.6	0.6	-0.9	0.4	0.8
Exports	3.6	-8.9	1.4	3.0	5.3	0.2	3.9	-13.2	6.1	8.3	3.3	2.6
Imports	3.7	-9.3	7.8	7.6	-1.0	3.0	4.3	-9.0	14.1	8.3	-0.8	2.3
Inventories, contribution to annual GDP growth	0.1	-1.8	1.0	2.2	-1.2	-0.7	0.2	-0.7	0.2	0.6	-0.4	0.1
Nominal GDP	4.0	-4.5	13.6	11.4	3.4	3.2	4.0	-1.5	10.7	9.2	5.1	3.2
GDP deflator	1.7	0.6	8.2	7.6	2.6	1.7	1.7	1.3	4.5	7.1	4.5	1.7
Consumer price index (CPI)	1.6	0.7	3.4	6.8	4.1	1.9	1.8	1.3	4.7	8.1	5.0	2.6
Core inflation rate**	1.7	1.9	2.7	4.7	3.2	2.0	1.6	1.3	3.5	5.0	3.5	2.5
Pre-tax corporate profits	6.3	-1.4	35.8	12.7	-0.7	3.7	5.9	-5.9	22.6	7.2	3.7	1.6
Employment	1.3	-5.1	4.8	3.6	0.9	1.3	1.2	-5.8	2.8	4.0	0.9	0.4
Unemployment rate (%)	6.9	9.5	7.4	5.3	5.8	6.3	6.2	8.1	5.4	3.7	4.2	4.8
Current account balance (CAD, USD bn)	-56.9	-47.6	-6.7	-9.9	16.7	-18.7	-407	-620	-846	-893	-727	-732
Merchandise trade balance (CAD, USD bn)	-13.6	-40.3	4.7	29.8	65.0	44.6	-763	-914	-1090	-1170	-1054	-1087
Federal budget balance (FY, CAD, USD bn) ***	-18.7	-327.7	-90.2	-36.4	-30.6	-25.4	-829	-3,132	-2,775	-1,036	-1,016	-1,134
percent of GDP	-1.0	-14.8	-3.6	-1.3	-1.1	-0.9	-4.8	-14.9	-11.9	-4.1	-3.8	-4.1
Housing starts (000s, mn)	201	218	271	258	202	194	1.31	1.40	1.61	1.56	1.37	1.41
Motor vehicle sales (000s, mn)	1,816	1,566	1,668	1,532	1,698	1,864	15.7	14.5	14.9	13.8	15.4	16.8
Industrial production	2.4	-8.2	4.5	3.9	1.0	1.6	1.7	-7.0	5.0	4.2	2.0	2.0
	Mexico (annual % change)											
Real GDP	2.7	-8.2	4.8	2.8	0.8	1.9						
Consumer price index (year-end)	4.0	3.4	5.7	8.0	6.3	4.2						
Unemployment rate (%)	4.4	4.4	4.1	3.5	3.9	3.7						

Sources: Scotiabank Economics, Statistics Canada, CMHC, BEA, BLS, Bloomberg. *For Canada it includes capital expenditures by businesses and non-profit institutions. ** US: core PCE deflator; Canada: average of 2 core measures published by the BoC. *** In order to align with US reporting, as of the August 2020 issue of Scotiabank's Forecast Tables, Canadian Federal and Provincial Budget Balances for FY2020/21 are noted in calendar year 2020, FY2021/22 in calendar year 2021.

Quarterly Forecasts

	2021	2022				2023				2024			
Canada	Q4	Q1	Q2	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Real GDP (q/q ann. % change)	6.9	2.8	3.2	2.9	1.0	-0.2	-0.1	-0.1	1.5	1.6	2.2	2.2	2.2
Real GDP (y/y % change)	3.9	3.2	4.7	3.9	2.5	1.7	0.9	0.2	0.3	0.7	1.3	1.8	2.0
Consumer prices (y/y % change)	4.7	5.8	7.5	7.2	6.8	5.3	4.2	3.8	2.9	2.3	1.8	1.7	1.7
Average of new core CPIs (y/y % change)*	3.3	4.0	5.0	5.0	4.8	4.0	3.4	2.9	2.5	2.2	2.0	1.9	1.8
CPIXFET (y/y % change)**	3.2	4.0	5.1	5.4	5.1	4.3	3.7	3.3	2.8	2.5	2.2	2.1	1.9
Unemployment Rate (%)	6.3	5.8	5.1	5.2	5.2	5.4	5.7	6.0	6.1	6.2	6.3	6.3	6.3
United States													
Real GDP (q/q ann. % change)	7.0	-1.6	-0.6	2.9	1.2	-0.4	-0.3	1.0	1.2	1.6	1.8	2.0	2.0
Real GDP (y/y % change)	5.7	3.7	1.8	1.9	0.5	0.8	0.8	0.4	0.4	0.9	1.4	1.7	1.9
Consumer prices (y/y % change)	6.7	8.0	8.6	8.3	7.7	6.5	5.3	4.5	3.8	3.2	2.6	2.3	2.3
Total PCE deflator (y/y % change)	5.7	6.4	6.6	6.3	5.9	5.1	4.2	3.7	3.2	2.7	2.2	2.0	2.0
Core PCE deflator (y/y % change)	4.7	5.3	5.0	4.9	4.9	4.3	3.7	3.2	3.0	2.8	2.6	2.4	2.3
Unemployment Rate (%)	4.2	3.8	3.6	3.6	3.7	3.9	4.1	4.3	4.5	4.6	4.7	4.8	4.8

* Average of 2 core measures published by the BoC. ** CPI ex. food, energy and indirect taxes. Sources: Scotiabank Economics, Statistics Canada, BEA, BLS, Bloomberg.

December 8, 2022

Central Bank Rates

	2021	2022				2023				2024			
	Q4	Q1	Q2	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Americas						(%, end of period)							
Bank of Canada	0.25	0.50	1.50	3.25	4.25	4.25	4.25	4.25	4.00	3.50	3.00	3.00	3.00
US Federal Reserve (upper bound)	0.25	0.50	1.75	3.25	4.50	5.00	5.00	5.00	4.75	4.25	3.75	3.25	3.00
Bank of Mexico	5.50	6.50	7.75	9.25	10.50	10.75	10.75	10.75	10.25	9.75	9.25	8.50	7.50
Central Bank of Brazil	9.25	11.75	13.25	13.75	13.75	13.50	13.25	12.50	11.75	10.50	9.50	9.00	8.50
Bank of the Republic of Colombia	3.00	5.00	7.50	10.00	12.00	12.50	12.00	11.00	10.00	9.00	8.50	7.00	6.00
Central Reserve Bank of Peru	2.50	4.00	5.50	6.75	7.50	7.50	7.50	7.50	7.25	7.00	6.75	6.25	5.75
Central Bank of Chile	4.00	7.00	9.00	10.75	11.25	11.00	8.00	6.00	4.50	3.75	3.75	3.75	3.75
Europe													
European Central Bank MRO Rate	0.00	0.00	0.00	1.25	2.50	3.25	3.25	3.25	3.25	3.00	2.75	2.50	2.50
European Central Bank Deposit Rate	-0.50	-0.50	-0.50	0.75	2.00	2.75	2.75	2.75	2.75	2.50	2.25	2.00	2.00
Bank of England	0.25	0.75	1.25	2.25	3.50	4.25	4.25	4.25	4.25	4.00	3.75	3.50	3.25
Asia/Oceania													
Reserve Bank of Australia	0.10	0.10	0.85	2.35	3.10	3.45	3.55	3.55	3.50	3.30	3.15	3.00	2.85
Bank of Japan	-0.10	-0.10	-0.10	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
People's Bank of China	3.80	3.70	3.70	3.65	4.30	4.30	4.30	4.30	4.30	4.25	4.25	4.10	4.00
Reserve Bank of India	4.00	4.00	4.90	5.90	6.25	6.40	6.45	6.40	6.30	6.15	6.10	6.05	6.00
Bank of Korea	1.00	1.25	1.75	2.50	3.25	3.50	3.55	3.50	3.35	3.25	3.00	2.75	2.50
Bank of Thailand	0.50	0.50	0.50	1.00	1.30	1.60	1.75	1.85	1.85	1.90	1.85	1.80	1.75

