Request IR-1:

Please provide NS Power's actual 2024 capital structure, specifically it's actual 2024 average short-term and long-term debt and actual 2024 equity.

Response IR-1:

NS Power is unable to provide the Company's actual capital structure for 2024 in advance of completing its 2024 Regulated Financial Statements. NS Power will file the 2024 Regulated Financial Statements on, or before, April 15th, 2025.

Request IR-2:

Please provide Appendix A in excel format with cells intact and` the worksheets unprotected.

Response IR-2:

Please refer to Partially Confidential Attachment 1. NS Power has amended line 33 of Appendix A page 4 of 6 to "Average Long-Term Debt, **2025"** in response to NSUARB IR-11.

Nova Scotia Power Inc. **FOR-10**

Estimated Average Capital and Cost of Capital
Year Ended December 31st
Thousands of Dollars

2025 Budget

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2025	**Opening**	**Closing**	**Average Capital**	**Capital Ratio**	**Cost Pre-tax Factor**	**Cost After-tax Factor**	**Weighted Pre-tax Cost**	**Weighted After-tax Cost**
Estimated Cost of Capital								
Short-term debt	9,835	165,932	87,884	1.5%	5.19%	3.68%	0.08%	0.06%
Long-term debt	3,207,801	3,435,467	3,321,634	58.5%	5.09%	3.62%	2.98%	2.11%
Total debt	3,217,636	3,601,399	3,409,518	60.0%			3.06%	2.17%
Common equity	2,145,091	2,400,933	2,273,012	40.0%	9.00%	9.00%	3.60%	3.60%
Total	**$5,362,728**	**$6,002,332**	**$5,682,530**	**100.0%**			**6.66%**	**5.77%**

Notes:
1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.
2) Pre-tax equity cost excludes the income tax gross-up factor.
3) Average capital reflects average of year-end balances.

Nova Scotia Power Inc. **CS-1-3**

Capital Structure and Ratios

Year Ended December 31st

Millions of Dollars

2025 Budget

1			(1)				(1)
2			**Proposed Rates 2025**	**Actual Interest Rate**	**Projected Interest Rates**	**Weighted Average Interest Rate**	**Total Interest Cost**
3	**Capitalization:**						
4	Debt %		60.0%				
5	Common %		40.0%				
6	Total Regulated Capitalization ($):		$6,002				
7							
8	**Financial Ratios:**						
9	Return on average common equity (%)		9.0%				
10	Average common equity ($)		$2,273				
11							
12	**Details of Debt:**						
13	Short-Term ($M):						
14	Current portion of long-term debt		-				
15	Bank indebtedness		165.9		4.13%		4.56
16	**Total Short-Term Debt**		**$165.9**	**-**	**4.13%**		**$4.6**
17							
18	**Long-Term ($M):**	**Maturity Date**					
19							
20	Series: "F"	19-May-2025	-	8.85%		0.13%	4.2
21	Series: "M"	14-Aug-2026	40.0	8.50%		0.10%	3.4
22	Series: "P"	9-Apr-2029	40.0	6.28%		0.08%	2.5
23	Series: "R"	14-Jul-2031	75.0	7.45%		0.17%	5.6
24	Series: "S"	25-Aug-2033	200.0	6.95%		0.42%	13.9
25	Series: "V"	14-Nov-2035	150.0	5.67%		0.26%	8.5
26	Series: "L"	21-Mar-2036	60.0	8.30%		0.15%	5.0
27	Series: "N"	25-Jul-2097	50.0	7.60%		0.11%	3.8
28	Series: "W"	27-Jul-2039	200.0	5.95%		0.36%	11.9
29	Series: "X"	15-Jun-2040	300.0	5.61%		0.51%	16.8
30	Series "Y"	5-Mar-2042	250.0	4.15%		0.31%	10.4
31	Series "Z"	5-Jul-2043	300.0	4.50%		0.41%	13.5
32	Series "AA"	1-May-2045	175.0	3.61%		0.19%	6.3
33	Series "AB"	3-Apr-2049	400.0	3.57%		0.43%	14.3
34	Series "2020-1"	24-Apr-2050	300.0	3.31%		0.30%	9.9
35	"2023-1" 4.951% NOV 15/32	15-Nov-2032	300.0	4.95%		0.45%	14.9
36	"2023-2" 5.355% MAR 24/53	24-Mar-2053	200.0	5.36%		0.32%	10.7
37	WMA Preferred Shares	Multiple	[redacted]				
38	Forecasted Issue (2025)	1-Jun-2035					
39	Forecasted Issuance (CIB)	21-May-2047	89.9	2.51%		0.05%	1.7
40	**Total Long-Term Debt**		**$ 3,439.9**			**5.01%**	**$166.5**
41							
42							
43	Unamortized discounts, net		(4.5)			0.08%	2.6
44	Capital Lease Obligations		-				
45	**Total Long-Term Debt, net of Financing costs**		**$ 3,435.5**			**5.09%**	**$169.1**
46							
47	**Notes:**						
48	1) Figures presented reflect whole numbers which may cause $0.1M in rounding differences on some line items.						

Nova Scotia Power Inc. **FOR-11**

Details of Interest and Other Expenses
Year Ended December 31st
Millions of Dollars

2025 Budget

	(1) Proposed Rates 2025
Interest on long-term debt	$167
Interest on short-term borrowings	$5
Other financing charges & adjustments	$1
Amortization of deferred financing charges	$2
Foreign Exchange	$0
Total Regulated Financing Cost	**$174**

Notes:
1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

Nova Scotia Power Inc.
Details of Long-Term Debt Interest Calculation
Year Ended December 31st
Millions of Dollars

2025 Budget

		Issue Date	Maturity	Volume ($)	Rate	2025 Total
1						
2						
3	**Long-Term Debt Interest Expense**					
4	Series "F"	19-May-1995	19-May-2025	-	8.85%	**4.2**
5	Series "L"	21-Mar-1996	21-Mar-2036	60	8.30%	**5.0**
6	Series "M"	07-Aug-1996	14-Aug-2026	40	8.50%	**3.4**
7	Series "N"	25-Jul-1997	25-Jul-2097	50	7.60%	**3.8**
8	Series "R"	12-Jul-2001	14-Jul-2031	75	7.45%	**5.6**
9	Series "S"	25-Aug-2003	25-Aug-2033	200	6.95%	**13.9**
10	Series "P"	09-Apr-1999	09-Apr-2029	40	6.28%	**2.5**
11	Series "V"	14-Nov-2005	14-Nov-2035	150	5.67%	**8.5**
12	Series "W"	27-Jul-2009	27-Jul-2039	200	5.95%	**11.9**
13	Series "X"	15-Jun-2010	15-Jun-2040	300	5.61%	**16.8**
14	Series "Y"	05-Mar-2012	05-Mar-2042	250	4.15%	**10.4**
15	Series "Z"	05-Jul-2013	05-Jul-2043	300	4.50%	**13.5**
16	Series "AA"	30-Apr-2015	01-May-2045	175	3.61%	**6.3**
17	Series "AB"	04-Apr-2019	05-Apr-2049	400	3.57%	**14.3**
18	Series "2020-1"	24-Apr-2020	25-Apr-2050	300	3.31%	**9.9**
19	"2023-1" 4.951% NOV 15/32	24-Mar-2023	15-Nov-2032	300	4.95%	**14.9**
20	"2023-2" 5.355% MAR 24/53	24-Mar-2023	24-Mar-2053	200	5.36%	**10.7**
21	WMA Preferred Shares	[redacted]				
22	Forecast Issuance 2025					
23	Forecast Issuance (CIB)	26-Jul-2024	21-May-2047	90	2.51%	**1.7**
24	Capital Lease Obligations			-		**-**
25	Unamortized Discount, net			(4)		**-**
26	**Total Long-Term Debt Interest Expense**					**166.5**
27	**Other financing charges and adjustments (note 1)**					**0.8**
28	**Amortization of deferred financing charges**					**1.8**
29	**Total Long-Term Debt Expenses**					**169.1**
30						
31	Opening, Long-Term Debt					3,207.8
32	Ending, Long-Term Debt					3,435.5
33	**Average Long-Term Debt, 2025**					**3,321.6**
34	**Long-Term Debt Cost**					**5.09%**
35						
36						

37 Notes:
(1) Other financing charges are based on historical fees charged by financial service providers (bank, rating agencies), offset by interest income earned on Nova Scotia Power's on bill
38 financing program
39 (2) Figures presented reflect whole numbers which may cause $0.1M in rounding differences on some line items

Nova Scotia Power Inc.
Details of Short-Term Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

2025 Budget

NSPI CP Forecast, As of August 20, 2024

	2025			
Commercial Paper Rates	**Q1/25**	**Q2/25**	**Q3/25**	**Q4/25**
Bloomberg Outlook T-Bills	3.64%	3.35%	3.14%	3.05%
Outlook T-Bills to Term CORRA Rates spread	0.32%	0.32%	0.32%	0.32%
Estimated CP Rate	**3.96%**	**3.67%**	**3.46%**	**3.37%**
Current NSPI spread	0.51%	0.51%	0.51%	0.51%
All In CP Rates	**4.47%**	**4.18%**	**3.97%**	**3.88%**

Interest Rate Calculation per WACC methodology

Opening, Short-Term Debt	9,835
Ending, Short-Term Debt	165,932
Average Short-Term Debt Balance, 2025	**87,884**
Interest on Short-Term Debt :	**4,558**
Short-Term Debt cost	**5.19%**

	Dec-24	**Jan-25**	**Feb-25**	**Mar-25**	**Apr-25**	**May-25**	**Jun-25**	**Jul-25**	**Aug-25**	**Sep-25**	**Oct-25**	**Nov-25**	**Dec-25**	**Total**
Forecasted Balances of Short-Term debt by month	9,835	60,568	44,785	61,177	145,891	255,252	20,475	45,207	90,237	102,722	175,071	179,053	165,932	
Interest Expense by month		226	167	228	508	889	71	150	299	340	566	579	537	**4,558**

1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

Nova Scotia Power Inc.
Details of CIB Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

2025 Budget

	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Total
Forecasted Balances of CIB debt by month	35,703	35,703	35,792	35,792	35,792	77,457	77,457	77,457	83,356	83,356	83,356	89,934	89,934	
CIB Interest Rate	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	2.51%	
CIB Interest Expense by month		75	75	75	75	162	162	162	174	174	174	188	188	**1,685**

1) Figures presented reflect whole numbers which may cause $1 Thousand rounding differences on some line items.

Request IR-3:

How has the transition from Canadian Dollar Offered Rate (CDOR) to Canadian Overnight Repo Rate Average (CORRA) affected NS Power's financial position and forecasting processes, specifically in terms of:

(a) The impact on short-term borrowing costs and updates to the interest rate forecasting methodology?

(b) The steps taken to implement the change in financial systems and manage potential risks form CORRA rate fluctuations?

(c) Compliance with regulatory requirements and public disclosures about the financial impact of the transition?

Response IR-3:

(a) There has been no impact to short-term borrowing costs. The Company now forecasts the commercial paper cost of borrowing using Term CORRA as the benchmark reference rate instead of the previously used CDOR. The forecasting process remains the same whereby NS Power estimates the future benchmark interest rate and cost of commercial paper borrowing using analyst forecasts of Canadian Treasury Bill rates.

(b) There has been no change in financial systems or steps to manage risk implemented as a result of the transition from the CDOR to the CORRA benchmark rate.

(c) There are no regulatory requirements or public disclosures required.

Request IR-4:

How does NS Power determine and manage the credit spread in its WACC calculation, specifically:

(a) What specific methodology or approach did NS Power use to determine the credit spread included in the WACC calculation?

(b) How does NS Power decide on the appropriate credit spread when calculating the cost of debt, and what factors influence this decision?

(c) What data sources did NS Power rely on to determine the credit spread?

(i) Did the Company use external benchmarks, such as ratings from agencies like DBRS, or internal assessments?

(d) How frequently is the credit spread reviewed to reflect changing market conditions?

(e) Has NS Power made any adjustments to the credit spread in response to the transition from CDOR to CORRA? If so, how were these adjustments determined?

(f) Has NS Power's credit spread been affected by its credit rating or changes in the market compared to its competitors?

(g) How does NS Power's current credit rating influence the credit spread applied in your WACC calculation?

Response IR-4:

(a-c) NS Power estimates the credit spread for Commercial Paper by analyzing the credit spread of existing borrowings over the current benchmark rate.

(d) NS Power uses the current achieved credit spread when compiling forecasts.

(e) The transition from CDOR to CORRA does not impact the Company's credit spread. The process to calculate NS Power's credit spread as noted in response to (a) above remains the same. However, because the Company now compares the cost of existing borrowings to the Term CORRA benchmark rate which includes a credit spread of 0.29 percent, the NS Power spread compared to the benchmark rate has decreased, but the total spread as compared to treasury bills remains fairly consistent with 2024.

(f) When NS Power received exemptive relief in 2023 to re-enter the Commercial Paper market after receiving a credit downgrade from DBRS and S&P Global, NS Power's cost of borrowing had increased compared to its cost prior to the departure from the Commercial Paper market. The credit downgrade from R1-Low to R2-High required the Company to sell Commercial Paper to a different investor base which has resulted in a higher credit spread.

(g) The Company assumes no migration from its current credit rating, maintaining the existing R2-High Commercial Paper classification. The most recent credit rating reports issued by DBRS and S&P Global affirmed the Company's existing credit ratings. S&P Global revised the Company's outlook from negative to stable, however, despite this revision the Company assumes the credit spread remains consistent commensurate with the Company's credit rating which reflects the current required risk premium. The Company's credit spread remains elevated compared to the R1-Low Commercial Paper rating the Company held before the downgrade.

