

Finance Expense-Debt Levels MFR 1

Table(s) detailing the relied upon interest forecasts by forecaster for both short term and long term interest rates indicating, the date of the forecast, whether the forecast represented end of period data or average and describe what if any adjustments were made to end of period data forecasts to average the results. PUB/MH 1-28 (a-g)

Table 1 on the following page depicts the sources used to derive the forecast of Canadian 3 month T-bill rates for each quarter of the 2015/16 – 2020/21 period, as utilized in IFF15.

Table 2 depicts the sources used to derive the forecast of Canadian bond yield 10 yr+ rates for the 2015/16 – 2020/21 period, as utilized in IFF15.

Copies of the publically available source forecasts utilized in IFF15 are provided at the end of this response.

For forecasters that provided end of period rates, the rates provided in Tables 1 and 2 reflect rates adjusted to a comparable average period basis. For example, Desjardin's forecast provided end of period rates. Their forecast for 2016 Q2 end of period is 0.45% and 2016 Q3 end of period is 0.50% for Canada 3-month T-Bill. In order to place the forecast on an equivalent basis for a 2016 Q3 average period forecast, Desjardin's 2016 Q3 end of period forecast of 0.50% was averaged with their 2016 Q2 end of period forecast of 0.45% to approximate an average period 2016 Q3 forecast of 0.48%. This process was followed for all subsequent quarters and for all forecasters that provided end of period rates.

Since some sources do not prepare updates to outlooks in the fall, the smaller sample size can cause erratic swings in the consensus result. To avoid these swings, an interpolation between points of the unadjusted consensus forecast was applied.

Table 1 – Canadian 3-Month T-Bill Rate - %

Forecaster	Forecast Date	End of Period or Average	2015			2016				2017				2018				2019				2020				2021
			Q2**	Q3**	Q4**	Q1**	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Sep-15	Average	0.63	0.41	0.40	0.41	0.40	0.40	0.40	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
CIBC	21-Sep-15	End Period	0.63	0.51	0.45	0.45	0.45	0.50	0.63	1.40	1.40	1.40	1.40	2.10	2.10	2.10	2.10	*	*	*	*	*	*	*	*	
Desjardins	30-Sep-15	End Period					0.45	0.48	0.50																	
Laurentian	22-Sep-15	End Period	0.63	0.51	0.43	0.43	0.45	0.45	0.48																	
National Bank	1-Sep-15	End Period					0.21	0.26	0.36																	
Royal Bank	9-Sep-15	End Period	0.63	0.54	0.50	0.53	0.58	0.73	1.13																	
Scotiabank	1-Sep-15	End Period	0.63	0.51	0.48	0.50	0.50	0.53	0.70																	
TD Bank	21-Sep-15	End Period	0.63	0.51	0.45	0.45	0.45	0.45	0.48	0.53	0.68	0.98	1.18	1.50	1.88	2.00	2.10	2.30	2.60	2.75	2.85					
IHS Global Insight	9-Sep-15	Average	0.63	0.41	0.42	0.42	0.43	0.49	0.67	1.03	1.46	1.80	2.27	2.77	3.31	3.49	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
Conference Board	21-Sep-15	Average					0.38	0.38	0.46	0.59	0.71	0.98	1.17	1.42	1.67	1.92	2.17	2.42	2.67	2.92	3.17	3.38	3.46	3.46	3.46	
Average			2015/16			2016/17				2017/18				2018/19				2019/20				2020/21				
EO 2015 - Fiscal			0.50			0.60				1.68				2.47				2.98				3.16				
			0.50			0.54				1.41				2.39				2.98				3.02				

Note: The rates provided for 2015Q2 reflect actual average period Canadian 3-month T-bill rates.

Note: In the case where source forecasts are provided as end-of-period, the 2015 Q2 end-of-period actual rate of 0.58% was averaged with the source forecasters' end-of-period rate for Q3 in order to approximate an average period 2015 Q3 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2017+ is proprietary and cannot be disclosed.

Note: **The consensus forecast for 2015/16 reflects the forecasts from the summer 2015 review.