Currencies and Interest Rates

	2021	2022				2023				2024			
	Q4	Q1	Q2	Q3	Q4f	Q1f	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Americas						(end of period)							
Canadian dollar (USDCAD)	1.26	1.25	1.29	1.38	1.35	1.35	1.35	1.30	1.30	1.27	1.27	1.25	1.25
Canadian dollar (CADUSD)	0.79	0.80	0.78	0.72	0.74	0.74	0.74	0.77	0.77	0.79	0.79	0.80	0.80
Mexican peso (USDMXN)	20.53	19.87	20.12	20.14	19.72	20.42	20.54	20.79	20.57	20.74	20.85	21.38	21.45
Brazilian real (USDBRL)	5.58	4.74	5.26	5.42	5.29	5.38	5.41	5.49	5.38	5.47	5.39	5.31	5.23
Colombian peso (USDCOP)	4,080	3,771	4,155	4,609	4,847	4,880	4,958	5,026	5,026	5,026	5,026	5,026	5,026
Peruvian sol (USDPEN)	4.00	3.68	3.83	3.98	3.95	3.99	3.95	3.90	3.95	3.90	3.95	3.90	3.95
Chilean peso (USDCLP)	852	786	918	969	900	900	880	870	850	800	780	770	750
Europe													
Euro (EURUSD)	1.14	1.11	1.05	0.98	1.05	1.05	1.05	1.10	1.10	1.10	1.10	1.12	1.12
UK pound (GBPUSD)	1.35	1.31	1.22	1.12	1.20	1.20	1.20	1.25	1.25	1.25	1.25	1.28	1.28
Asia/Oceania													
Japanese yen (USDJPY)	115	122	136	145	135	135	135	130	130	130	130	125	125
Australian dollar (AUDUSD)	0.73	0.75	0.69	0.64	0.67	0.67	0.67	0.69	0.69	0.70	0.70	0.72	0.72
Chinese yuan (USDCNY)	6.36	6.34	6.70	7.12	7.20	7.15	7.14	7.05	6.90	6.80	6.80	6.70	6.70
Indian rupee (USDINR)	74.3	75.8	79.0	81.3	82.2	82.0	82.0	82.0	80.0	79.0	79.0	78.0	78.0
South Korean won (USDKRW)	1,189	1,212	1,299	1,431	1,400	1,380	1,350	1,330	1,330	1271	1271	1271	1271
Thai baht (USDTHB)	33.4	33.3	35.3	37.7	37.0	36.2	35.5	35.0	34.5	33.8	33.8	33.0	33.0
Canada (Yields, %)													
3-month T-bill	0.19	0.73	2.31	3.78	4.15	4.15	4.15	4.10	3.65	3.20	2.90	2.90	2.90
2-year Canada	0.95	2.29	3.15	3.79	3.80	3.65	3.40	3.25	3.10	3.00	2.90	2.90	2.90
5-year Canada	1.26	2.41	3.11	3.33	3.00	3.15	3.20	3.30	3.35	3.25	3.20	3.15	3.15
10-year Canada	1.42	2.40	3.22	3.17	2.75	2.85	3.00	3.25	3.45	3.45	3.50	3.50	3.55
30-year Canada	1.68	2.38	3.13	3.09	2.75	2.90	3.15	3.35	3.55	3.60	3.65	3.65	3.70
United States (Yields, %)													
3-month T-bill	0.06	0.55	1.73	3.21	4.30	4.80	4.80	4.80	4.50	4.00	3.50	3.00	2.75
2-year Treasury	0.73	2.33	3.09	4.28	4.35	4.15	3.90	3.65	3.30	3.10	3.00	3.00	3.00
5-year Treasury	1.26	2.46	3.04	4.09	3.70	3.60	3.50	3.40	3.20	3.15	3.15	3.10	3.10
10-year Treasury	1.51	2.34	3.01	3.83	3.50	3.25	3.30	3.40	3.45	3.50	3.55	3.60	3.60
30-year Treasury	1.90	2.45	3.18	3.78	3.50	3.45	3.50	3.55	3.60	3.65	3.70	3.75	3.75

Sources: Scotiabank Economics, Bloomberg.

Scotiabank

SCOTIABANK'S FORECAST TABLES

December 8, 2022

The Provinces

(annual % change except where noted)

Real GDP	CA	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
2010–19	2.3	1.1	2.1	1.2	0.7	1.9	2.3	2.2	2.3	2.6	2.9
2020	-5.1	-4.6	-1.6	-3.5	-2.7	-5.0	-4.7	-4.4	-4.8	-8.0	-3.0
2021	5.0	0.6	7.9	6.2	5.9	6.0	5.2	1.8	-0.9	4.8	6.1
2022f	3.6	0.5	2.6	2.4	2.2	3.6	3.5	3.6	5.2	4.7	2.6
2023f	0.8	1.0	1.2	0.7	0.6	0.6	0.5	0.6	1.8	1.6	0.5
2024f	1.5	1.2	1.4	1.2	1.0	1.2	1.6	1.1	1.3	1.7	1.5
Nominal GDP											
2010–19	4.0	3.7	4.2	3.0	2.8	3.9	3.6	3.9	3.5	3.7	4.5
2020	-4.5	-10.0	1.4	0.0	-1.6	-2.5	-2.9	-1.3	-7.6	-15.7	-0.7
2021	13.6	17.7	14.3	10.9	13.8	11.8	10.3	8.4	13.1	26.2	14.2
2022f	11.4	11.9	7.0	6.6	5.5	10.3	10.1	9.1	20.0	19.8	7.3
2023f	3.4	2.0	4.2	3.4	3.1	3.8	3.6	3.6	2.9	2.5	3.4
2024f	3.2	0.7	2.4	2.3	1.9	3.8	4.1	2.8	0.7	1.0	3.8
Employment											
2010–19	1.3	0.6	1.5	0.3	0.0	1.2	1.4	0.7	0.8	1.2	2.0
2020	-5.1	-5.7	-3.2	-4.7	-2.6	-4.8	-4.8	-3.3	-4.7	-6.6	-6.5
2021	4.8	2.8	3.6	5.4	2.5	4.1	4.9	3.3	2.5	5.1	6.7
2022f	3.6	3.6	3.5	3.3	3.2	3.2	3.8	3.2	3.3	4.4	3.2
2023f	0.9	1.2	0.8	0.9	0.9	0.8	0.9	0.8	1.1	1.3	0.6
2024f	1.3	1.6	1.3	1.3	1.3	1.2	1.2	1.3	1.6	1.6	1.2
Unemployment Rate (%)											
2010–19	6.9	13.3	10.6	8.7	9.3	7.1	7.0	5.5	6.4	6.2	6.1
2020	9.5	14.1	10.4	9.8	10.0	8.9	9.6	7.6	10.2	11.4	8.8
2021	7.4	12.9	9.2	8.4	9.0	6.1	8.0	6.3	8.1	8.7	6.3
2022f	5.3	10.9	7.4	6.6	7.2	4.3	5.7	4.6	4.7	5.8	4.7
2023f	5.8	11.0	7.9	7.1	7.7	4.9	6.2	5.2	5.0	5.9	5.5
2024f	6.3	11.2	8.4	7.6	8.1	5.4	6.7	5.7	5.2	6.1	6.1
Total CPI, annual average											
2010-19	1.6	2.0	1.6	1.7	1.8	1.5	1.9	1.8	1.8	1.7	1.6
2020	0.6	0.2	0.0	0.3	0.2	0.8	0.6	0.5	0.6	1.1	0.8
2021	3.4	3.7	5.1	4.1	3.8	3.8	3.5	3.2	2.6	3.2	2.8
2022f	6.8	6.4	8.8	7.4	7.3	6.7	6.9	7.7	6.5	6.4	6.8
2023f	4.1	4.4	5.6	4.7	4.5	4.3	4.1	4.2	3.7	3.5	4.0
2024f	1.9	2.1	2.5	2.2	2.1	2.0	1.9	1.9	1.7	1.6	1.9
Housing Starts (units, 000s)											
2010–19	201	2.2	0.8	4.2	2.7	44	70	6.6	6.0	31	34
2020	218	0.8	1.2	4.9	3.5	54	81	7.3	3.1	24	38
2021	271	1.0	1.3	6.3	3.8	68	100	8.0	4.2	32	48
2022f	258	1.8	1.2	5.6	4.3	63	89	7.8	4.5	36	45
2023f	202	1.1	0.9	4.5	3.1	50	72	6.0	3.3	26	35
2024f	194	0.7	1.0	4.4	2.9	48	72	6.1	2.9	22	34
Motor Vehicle Sales (units, 000s)											
2010–19	1,816	33	7	52	42	441	738	56	54	239	199
2020	1,566	27	7	40	35	378	653	47	42	184	179
2021	1,668	29	8	45	38	404	665	49	43	196	199
2022f	1,532	25	7	35	34	366	628	42	40	182	178
2023f	1,698	27	7	40	37	404	696	46	44	204	195
2024f	1,864	29	8	45	40	443	765	51	48	222	215
Budget Balances, (CAD mn)											
2019*	-39,392	1,117	22	2	49	32	-8,672	5	-319	-12,152	-322
2020	-327,729	-1,492	-6	-342	409	-7,539	-16,404	-2,124	-1,127	-16,962	-5,468
2021	-90,200	-272	-27	351	488	-294	2,051	-704	-1,468	3,944	1,306
2022f	-36,400	479	-93	-506	774	-1,656	-12,900	-548	1,094	12,294	5,732
2023f	-30,600	-309	-52	-419	21	-1,277	-8,100	-440	-384	5,615	-4,128

* NL budget balance in 2019 is net of one-time revenue boost via *Atlantic Accord* .
Sources: Scotiabank Economics, Statistics Canada, CMHC, Budget documents; Quebec budget balance figures are after Generations Fund and before Stabilization Reserve transfers.