Request IR-5:

In reference to Figure 1 on page 8:

(a) In 2022 and 2023, the actual short-term interest rate was significantly higher than both the Bloomberg and T-Bill forecasts. Is there any insight into why the forecasts were so far off from the actual rate?

(b) Please provide the specific reports from which the Canadian bank (Scotiabank, BMO, RBC, CIBC, and TD Bank) data was collected to calculate the short-term interest rate estimates in Figure 1.

(c) Please revise Figure 1 to disaggregate the column labelled Short-term Interest rate Forecate using 3-month T-Bills from 5 Canadian Banks for each year (insert 5 additional columns) and identify the Canadian Bank forecast used to arrive at each of the rates provided from 2022 to 2025.

(d) Please list all known Canadian utilities that rely on the Bloomberg forecast to set their WACC/AFUDC.

(e) Does the Bloomberg Outlook 1 month T-Bills incorporate forecasts by Scotiabank, BMO, RBC, CIBC and TD Bank?

Response IR-5:

(a) NS Power is not privy to the analyst assumptions used to develop the forecasts. The interest rate forecast at any point in time includes a number of inputs and assumptions. These assumptions are subject to change over time and may result in rates being different than the forecast.

(b) NS Power has provided the source material of bank rate estimates used in Figure 1. The estimates were retrieved as part of the Company's historical WACC filings and in response to the Board's 2024 WACC Compliance Filing. Please refer to Attachments 1 through 4.

Attachment 1 – 2022 Rate Support – NS Power inadvertently used the BMO overnight rate in place of the 3-month rate. NS Power updated the 2022 WACC calculation and confirmed the difference would not impact any rounded figures in the 2022 WACC filing.

Attachment 2 – 2023 Rate Support – NS Power was not able to retrieve forecasts from Bank of Nova Scotia, Toronto Dominion, or the Royal Bank of Canada for the period of 2023 when the forecast was prepared. The publicly available forecasts from the banks do not typically extend beyond a period of four to six quarters. The interest rate forecast for 2023 was prepared as part of the Company's 2023-2024 GRA and was supported with interest rates retrieved in August 2021. Because the published forecasts available at this time did not forecast rates far enough into the future, NS Power requested informal rate forecasts from the banks. NS Power only received information rate forecasts from CIBC and BMO.

Attachment 3 – 2024 Rate Support – NS Power inadvertently used the RBC overnight rate in place of the 3-month rate in response to IG IR-1 (g) during M11563. NS Power updated the calculation and confirmed the difference would change short-term debt to 5.59 percent (5.62 percent was previously communicated in response to IG IR-1 (g) during M11563). NS Power's rounded WACC rate would remain consistent. The were no recent rate forecasts published by Toronto Dominion at the time the forecast was prepared and therefore NS Power excluded the bank for the Company's rate forecast.

Attachment 4 – 2025 Rate Support

(c) Please refer to Attachment 5 which shows the quarterly Canadian Treasury Bill rates retrieved from the 5 Canadian Banks and the supporting calculation of the short-term interest rate shown Figure 1.

The rates for 2022 and 2023 were retrieved from the Company's approved WACC filing for those years. The rate for 2024 was retrieved from the information filed in response to M11563 IG IR-1. The rate for 2025 was calculated in response to the Board's Decision Letter in M11563 to support Figure 1.

(d) NS Power has not performed a study of Canadian utilities to determine the inputs into their respective WACC/AFUDC rates.

(e) Yes. Scotiabank, BMO, RBC, CIBC and TD Bank are included in the current forecast available in Bloomberg.

Interest Rate Outlook

Interest Rates	Spot Rate Jul-21	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3F	2021 Q4F	2022 Q1F	2022 Q2F	2022 Q3F	2022 Q4F
CANADA													
Overnight Target Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50
3-mth T-Bill Rate	0.17	0.21	0.20	0.12	0.06	0.09	0.15	0.15	0.18	0.20	0.20	0.35	0.63
2-yr Govt. Bond Yield	0.47	0.42	0.28	0.25	0.20	0.22	0.45	0.50	0.70	0.90	1.10	1.30	1.45
5-yr Govt. Bond Yield	0.81	0.60	0.36	0.36	0.39	0.99	0.97	1.00	1.35	1.55	1.70	1.80	1.90
10-yr Govt. Bond Yield	1.23	0.71	0.52	0.57	0.67	1.55	1.39	1.50	2.00	2.15	2.25	2.25	2.25
30-yr Govt. Bond Yield	1.80	1.30	0.99	1.11	1.21	1.98	1.84	2.10	2.30	2.50	2.55	2.55	2.55
10-yr-2-yr Govt Spread	0.76	0.29	0.24	0.32	0.47	1.33	0.94	1.00	1.30	1.25	1.15	0.95	0.80
U.S.													
Fed Funds Target Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50
3-mth T-Bill Rate	0.05	0.11	0.16	0.10	0.09	0.03	0.05	0.07	0.10	0.13	0.15	0.30	0.55
2-yr Govt. Bond Yield	0.21	0.23	0.16	0.13	0.13	0.16	0.25	0.30	0.55	0.80	1.00	1.20	1.40
5-yr Govt. Bond Yield	0.73	0.37	0.29	0.28	0.36	0.92	0.87	1.00	1.40	1.60	1.75	1.85	2.00
10-yr Govt. Bond Yield	1.29	0.70	0.66	0.69	0.93	1.74	1.45	1.60	2.00	2.10	2.20	2.30	2.40
30-yr Govt. Bond Yield	1.94	1.35	1.41	1.46	1.65	2.41	2.06	2.20	2.40	2.55	2.65	2.70	2.75
10-yr-2-yr Govt Spread	1.08	0.47	0.50	0.56	0.80	1.58	1.20	1.30	1.45	1.30	1.20	1.10	1.00
CANADA - U.S SPREADS													
Can - U.S. T-Bill Spread	0.13	0.10	0.04	0.02	-0.03	0.06	0.10	0.08	0.08	0.07	0.05	0.05	0.08
Can - U.S. 10-Year Bond Spread	-0.06	0.01	-0.14	-0.12	-0.26	-0.19	-0.06	-0.10	0.00	0.05	0.05	-0.05	-0.15

F: Forecast by TD Economics, July 2021; Forecasts are end-of-period.
Source: Bloomberg, Bank of Canada, Federal Reserve.

Foreign Exchange Outlook

Currency	Exchange rate	Spot Price Jul-21	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3F	2021 Q4F	2022 Q1F	2022 Q2F	2022 Q3F	2022 Q4F
Exchange rate to U.S. dollar														
Chinese Yuan	CNY per USD	6.47	7.08	7.07	6.79	6.53	6.55	6.40	6.45	6.50	6.55	6.60	6.65	6.70
Japanese yen	JPY per USD	110	108	108	106	103	111	109	106	104	102	102	101	101
Euro	USD per EUR	1.18	1.10	1.12	1.17	1.22	1.17	1.21	1.19	1.21	1.23	1.24	1.25	1.26
U.K. pound	USD per GBP	1.37	1.25	1.24	1.29	1.37	1.38	1.41	1.38	1.39	1.40	1.40	1.40	1.40
Swiss franc	CHF per USD	0.92	0.96	0.95	0.92	0.88	0.94	0.90	0.93	0.94	0.95	0.96	0.97	0.98
Canadian dollar	CAD per USD	1.26	1.41	1.36	1.33	1.28	1.26	1.25	1.25	1.24	1.25	1.26	1.26	1.27
Australian dollar	USD per AUD	0.74	0.61	0.69	0.72	0.77	0.76	0.77	0.74	0.73	0.73	0.73	0.73	0.73
NZ dollar	USD per NZD	0.70	0.60	0.65	0.66	0.72	0.70	0.72	0.69	0.68	0.67	0.67	0.67	0.67
Exchange rate to Euro														
U.S. dollar	USD per EUR	1.18	1.10	1.12	1.17	1.22	1.17	1.21	1.19	1.21	1.23	1.24	1.25	1.26
Japanese yen	JPY per EUR	130	118	121	124	126	130	132	126	126	126	126	127	127
U.K. pound	GBP per EUR	0.86	0.89	0.91	0.91	0.90	0.85	0.86	0.86	0.87	0.88	0.89	0.89	0.90
Swiss franc	CHF per EUR	1.08	1.06	1.06	1.08	1.08	1.11	1.09	1.11	1.14	1.17	1.19	1.21	1.24
Canadian dollar	CAD per EUR	1.48	1.56	1.53	1.56	1.56	1.48	1.51	1.49	1.50	1.54	1.56	1.58	1.60
Australian dollar	AUD per EUR	1.60	1.79	1.63	1.64	1.59	1.54	1.57	1.61	1.66	1.69	1.70	1.71	1.73
NZ dollar	NZD per EUR	1.69	1.85	1.74	1.77	1.70	1.68	1.68	1.73	1.78	1.84	1.85	1.87	1.88
Exchange rate to Japanese yen														
U.S. dollar	JPY per USD	110	108	108	106	103	111	109	106	104	102	102	101	101
Euro	JPY per EUR	130	118	121	124	126	130	132	126	126	126	126	127	127
U.K. pound	JPY per GBP	151	134	133	136	141	153	154	146	145	143	143	142	141
Swiss franc	JPY per CHF	120.2	111.7	113.8	114.9	116.7	117.4	121.1	114.0	110.6	107.8	106.2	104.6	103.1
Canadian dollar	JPY per CAD	87.7	76.1	79.2	79.2	80.9	88.0	87.2	84.8	83.9	81.9	80.9	80.3	79.7
Australian dollar	JPY per AUD	81.2	66.0	74.3	75.6	79.5	84.2	83.9	78.4	75.9	74.8	74.4	74.0	73.6
NZ dollar	JPY per NZD	76.9	64.1	69.5	69.8	74.2	77.3	78.5	73.1	70.7	68.6	68.3	67.9	67.6
Exchange rate to Canadian dollar														
U.S. dollar	USD per CAD	0.80	0.71	0.74	0.75	0.78	0.80	0.80	0.80	0.81	0.80	0.79	0.79	0.79
Japanese yen	JPY per CAD	87.7	76.1	79.2	79.2	80.9	88.0	87.2	84.8	83.9	81.9	80.9	80.3	79.7
Euro	CAD per EUR	1.48	1.56	1.53	1.56	1.56	1.48	1.51	1.49	1.50	1.54	1.56	1.58	1.60
U.K. pound	CAD per GBP	1.72	1.76	1.68	1.72	1.74	1.73	1.76	1.73	1.72	1.75	1.76	1.77	1.77
Swiss franc	CHF per CAD	0.73	0.68	0.70	0.69	0.69	0.75	0.72	0.74	0.76	0.76	0.76	0.77	0.77
Australian dollar	AUD per CAD	1.08	1.15	1.07	1.05	1.02	1.04	1.04	1.08	1.10	1.10	1.09	1.08	1.08
NZ dollar	NZD per CAD	1.14	1.19	1.14	1.14	1.09	1.14	1.11	1.16	1.19	1.19	1.18	1.18	1.18

F: Forecast by TD Economics, July 2021; Forecasts are end-of-period.
Source: Federal Reserve, Bloomberg.

Rates Scenario | Rates Scenario for August 9, 2021

Interest Rate Forecasts

(% : avg.)	Actual 2021 Jul	Forecasts 2021 Aug	Sep	Oct	Nov	Dec	2022 Jan	2022 Q1	Q2	Q3	Q4
Cdn. Yield Curve											
Overnight[1]	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50
3 month	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.40
6 month	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.45
1 year	0.26	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.40	0.60
2 year	0.46	0.45	0.45	0.45	0.50	0.50	0.50	0.55	0.60	0.70	0.80
3 year	0.61	0.55	0.55	0.60	0.60	0.60	0.65	0.70	0.85	0.95	1.05
5 year	0.86	0.85	0.85	0.90	0.90	0.95	0.95	1.00	1.10	1.20	1.30
7 year	1.04	1.00	1.00	1.05	1.10	1.10	1.15	1.20	1.30	1.45	1.55
10 year	1.25	1.20	1.25	1.25	1.30	1.35	1.40	1.45	1.55	1.70	1.80
30 year	1.78	1.75	1.75	1.80	1.85	1.85	1.90	1.95	2.05	2.15	2.25
1m BA	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.60
3m BA	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.65
6m BA	0.54	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.80
12m BA	0.58	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.70	0.90
Prime Rate[1]	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.70
U.S. Yield Curve											
Fed funds[1]	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
3 month	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
6 month	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
1 year	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.20	0.30
2 year	0.22	0.20	0.20	0.20	0.20	0.25	0.25	0.25	0.35	0.50	0.65
3 year	0.40	0.40	0.40	0.40	0.45	0.45	0.50	0.55	0.70	0.85	1.00
5 year	0.76	0.70	0.75	0.75	0.80	0.85	0.90	0.90	1.05	1.15	1.30
7 year	1.07	1.00	1.05	1.10	1.15	1.15	1.20	1.25	1.35	1.50	1.60
10 year	1.32	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.65	1.80	1.95
30 year	1.94	1.90	1.95	2.00	2.00	2.05	2.10	2.15	2.25	2.40	2.50
1m LIBOR[2]	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
3m LIBOR[2]	0.13	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
6m LIBOR[2]	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
12m LIBOR[2]	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.30	0.40	0.45
Prime Rate[1]	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Other G7 Yields											
ECB Refi[1]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10yr Bund	-0.35	-0.35	-0.40	-0.40	-0.45	-0.45	-0.40	-0.35	-0.25	-0.10	0.05
BoE Repo[1]	0.10	0.10[3]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
10yr Gilt	0.62	0.60	0.65	0.65	0.65	0.65	0.70	0.75	0.95	1.10	1.30
BoJ O/N[1]	-0.04	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
10yr JGB	0.02	0.04	0.05	0.07	0.08	0.10	0.10	0.10	0.10	0.10	0.10