Table 2 – Canadian 10 Year+ Bond Yield Rate - %

Forecaster	Forecast Date	End of Period or Average	2015			2016				2017				2018				2019				2020				2021
			Q2**	Q3**	Q4**	Q1**	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Sep-15	Average					2.13	2.23	2.33																	
CIBC	21-Sep-15	End Period	1.96	2.03	2.14	2.21	2.09	2.21	2.46	2.88	2.88	2.88	2.88	3.25	3.25	3.25	3.25	*	*	*	*	*	*	*	*	
Desjardins	30-Sep-15	End Period					2.01	2.06	2.18																	
Laurentian	22-Sep-15	End Period	1.96	2.03	2.16	2.39	2.54	2.68	2.83																	
National Bank	1-Sep-15	End Period					2.16	2.23	2.29																	
Royal Bank	9-Sep-15	End Period	1.96	2.09	2.29	2.53	2.71	2.88	3.03																	
Scotiabank	1-Sep-15	End Period	1.96	2.02	2.11	2.30	2.40	2.51	2.60																	
TD Bank	21-Sep-15	End Period	1.96	2.03	2.10	2.24	2.14	2.25	2.36	2.49	2.63	2.79	2.96													
IHS Global Insight	9-Sep-15	Average	1.96	2.16	2.30	2.53	2.75	2.90	3.04	3.20	2.71	2.77	2.83	3.00	3.21	3.38	3.48	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	
Conference Board	21-Sep-15	Average					1.79	1.99	2.22	2.81	3.20	3.47	3.73	4.04	4.24	4.44	4.59	4.62	4.65	4.67	4.68	4.69	4.69	4.69	4.69	
Average			2015/16			2016/17				2017/18				2018/19				2019/20				2020/21				
EO 2015 - Fiscal			2.14			2.48				3.13				3.65				3.86				3.79				
			2.14			2.45				3.00				3.60				3.69				3.79				

Note: The rates provided for 2015Q2 reflect actual average period Canadian 10 Year+ Bond Yield rates.

Note: In the case where source forecasts are provided as end-of-period, the 2015 Q2 end-of-period actual rate of 2.03% (average of 1.76% for Canada 10 year and 2.31% for Canada 30 year) was averaged with the source forecasters' end-of-period rate for Q3 in order to approximate an average period 2015 Q3 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2017+ is proprietary and cannot be disclosed.

Note: **The consensus forecast for 2015/16 reflects the forecasts from the summer 2015 review.

The calculations of the Canadian 3-Month T-Bill and Canada Bond Yield 10 year+ rates for the 2015/16, 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21 period are as follows:

- The 2015/16 forecast included the average of all data points within Q2, Q3, Q4 of 2015 and Q1 of 2016. The 2016/17 forecast included the average of all data points within Q2, Q3, Q4 of 2016 and Q1 of 2017. The 2017/18 forecast included the average of all data points within Q2, Q3, Q4 of 2017 and Q1 of 2018. The 2018/19 forecast included the average of all data points within Q2, Q3, Q4 of 2018 and Q1 of 2019. The 2019/20 forecast included the average of all data points within Q2, Q3, Q4 of 2019 and Q1 of 2020. The 2020/21 forecast included the average of all data points within Q2, Q3, Q4 of 2020 and Q1 of 2021. For example, the Canada 3-Month T-Bill rate for 2016/17 of 0.55% (rounded to the nearest 5 basis points) in Table 1 was calculated as the average of the following data points:

	2016 Q2	2016 Q3	2016 Q4	2017 Q1
BMO Nesbitt Burns	0.40%	0.40%	0.40%	*
CIBC	0.45%	0.50%	0.63%	1.40%
Desjardins	0.45%	0.48%	0.50%	
Laurantian	0.45%	0.45%	0.48%	
National Bank	0.21%	0.26%	0.36%	
Royal Bank	0.58%	0.73%	1.13%	
Scotiabank	0.50%	0.53%	0.70%	
TD Bank	0.45%	0.45%	0.48%	0.53%
IHS Global Insight	0.43%	0.49%	0.67%	1.03%
Conference Board	0.38%	0.38%	0.46%	0.59%
Average	0.55%			

**Information provided by BMO is proprietary and cannot be disclosed.*

The Manitoba Hydro Canadian short-term interest rate was calculated by adding the guarantee fee of 1.00% to the 3-Month T-Bill rate as follows:

	Canada 3-Month T-Bill	Guarantee Fee	MH Cdn Short Term Rate
2015/16	0.50%	1.00%	1.50%
2016/17	0.55%	1.00%	1.55%
2017/18	1.40%	1.00%	2.40%
2018/19	2.40%	1.00%	3.40%
2019/20	3.00%	1.00%	4.00%
2020/21	3.00%	1.00%	4.00%

The Manitoba Hydro Canadian long-term interest rate was calculated by adding the appropriate credit spread to the Canada Bond Yield 10 Year+ rate and a provincial debt guarantee fee as follows:

	Canada Bond Yield 10 Yr+	Spread	Guarantee Fee	MH Cdn Long Term Rate
2015/16	2.15%	0.90%	1.00%	4.05%
2016/17	2.45%	0.90%	1.00%	4.35%
2017/18	3.00%	0.80%	1.00%	4.80%
2018/19	3.60%	0.80%	1.00%	5.40%
2019/20	3.70%	0.80%	1.00%	5.50%
2020/21	3.80%	0.80%	1.00%	5.60%