Financial Markets: Canada							
Stokes Economics November 2022 Provincial Forecast							
	2023	2024	2025	2026	2027	2028	2029
Financial Markets							
Interest Rates (%)							
Canada							
3-Month T-Bills	4	3.1	2.9	3	3	3	3
10-Year GOCs	3.3	3.3	3.6	3.8	4	4	4
30-Year GOCs	3.4	3.5	3.8	4.1	4.3	4.3	4.3
10+ Year GOCs	3.3	3.5	3.8	4.1	4.2	4.2	4.2
Prime Rate	5.9	5	4.7	4.7	4.6	4.6	4.6
1-Year Mortgages	6.1	5.2	4.9	4.9	4.8	4.8	4.8
5-year Mortgages	7.4	6.3	6	6	5.9	5.9	5.9
Real Rates							
3-Month T-Bills	0.1	0.9	1	1	1	1	1
10-Year Bonds	-0.6	1.1	1.6	1.8	2	2	2
United States							
3-Month T-Bills	4.5	3.6	3.1	2.9	2.8	2.8	2.8
10-Year Treasury Bonds	3.9	3.8	3.8	3.8	3.8	3.8	3.8
Canada-U.S. Differentials (Unadjusted)							
3-Month T-Bills	-0.6	-0.5	-0.2	0.1	0.2	0.2	0.2
10-Year Bonds	-0.6	-0.5	-0.2	0.1	0.2	0.2	0.2
Dividend Price Ratio	2.2	2.3	2.4	2.3	2.3	2.2	2.2
Canada-U.S. Exchange Rate							
$US	0.743	0.764	0.767	0.773	0.776	0.778	0.776
$C	1.345	1.309	1.304	1.294	1.289	1.285	1.289
PPP	0.782	0.795	0.797	0.796	0.798	0.802	0.806

TD Economics

Quarterly Economic Forecast

It Tastes Awful, But It Works

December 13, 2022

Contributing Authors

- Beata Caranci, Chief Economist | 416-982-8067
- Derek Burleton, Deputy Chief Economist | 416-982-2514
- Thomas Feltmate, Director | 416-944-5730
- Leslie Preston, Managing Director | 416-983-7053
- James Orlando, CFA, Director | 416-413-3180
- Andrew Hencic, Senior Economist | 416-944-5307

There's little question that the global economy will slow in 2023, the only question that remains is by how much? Recent data has revealed more resilience than many expected, even within Europe as it contends with an energy crisis. And now China has returned to the forefront in a surprise move to relax its strict zero-COVID strategy. The timing is earlier than previously conveyed by authorities and has led to a slight upgrade to our global outlook, specific to the mid-to-second half of 2023 as the remnants of their health crisis begins to fade into the past.

Recession talk is reaching a feverish pitch in Canada and the U.S. despite no evidence (yet) to support that direction. However, here too there's no question that there's only one way to re-introduce the necessary economic slack that takes pressure off inflation. Demand in both countries must stagnate for a lengthy period or contract sharply over a shorter haul. In both, the unemployment rate will rise, and it's only a question of how much and how fast. Given the resilience in employer demand and job vacancies, our forecast has opted for the low-and-slow economic growth framework that produces a one-and-half percentage point rise in the unemployment rate through 2023 and 2024. This outlook risks imparting deeper economic scars to the landscape, particularly investment, given its longevity. Should a more intense downturn materialize, it's possible for the central bank to engineer a shorter duration than our two-year timeframe by throttling back more quickly on interest rates from its current highly restrictive territory. However, any way you cut it, the medicine of higher interest rates will take time to be fully absorbed. While it tastes awful, we expect it will work to bring the inflation fever down.

This publication focuses on the numbers, but if you'd like a deeper dive into underlying issues please see our Question & Answer piece published November 23rd.

- Global GDP growth is expected to register 3.3% in 2022, 2.3% in 2023 and 2.9% in 2024, broadly as expected in our September forecast. Although growth momentum continues to fade in advanced economies as central banks tighten financial conditions, there were upside surprises in the third quarter, particularly in Europe.
- Europe is heading into the winter months in a much better position than expected a few months ago. It has built ample natural gas stocks and significantly reduced consumption. These actions now offer thicker insulation should the remaining winter months prove colder than expected. However, that insulation can only take them so far. The outlook remains fraught as inflation erodes disposable incomes, industrial activity declines, and the European Central Bank raises interest rates to fight inflation.
- Chinese authorities also provided some surprise news with the easing of its zero-COVID strategy. This will lighten the downdraft on the global outlook. If China's health and infection experience follows the pattern of countries that have already gone before it, the first quarter is likely to test China's political resolve and medical system. However, once that

intensity of infections resolves, the easing in restrictions should open the door for a sustainable increase in consumer mobility, production and investment, rather than the fits-and-starts pattern that has come to define the past three years. Policymakers also recently moved to support the troubled housing market, and this too should help to restore consumer confidence. On the flip side, it's important to bear in mind that an earlier and more robust revival also risks fuelling another burst of global inflation if Chinese demand pressures commodity supply.

United States

- Real GDP growth has been revised higher for 2022 from 1.6% to 1.9%. For an economy that needs to slow below its potential pace, a third quarter print of 2.9% failed to provide comfort that the U.S. is on that trajectory. And even though we are forecasting a sub-trend gain in Q4, this masks the details that reveal an acceleration in domestic demand to its fastest pace of the year. The consumer spending and business investment profiles are expected to end the year absent any signal of an economy on the precipice of downfall. That hand off has improved the annual growth prospects for 2023 slightly to 0.9%.
- The weight of high interest rates and inflation is evident in the run-down of household savings, but there are several layers of cushion currently in place that seems to be preventing an abrupt or jarring adjustment. These layers all reside on the household side.
- Despite a sharp erosion in the savings rate, excess savings remain on the balance sheets of many households. This too should steadily erode, but in the meantime, it's mitigating a sudden recalibration of spending patterns. Second, American households are more desensitized in this cycle to higher interest rates due to the massive deleveraging cycle following the Global Financial Crisis. This has left debt service costs as a share of disposable income much lower, even amidst one of the fastest rate hike cycles in history.
- And lastly, the labor market (and wages) is shoring up income nationwide. Job growth has moderated over the course of the year but remains remarkedly stable in the 260k-280k range. That's more than two times the number of jobs that would be consistent with U.S. demographics on a sustainable basis. Job openings have also fallen from their early-2022 highs but are also too historically elevated. Meanwhile, labor supply has continued to disappoint, with no improvement in the participation rate this year.
- This mitigates the risk of a sudden drop off in job demand in the coming quarter but won't likely prevent it all together as businesses continue to be pressured. We anticipate that by mid-2023, employers will start to thin out their workforces as economic growth slips well below trend. The unemployment rate is expected to increase by 1.5 percentage points (pp) and reach a peak of 5.1% by mid-2024. This remains unchanged from our forecast in September. The rise in the unemployment rate is consistent with a job loss tally of 1.35 million.
- Never has the U.S. economy experienced a 1.5 pp increase in the unemployment rate without it being characterized as a recession. This gets to the point that focusing on the word "recession" doesn't address its wide interpretation for depth and duration.
- This magnitude of shift in the unemployment rate and job losses would be shallow by historical standards, reflecting a bifurcated job market. Several sectors are still a long way from recovering to pre-crisis levels – like leisure & hospitality – while others display historically high vacancy rates – like manufacturing. Both are examples of sectors that would normally lead job losses during a downturn but are unlikely to do so this time around. In contrast, sectors like information and professional/technical are at risk of leading the job losses, where hiring activity was exuberant throughout the pandemic. The bottom line is that all boats may not be rowing in the same direction in this cycle given unique past-pandemic legacies.
- On the inflation front, the outlook has been revised higher due to an upward revision to our oil price forecast and more persistence in the shelter inflation, which is not expected to peak until mid-2023. Core inflation is now forecasted to average 6.2% in 2022 and 4.7% in 2023. This will keep the Fed in tightening mode over the near-term, with the central bank expected to hike to a peak of 5% in early-2023.