[1] end of period; [2] Most LIBOR rates will cease 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. ; [3] actual value

Sources: BMO Economics, Haver Analytics

Scotiabank™

GLOBAL ECONOMICS

| SCOTIABANK'S FORECAST TABLES

July 23, 2021

	2019	2020				2021				2022			
Central Bank Rates	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3f**	**Q4f**	**Q1f**	**Q2f**	**Q3f**	**Q4f**
Americas						(%, end of period)							
Bank of Canada	1.75	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.75
US Federal Reserve (upper bound)	1.75	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Bank of Mexico	7.25	6.50	5.00	4.25	4.25	4.00	4.25	4.75	5.25	5.50	5.75	6.00	6.00
Central Bank of Brazil	4.50	3.75	2.25	2.00	2.00	2.75	4.25	6.00	6.75	7.25	7.25	7.25	7.25
Bank of the Republic of Colombia	4.25	3.75	2.75	1.75	1.75	1.75	1.75	2.00	2.50	3.00	3.50	4.00	4.00
Central Reserve Bank of Peru	2.25	1.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.75	0.75	1.00	1.00
Central Bank of Chile	1.75	0.50	0.50	0.50	0.50	0.50	0.50	0.75	1.00	1.00	1.25	1.50	1.75
Central Bank of Argentina	55.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	42.00	46.00	46.00	44.00	40.00
Europe													
European Central Bank MRO Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
European Central Bank Deposit Rate	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50
Bank of England	0.75	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Asia/Oceania													
Reserve Bank of Australia	0.75	0.25	0.25	0.25	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Bank of Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
People's Bank of China	4.15	4.05	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85
Reserve Bank of India	5.15	4.40	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.25	4.50	4.75	5.00
Bank of Korea	1.25	0.75	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25
Bank of Thailand	1.25	0.75	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	1.00
Currencies and Interest Rates													
Americas						(end of period)							
Canadian dollar (USDCAD)	1.30	1.41	1.36	1.33	1.27	1.26	1.24	1.22	1.22	1.24	1.24	1.25	1.25
Canadian dollar (CADUSD)	0.77	0.71	0.74	0.75	0.79	0.80	0.81	0.82	0.82	0.81	0.81	0.80	0.80
Mexican peso (USDMXN)	18.93	23.67	22.99	22.11	19.91	20.43	19.94	20.21	20.54	20.76	21.03	21.27	21.45
Brazilian real (USDBRL)	4.02	5.21	5.47	5.61	5.19	5.63	4.97	5.04	4.88	4.85	4.81	4.85	4.92
Colombian peso (USDCOP)	3,287	4,065	3,758	3,828	3,428	3,663	3,755	3,630	3,525	3,468	3,455	3,443	3,450
Peruvian sol (USDPEN)	3.31	3.43	3.54	3.60	3.62	3.74	3.87	3.77	3.65	3.65	3.63	3.62	3.60
Chilean peso (USDCLP)	753	854	821	784	711	719	734	720	720	720	720	710	700
Argentine Peso (USDARS)	59.87	64.40	70.46	76.18	84.15	91.99	95.72	99.70	108.50	112.00	121.00	132.00	141.00
Europe													
Euro (EURUSD)	1.12	1.10	1.12	1.17	1.22	1.17	1.19	1.18	1.18	1.17	1.17	1.15	1.15
UK pound (GBPUSD)	1.33	1.24	1.24	1.29	1.37	1.38	1.38	1.38	1.38	1.40	1.40	1.42	1.42
Asia/Oceania													
Japanese yen (USDJPY)	109	108	108	105	103	111	111	109	107	108	108	110	110
Australian dollar (AUDUSD)	0.70	0.61	0.69	0.72	0.77	0.76	0.75	0.78	0.78	0.76	0.76	0.75	0.75
Chinese yuan (USDCNY)	6.96	7.08	7.01	6.79	6.53	6.55	6.46	6.40	6.40	6.30	6.30	6.20	6.20
Indian rupee (USDINR)	71.4	75.5	75.5	73.8	73.1	73.1	74.3	74.0	74.0	72.0	72.0	70.0	70.0
South Korean won (USDKRW)	1,156	1,219	1,203	1,170	1,086	1,132	1,126	1,140	1,140	1,120	1,120	1,100	1,100
Thai baht (USDTHB)	30.0	32.8	30.9	31.7	30.0	31.3	32.1	33.0	33.0	31.5	31.5	30.0	30.0
Canada (Yields, %)													
3-month T-bill	1.66	0.21	0.20	0.12	0.07	0.09	0.14	0.15	0.15	0.20	0.35	0.60	0.90
2-year Canada	1.69	0.42	0.29	0.25	0.20	0.22	0.45	0.55	0.75	0.90	1.20	1.40	1.65
5-year Canada	1.68	0.58	0.36	0.35	0.39	0.99	0.98	1.10	1.35	1.55	1.60	1.70	1.80
10-year Canada	1.70	0.69	0.53	0.56	0.68	1.56	1.39	1.60	1.70	1.85	1.90	1.95	2.00
30-year Canada	1.76	1.30	0.99	1.11	1.21	1.98	1.84	1.95	2.05	2.10	2.15	2.15	2.15
United States (Yields, %)													
3-month T-bill	1.51	0.05	0.14	0.09	0.08	0.01	0.04	0.05	0.05	0.05	0.05	0.10	0.15
2-year Treasury	1.57	0.25	0.15	0.13	0.12	0.16	0.25	0.40	0.55	0.70	0.90	1.15	1.30
5-year Treasury	1.69	0.38	0.29	0.28	0.36	0.94	0.89	1.00	1.30	1.35	1.45	1.60	1.75
10-year Treasury	1.92	0.67	0.66	0.68	0.91	1.74	1.47	1.60	2.00	2.15	2.20	2.25	2.30
30-year Treasury	2.39	1.32	1.41	1.46	1.64	2.41	2.09	2.05	2.25	2.45	2.55	2.60	2.60

Sources: Scotiabank Economics, Bloomberg.

Economics

FORECAST UPDATE

August 9, 2021

Forecast Details

Table: Canadian interest rates (end of period)

Variable	2021 9-Aug	2021 Sep	2021 Dec	2022 Mar	2022 Jun	2022 Sep	2022 Dec
Overnight target rate	0.25	0.25	0.25	0.25	0.25	0.25	0.50
98-Day Treasury Bills	0.18	0.20	0.20	0.25	0.25	0.25	0.50
2-Year Government Bond	0.47	0.50	0.55	0.60	0.65	0.75	1.10
10-Year Government Bond	1.22	1.35	1.55	1.60	1.70	1.75	2.00
30-Year Government Bond	1.74	2.00	2.10	1.90	1.95	2.10	2.30
Canada - US T-Bill Spread	0.13	0.15	0.10	0.10	0.10	-0.10	0.00
Canada - US 10-Year Bond Spread	-0.07	-0.10	-0.05	-0.10	-0.10	-0.25	-0.15
Canada Yield Curve (10-year — 2-year)	0.74	0.85	1.00	1.00	1.05	1.00	0.90

Table: US Interest rates (end of period)

Variable	2021 9-Aug	2021 Sep	2021 Dec	2022 Mar	2022 Jun	2022 Sep	2022 Dec
Federal funds rate	0.125	0.125	0.125	0.125	0.125	0.375	0.625
91-Day Treasury Bills	0.05	0.05	0.10	0.15	0.15	0.35	0.50
2-Year Government Note	0.21	0.25	0.40	0.45	0.65	0.90	1.25
10-Year Government Note	1.28	1.45	1.60	1.70	1.80	2.00	2.15
30-Year Government Bond	1.93	2.10	2.25	2.40	2.50	2.60	2.75
US Yield curve (10-year — 2-year)	1.07	1.20	1.20	1.25	1.15	1.10	0.90

RBC Economics

RBC

FINANCIAL MARKET FORECASTS

August 12, 2021

Interest rates (%, end of quarter)

							Forecast								Forecast	
	20Q1	20Q2	20Q3	20Q4	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	2019	2020F	2021F	2022F
Canada																
Overnight	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.75	1.75	0.25	0.25	0.75
Three-month	0.21	0.20	0.12	0.06	0.09	0.15	0.20	0.20	0.25	0.30	0.55	0.80	1.66	0.06	0.20	0.80
Two-year	0.42	0.29	0.25	0.20	0.23	0.45	0.50	0.60	0.70	0.85	1.05	1.20	1.70	0.20	0.60	1.20
Five-year	0.59	0.37	0.36	0.39	0.99	0.98	1.05	1.20	1.35	1.45	1.55	1.65	1.69	0.39	1.20	1.65
10-year	0.70	0.53	0.57	0.68	1.56	1.39	1.40	1.70	1.80	1.90	1.95	2.00	1.70	0.68	1.70	2.00
30-year	1.31	0.99	1.11	1.21	1.99	1.84	1.90	2.10	2.20	2.25	2.30	2.30	1.76	1.21	2.10	2.30
Yield curve (10s-2s)	28	24	32	48	133	94	90	110	110	105	90	80	0	48	110	80
United States																
Fed funds*	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.38	1.63	0.13	0.13	0.38
Three-month	0.11	0.16	0.10	0.09	0.03	0.05	0.01	0.05	0.05	0.10	0.25	0.60	1.55	0.09	0.05	0.60
Two-year	0.23	0.16	0.13	0.13	0.16	0.25	0.30	0.45	0.60	0.80	1.00	1.20	1.58	0.13	0.45	1.20
Five-year	0.37	0.29	0.28	0.36	0.92	0.87	0.95	1.20	1.30	1.45	1.60	1.80	1.69	0.36	1.20	1.80
10-year	0.70	0.66	0.69	0.93	1.74	1.45	1.55	1.75	1.85	2.00	2.10	2.20	1.92	0.93	1.75	2.20
30-year	1.35	1.41	1.46	1.65	2.41	2.06	2.15	2.30	2.40	2.50	2.55	2.55	2.39	1.65	2.30	2.55
Yield curve (10s-2s)	47	50	56	80	158	120	125	130	125	120	110	100	34	80	130	100
Yield spreads																
Three-month T-bills	0.10	0.04	0.02	-0.03	0.06	0.10	0.19	0.15	0.20	0.20	0.30	0.20	0.11	-0.03	0.15	0.20
Two-year	0.19	0.13	0.12	0.07	0.07	0.20	0.20	0.15	0.10	0.05	0.05	0.00	0.12	0.07	0.15	0.00
Five-year	0.22	0.08	0.08	0.03	0.07	0.11	0.10	0.00	0.05	0.00	-0.05	-0.15	0.00	0.03	0.00	-0.15
10-year	0.00	-0.13	-0.12	-0.25	-0.18	-0.06	-0.15	-0.05	-0.05	-0.10	-0.15	-0.20	-0.22	-0.25	-0.05	-0.20
30-year	-0.04	-0.42	-0.35	-0.44	-0.42	-0.22	-0.25	-0.20	-0.20	-0.25	-0.25	-0.25	-0.63	-0.44	-0.20	-0.25

Note: Interest Rates are end of period rates. * Midpoint of 25 basis point range

Exchange rates (end of quarter)

							Forecast								Forecast	
	20Q1	20Q2	20Q3	20Q4	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	2019	2020	2021F	2022F
AUD/USD	0.61	0.69	0.72	0.77	0.76	0.75	0.75	0.74	0.74	0.73	0.73	0.73	0.70	0.77	0.74	0.73
USD/CAD	1.41	1.36	1.33	1.27	1.26	1.24	1.24	1.25	1.26	1.27	1.27	1.27	1.30	1.27	1.25	1.27
EUR/USD	1.10	1.12	1.17	1.22	1.17	1.19	1.17	1.14	1.13	1.12	1.13	1.14	1.12	1.22	1.14	1.14
USD/JPY	107.5	107.9	105.5	103.3	110.7	111.1	107.0	105.0	107.0	108.0	110.0	112.0	108.6	103.3	105.0	112.00
USD/CHF	0.96	0.95	0.92	0.89	0.94	0.93	0.93	0.95	0.96	0.98	0.98	0.98	0.97	0.89	0.95	0.98
GBP/USD	1.24	1.24	1.29	1.37	1.38	1.38	1.34	1.28	1.24	1.22	1.23	1.23	1.33	1.37	1.28	1.23