Canada

- The Canadian economy had a similar experience to its American counterpart in the third quarter, also recording roughly 3% growth. This caught many, including us and the Bank of Canada, off-guard and extends an impressive streak of above-trend economic growth.
- The narrative to Canada is similar to the economic backdrop to the south. Near-term spending is likely to be boosted following another jump in employment. However high inflation and rising interest rates will increasingly take their natural course of action on cooling demand into 2023.
- One significant departure from the U.S. narrative, was the Canadian consumer spending was weak in the third quarter of 2022. Although spending on services continued to expand, the drop in goods spending was more than offsetting. However, the third-quarter lull followed two prior blow-out quarters on consumer spending, and the early indicators suggest some revival is on deck for the final quarter of the year.
- This may reflect only a temporary reprieve. As 2023 unfolds, the consumer forecast has been downgraded to reflect a Bank of Canada that has pushed interest rates higher than expected relative to the prior September forecast. This presses harder on a household that displays far higher sensitivity to interest rates due to asymmetric household leverage risks relative to the American household counterpart.
- Relative to last quarter's forecast, consumer spending growth for 2023 has been downgraded by 0.7 percentage points marking a larger decline in goods spending and a more pronounced slowing in services.
- The unemployment rate outlook reflects a peak of 6.5% that corresponds to 110 thousand job losses. There is a risk that Canadian employers may go further. Although the job market reflects tightness based on vacancy rates and low unemployment rates, the degree of tightness is not as pronounced as its U.S. counterpart. Canadian firms were quick to hire exiting the pandemic, with employment 2.7% above pre-crisis peak compared to a U.S. equivalent metric of only 0.7%. If a deeper household deleverage cycle plays out, the job market recalibration would reflect that asymmetric risk.
- In contrast, non-residential investment fares better in the 2023 outlook, as elevated commodity prices, the energy transition, and a robust pipeline of infrastructure projects supports spending on structures and equipment. Recent quarters have already surprised to the upside on this front.
- As for the Canadian housing market, much of past forecast is playing out as expected, leading to only minor adjustments with average prices falling 22% from their peak, unchanged from our September outlook.
- Inflation is more cooperative in Canada than its U.S. counterpart, trending roughly one percentage point lower. This, in combination with higher interest rate sensitivity should provide a lower stopping level for the Bank of Canada on its rate hike cycle. We deem the peak rate to be 4.5% in the first quarter of 2023. Both short-term and long-term bond yields are likely to decline over 2023 as the weak economic backdrop causes increasing expectation for policy rate cuts.

Interest Rate Outlook

Interest Rates	2022 Q1	2022 Q2	2022 Q3	2022 Q4F	2023 Q1F	2023 Q2F	2023 Q3F	2023 Q4F	2024 Q1F	2024 Q2F	2024 Q3F	2024 Q4F
Canada												
Overnight Target Rate	0.50	1.50	3.25	4.25	4.50	4.50	4.50	3.75	3.25	2.75	2.50	2.25
3-mth T-Bill Rate	0.60	2.08	3.58	4.38	4.50	4.50	4.13	3.50	3.00	2.63	2.38	2.13
2-yr Govt. Bond Yield	2.27	3.10	3.79	3.90	3.60	3.30	3.05	2.85	2.60	2.45	2.30	2.20
5-yr Govt. Bond Yield	2.39	3.10	3.32	3.10	3.00	2.90	2.75	2.60	2.45	2.40	2.40	2.35
10-yr Govt. Bond Yield	2.40	3.23	3.16	2.90	2.85	2.80	2.75	2.70	2.65	2.60	2.60	2.60
30-yr Govt. Bond Yield	2.38	3.13	3.09	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
10-yr-2-yr Govt Spread	0.13	0.13	-0.63	-1.00	-0.75	-0.50	-0.30	-0.15	0.05	0.15	0.30	0.40
U.S.												
Fed Funds Target Rate	0.50	1.75	3.25	4.50	5.00	5.00	5.00	4.50	4.00	3.50	3.00	2.75
3-mth T-Bill Rate	0.51	1.66	3.22	4.65	4.90	4.90	4.65	4.15	3.65	3.15	2.75	2.50
2-yr Govt. Bond Yield	2.28	2.92	4.22	4.40	4.20	3.85	3.50	3.20	2.95	2.70	2.55	2.40
5-yr Govt. Bond Yield	2.42	3.01	4.06	3.80	3.70	3.60	3.45	3.25	3.05	2.85	2.75	2.65
10-yr Govt. Bond Yield	2.32	2.98	3.83	3.60	3.55	3.50	3.40	3.30	3.15	3.00	2.90	2.80
30-yr Govt. Bond Yield	2.44	3.14	3.79	3.58	3.55	3.50	3.45	3.40	3.35	3.30	3.20	3.10
10-yr-2-yr Govt Spread	0.04	0.06	-0.39	-0.80	-0.65	-0.35	-0.10	0.10	0.20	0.30	0.35	0.40
Canada-U.S. Spreads												
Can - U.S. T-Bill Spread	0.09	0.42	0.36	-0.27	-0.40	-0.40	-0.52	-0.65	-0.65	-0.52	-0.37	-0.37
Can - U.S. 10-Year Bond Spread	0.08	0.25	-0.67	-0.70	-0.70	-0.70	-0.65	-0.60	-0.50	-0.40	-0.30	-0.20

F: Forecast by TD Economics as at December 2022. All forecasts are end-of-period.

Source: Bloomberg, Bank of Canada, Federal Reserve, TD Economics.

Foreign Exchange Outlook

Currency	Exchange rate	2022 Q1	2022 Q2	2022 Q3	2022 Q4F	2023 Q1F	2023 Q2F	2023 Q3F	2023 Q4F	2024 Q1F	2024 Q2F	2024 Q3F	2024 Q4F
Exchange rate to U.S. dollar													
Euro	USD per EUR	1.11	1.05	0.98	1.05	1.01	0.99	1.00	1.02	1.04	1.06	1.08	1.10
UK pound	USD per GBP	1.32	1.22	1.11	1.21	1.18	1.15	1.16	1.19	1.21	1.23	1.26	1.28
Japanese yen	JPY per USD	121	136	145	137	139	140	139	136	133	131	128	126
Chinese renminbi	CNY per USD	6.34	6.70	7.11	7.00	6.90	6.80	6.80	6.80	6.80	6.80	6.80	6.80
Exchange rate to Canadian dollar													
U.S. dollar	USD per CAD	0.80	0.78	0.73	0.73	0.73	0.72	0.73	0.73	0.74	0.75	0.76	0.76
Euro	CAD per EUR	1.39	1.35	1.35	1.43	1.39	1.38	1.38	1.39	1.40	1.42	1.43	1.45
UK pound	CAD per GBP	1.64	1.57	1.53	1.65	1.62	1.60	1.60	1.61	1.63	1.65	1.66	1.68
Japanese yen	JPY per CAD	97.3	105.4	105.2	100.3	101.1	100.7	101.0	100.0	99.0	98.0	97.0	96.0
Chinese renminbi	CNY per CAD	5.08	5.21	5.17	5.12	5.02	4.89	4.94	4.99	5.04	5.09	5.15	5.20

F: Forecast by TD Economics as at December 2022. All forecasts are end-of-period.
Source: Bloomberg, Bank of Canada, Federal Reserve, TD Economics.

Commodity Price Outlook

Commodity	2022 Q1	2022 Q2	2022 Q3	2022 Q4F	2023 Q1F	2023 Q2F	2023 Q3F	2023 Q4F	2024 Q1F	2024 Q2F	2024 Q3F	2024 Q4F
Crude Oil (WTI, $US/bbl)	94	109	93	82	86	88	89	90	89	88	88	85
Natural Gas ($US/MMBtu)	4.66	7.48	7.99	5.57	6.32	5.72	5.69	5.48	5.99	6.03	6.06	6.09
Gold ($US/troy oz.)	1876	1873	1728	1724	1768	1705	1720	1733	1745	1756	1766	1776
Silver ($US/troy oz.)	24.05	22.66	19.25	20.96	20.75	20.56	20.47	20.45	20.46	20.51	20.58	20.66
Copper (cents/lb)	453	433	352	364	317	326	334	359	361	362	364	366
Nickel ($US/lb)	12.73	13.20	10.00	11.43	9.30	9.10	9.30	9.80	10.00	10.20	10.20	10.50
Aluminum (cents/lb)	148	131	107	107	110	114	116	117	118	119	120	120
Wheat ($US/bu)	11.55	13.69	10.72	11.53	9.50	9.30	9.00	8.60	8.71	8.65	8.63	8.63

F: Forecast by TD Economics as at December 2022. All forecasts are period averages.

Source: Bloomberg, TD Economics, USDA (Haver).

Canadian Economic Outlook

Period-Over-Period Annualized Per Cent Change Unless Otherwise Indicated

Economic Indicators	2022				2023				2024				Annual Average			4th Qtr/4th Qtr		
	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F	22F	23F	24F	22F	23F	24F
Real GDP	2.8	3.2	2.9	0.7	0.3	0.0	-0.8	0.3	0.6	0.8	0.9	1.1	3.5	0.7	0.4	2.4	-0.1	0.9
Consumer Expenditure	2.3	9.5	-1.0	1.4	0.8	0.1	-0.8	-0.1	0.4	0.6	0.8	0.9	4.8	0.8	0.3	3.0	0.0	0.7
Durable Goods	8.0	-14.4	-8.2	1.0	-0.5	-1.5	-3.0	-0.5	0.0	0.1	0.2	0.3	-3.1	-2.7	-0.5	-3.8	-1.4	0.2
Business Investment	7.3	15.2	3.6	0.9	1.7	1.3	1.1	1.3	1.6	1.9	2.3	2.3	8.2	2.4	1.7	6.6	1.4	2.0
Non-Res. Structures	13.3	13.8	11.7	3.0	2.0	1.5	1.3	1.5	1.7	2.0	2.5	2.4	11.6	3.8	1.8	10.3	1.6	2.2
Equipment & IPP*	1.1	17.0	-4.7	-1.2	1.4	1.2	0.9	1.2	1.5	1.7	2.0	2.1	4.7	0.9	1.5	2.7	1.2	1.8
Residential Investment	8.8	-31.5	-15.4	-4.0	-6.0	-4.0	-2.0	0.5	1.0	1.5	2.2	2.5	-10.3	-7.6	0.5	-11.8	-2.9	1.8
Govt. Expenditure	0.7	-2.2	3.9	2.6	2.1	2.2	2.3	2.4	2.3	2.2	2.1	2.1	1.3	2.2	2.3	1.2	2.3	2.2
Final Domestic Demand	3.0	2.4	-0.6	1.2	0.8	0.5	0.1	0.7	1.1	1.2	1.4	1.5	2.7	0.7	0.9	1.5	0.5	1.3
Exports	-7.6	8.1	8.6	2.4	3.4	2.3	1.2	1.3	1.7	1.8	1.9	1.9	2.6	3.5	1.6	2.7	2.0	1.8
Imports	0.2	29.5	-1.5	-0.1	2.2	1.7	1.0	1.4	1.6	1.7	1.7	1.9	8.2	2.5	1.5	6.3	1.6	1.7
Change in Non-farm Inventories (2012 $Bn)	21.1	45.9	46.8	39.8	35.8	32.3	26.8	24.8	22.4	20.0	17.5	15.5	38.4	29.9	18.8	--	--	--
Final Sales	0.4	-3.9	-1.0	2.6	1.5	1.2	1.2	1.1	1.5	1.7	1.9	1.9	0.4	0.9	1.5	-0.5	1.2	1.7
International Current Account Balance ($Bn)	3.7	10.6	-44.4	-17.9	-18.8	-21.1	-20.5	-20.1	-19.1	-18.5	-17.8	-17.6	-12.0	-20.1	-18.2	--	--	--
% of GDP	0.1	0.4	-1.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.4	-0.7	-0.6	--	--	--
Pre-tax Corp. Profits	20.1	56.0	-30.7	-20.9	-10.9	-0.9	0.3	1.4	1.8	1.9	2.0	2.2	11.1	-8.8	1.4	0.7	-2.6	2.0
% of GDP	15.6	16.8	15.4	14.5	14.0	13.9	13.9	13.8	13.8	13.7	13.7	13.7	15.6	13.9	13.7	--	--	--
GDP Deflator (y/y)	8.8	9.8	6.9	4.9	2.3	-0.4	1.6	2.3	2.3	2.4	2.3	2.2	7.6	1.4	2.3	4.9	2.3	2.2
Nominal GDP	15.8	17.2	-2.7	0.6	2.6	2.0	1.6	2.6	3.0	3.0	3.1	3.2	11.3	2.1	2.7	7.3	2.2	3.1
Labour Force	0.9	0.9	-1.0	2.2	1.2	0.8	0.4	0.3	0.4	0.4	0.5	0.7	1.3	0.9	0.4	0.7	0.7	0.5
Employment	3.2	3.9	-1.3	2.0	0.2	-0.4	-1.5	-0.3	0.0	0.0	0.5	0.9	3.6	0.2	-0.2	1.9	-0.5	0.3
Change in Empl. ('000s)	153	188	-66	99	9	-22	-72	-14	-2	0	24	45	686	41	-31	374	-99	67
Unemployment Rate (%)	5.8	5.1	5.2	5.2	5.4	5.7	6.2	6.3	6.4	6.5	6.5	6.5	5.3	5.9	6.5	--	--	--
Personal Disp. Income	18.0	3.8	3.3	5.9	1.2	0.8	0.7	1.5	1.8	1.8	1.8	1.9	5.4	2.4	1.5	7.6	1.0	1.8
Pers. Savings Rate (%)	8.8	5.1	5.7	5.9	5.3	4.9	4.7	4.5	4.4	4.1	3.9	3.7	6.4	4.8	4.0	--	--	--
Cons. Price Index (y/y)	5.8	7.4	7.1	6.9	5.8	3.7	3.2	2.6	2.3	2.1	2.0	2.0	6.8	3.8	2.1	6.9	2.6	2.0
CPIX (y/y)**	4.8	5.9	5.9	5.9	5.4	3.9	3.3	2.8	2.5	2.3	2.1	2.1	5.6	3.8	2.2	5.9	2.8	2.1
BoC Inflation (y/y)***	2.7	4.1	5.3	5.4	4.8	3.5	2.6	2.2	2.2	2.1	2.0	2.0	4.4	3.3	2.1	5.4	2.2	2.0
Housing Starts ('000s)	244	271	282	251	241	231	223	217	213	209	207	204	262	228	208	--	--	--
Home Prices (y/y)	17.0	3.4	-4.8	-11.7	-20.9	-13.0	-5.2	-1.5	3.5	4.0	4.2	3.8	0.6	-10.7	3.9	-11.7	-1.5	3.8
Real GDP / worker (y/y)	-1.4	-0.4	0.9	0.5	0.6	0.9	0.0	0.4	0.6	0.7	0.6	0.5	-0.1	0.5	0.6	0.5	0.4	0.5

F: Forecast by TD Economics as at December 2022.

Home price measure shown is the CREA Composite Sale Price.

* Intellectual Property Products. ** CPIX: CPI excluding the 8 most volatile components. *** BoC Inflation: simple average of CPI-trim, CPI-median, and CPI-common.

Source: Statistics Canada, Bank of Canada, Canada Mortgage and Housing Corporation, Haver Analytics, TD Economics.