	Canada/U.S. Interest Rates----History and Forecasts				
	Canada Prime Rate	3-mth Cdn Bills	2-year GoC	5-year GoC	
1161 !Q	CAPRC@BMONE	CAIT3C@BMONI	CAIB2C@BMON	CAIB5C@BMON	C/
DESC	Canada: Prime Business Loan Rate, Chartered Banks [BoC] (%)	Canada: 3-Month Treasury Bills [BoC] (%)	Canada: Benchmark 2-Year Bond Yields [BoC] (%)	Canada: Benchmark 5-Year Bond Yields [BoC] (%)	B Bı [
T1	Q1-1935 <- Jan-	Q1-1962 <- Jan-	Q4-1991 <- Oct-	Q1-1990 <- Jan-	Q
TN	Q4-2026 <- Dec-	Q4-2026 <- Dec-	Q4-2026 <- Dec-	Q4-2026 <- Dec-	Q
SOURCE	BMOCME	BMOCME	BMOCME	BMOCME	BI
DTLM	Aug-27-2021 09	Aug-27-2021 09	Aug-27-2021 09	Aug-27-2021 09	A
FRQ	Quarterly <- Mor	Quarterly <- Mor	Quarterly <- Mor	Quarterly <- Mor	Q
201	3.616667	1.286308	1.207353	1.174745	
202	2.450000	0.219439	0.316853	0.430195	
203	2.450000	0.160768	0.271849	0.360957	
204	2.450000	0.104405	0.250556	0.414810	
211	2.450000	0.082545	0.213996	0.646963	
212	2.450000	0.105817	0.319255	0.925596	
213	2.45	0.17	0.46	0.85	
214	2.45	0.17	0.47	0.91	
221	2.45	0.17	0.52	1.00	
222	2.45	0.17	0.60	1.11	
223	2.45	0.17	0.71	1.21	
224	2.70	0.40	0.81	1.31	
231	2.70	0.45	0.82	1.34	
232	2.95	0.66	1.02	1.46	
233	2.95	0.70	1.02	1.47	
234	3.20	0.91	1.22	1.58	
241	3.20	0.95	1.23	1.60	
242	3.45	1.16	1.42	1.71	
243	3.45	1.20	1.43	1.72	
244	3.70	1.41	1.63	1.83	
251	3.70	1.45	1.63	1.85	
252	3.95	1.66	1.83	1.96	
253	3.95	1.70	1.84	1.98	
254	3.95	1.70	1.84	1.99	
	Average of highlighted 3M Tbills for 2023=			0.68	

RE: Looking for Longer Dated 90 day tbill and 30 yr Forecas

SE Spektor, Emanuel <Emanuel.Spektor@cibc.com>
To Recker, Blaine
Cc Sun, Tiffany; Mughal, Sufian; Morin, Laurence

You replied to this message on 10/18/2021 4:32 PM.

****Exercise Caution -** This
Beware of links or attachments fr

Good morning Blaine,

I hope you are doing well and had a great weekend!

Please find our annual average forecasts up to 2025 below:

Indices (Canada)	2022	2023	2024	2025
98-Day Treasury Bills	0.28	0.83	1.40	1.90
30-Year Gov't Bond	2.04	2.35	2.40	2.38

Thank you,

Emanuel Spektor | Associate | Corporate Solutions Group | CIBC Capital Markets |
161 Bay Street 5th Floor, Toronto, Ontario, M5J 2S8 | Tel: 416-594-7223 |

Rates Scenario | Rates Scenario for August 24, 2023

Interest Rate Forecasts

(% : avg.)	Actual 2023 Jul	Forecasts 2023 Aug	Sep	Oct	Nov	Dec	2024 Jan	2024 Q1	Q2	Q3	Q4
Canada											
Overnight target (period end)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.75	4.50	4.25
Overnight target	4.90	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.78	4.57	4.31
CORRA[2]	4.91	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.78	4.57	4.31
3-month bills	4.95	5.05	5.10	5.10	5.10	5.10	5.10	5.10	4.85	4.65	4.35
6-month	5.05	5.15	5.15	5.15	5.15	5.15	5.15	5.15	4.90	4.70	4.40
1-year	5.12	5.20	5.10	5.05	4.95	4.90	4.85	4.75	4.50	4.25	4.00
2-year bonds	4.69	4.70	4.55	4.40	4.25	4.15	4.00	3.85	3.60	3.40	3.20
3-year	4.37	4.45	4.30	4.20	4.10	3.95	3.85	3.70	3.45	3.30	3.15
5-year	3.85	4.00	3.95	3.85	3.80	3.70	3.65	3.55	3.35	3.25	3.10
7-year	3.57	3.75	3.70	3.65	3.60	3.55	3.50	3.40	3.25	3.15	3.05
10-year	3.45	3.65	3.60	3.55	3.50	3.45	3.35	3.30	3.15	3.10	3.00
30-year	3.28	3.50	3.45	3.40	3.35	3.30	3.25	3.20	3.10	3.05	3.05
1m BA	5.35	5.35	5.45	5.45	5.45	5.45	5.45	5.45	5.20	4.95	4.70
3m BA	5.47	5.50	5.55	5.55	5.55	5.55	5.55	5.55	5.30	5.05	4.75
Prime rate	7.10	7.20	7.20	7.20	7.20	7.20	7.20	7.20	6.98	6.77	6.51
United States											
Fed funds target (period end)	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.13	4.88	4.63
Fed funds target	5.16	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.33	5.09	4.84
EFFR[3]	5.12	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.28	5.05	4.80
SOFR[4]	5.09	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.02	4.78
3-month bills	5.49	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.50	5.25	5.00
6-month	5.53	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.50	5.25	5.00
1-year	5.37	5.35	5.30	5.25	5.20	5.15	5.10	5.00	4.85	4.60	4.35
2-year notes	4.83	4.90	4.80	4.70	4.55	4.45	4.35	4.25	3.90	3.70	3.50
3-year	4.47	4.60	4.50	4.40	4.35	4.25	4.15	4.05	3.80	3.65	3.50
5-year	4.14	4.30	4.25	4.20	4.10	4.05	4.00	3.95	3.75	3.60	3.45
7-year	4.03	4.25	4.20	4.15	4.05	4.00	3.95	3.85	3.65	3.55	3.45
10-year	3.90	4.15	4.10	4.05	4.00	3.90	3.85	3.80	3.60	3.50	3.40
30-year bonds	3.96	4.30	4.20	4.15	4.10	4.00	3.95	3.90	3.70	3.65	3.55
Prime rate	8.29	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.45	8.22	7.97
Other G7											
ECB Refi[1]	4.00	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.00	3.75	3.50
10yr Bund	2.49	2.50	2.55	2.55	2.60	2.60	2.55	2.50	2.30	2.15	2.00
BoE Repo[1]	5.00	5.25[6]	5.50	5.50	5.50	5.50	5.50	5.50	5.25	5.00	4.75
SONIA[5]	4.93	5.16	5.27	5.44	5.44	5.44	5.44	5.44	5.28	5.03	4.79
10yr Gilt	4.41	4.30	4.20	4.10	4.00	4.00	3.95	3.85	3.60	3.40	3.15
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	0.46	0.53	0.59	0.66	0.73	0.80	0.80	0.80	0.80	0.80	0.80

[1] end of period; [2] Canadian Overnight Repo Rate Average; [3] Effective Fed Funds Rate; [4] Secured Overnight Financing Rate; [5] Sterling Overnight Index Average; [6] actual value

Sources: BMO Economics, Haver Analytics

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RBC Economics & Thought Leadership

Financial Markets Monthly

August 2023

Central banks hit "hopeful pause" on rate hikes

Robust economic data seemed to bring sunnier days in July. For the most part, global equity indices inched higher as recession fears eased.

And yet, U.S. banks continue to report tighter lending standards and slower commercial & industrial loan demand—a sign businesses are growing more cautious. What's more, a downgrade to U.S. credit ratings by Fitch in early August softened markets even as oil prices rallied on expectations that a global energy supply deficit will deepen in 2024.

The good news: inflation has shown further signs of slowing—albeit in varying degrees across regions. That's reducing the urgency of central banks to push interest rates higher even as economic growth continues to be stronger than expected. Indeed, despite improved market sentiment, yield curves are still steeply inverted on expected interest rate cuts in 2024 and beyond.

Slower inflation has been helped by lower energy prices, which may not last. Oil prices have already moved higher in recent weeks and could continue to rise. But broader inflation pressures have shown signs of slowing, particularly in the U.S. and Canada. U.K. inflation trends have been stickier, though the latest June data brought a welcome reprieve.

Overview

Claire Fan | Economist | claire.fan@rbc.com | 416-974-3639 |
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Central bank bias

<table>
<tr><th>Central bank</th><th>Current policy rate
(latest move)</th><th>Next move</th></tr>
<tr><td>BoC</td><td>5.00%
+25 bps in Jul-23</td><td>+0 bps
in Sep-23</td></tr>
<tr><td colspan="3">The BoC followed up its hike in June with another 25 bp move in July. Since then, economic data has been in line with our forecast that economy will soften enough for the BoC to resume its pause in September.</td></tr>
<tr><td>Fed</td><td>5.25-5.50%
+25 bps in Jul-23</td><td>+0 bps
in Sep-23</td></tr>
<tr><td colspan="3">Significantly improved inflation trends have taken pressures off the Fed to respond immediately to the resilient growth backdrop. Absent a sharp rebound in price pressures, we see the Fed pausing rates at currently elevated levels until 2024.</td></tr>
<tr><td>BoE</td><td>5.25%
+25 bps in Aug-23</td><td>+25 bps
in Sep-23</td></tr>
<tr><td colspan="3">Mildly improving (but still elevated) inflation trends weakening labour market data are welcoming news for the BoE, who's expected to take the bank rate higher by 25 bp in September before pausing for reassessment.</td></tr>
<tr><td>ECB</td><td>3.75%
+25 bps in Jul-23</td><td>+0 bps
in Sep-23</td></tr>
<tr><td colspan="3">A dovish pivot from ECB President Lagarde in the July meeting, alongside weaker survey data in the euro area suggest the ECB will move to the sidelines by keeping rates at currently restrictive levels.</td></tr>
<tr><td>RBA</td><td>4.1%
+0 bps in Aug-23</td><td>+0 bps
in Sep-23</td></tr>
<tr><td colspan="3">Weaker than expected inflation and retail sales data for Q2 allowed the RBA to pause in July and August. We think that the current cycle may be nearing a completion, with one more hike somewhere in Q4 expected.</td></tr>
</table>

Interest rate outlook

Policy rates and government bond yields, end of period

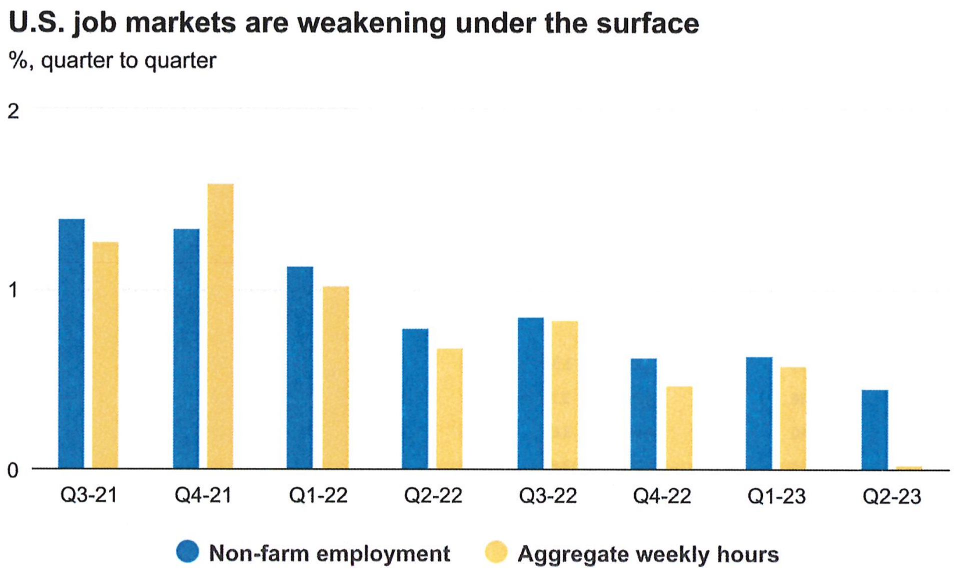
	Q1-22	Q2-22	Q3-22	Q4-22	Q1-23	Q2-23	Q3-23	Q4-23	Q1-24	Q2-24	Q3-24	Q4-24
Canada												
Overnight rate	0.50	1.50	3.25	4.25	4.50	4.75	5.00	5.00	5.00	5.00	4.50	4.00
Three-month	0.60	2.08	3.58	4.23	4.34	4.90	5.10	4.95	4.90	4.85	4.35	3.85
Two-year	2.27	3.10	3.79	4.06	3.74	4.58	4.50	4.25	4.00	3.70	3.50	3.35
Five-year	2.39	3.10	3.32	3.41	3.02	3.68	3.60	3.50	3.30	3.15	3.05	3.00
10-year	2.40	3.23	3.16	3.30	2.90	3.26	3.15	3.00	2.90	2.85	2.80	2.80
30-year	2.37	3.14	3.09	3.28	3.02	3.09	3.05	3.00	2.95	2.90	2.90	2.90
United States												
Fed funds midpoint	0.37	1.62	3.12	4.37	4.87	5.12	5.38	5.38	5.38	5.13	4.63	4.13
Three-month	0.52	1.72	3.33	4.42	4.85	5.43	5.35	5.28	5.23	4.93	4.43	3.93
Two-year	2.28	2.92	4.22	4.41	4.06	4.87	4.75	4.60	4.25	3.80	3.40	3.15
Five-year	2.42	3.01	4.06	3.99	3.60	4.13	4.15	4.00	3.80	3.55	3.35	3.25
10-year	2.32	2.98	3.83	3.88	3.48	3.81	3.95	3.90	3.75	3.60	3.45	3.40
30-year	2.44	3.14	3.79	3.97	3.67	3.85	4.15	4.15	4.10	4.05	4.00	4.00
United Kingdom												
Bank rate	0.75	1.25	2.25	3.50	4.25	5.00	5.50	5.50	5.50	5.50	5.50	5.50
Two-year	1.36	1.85	4.29	3.71	3.42	5.27	5.10	5.00	4.95	4.90	4.60	4.25
Five-year	1.40	1.88	4.40	3.62	3.33	4.66	4.40	4.25	4.15	4.10	3.90	3.60
10-year	1.60	2.22	4.08	3.67	3.47	4.39	4.25	4.00	3.95	3.80	3.60	3.50
30-year	1.77	2.59	3.82	3.95	3.82	4.42	4.25	4.00	4.00	3.90	3.65	3.50
Euro area*												
Deposit Rate	-0.50	-0.50	0.75	2.00	3.00	3.50	3.75	3.75	3.75	3.75	3.75	3.75
Two-year	-0.08	0.64	1.78	2.76	2.66	3.27	3.40	3.25	3.20	3.15	3.00	2.75
Five-year	0.37	1.09	1.98	2.58	2.30	2.58	2.70	2.60	2.60	2.50	2.30	2.20
10-year	0.55	1.36	2.12	2.57	2.28	2.39	2.60	2.55	2.50	2.35	2.25	2.10
30-year	0.67	1.63	2.10	2.46	2.35	2.38	2.45	2.40	2.30	2.25	2.10	2.00
Australia												
Cash target rate	0.10	0.85	2.35	3.10	3.60	4.10	4.10	4.35	4.35	4.35	4.35	3.85
Two-year	1.78	2.73	3.43	3.41	2.97	4.18	3.90	3.90	3.70	3.50	3.30	3.20
10-year	2.84	3.67	3.89	4.05	3.30	4.03	4.05	4.10	4.00	3.90	3.70	3.60
New Zealand												
Cash target rate	1.00	2.00	3.00	4.25	4.75	5.50	5.50	5.50	5.50	5.00	4.50	4.00
Two-year swap	3.27	4.06	4.76	5.36	5.01	5.46	5.25	5.00	4.50	4.25	4.00	3.90
10-year swap	3.38	4.10	4.50	4.78	4.27	4.46	4.75	4.40	4.25	4.00	3.90	3.85