U.S. Economic Outlook

Period-Over-Period Annualized Per Cent Change Unless Otherwise Indicated

Economic Indicators	2022				2023				2024				Annual Average			4th Qtr/4th Qtr		
	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F	22F	23F	24F	22F	23F	24F
Real GDP	-1.6	-0.6	2.9	1.1	0.7	0.4	0.2	0.7	1.0	1.3	1.4	1.5	1.9	0.9	0.9	0.5	0.5	1.3
Consumer Expenditure	1.3	2.0	1.7	3.2	1.2	0.7	0.3	0.7	0.9	1.1	1.2	1.3	2.8	1.4	0.9	2.1	0.7	1.1
Durable Goods	7.7	-2.8	-0.3	5.5	-2.0	-3.3	-1.5	0.4	1.4	1.7	1.2	1.3	0.0	-0.5	0.6	2.4	-1.6	1.4
Business Investment	7.9	0.1	5.1	3.6	0.9	-1.0	-0.9	0.1	0.6	1.3	2.0	2.6	3.7	1.2	0.6	4.1	-0.2	1.6
Non-Res. Structures	-4.4	-12.7	-6.9	-5.0	-5.0	-6.0	-4.0	-2.0	0.0	2.0	4.0	5.0	-8.1	-5.6	-0.1	-7.3	-4.3	2.7
Equipment & IPP*	12.4	3.1	8.3	5.8	2.2	0.0	-0.3	0.5	0.7	1.0	1.5	2.0	7.2	2.8	0.7	7.3	0.6	1.3
Residential Investment	-3.1	-17.8	-26.8	-24.2	-18.0	-10.7	-1.9	4.6	9.8	11.4	10.2	10.3	-10.5	-16.2	6.3	-18.5	-6.9	10.4
Govt. Expenditure	-2.3	-1.6	3.0	1.5	3.5	1.0	0.9	0.8	0.8	0.8	0.7	0.8	-0.8	1.8	0.8	0.1	1.5	0.8
Final Domestic Demand	1.3	0.2	0.9	1.7	0.7	0.1	0.2	0.8	1.2	1.4	1.6	1.7	1.7	0.7	1.0	1.0	0.4	1.5
Exports	-4.6	13.8	15.3	-2.0	-1.5	-1.7	0.0	0.5	1.2	1.6	2.0	2.4	7.3	1.5	1.0	5.3	-0.7	1.8
Imports	18.4	2.2	-7.3	8.2	-2.4	-3.9	-2.0	-1.0	0.9	2.7	3.5	3.6	9.0	-1.0	0.7	5.0	-2.3	2.7
Change in Private Inventories	214.5	125.8	74.2	111.1	99.2	97.7	87.1	72.4	63.9	63.9	67.0	67.0	131.4	89.1	65.4	--	--	--
Final Sales	-1.8	1.3	4.0	0.3	0.9	0.5	0.5	1.0	1.2	1.3	1.3	1.5	1.2	1.1	1.1	0.9	0.7	1.3
International Current Account Balance ($Bn)	-1130	-1004	-897	-979	-937	-922	-946	-967	-991	-1003	-1015	-1027	-1003	-943	-1009	--	--	--
% of GDP	-4.6	-4.0	-3.5	-3.8	-3.6	-3.5	-3.5	-3.6	-3.6	-3.7	-3.7	-3.7	-3.9	-3.5	-3.7	--	--	--
Pre-tax Corporate Profits including IVA&CCA	0.5	19.7	-4.1	1.8	1.0	-4.2	-7.7	-6.5	-4.9	-3.5	-4.5	-4.5	6.7	-1.0	-5.2	4.1	-4.4	-4.3
% of GDP	11.6	11.9	11.6	11.5	11.4	11.1	10.8	10.6	10.4	10.2	10.0	9.8	11.6	11.0	10.1	--	--	--
GDP Deflator (y/y)	6.9	7.6	7.1	6.5	5.5	4.0	3.6	3.0	2.5	2.3	2.1	2.0	7.0	4.0	2.2	6.5	3.0	2.0
Nominal GDP	6.6	8.5	7.3	5.5	4.7	3.6	2.9	3.0	3.1	3.3	3.4	3.6	9.1	4.9	3.2	7.0	3.6	3.4
Labor Force	5.1	0.3	0.8	0.4	1.5	0.7	0.8	0.3	0.5	0.5	0.4	0.4	1.9	0.8	0.5	1.6	0.8	0.5
Employment	4.7	3.3	3.1	2.0	1.5	-0.2	-0.8	-1.1	-0.9	-0.5	0.4	0.6	4.1	1.1	-0.6	3.3	-0.1	-0.1
Change in Empl. ('000s)	1721	1226	1145	769	590	-66	-322	-407	-363	-191	152	236	5935	1734	-854	4861	-205	-166
Unemployment Rate (%)	3.8	3.6	3.5	3.7	3.8	4.1	4.4	4.7	4.9	5.1	5.0	4.9	3.7	4.3	5.0	--	--	--
Personal Disp. Income	-3.9	4.8	5.2	6.8	4.7	4.9	5.5	4.3	3.6	3.7	4.0	4.1	-0.5	5.3	4.1	3.2	4.9	3.8
Pers. Savings Rate (%)	4.3	3.2	2.8	2.5	2.4	2.6	3.0	3.2	3.3	3.4	3.6	3.8	3.2	2.8	3.5	--	--	--
Cons. Price Index (y/y)	8.0	8.6	8.3	7.5	6.4	4.8	4.2	3.6	2.8	2.3	2.0	1.9	8.1	4.7	2.3	7.5	3.6	1.9
Core CPI (y/y)	6.3	6.0	6.3	6.2	5.8	5.1	4.3	3.7	3.1	2.7	2.4	2.3	6.2	4.7	2.6	6.2	3.7	2.3
Core PCE Price Index (y/y)	5.3	5.0	4.9	4.8	4.4	4.1	3.6	3.1	2.7	2.4	2.2	2.0	5.0	3.8	2.3	4.8	3.1	2.0
Housing Starts (mns)	1.72	1.65	1.46	1.38	1.28	1.24	1.24	1.28	1.34	1.37	1.40	1.43	1.55	1.26	1.38	--	--	--
Real Output per hour (y/y)**	-0.4	-2.1	-1.3	-2.3	-1.0	0.1	0.1	0.6	1.3	1.8	1.7	1.4	-1.5	0.0	1.6	-2.3	0.6	1.4

F: Forecast by TD Economics as at December 2022.

* Intellectual Property Products. ** Non-farm business sector.

Source: Bureau of Labor Statistics, Bureau of Economic Analysis, Census Bureau, TD Economics.

Economic Indicators: G7 & Europe				
	2021	2022F	2023F	2024F
Real GDP (annual per cent change)				
G7 (30.1%)*	5.2	2.2	0.4	0.9
U.S.	5.9	1.9	0.9	0.9
Japan	1.7	1.4	1.2	1.2
Euro Area	5.3	3.2	-0.2	0.9
Germany	2.6	1.7	-0.8	0.9
France	6.8	2.5	0.1	0.9
Italy	6.7	3.7	-0.1	0.7
United Kingdom	7.5	4.5	-0.9	0.8
Canada	5.0	3.5	0.7	0.4
Consumer Price Index (annual per cent change)				
G7	3.2	7.3	4.9	2.1
U.S.	4.7	8.1	4.7	2.3
Japan	-0.2	2.4	2.4	1.3
Euro Area	2.6	8.5	7.0	2.3
Germany	3.2	8.9	6.9	2.5
France	2.1	6.0	5.5	2.1
Italy	1.9	8.7	5.9	2.3
United Kingdom	2.6	9.1	8.0	2.7
Canada	3.4	6.8	3.8	2.1
Unemployment Rate (per cent annual averages)				
U.S.	5.4	3.7	4.3	5.0
Japan	2.8	2.6	2.5	2.4
Euro Area	7.7	6.7	7.2	8.0
Germany	5.7	5.3	6.4	6.8
France	7.9	7.3	7.9	8.5
Italy	9.5	8.1	8.9	9.5
United Kingdom	4.5	3.7	4.6	5.1
Canada	7.4	5.3	5.9	6.5

*Share of 2019 world gross domestic product (GDP) at PPP.
Forecast as at December 2022.
Source: National statistics agencies, TD Economics.

Global Economic Outlook				
Annual Per Cent Change Unless Otherwise Indicated				
	2019 Share*	Forecast		
Real GDP	**(%)**	**2022**	**2023**	**2024**
World	100.0	3.3	2.3	2.9
North America	19.2	2.1	0.9	1.0
United States	15.8	1.9	0.9	0.9
Canada	1.4	3.5	0.7	0.4
Mexico	1.9	2.7	1.3	1.6
European Union (EU-28)	15.4	3.4	-0.2	1.1
Euro Area (EU-19)	12.5	3.2	-0.2	0.9
Germany	3.5	1.7	-0.8	0.9
France	2.4	2.5	0.1	0.9
Italy	2.0	3.7	-0.1	0.7
United Kingdom	2.4	4.5	-0.9	0.8
EU accession members	2.9	4.5	-0.5	1.8
Asia	43.2	3.7	4.1	4.5
Japan	4.1	1.4	1.2	1.2
Asian NIC's	3.5	2.3	2.5	2.8
Hong Kong	0.3	-3.0	3.1	2.8
Korea	1.7	2.7	2.5	3.0
Singapore	0.4	3.8	2.7	2.7
Taiwan	0.9	3.0	2.4	2.8
Russia	3.1	-3.6	-3.7	1.5
Australia & New Zealand	1.2	3.9	2.2	2.2
Emerging Asia	31.4	4.9	5.5	5.5
ASEAN-5	5.7	5.9	5.3	5.4
China	17.3	2.9	5.0	4.9
India**	7.1	9.0	6.9	6.8
Central/South America	5.6	3.9	1.3	2.3
Brazil	2.4	2.6	0.8	2.0
Other Emerging Markets	13.0	2.9	2.7	3.1
Other Advanced	1.1	3.6	2.2	2.2

*Share of world GDP on a purchasing-power-parity (PPP) basis.
Forecast as at December 2022. **Forecast for India refers to fiscal year.
Source: IMF, TD Economics.