Sources: Refinitiv, BoC, Fed, BoE, ECB, RBA, RBNZ, RBC Economics, RBC Capital Markets | *German government bond yields

A bumpy landing is still more likely than a soft one in the U.S.

In the U.S., broadly easing inflation pressures are playing out against a resilient consumer and labour market backdrop. This has increased talk of a possible "soft-landing" for the economy, where inflation slows to the Fed's 2% objective—without a significant increase in unemployment.

We still think that's unlikely. Well-anchored, longer run inflation expectations have probably played a bigger role in the initial moderation of CPI than is commonly appreciated. But the Fed isn't likely to view slower inflation growth as sustainable without softer consumer demand and labour markets.



Source: Bureau of Labour Statistics, RBC Economics

And there are still signs that the U.S. economy is weakening, despite resilient activity in 2023. U.S. employment growth has been firm, but hours worked were essentially unchanged in Q2, and they declined in July. Job openings continue to trend lower. Households' liquid assets including cash and time deposits have fallen outright in every consecutive quarter since Q1 2022. The depletion of the excess savings stockpile that was built up over the pandemic means much less financial cushion moving forward. And headwinds like the restart of student loan repayments still loom over many households. High interest rates have made borrowing to support current spending increasingly inaccessible. Growth momentum has been firmer than expected and Q3 GDP is likely to post another increase. But early signs suggest there's more softening in economic activity to come. We look for GDP growth to dip into negative territory later this year.

We look for economic growth in the UK and Euro Area to hold in positive territory. But that growth won't be strong enough to prevent an uptick in unemployment rates. And in both regions, softer PMI survey data into the summer has flagged the risk of declines in GDP growth.

Scotiabank.

SCOTIABANK'S FORECAST TABLES

July 20, 2023

Central Bank Rates

	2021	2022				2023				2024			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Americas						(%, end of period)							
Bank of Canada	0.25	0.50	1.50	3.25	4.25	4.50	4.75	5.00	5.00	5.00	4.75	4.25	3.75
US Federal Reserve (upper bound)	0.25	0.50	1.75	3.25	4.50	5.00	5.25	5.50	5.50	5.50	5.25	4.75	4.00
Bank of Mexico	5.50	6.50	7.75	9.25	10.50	11.25	11.25	11.25	11.00	10.00	9.25	8.75	8.25
Central Bank of Brazil	9.25	11.75	13.25	13.75	13.75	13.75	13.75	13.25	12.25	11.25	10.25	9.75	9.25
Bank of the Republic of Colombia	3.00	5.00	7.50	10.00	12.00	13.00	13.25	13.25	12.25	10.25	8.25	6.75	5.75
Central Reserve Bank of Peru	2.50	4.00	5.50	6.75	7.50	7.75	7.75	7.75	7.25	6.75	6.25	5.75	5.25
Central Bank of Chile	4.00	7.00	9.00	10.75	11.25	11.25	11.25	10.00	7.50	6.50	4.00	3.75	3.75
Europe													
European Central Bank MRO Rate	0.00	0.00	0.00	1.25	2.50	3.50	4.00	4.50	4.50	4.50	4.25	4.00	3.75
European Central Bank Deposit Rate	-0.50	-0.50	-0.50	0.75	2.00	3.00	3.50	4.00	4.00	4.00	3.75	3.50	3.25
Bank of England	0.25	0.75	1.25	2.25	3.50	4.25	5.00	5.50	5.50	5.50	5.00	4.50	4.25
Asia/Oceania													
Reserve Bank of Australia	0.10	0.10	0.85	2.35	3.10	3.60	4.10	4.35	4.60	4.40	4.10	4.05	3.85
Bank of Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
People's Bank of China	3.80	3.70	3.70	3.65	3.65	3.65	3.55	4.35	4.35	4.35	4.35	4.35	4.35
Reserve Bank of India	4.00	4.00	4.90	5.90	6.25	6.50	6.50	6.50	6.50	6.25	6.00	6.00	5.75
Bank of Korea	1.00	1.25	1.75	2.50	3.25	3.50	3.50	3.50	3.50	3.25	3.00	2.75	2.50
Bank of Thailand	0.50	0.50	0.50	1.00	1.25	1.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Currencies and Interest Rates

	2021	2022				2023				2024			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Americas						(end of period)							
Canadian dollar (USDCAD)	1.26	1.25	1.29	1.38	1.36	1.35	1.32	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	0.76	0.77	0.77	0.79	0.79	0.80	0.80
Mexican peso (USDMXN)	20.53	19.87	20.12	20.14	19.50	18.05	17.12	17.30	17.90	17.90	18.30	18.50	18.90
Brazilian real (USDBRL)	5.58	4.74	5.26	5.42	5.28	5.06	4.79	4.90	4.85	4.90	5.00	5.00	5.00
Colombian peso (USDCOP)	4,080	3,771	4,155	4,609	4,853	4,623	4,172	4,225	4,234	4,249	4,278	4,302	4,316
Peruvian sol (USDPEN)	4.00	3.68	3.83	3.98	3.81	3.76	3.63	3.75	3.85	3.85	3.80	3.80	3.85
Chilean peso (USDCLP)	852	786	918	969	851	795	802	820	830	840	850	850	850
Europe													
Euro (EURUSD)	1.14	1.11	1.05	0.98	1.07	1.08	1.09	1.12	1.12	1.15	1.15	1.18	1.18
UK pound (GBPUSD)	1.35	1.31	1.22	1.12	1.21	1.23	1.27	1.35	1.35	1.38	1.38	1.40	1.40
Asia/Oceania													
Japanese yen (USDJPY)	115	122	136	145	131	133	144	135	135	130	130	125	125
Australian dollar (AUDUSD)	0.73	0.75	0.69	0.64	0.68	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	6.90	6.87	7.25	7.14	7.00	6.90	6.87	6.75	6.69
Indian rupee (USDINR)	74.3	75.8	79.0	81.3	82.7	82.2	82.0	82.0	81.5	81.5	81.0	80.0	80.0
South Korean won (USDKRW)	1,189	1,212	1,299	1,431	1,260	1,302	1,318	1,290	1,275	1250	1223	1202	1180
Thai baht (USDTHB)	33.4	33.3	35.3	37.7	34.6	34.1	35.5	34.5	33.8	33.3	33.0	32.5	31.8
Canada (Yields, %)													
3-month T-bill	0.19	0.73	2.31	3.78	4.32	4.42	4.91	5.10	5.10	4.90	4.65	4.10	3.60
2-year Canada	0.95	2.29	3.15	3.79	4.05	3.73	4.58	4.50	4.25	4.00	3.75	3.65	3.50
5-year Canada	1.26	2.41	3.11	3.33	3.41	3.02	3.68	3.70	3.65	3.65	3.60	3.60	3.60
10-year Canada	1.42	2.40	3.22	3.17	3.30	2.90	3.27	3.25	3.20	3.30	3.40	3.55	3.70
30-year Canada	1.68	2.38	3.13	3.09	3.28	3.00	3.09	3.35	3.55	3.60	3.65	3.70	3.75
United States (Yields, %)													
3-month T-bill	0.06	0.55	1.73	3.21	4.40	4.65	5.17	5.30	5.30	5.25	4.75	4.10	3.70
2-year Treasury	0.73	2.33	3.09	4.28	4.43	4.03	4.90	4.60	4.35	4.00	3.75	3.60	3.50
5-year Treasury	1.26	2.46	3.04	4.09	4.00	3.57	4.16	3.95	3.85	3.80	3.75	3.70	3.70
10-year Treasury	1.51	2.34	3.01	3.83	3.88	3.47	3.84	3.65	3.60	3.70	3.75	3.80	3.85
30-year Treasury	1.90	2.45	3.18	3.78	3.97	3.65	3.86	3.85	3.85	3.90	3.90	3.90	3.90

Sources: Scotiabank Economics, Bloomberg.

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ECONOMIC INSIGHTS

August 9, 2023

Canadian consumer: Cracks beginning to show

by **Andrew Grantham** andrew.grantham@cibc.com and **Katherine Judge** katherine.judge@cibc.com

The resilience of the Canadian consumer has been one of the biggest surprises of 2023 so far, and a key factor behind the Bank of Canada restarting its rate hike campaign in June. Indeed, stronger-than-anticipated household consumption has accounted for the entirety of the upgrade to the BoC's GDP forecast since the start of the year (Chart 1).

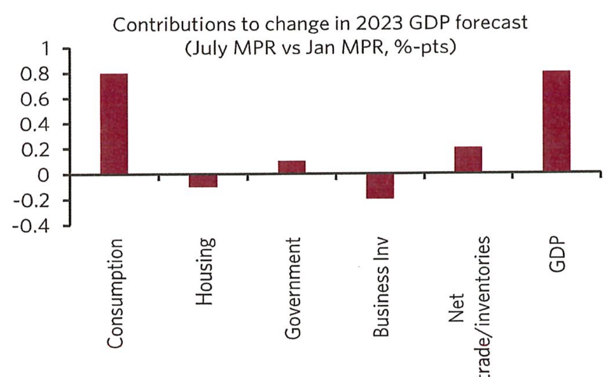
However, cracks are starting to show, with the recovery in services consumption stalling at a level still below its pre-pandemic trend, and households starting to fall behind on some of their debt repayments. Because of that, consumer spending is expected to see little growth over the balance of 2023 and into 2024, resulting in a close brush with recession (Table 1, p5). That will open up some additional slack within the economy, seeing inflation ease further next year and allowing interest rate cuts to start before the middle of 2024 (Table 3, p6).

Resilient, but not strong

One of the reasons why consumption hasn't fallen or slowed yet, even after historically swift rate hikes, is that the level of spending wasn't particularly strong to begin with. While real consumer spending has continued to rise swiftly on average since rates starting to head higher (Chart 2, left), much of that spending can be linked to the reopening of the economy following Covid-19 lockdowns, as well as an easing of supply chain issues. The level of consumer spending, particularly in per capita terms, remains well below the trend it was on before the pandemic and relative to the 2017 rate hiking cycle. (Chart 2, right).

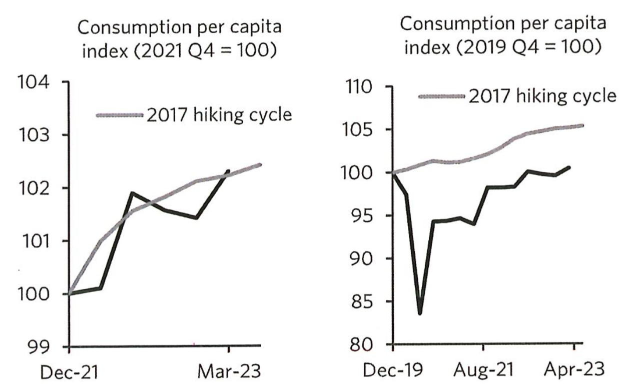
In particular, the rotation of consumer spending away from goods and back towards services that everyone was talking about before interest rates headed higher, has not fully happened. While goods spending has eased back close to its

Chart 1: Consumer resilience drove upside surprises in growth this year



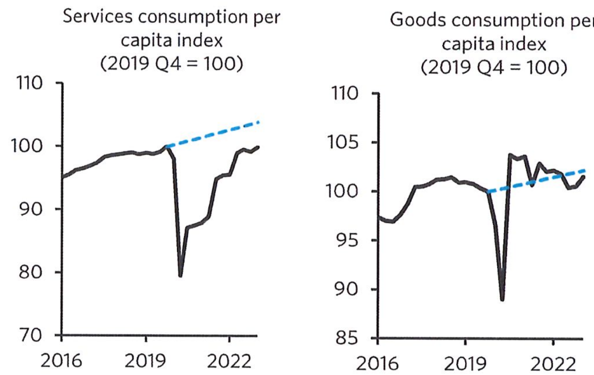
Source: Bank of Canada, CIBC

Chart 2: Consumption per capita — strength since 2021 (L) belied by perspective since 2019 (R)



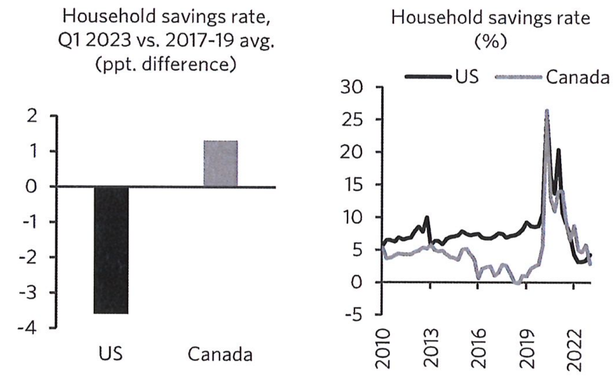
Source: Statistics Canada, CIBC

Chart 3: Services consumption has recovered (L), but is further below its pre-pandemic trend than goods (R)



Source: Statistics Canada, CIBC

Chart 4: Savings rate above pre-pandemic in Canada (L), but still low in absolute terms (R)

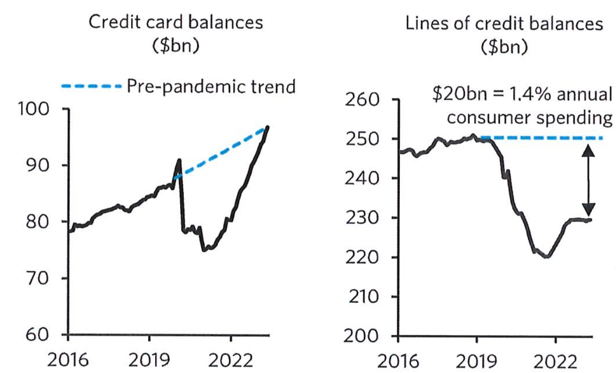


Source: Statistics Canada, BEA, CIBC

pre-pandemic trend (Chart 3, left) the recovery in services spending has slowed even at a level still well below its pre-pandemic trend (Chart 3, right). That could reflect a structural shift in spending patterns owing to the extension of remote work, which has limited demand for services, while boosting demand for durable goods. The excess demand that the Bank of Canada continues to refer to doesn't really look excessive at all — at least compared to the spending behaviour of households prior to the pandemic. Instead, the excess demand is a combination of a recovery in demand, and a disappointing recovery in supply, not an overheated consumer sector. Indeed, consumption looks to have contracted in Q2 after a bounce Q1.

Moreover, consumers in Canada remain more cautious than they were prior to 2020. While the household savings rate has fallen from the heights seen during the pandemic, it remains above the very low levels that were common just before the pandemic started. That's in contrast to US households, who are saving less than they were in the prior cycle in order to maintain an elevated level of spending (Chart 4, left and right). While Canadian households' credit card balances are now back to their earlier trend (Chart 5, left), after having been run down dramatically during the pandemic, lines of credit are seeing less use in this higher interest rate environment (Chart 5, right). The gap between the current balance on lines of credit and the pre-pandemic trend is roughly $20bn, or $1.4% of annual consumer spending.

Chart 5: Credit card balances back to pre-pandemic norms (L), but lines of credit still contained (R)

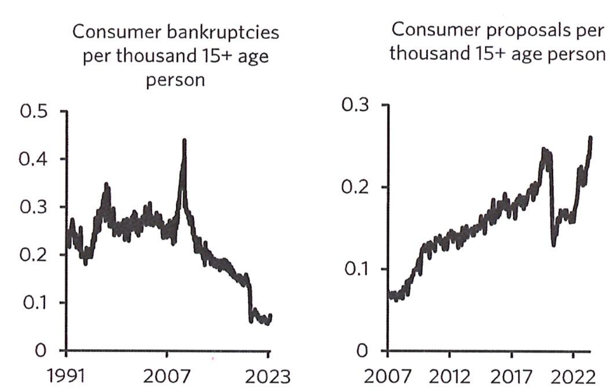


Source: Statistics Canada, CIBC

Early signs of struggles

Despite the fairly cautious attitude of Canadian households, there are early indications that some are struggling in this higher interest rate environment. While bankruptcies remain historically low (Chart 6, left), proposals have risen above their pre-pandemic level even on a per capita basis (Chart 6, right). The proportion of indebted households that are behind with

Chart 6: Bankruptcies contained (L), but proposals elevated (R)



Source: ISED, Statistics Canada, CIBC

Table 3: Canadian interest rates (end of period)

Variable	2023 8-Aug	2023 Sep	2023 Dec	2024 Mar	2024 Jun	2024 Sep	2024 Dec
Overnight target rate	5.00	5.25	5.25	5.25	4.50	4.00	3.50
98-Day Treasury Bills	5.05	5.25	5.20	5.00	4.25	3.90	3.35
2-Year Government Bond	4.51	4.85	4.70	4.30	3.50	3.20	2.80
10-Year Government Bond	3.47	3.55	3.45	3.25	3.00	2.90	2.75
30-Year Government Bond	3.38	3.45	3.30	3.25	3.00	2.90	2.85
Canada - US T-Bill Spread	-0.37	-0.55	-0.55	-0.60	-0.60	-0.45	-0.75
Canada - US 10-Year Bond Spread	-0.55	-0.35	-0.35	-0.25	-0.25	0.00	0.00
Canada Yield Curve (10-year — 2-year)	-1.04	-1.30	-1.25	-1.05	-0.50	-0.30	-0.05

Table 4: US Interest rates (end of period)

Variable	2023 8-Aug	2023 Sep	2023 Dec	2024 Mar	2024 Jun	2024 Sep	2024 Dec
Federal funds rate	5.375	5.625	5.625	5.625	5.125	4.625	4.125
91-Day Treasury Bills	5.42	5.80	5.75	5.60	4.85	4.35	4.10
2-Year Government Note	4.77	4.90	4.70	4.30	3.60	3.00	2.80
10-Year Government Note	4.02	3.90	3.80	3.50	3.25	2.90	2.75
30-Year Government Bond	4.19	4.00	3.80	3.75	3.45	3.30	3.20
US Yield curve (10-year — 2-year)	-0.75	-1.00	-0.90	-0.80	-0.35	-0.10	-0.05

Table 5: Foreign exchange rates

Exchange rate	2023 8-Aug	2023 Sep	2023 Dec	2024 Mar	2024 Jun	2024 Sep	2024 Dec
CAD-USD	0.74	0.75	0.76	0.76	0.77	0.78	0.78
USD-CAD	1.35	1.33	1.31	1.31	1.30	1.29	1.28
USD-JPY	143	141	135	125	122	120	118
EUR-USD	1.09	1.08	1.11	1.13	1.14	1.15	1.15
GBP-USD	1.27	1.26	1.28	1.30	1.31	1.32	1.32
AUD-USD	0.65	0.66	0.68	0.69	0.69	0.70	0.70
USD-CNY	7.22	7.15	7.00	6.85	6.75	6.70	6.70
USD-BRL	4.92	5.05	5.20	5.20	5.20	5.40	5.00
USD-MXN	17.20	17.50	18.00	18.50	19.00	19.20	19.00

Table 1: Canada forecast detail (real % change, SAAR, unless otherwise noted)

Variable	23Q1A	23Q2F	23Q3F	23Q4F	24Q1F	24Q2F	24Q3F	24Q4F	2022A	2023F	2024F
Real GDP Growth (AR)	3.1	1.3	0.8	-0.2	0.6	0.5	1.4	1.7	3.4	1.6	0.7
Real Final Domestic Demand (AR)	2.6	0.2	1.2	-0.1	1.0	0.8	1.8	2.0	2.7	0.9	0.9
Household Consumption (AR)	5.7	-0.7	1.3	-0.7	0.7	0.2	1.0	1.7	4.8	2.2	0.4
All Items CPI Inflation (Y/Y)	5.1	3.5	3.4	3.0	2.9	2.1	1.9	1.7	6.8	3.7	2.2
Unemployment Rate (%)	5.0	5.2	5.6	6.0	6.2	6.2	6.0	5.8	5.3	5.4	6.1

Table 2: US forecast detail (real % change, SAAR, unless otherwise noted)

Variable	23Q1A	23Q2A	23Q3F	23Q4F	24Q1F	24Q2F	24Q3F	24Q4F	2022A	2023F	2024F
Real GDP Growth (AR)	2.0	2.4	0.9	-1.1	0.6	0.7	1.0	1.4	2.1	1.8	0.6
Real Final Sales (AR)	4.2	2.3	0.6	-0.8	0.5	0.7	1.0	1.3	1.3	2.3	0.5
All Items CPI Inflation (Y/Y)	5.8	4.0	3.2	2.6	2.3	1.9	1.8	2.1	8.0	3.9	2.0
Core CPI Inflation (Y/Y)	5.6	5.2	4.3	3.2	2.4	1.8	1.6	1.7	6.2	4.5	1.9
Unemployment Rate (%)	3.5	3.6	3.7	4.1	4.3	4.3	4.3	4.2	3.6	3.7	4.3

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

Scotiabank. SCOTIABANK'S FORECAST TABLES

July 18, 2024

Central Bank Rates

	2022	2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Americas						(%, end of period)							
Bank of Canada	4.25	4.50	4.75	5.00	5.00	5.00	4.75	4.25	4.00	3.75	3.50	3.25	3.25
US Federal Reserve (upper bound)	4.50	5.00	5.25	5.50	5.50	5.50	5.50	5.25	5.00	4.50	4.00	3.50	3.50
Bank of Mexico	10.50	11.25	11.25	11.25	11.25	11.00	11.00	10.75	10.50	10.00	9.50	8.75	8.00
Central Bank of Brazil	13.75	13.75	13.75	12.75	11.75	10.75	10.50	10.50	10.50	10.50	10.00	9.75	9.50
Bank of the Republic of Colombia	12.00	13.00	13.25	13.25	13.00	12.25	11.25	10.00	8.50	7.00	5.50	5.50	5.50
Central Reserve Bank of Peru	7.50	7.75	7.75	7.50	6.75	6.25	5.75	5.50	5.00	4.75	4.50	4.25	4.25
Central Bank of Chile	11.25	11.25	11.25	9.50	8.25	7.25	5.75	5.50	5.25	5.00	4.75	4.50	4.25
Europe													
European Central Bank MRO Rate	2.50	3.50	4.00	4.50	4.50	4.50	4.25	3.65	3.40	3.15	2.90	2.65	2.40
European Central Bank Deposit Rate	2.00	3.00	3.50	4.00	4.00	4.00	3.75	3.50	3.25	3.00	2.75	2.50	2.25
Bank of England	3.50	4.25	5.00	5.25	5.25	5.25	5.25	5.00	4.50	4.25	3.75	3.50	3.25
Asia/Oceania													
Reserve Bank of Australia	3.10	3.60	4.10	4.10	4.35	4.35	4.35	4.35	4.10	3.85	3.60	3.35	3.35
Bank of Japan	-0.10	-0.10	-0.10	-0.10	-0.10	0.00	0.00	0.00	0.00	0.25	0.25	0.50	0.50
People's Bank of China	2.75	2.75	2.65	2.50	2.50	2.50	2.50	2.40	2.30	2.20	2.10	2.10	2.10
Reserve Bank of India	6.25	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.25	6.00	5.75	5.75	5.75
Bank of Korea	3.25	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.25	3.00	2.75	2.50	2.50
Bank of Thailand	1.25	1.75	2.00	2.50	2.50	2.50	2.50	2.50	2.25	2.25	2.00	2.00	2.00