Disclaimer

Long-Term Economic Forecast

James Orlando, CFA, Director | 416-413-3180
Thomas Feltmate, Director | 416-944-5730

December 14, 2022

United States

- After the strongest annual average growth in nearly 40 years (5.7%) in 2021, US economic growth is set to slow to a 1.9% pace in 2022. Looking into 2023, economic growth is expected to decelerate further, as monetary policy moves well into restrictive territory, pushing growth to a sub-trend pace through 2024. Growth is expected to average 0.9% in both 2023 and 2024, respectively.
- The labor market has continued to perform better than expected. Labor demand remains just off historic highs, while the pool of available workers continues to shrink as the participation rate has shown no improvement through 2022. This combined with a weaker pace of economic growth should give way to a slower pace of hiring – putting upward pressure on the unemployment rate. We now expect the unemployment rate to rise by 1.5%-pts between Q3-2022 and Q2-2024, reaching a peak of 5.1%, before gradually moving back to its long-run average of 4%.
- Inflation has slowed from its multidecade highs and we expect to see a meaningful deceleration through 2023. However, the core PCE deflator (the Fed's preferred measure of inflation) isn't expected to reach the FOMC's average 2% inflation target until the end of 2024.
- Monetary policy is expected to become far more restrictive than previously thought. We now project the Fed funds rate to reach 5% in early 2023 and remain at that level through the third quarter of 2023. As higher rates cool demand-side pressures and inflation moves meaningfully back towards 2%, we expect the Fed to cut interest rates back to a level more consistent with its neutral (2.25%) rate.

Canada

- The narrative for Canada is similar to the economic backdrop to the south. Near-term spending is likely to grow at a modest rate amid resilient job market conditions. However, high inflation and rising interest rates will increasingly take their toll on spending and hiring in 2023 and through 2024.
- The unemployment rate outlook reflects a peak of 6.5% that corresponds to 110 thousand job losses. There is a risk that Canadian employers may go further. Although the job market reflects tightness based on high vacancy and low unemployment rates, the degree of tightness is not as pronounced as its U.S. counterpart.
- Inflation has likely peaked in Canada and we expect further easing in price pressures in 2023 and 2024. This, in combination with higher interest rate sensitivity should provide a lower stopping level for the Bank of Canada on its rate hike cycle.
- We deem the peak overnight rate to be 4.5% in the first quarter of 2023. Both short-term and long-term bond yields are likely to decline over 2023 as the weak economic backdrop causes increasing expectation for policy rate cuts. We assume the rate is reduced back towards its neutral level starting at the end of 2023, with the rate reaching 2% by 2025.

U.S. Economic Outlook *Period-Over-Period Annualized Per Cent Change Unless Otherwise Indicated*															
Economic Indicator	**Annual Average**							**Fourth Quarter / Fourth Quarter**							
	22F	**23F**	**24F**	**25F**	**26F**	**27F**	**28F**	**22F**	**23F**	**24F**	**25F**	**26F**	**27F**	**28F**
Real GDP	1.9	0.9	0.9	1.7	1.9	1.8	1.8	0.5	0.5	1.3	1.9	1.9	1.8	1.8
Consumer Expenditure	2.8	1.4	0.9	1.5	1.8	1.8	1.9	2.1	0.7	1.1	1.6	1.8	1.8	1.9
Durable Goods	0.0	-0.5	0.6	1.9	2.3	2.3	2.3	2.4	-1.6	1.4	2.3	2.3	2.3	2.3
Business Investment	3.7	1.2	0.6	2.9	3.8	3.8	3.4	4.1	-0.2	1.6	3.3	4.1	3.5	3.4
Non-Res. Structures	-8.1	-5.6	-0.1	4.7	5.0	4.4	3.1	-7.3	-4.3	2.7	5.0	5.0	3.7	3.0
Equipment & IPP*	7.2	2.8	0.7	2.4	3.6	3.7	3.5	7.3	0.6	1.3	2.9	3.9	3.5	3.5
Residential Investment	-10.5	-16.2	6.3	8.5	2.6	0.7	0.5	-18.5	-6.9	10.4	6.5	1.1	0.6	0.5
Govt. Expenditure	-0.8	1.8	0.8	0.7	0.6	0.3	0.2	0.1	1.5	0.8	0.8	0.4	0.2	0.1
Final Domestic Demand	1.7	0.7	1.0	1.8	1.9	1.8	1.7	1.0	0.4	1.5	1.9	1.8	1.7	1.7
Exports	7.3	1.5	1.0	2.6	3.3	3.3	3.3	5.3	-0.7	1.8	3.0	3.3	3.3	3.3
Imports	9.0	-1.0	0.7	2.9	2.5	2.5	2.5	5.0	-2.3	2.7	2.6	2.5	2.5	2.5
Change in Private Inventories	131.4	89.1	65.4	68.9	68.9	68.9	68.9	---	---	---	---	---	---	---
Final Sales	1.2	1.1	1.1	1.7	1.9	1.8	1.8	0.9	0.7	1.3	1.9	1.9	1.8	1.8
International Current Account Balance ($Bn)	-1003	-943	-1009	-1012	-945	-909	-855	---	---	---	---	---	---	---
% of GDP	-3.9	-3.5	-3.7	-3.5	-3.2	-2.9	-2.6	---	---	---	---	---	---	---
Pre-tax Corporate Profits including IVA&CCA	6.7	-1.0	-5.2	-0.8	4.7	6.7	7.4	4.1	-4.4	-4.3	2.0	5.5	7.6	7.4
% of GDP	11.6	11.0	10.1	9.6	9.6	9.9	10.2	---	---	---	---	---	---	---
GDP Deflator (y/y)	7.0	4.0	2.2	2.2	2.4	2.3	2.3	6.5	3.0	2.0	2.3	2.4	2.3	2.3
Nominal GDP	9.1	4.9	3.2	4.0	4.4	4.2	4.1	7.0	3.6	3.4	4.3	4.4	4.1	4.1
Labor Force	1.9	0.8	0.5	0.4	0.4	0.3	0.3	1.6	0.8	0.5	0.4	0.4	0.3	0.3
Employment	4.1	1.1	-0.6	0.6	0.7	0.4	0.2	3.3	-0.1	-0.1	0.8	0.6	0.3	0.3
Change in Empl. ('000s)	5,935	1,734	-854	954	1,120	546	385	4,861	-205	-166	1,213	935	403	396
Unemployment Rate (%)	3.7	4.3	5.0	4.5	4.1	4.0	4.0	---	---	---	---	---	---	---
Personal Disp. Income	-0.5	5.3	4.1	4.3	4.4	4.4	4.3	3.2	4.9	3.8	4.4	4.4	4.3	4.2
Pers. Savings Rate (%)	3.2	2.8	3.5	4.4	4.9	5.3	5.7	---	---	---	---	---	---	---
Cons. Price Index (y/y)	8.1	4.7	2.3	2.1	2.3	2.3	2.2	7.5	3.6	1.9	2.2	2.3	2.2	2.1
Core CPI (y/y)	6.2	4.7	2.6	2.2	2.3	2.3	2.2	6.2	3.7	2.3	2.2	2.3	2.2	2.2
Core PCE Price Index (y/y)	5.0	3.8	2.3	2.0	2.0	2.0	2.0	4.8	3.1	2.0	2.0	2.1	2.0	2.0
Housing Starts (mns)	1.55	1.26	1.38	1.48	1.50	1.50	1.50	---	---	---	---	---	---	---
Real Output per hour (y/y)**	-1.5	0.0	1.6	1.0	1.2	1.6	1.7	-2.3	0.6	1.4	1.0	1.3	1.7	1.7

*Intellectual property products. F: Forecast by TD Economics as at December 2022.