Currencies and Interest Rates

	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3f	2024 Q4f	2025 Q1f	2025 Q2f	2025 Q3f	2025 Q4f
Americas						(end of period)							
Canadian dollar (USDCAD)	1.36	1.35	1.32	1.36	1.32	1.35	1.37	1.38	1.36	1.34	1.32	1.32	1.30
Canadian dollar (CADUSD)	0.74	0.74	0.76	0.74	0.76	0.74	0.73	0.72	0.74	0.75	0.76	0.76	0.77
Mexican peso (USDMXN)	19.50	18.05	17.12	17.42	16.97	16.56	18.32	18.80	18.90	19.50	19.60	19.80	20.00
Brazilian real (USDBRL)	5.28	5.06	4.79	5.03	4.86	5.01	5.59	5.31	5.25	5.22	5.18	5.18	5.20
Colombian peso (USDCOP)	4,853	4,623	4,172	4,067	3,855	3,852	4,153	4,102	4,116	4,120	4,125	4,140	4,150
Peruvian sol (USDPEN)	3.81	3.76	3.63	3.78	3.70	3.72	3.84	3.80	3.75	3.75	3.75	3.80	3.78
Chilean peso (USDCLP)	851	795	802	892	879	979	940	900	870	870	870	870	870
Europe													
Euro (EURUSD)	1.07	1.08	1.09	1.06	1.10	1.08	1.07	1.07	1.09	1.11	1.11	1.15	1.15
UK pound (GBPUSD)	1.21	1.23	1.27	1.22	1.27	1.26	1.26	1.25	1.27	1.29	1.29	1.31	1.31
Asia/Oceania													
Japanese yen (USDJPY)	131	133	144	149	141	151	161	150	150	145	145	140	140
Australian dollar (AUDUSD)	0.68	0.67	0.67	0.64	0.68	0.65	0.67	0.68	0.68	0.70	0.70	0.72	0.72
Chinese yuan (USDCNY)	6.90	6.87	7.25	7.30	7.10	7.22	7.27	7.27	7.24	7.20	7.16	7.13	7.10
Indian rupee (USDINR)	82.7	82.2	82.0	83.0	83.2	83.4	83.4	83.5	83.4	83.3	83.2	83.1	83.0
South Korean won (USDKRW)	1,265	1,302	1,318	1,349	1,288	1347	1377	1364	1350	1335	1321	1309	1298
Thai baht (USDTHB)	34.6	34.2	35.5	36.4	34.1	36.4	36.7	36.7	36.4	36.0	35.7	35.5	35.3
Canada (Yields, %)													
3-month T-bill	4.32	4.42	4.91	5.11	5.03	4.95	4.64	4.05	3.70	3.55	3.30	3.20	3.20
2-year Canada	4.05	3.73	4.58	4.87	3.89	4.18	3.99	3.75	3.60	3.50	3.40	3.40	3.40
5-year Canada	3.41	3.02	3.68	4.25	3.17	3.53	3.51	3.40	3.45	3.50	3.50	3.50	3.50
10-year Canada	3.30	2.90	3.27	4.02	3.11	3.47	3.50	3.40	3.50	3.60	3.60	3.60	3.60
30-year Canada	3.28	3.00	3.09	3.81	3.03	3.35	3.39	3.35	3.40	3.50	3.50	3.50	3.50
United States (Yields, %)													

BMO

Interest Rate Forecasts

Aug 7/24

(% : avg.)	Actual 2024 Jul	Forecasts 2024 Aug	Sep	Oct	Nov	Dec	2025 Jan	2025 Q1	Q2	Q3	Q4
Canada											
Overnight target (period end)	4.50	4.50	4.25	4.00	4.00	3.75	3.50	3.50	3.00	3.00	3.00
Overnight target	4.70	4.50	4.29	4.18	4.00	3.84	3.67	3.56	3.22	3.00	3.00
CORRA[2]	4.73	4.53	4.31	4.20	4.01	3.84	3.67	3.56	3.22	3.00	3.00
3-month bills	4.52	4.30	4.15	4.05	3.85	3.70	3.55	3.45	3.15	2.95	2.95
6-month	4.43	4.20	4.05	3.95	3.80	3.70	3.55	3.45	3.20	3.05	3.05
1-year	4.27	4.00	3.85	3.75	3.65	3.55	3.40	3.35	3.05	2.90	2.90
2-year bonds	3.78	3.30	3.25	3.20	3.10	3.05	3.00	2.95	2.80	2.75	2.75
3-year	3.65	3.20	3.15	3.10	3.10	3.05	3.00	2.95	2.85	2.80	2.80
5-year	3.37	3.00	3.00	2.95	2.95	2.95	2.95	2.95	2.90	2.90	2.90
7-year	3.36	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.95	2.95	2.95
10-year	3.41	3.10	3.10	3.10	3.05	3.05	3.05	3.05	3.05	3.00	3.00
30-year	3.38	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.10	3.10	3.05
Prime rate	6.90	6.70	6.49	6.38	6.20	6.04	5.87	5.76	5.42	5.20	5.20

Interest Rate Outlook

Interest Rates	Spot Rate	2023				2024				2025			
	Aug-23	Q1	Q2	Q3	Q4	Q1	Q2	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
CANADA													
Overnight Target Rate	4.50	4.50	4.75	5.00	5.00	5.00	4.75	4.25	3.75	3.25	3.00	2.75	2.50
3-mth T-Bill Rate	4.23	4.34	4.90	5.07	5.04	4.99	4.64	4.00	3.50	3.13	2.88	2.63	2.38
2-yr Govt. Bond Yield	3.29	3.74	4.58	4.87	3.88	4.17	3.99	3.30	3.00	2.70	2.40	2.40	2.35
5-yr Govt. Bond Yield	2.97	3.02	3.68	4.25	3.17	3.51	3.51	3.00	2.90	2.75	2.65	2.65	2.60
10-yr Govt. Bond Yield	3.06	2.90	3.26	4.03	3.10	3.45	3.50	3.05	3.00	2.90	2.90	2.85	2.85
30-yr Govt. Bond Yield	3.14	3.00	3.08	3.81	3.02	3.37	3.37	3.15	3.15	3.15	3.15	3.15	3.15
10-yr-2-yr Govt Spread	-0.23	-0.84	-1.32	-0.84	-0.78	-0.72	-0.49	-0.25	0.00	0.20	0.50	0.45	0.50
U.S.													
Fed Funds Target Rate	5.50	5.00	5.25	5.50	5.50	5.50	5.50	5.25	4.75	4.25	3.75	3.50	3.25
3-mth T-Bill Rate	5.02	4.68	5.17	5.32	5.20	5.23	5.22	5.05	4.40	3.90	3.55	3.30	3.00
2-yr Govt. Bond Yield	4.01	4.06	4.87	5.03	4.23	4.59	4.71	4.05	3.75	3.45	3.15	3.05	3.00
5-yr Govt. Bond Yield	3.71	3.60	4.13	4.60	3.84	4.21	4.33	3.75	3.60	3.40	3.25	3.20	3.20
10-yr Govt. Bond Yield	3.84	3.48	3.81	4.59	3.88	4.20	4.36	3.85	3.75	3.60	3.50	3.45	3.45
30-yr Govt. Bond Yield	4.12	3.67	3.85	4.73	4.03	4.34	4.51	4.10	4.05	3.90	3.80	3.75	3.75
10-yr-2-yr Govt Spread	-0.17	-0.58	-1.06	-0.44	-0.35	-0.39	-0.35	-0.20	0.00	0.15	0.35	0.40	0.45
CANADA - U.S SPREADS													
Can - U.S. T-Bill Spread	-0.79	-0.34	-0.27	-0.25	-0.16	-0.24	-0.58	-1.05	-0.90	-0.77	-0.67	-0.67	-0.62
Can - U.S. 10-Year Bond Spread	-0.79	-0.58	-0.55	-0.56	-0.78	-0.75	-0.86	-0.80	-0.75	-0.70	-0.60	-0.60	-0.60

F: Forecast by TD Economics, August 2024; Forecasts are end-of-period.
Source: Bloomberg, Bank of Canada, Federal Reserve.

Interest rate outlook

Policy rates and government bond yields, end of period

	Q1-23	Q2-23	Q3-23	Q4-23	Q1-24	Q2-24	Q3-24	Q4-24	Q1-25	Q2-25	Q3-25	Q4-25
Canada												
Overnight rate	4.50	4.75	5.00	5.00	5.00	4.75	4.25	4.00	3.75	3.25	3.00	3.00
Three-month	4.34	4.90	5.07	5.04	4.99	4.64	4.10	3.95	3.60	3.20	3.00	3.00
Two-year	3.74	4.58	4.87	3.88	4.22	3.99	3.40	3.25	2.90	2.75	2.90	3.00
Five-year	3.02	3.68	4.25	3.17	3.58	3.51	3.10	3.00	2.85	2.90	2.90	3.00
10-year	2.90	3.26	4.03	3.10	3.52	3.50	3.15	3.00	2.90	2.95	3.00	3.10
30-year	3.02	3.09	3.81	3.02	3.41	3.39	3.25	3.05	3.00	3.05	3.10	3.15

CIBC

CIBC CAPITAL MARKETS

Economics and FICC Strategy

FORECAST UPDATE

August 6, 2024

Forecast Details

Table: Canadian interest rates (end of period)

Variable	2024 Aug 6	2024 Sep	2024 Dec	2025 Mar	2025 Jun	2025 Sep	2025 Dec
Overnight target rate	4.50	4.25	3.75	3.25	3.00	2.75	2.50
98-Day Treasury Bills	4.30	4.15	3.60	3.00	2.90	2.70	2.50
2-Year Government Bond	3.28	3.35	3.10	2.90	2.80	2.70	2.80
10-Year Government Bond	3.12	3.20	3.25	3.15	3.10	3.15	3.30
30-Year Government Bond	3.19	3.25	3.25	3.20	3.25	3.35	3.45
Canada - US T-Bill Spread	-0.90	-0.85	-0.90	-0.95	-0.85	-0.90	-0.90
Canada - US 10-Year Bond Spread	-0.78	-0.90	-0.70	-0.55	-0.45	-0.30	-0.35
Canada Yield Curve (10-year — 2-year)	-0.16	-0.15	0.15	0.25	0.30	0.45	0.50

Nova Scotia Power Inc.
Details of Short-Term Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

Line		2025 Q1/25	Q2/25	Q3/25	Q4/25
1	**NSPI CP Forecast, As of August 2024**				
2		**2025**			
3	**3 mth T-bills info**	Q1/25	Q2/25	Q3/25	Q4/25
4	BMO (Aug 7)	3.45	3.15	2.95	2.95
5	BNS (Jul 18)	3.55	3.30	3.20	3.20
6	CIBC (Aug 10)	3.00	2.90	2.70	2.50
7	TD (Aug 26)	3.13	2.88	2.63	2.38
8	RBC (Aug 14)	3.60	3.20	3.00	3.00
9	3M T-Bills	3.35	3.09	2.90	2.81
10	3 mth TCs to 3 mth Tbills Spread (6 mth avg)	0.03	0.03	0.03	0.03
11	3 mth TC Rates	3.38	3.12	2.93	2.84
12	3 mth to 1 mth TC spread (current)	0.00	0.00	0.00	0.00
13	1M Term Corra	3.38	3.12	2.93	2.84
14	TC Credit Spread Adjustment	0.29	0.29	0.29	0.29
15	1 mth TC Rate	3.67	3.41	3.22	3.13
16	NSPI's Spread	0.51	0.51	0.51	0.51
17	**All In CP Rates**	**4.18%**	**3.92%**	**3.73%**	**3.64%**
18	**Interest Rate Calculation per WACC methodology**				
19	Opening, Short-Term Debt				9,835
20	Ending, Short-Term Debt				165,932
21	**Average Short-Term Debt Balance, 2025**				**87,884**
22	**Interest on Short-Term Debt :**				**4,271**
23	**Short-Term Debt cost**				**4.86%**
24					

Line		Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Total
25		**Dec-24**	**Jan-25**	**Feb-25**	**Mar-25**	**Apr-25**	**May-25**	**Jun-25**	**Jul-25**	**Aug-25**	**Sep-25**	**Oct-25**	**Nov-25**	**Dec-25**	**Total**
26	**Forecasted Balances of Short-Term debt by month**	9,835	60,568	44,785	61,177	145,891	255,252	20,475	45,207	90,237	102,722	175,071	179,053	165,932	
27	**Interest Expense by month**		211	156	213	476	833	67	140	280	319	530	543	503	**4,271**

28 1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

Nova Scotia Power Inc.
Details of Short-Term Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

2024 Financial Outlook
1 **NSPI CP Forecast, Calculated on February 20, 2024**
2 **Using data from July and August 2023.**

Line		2024 Q1/24	Q2/24	Q3/24	Q4/24
3	**3 mth T-bills Forecast**				
4	BMO (Aug 2023)	5.10%	4.85%	4.65%	4.35%
5	BNS (Jul 2023)	4.90%	4.65%	4.10%	3.60%
6	CIBC (Aug 2023)	5.00%	4.25%	3.90%	3.35%
7	TD (Unavailable)				
8	RBC (Aug 2023)	5.00%	5.00%	4.50%	4.00%
9		5.00%	4.69%	4.29%	3.83%
10	3 mth BAs to 3 mth Tbills Spread (6 mth avg)	0.22%	0.22%	0.22%	0.22%
11	**3 mth BA Rates**	**5.22%**	**4.91%**	**4.51%**	**4.05%**
12	3 mth to 1 mth BA Spread (current)	-0.11%	-0.11%	-0.11%	-0.11%
13	**1 mth BA Rate**	**5.11%**	**4.80%**	**4.40%**	**3.94%**
14	Current NSPI spread	0.70%	0.70%	0.70%	0.70%
15	**All In 1 mth CP Rates**	**5.81%**	**5.50%**	**5.10%**	**4.64%**
16					

17 **Interest Rate Calculation per WACC methodology**

Line		
18	Opening, Short-Term Debt	199,045
19	Ending, Short-Term Debt	116,298
20	**Average Short-Term Debt Balance, 2024**	**157,672**
21	**Interest on Short-Term Debt :**	**8,869**
22	**Short-Term Debt cost**	**5.62%**
23		

Line		Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Total
25	**Forecasted Balances of Short-Term debt by month**	199,045	253,052	236,360	192,160	193,453	202,869	250,276	38,490	1,445	145,236	175,035	179,802	116,298	
26	**Interest Expense by month**		1,225	1,144	930	886	929	1,147	164	6	617	676	694	449	**8,869**
27															

28 1) Figures presented reflect whole numbers rounded to the nearest thousand which may cause rounding differences for some line items.