**Non-farm business sector.

Source: Bureau of Labor Statistics, Bureau of Economic Analysis, Census Bureau, TD Economics.

Canadian Economic Outlook

Period-Over-Period Annualized Per Cent Change Unless Otherwise Indicated

	Annual Average							4th Quarter / 4th Quarter						
Economic Indicator	**22F**	**23F**	**24F**	**25F**	**26F**	**27F**	**28F**	**22F**	**23F**	**24F**	**25F**	**26F**	**27F**	**28F**
Real GDP	3.5	0.7	0.4	1.3	1.6	1.7	1.7	2.4	-0.1	0.9	1.5	1.6	1.7	1.7
Consumer Expenditure	4.8	0.8	0.3	1.0	1.4	1.6	1.7	3.0	0.0	0.7	1.2	1.5	1.6	1.7
Durable Goods	-3.1	-2.7	-0.5	0.7	1.4	1.6	1.7	-3.8	-1.4	0.2	1.0	1.5	1.6	1.7
Business Investment	8.2	2.4	1.7	2.1	1.8	1.7	1.7	6.6	1.4	2.0	2.0	1.8	1.7	1.7
Non-Res. Structures	11.6	3.8	1.8	2.2	1.9	1.7	1.7	10.3	1.6	2.2	2.0	1.8	1.7	1.7
Equipment & IPP*	4.7	0.9	1.5	2.0	1.8	1.7	1.7	2.7	1.2	1.8	1.9	1.8	1.7	1.7
Residential Investment	-10.3	-7.6	0.5	2.2	1.9	1.8	1.7	-11.8	-2.9	1.8	2.1	1.8	1.7	1.7
Govt. Expenditure	1.3	2.2	2.3	2.1	2.0	1.9	1.9	1.2	2.3	2.2	2.0	1.9	1.9	1.9
Final Domestic Demand	2.7	0.7	0.9	1.5	1.6	1.7	1.7	1.5	0.5	1.3	1.6	1.7	1.7	1.7
Exports	2.6	3.5	1.6	1.9	1.8	1.7	1.7	2.7	2.0	1.8	1.8	1.7	1.7	1.7
Imports	8.2	2.5	1.5	1.8	1.8	1.7	1.7	6.3	1.6	1.7	1.8	1.7	1.7	1.7
Change in Non-farm Inventories (2012 $Bn)	38.4	29.9	18.8	14.0	13.4	13.0	12.6	--	--	--	--	--	--	--
Final Sales	0.4	0.9	1.5	1.7	1.7	1.7	1.8	-0.5	1.2	1.7	1.7	1.7	1.8	1.8
International Current Account Balance ($Bn)	-12.0	-20.1	-18.2	-17.1	-16.2	-15.3	-14.3	--	--	--	--	--	--	--
% of GDP	-0.4	-0.7	-0.6	-0.6	-0.5	-0.5	-0.4	--	--	--	--	--	--	--
Pre-tax Corp. Profits	11.1	-8.8	1.4	2.4	2.8	3.0	3.2	0.7	-2.6	2.0	2.6	2.9	3.1	3.2
% of GDP	15.6	13.9	13.7	13.6	13.5	13.4	13.3	--	--	--	--	--	--	--
GDP Deflator (y/y)	7.6	1.4	2.3	2.1	2.0	2.0	2.0	4.9	2.3	2.2	2.0	2.0	2.0	2.0
Nominal GDP	11.3	2.1	2.7	3.4	3.6	3.7	3.7	7.3	2.2	3.1	3.5	3.7	3.7	3.7
Labour Force	1.3	0.9	0.4	0.7	0.8	0.7	0.7	0.7	0.7	0.5	0.8	0.7	0.7	0.7
Employment	3.6	0.2	-0.2	1.0	1.1	0.8	0.7	1.9	-0.5	0.3	1.2	1.0	0.7	0.7
Change in Empl. ('000s)	686	41	-31	190	216	160	145	374	-99	67	234	192	149	143
Unemployment Rate (%)	5.3	5.9	6.5	6.2	5.9	5.9	5.9	--	--	--	--	--	--	--
Personal Disp. Income	5.4	2.4	1.5	1.6	2.7	3.6	3.6	7.6	1.0	1.8	1.4	3.6	3.6	3.6
Pers. Savings Rate (%)	6.4	4.8	4.0	2.6	1.9	1.9	1.8	--	--	--	--	--	--	--
Cons. Price Index (y/y)	6.8	3.8	2.1	2.0	2.0	2.0	2.0	6.9	2.6	2.0	2.0	2.0	2.0	2.0
CPIX (y/y) **	5.6	3.8	2.2	2.0	2.0	2.0	2.0	5.9	2.8	2.1	2.0	2.0	2.0	2.0
BoC Inflation (y/y) **	4.4	3.3	2.1	2.0	2.0	2.0	2.0	5.4	2.2	2.0	2.0	2.0	2.0	2.0
Housing Starts ('000s)	262	228	208	216	222	223	223	--	--	--	--	--	--	--
Home Prices (y/y)	0.6	-10.7	3.9	3.5	2.9	2.8	2.8	-11.7	-1.5	3.8	3.3	2.8	2.8	2.8
Real GDP / worker (y/y)	-0.1	0.5	0.6	0.3	0.5	0.9	1.0	0.5	0.4	0.5	0.3	0.7	0.9	1.0

F: Forecast by TD Economics as at December 2022.
* Intellectual Property Products. ** CPIX: CPI ex. 8 most volatile components. *** BoC Inflation: avg. of CPI-trim, CPI-median, and CPI-common.
Home price measure shown is the CREA Composite Sale Price.
Sources: Statistics Canada, Bank of Canada, CMHC, CREA, TD Economics.

Interest Rates	Annual Average							End of Period						
	22F	23F	24F	25F	26F	27F	28F	22F	23F	24F	25F	26F	27F	28F
U.S. FIXED INCOME														
Fed Funds Target Rate (%)*	2.50	4.90	3.30	2.30	2.25	2.25	2.25	4.50	4.50	2.75	2.25	2.25	2.25	2.25
3-mth T-Bill Rate (%)	2.50	4.65	3.00	2.20	2.15	2.15	2.15	4.65	4.15	2.50	2.15	2.15	2.15	2.15
2-yr Govt. Bond Yield (%)	3.45	3.70	2.65	2.25	2.25	2.25	2.25	4.40	3.20	2.40	2.25	2.25	2.25	2.25
5-yr Govt. Bond Yield (%)	3.30	3.50	2.85	2.45	2.45	2.45	2.45	3.80	3.25	2.65	2.45	2.45	2.45	2.45
10-yr Govt. Bond Yield (%)	3.20	3.45	2.95	2.70	2.70	2.70	2.70	3.60	3.30	2.80	2.70	2.70	2.70	2.70
10-yr-2-yr Govt. Spread (%)	-0.25	-0.25	0.30	0.45	0.45	0.45	0.45	-0.80	0.10	0.40	0.45	0.45	0.45	0.45
CANADIAN FIXED INCOME														
Overnight Target Rate (%)	2.40	4.30	2.70	2.00	2.00	2.00	2.00	4.25	3.75	2.25	2.00	2.00	2.00	2.00
3-mth T-Bill Rate (%)	2.65	4.15	2.55	2.00	2.00	2.00	2.00	4.38	3.50	2.13	2.00	2.00	2.00	2.00
2-yr Govt. Bond Yield (%)	3.25	3.20	2.40	2.15	2.15	2.15	2.15	3.90	2.85	2.20	2.15	2.15	2.15	2.15
5-yr Govt. Bond Yield (%)	3.00	2.80	2.40	2.35	2.35	2.35	2.35	3.10	2.60	2.35	2.35	2.35	2.35	2.35
10-yr Govt. Bond Yield (%)	2.90	2.80	2.60	2.60	2.60	2.60	2.60	2.90	2.70	2.60	2.60	2.60	2.60	2.60
10-yr-2-yr Govt. Spread (%)	-0.35	-0.40	0.20	0.45	0.45	0.45	0.45	-1.00	-0.15	0.40	0.45	0.45	0.45	0.45

Table: Interest Rate Outlook

*Upper bound of target range. F: Forecast by TD Economics as at December 2022.

Annual averages are the average of the four quarterly end-of-period forecasts.

Source: Bank of Canada, Bloomberg, Statistics Canada, TD Economics.