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

Nova Scotia Power Inc.
Details of Short-Term Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

Compliance Filing - 2023-2024 Rate Case
NSPI CP Forecast, As of August 24, 2021

	2023			
3 mth T-bills info	**Q1/23**	**Q2/23**	**Q3/23**	**Q4/23**
BMO (Aug 9)	0.68%	0.68%	0.68%	0.68%
CIBC (Aug 9)	0.83%	0.83%	0.83%	0.83%
BNS (N/A)				
TD (N/A)				
RBC (N/A)				
	0.76%	0.76%	0.76%	0.76%
Tbills to BA's Spread	0.07%	0.07%	0.07%	0.07%
BA Rates	0.83%	0.83%	0.83%	0.83%
BA Spread (current)	-0.02%	-0.02%	-0.02%	-0.02%
Estimated CP Rate	**0.81%**	**0.81%**	**0.81%**	**0.81%**
NSPI's spread	0.18%	0.18%	0.18%	0.18%
All In CP Rates	**0.99%**	**0.99%**	**0.99%**	**0.99%**

Interest Rate Calculation per WACC methodology

Opening, Short-Term Debt	103,005
Ending, Short-Term Debt	36,274
Average Short-Term Debt Balance, 2023	**69,640**
Interest on Short-Term Debt :	**953**
Short-Term Debt cost	**1.37%**

	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total
Forecasted Balances of Short-Term debt by month	103,005	120,659	124,917	103,090	93,347	117,137	176,622	188,224	187,123	(23,288)	(13,611)	50,283	36,274	
Interest Expense by month		99	103	85	77	96	145	155	154	(19)	(11)	41	30	**953**

1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

Nova Scotia Power Inc.
Details of Short-Term Debt Interest Calculation
Year Ended December 31st
Thousands of Dollars

2022 Financial Outlook

Line					
1	**NSPI CP Forecast, As of August 19, 2021**				
2			**2022**		
	3 mth T-bills info	**Q1/22**	**Q2/22**	**Q3/22**	**Q4/22**
3	BMO (Aug 9)	0.25%	0.25%	0.25%	0.50%
4	BNS (Jul 23)	0.20%	0.35%	0.60%	0.90%
5	CIBC (Aug 9)	0.25%	0.25%	0.25%	0.50%
6	TD (Jul 1)	0.20%	0.20%	0.35%	0.63%
	RBC (Aug 12)	0.25%	0.30%	0.55%	0.80%
7		0.23%	0.27%	0.40%	0.67%
8	Tbills to BA's Spread	0.07%	0.07%	0.07%	0.07%
9	BA Rates	0.30%	0.34%	0.47%	0.74%
10	BA Spread (current)	-0.02%	-0.02%	-0.02%	-0.02%
11	**Estimated CP Rate**	**0.28%**	**0.32%**	**0.45%**	**0.72%**
12	NSPI's spread	0.18%	0.18%	0.18%	0.18%
13					
14	**All In CP Rates**	**0.46%**	**0.50%**	**0.63%**	**0.90%**
15					
16	**Interest Rate Calculation per WACC methodology**				
17	Opening, Short-Term Debt				178,235
18	Ending, Short-Term Debt				179,478
19	**Average Short-Term Debt Balance, 2022**				**178,857**
20	**Interest on Short-Term Debt :**				**981**
21	**Short-Term Debt cost**				**0.55%**
22					

Line		Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
24	**Forecasted Balances of Short-Term debt by month**	178,235	226,744	141,117	101,431	131,402	196,116	227,795	256,776	272,595	29,672	61,179	129,871	179,478	
25	**Interest Expense by month**		87	54	39	55	82	95	135	143	16	46	97	134	**981**
26															

27 1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

PARTIALLY CONFIDENTIAL (Attachment Only)

Request IR-6:

(a) Please provide a schedule detailing the projected opening and closing balances of construction work in progress for 2025, to which the proposed AFUDC rate is expected to be applied, along with an estimate of the total AFUDC that would be charged in 2025, assuming the requested WACC/AFUDC rate is approved.

(b) What was NS Power's five quarter average equity ratio in 2024? Please provide the calculation in excel with cells intact.

(c) What is NS Power's forecast five quarter average equity rate for 2025? Please provide the calculation in excel with cells intact.

(d) Please provide a version of the schedule on page 1 of Appendix A showing the calculation of NS Power's actual 2024/2025 capital structure and weighted pre-tax cost rate, including the actual equity ratio (i.e. not the deemed equity ratio of 40.0%).

Response IR-6:

(a) The opening and closing balances of construction work in progress for 2025 are $224.2 million and $232.3 million respectively. Assuming the WACC/AFUDC rate is approved, approximately $16.7 million would be capitalized in 2025.

(b-d) NS Power calculates WACC/AFUDC using a common equity ratio of 40 percent consistent with the Board prescribed methodology as determined in M07215.[1]

NS Power is unable to provide the Company's actual capital structure for 2024 in advance of completing its 2024 Regulated Financial Statements. Please refer to Partially

[1] 1 M07215, An Application for approval of NS Power's Pre-Tax Weighted Average Cost of Capital (WACC) and Allowance for Funds Used During Construction (AFUDC) Rates, Board Decision, April 12, 2016, page 8.

Confidential Attachment 1 showing the Company’s cost of capital and forecast capital structure using the unadjusted equity ratio as per the 2025 Budget.

Nova Scotia Power Inc. **FOR-10**

Estimated Average Capital and Cost of Capital

Year Ended December 31st

Thousands of Dollars

2025 Budget

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2025					**Cost**	**Cost**	**Weighted**	**Weighted**
			Average	**Capital**	**Pre-tax**	**After-tax**	**Pre-tax**	**After-tax**
	Opening	**Closing**	**Capital**	**Ratio**	**Factor**	**Factor**	**Cost**	**Cost**
Estimated Cost of Capital								
	[redacted]							
Short-term debt								
Long-term debt								
Total debt								
Common equity								
Total	**$5,362,728**	**$5,966,668**	**$5,664,698**	**100.0%**			**6.56%**	**5.61%**

Notes:

1) Figures presented reflect whole numbers which may cause $1M in rounding differences on some line items.

2) Pre-tax equity cost excludes the income tax gross-up factor.

3) Average capital reflects average of year-end balances.

Request IR-7:

Page 8 of the application states that the Bloomberg data uses a larger sample size of short-term interest rates from a more diverse group of financial institutions.

(a) Please specify which Bloomberg short term interest rate NS Power seeking to apply?

(b) What is the sample size used in Bloomberg's short-term rate?

(i) How many financial institutions in the sample are Canadian?

a. Of those Canadian financial institutions, how many does NS Power borrow from?

(c) Please explain what is meant by "diverse" in reference to the financial institutions used in Bloomberg's short-term rate.

(i) Are these institutions constant year-over-year or do they change over time?

a. If these institutions change over time, at what frequency?

b. If these institutions change over time, how does NS Power plan to ensure that this rate is reflective of the borrowing market in which NS Power participates?

(ii) Please explain how the rates in the Bloomberg forecast are more accurate and/or more reflective of the environment in which NS Power borrows funds, compared to the currently approved methodology.

(d) Please explain how using Bloomberg's rate improves the forecasted short-term interest rate, with specific reference to forecast accuracy.

Response IR-7:

(a) NS Power is seeking to apply the Bloomberg estimate of 3-month Canadian Treasury Bills (T-Bills) in the calculation of the forecast short-term debt interest rates as the outlook for T-Bills in Appendix A, page 5 of 6.

(b) The Bloomberg consensus currently uses estimates from analysts at 11 banks.

a. Six.

b. Five.

(c) The Bloomberg consensus rate includes additional analyst opinions which were not previously considered, increasing the number of Canadian T- Bill estimates used to forecast NS Power's cost of borrowing.

(i)

(a-b) NS Power does not know Bloomberg's methodology and is unable to respond

(ii) The rate NS Power has proposed to use from Bloomberg is an average of analyst opinions regarding the future Canadian T-Bill interest rate. The addition or removal of analysts incorporated into the consensus opinion would not impact how relevant the consensus forecast of a Canadian T-Bill interest rate is to NS Power's cost of borrowing.

The Bloomberg forecast and the previous process both rely upon an estimate of the Canadian Treasury Bill, therefore there is no difference in terms of how reflective the forecasts are of the environment in which NS Power borrows funds. The

Bloomberg forecast simply incorporates the views of additional bank analysts and is more efficient to source than obtaining the analyst forecast from five Canadian financial institutions separately, as was previously done.

(d) The Canadian Treasury Bill estimate sourced from Bloomberg allows NS Power to develop a forecast based upon the consensus of analysts at 11 banks. The inclusion of additional analyst opinions into the average rate diminishes the weight of any single analyst opinion. This reduces the impact of outliers, errors, and biases (e.g., optimism or pessimism) on interest rate estimates. In addition, analysts often use different models, inputs, and sources of information to produce estimates. The incorporation of further estimates into the forecast captures a broader range of perspectives which provides NS Power with a more comprehensive estimate. By including a broader range of analyst's opinions, NS Power aims to increase the accuracy of its interest rate forecasting.

Request IR-8:

Appendix A page 2 provides 4.13% as the projected interest rate for Total Short-Term debt.

(a) Why is it not used in place of 5.19% in the Cost of Capital?

(b) Please provide the source of the forecasted balances of short-term debt by month in excel format with cells intact.

Response IR-8:

(a) The rate of 4.13 percent represents the quarterly average of commercial paper rates on line 9 of Appendix A Page 5 of 6. The rate of 5.19 percent represents total short-term interest expense of $4,558 (line 20 of Appendix A Page 5 of 6) divided by average short-term debt of $87,884 (line 7 of Appendix A Page 1 of 6). This is done in accordance with the methodology previously approved by the Board and prior WACC applications.

(b) The forecast short-term debt balances are estimated using the cash flow statement prepared during the Company’s annual budget. Please refer to Partially Confidential Attachment 1.

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

NS Power Cash Flow by Month ($ Thousands)

Operating Activities
Cash flow from operations
Total change in operating working capital
Net cash provided by operating activities

Financing Activities
Issue (retirement) long term debt
Net proceeds from common shares
Increase in (repayment of) short term debt (Δ in cash)
Net cash used in financing activities

Investing Activities
Net cash used in investing activities

[redacted]

Opening Short Term Debt	$9,835	$60,568	$44,785	$61,177	$145,891	$255,252	$20,475	$45,207	$90,237	$102,722	$175,071	$179,053	$9,835
Increase in (repayment of) short term debt	50,732	(15,783)	16,392	84,714	109,361	(234,777)	24,732	45,030	12,485	72,349	3,982	(13,121)	156,097
Closing Short Term Debt	$60,568	$44,785	$61,177	$145,891	$255,252	$20,475	$45,207	$90,237	$102,722	$175,071	$179,053	$165,932	$165,932

Request IR-9:

In reference to Appendix A page 2, Capital Structure and Ratios, Long-Term

(a) Why isn't a value provided in Colum (1) for Long-term Series F?

Response IR-9:

(a) The balances presented in the appendix are year-end figures. Therefore, Series "F" is blank because it is forecast to be repaid upon maturity on May 19, 2025.

Request IR-10:

Please identify the financing that is represented in the $1.8 amortization on deferred financing charges in Appendix A page 4.

(a) Why have the deferred financing charges increased from $1.4 million in the 2024 WACC/AFUC application to $1.8 million in this application.

Response IR-10:

(a) The deferred financing charges in Appendix A represents the amortization of bond premiums, bond discounts, defeasance, and financing fees resulting from the issuance of long-term debt which are amortized over the term of the debt instrument. The financing fees are forecast to increase primarily due to the maturity of the Series F issuance which had a bond premium amortized in deferred charges. Upon maturity of Series F, the bond premium amortization (income) will cease, thereby increasing the deferred financing charges.

Request IR-11:

Please explain why the long-term debt opening and closing balance uses the 2024 actual, but short-term debt opening and closing uses the projected 2025 amounts, as presented in Appendix A page 5.

Response IR-11:

Line 33 of Appendix A page 4 of 6 should have been labelled "Average Long-Term Debt, **2025"**. The average is calculated using the forecast opening and closing amounts for 2025. The amounts presented were correct, the error was related to the incorrect year used to label the line item.

Request IR-12:

Please show the calculation used to arrive at the current NSPI spread, as presented in Appendix A page 5.

(a) Please explain why the NSPI spread is added to the Outlook T-Bills to Term CORRA Rates spread.

(b) Please explain why the All in CP quarterly rates are not used to estimate the monthly interest expense on forecasted short-term debt.

(i) If they are, please provide a breakdown of the estimate showing the application of the quarterly All in CP Rates to short-term debt.

Response IR-12:

(a) The NS Power spread is an estimate of the rate money market investors will require to purchase the Company's commercial paper and the fees NS Power will be required to pay upon issuance. The spread reflects the Company's cost of borrowing above the benchmark rate and is determined by analyzing the credit spread of existing borrowings over the current benchmark rate. The spread used to calculate Term CORRA includes the 6-month historical spread between Term CORRA and Canadian Treasury Bills plus a fixed 29 basis points credit adjustment set by the Canadian Alternative Reference Rate working group which takes the Term CORRA rate from a secured, risk-free rate to an unsecured rate.

As noted in response to NSUARB IR-04, the Company's total spread to Canadian Treasury Bills remains fairly consistent with 2024, however, the presentation has changed due to the new Term CORRA benchmark rate.

(b) The interest expense forecast does use the all-in commercial paper quarterly rates. Please refer to NSUARB IR-2, Partially Confidential Attachment 1, tab .5 Appendix C – STD, row 9 and row 20.