

PUB (MPI) Pre-Ask 1

Preamble: (Derived from PF. 1 & PUB/MPI 2-30(b) and (c) Attachment):

	2015/16	2016/17	2017/18
Incremental Change in movement of interest rates (bp) August vs March, 2015	(09)	(07)	09
Net Claims Incurred			
August Update (PUB/MPI 2-30)	602,497	684,345	680,208
Application - March 2015	588,900	677,141	691,737
Gain(loss) impact on net income	(13,597)	(7,204)	11,529
Investment Income			
August Update	(688)	16,419	(434)
Application - March 2015	(10,830)	12,809	12,991
Gain(loss) impact on net income	10,142	3,610	(13,425)
Net Income (Loss)			
August Update	11,510	(15,002)	10,585
Application - March 2015	14,965	(11,402)	12,586
Change	(3,455)	(3,600)	(2,001)

- a) Please provide an explanation of the relationship between the change in net claims incurred and investment income for 2015/16, 2016/17 and 2017/18 based on the updated interest rates in PUB/MPI 2-30 and that indicated in the application.
- b) On pages 48 - 52 of the DCAT report, it would appear that a decline of 79 basis points in interest rates has an adverse impact on net income of \$68 million in 2016/17. The above August update reflects a \$3.6 million adverse impact on net

income arising from a 7 basis point decline in interest rates in the same period. Please reconcile these two modelled results.

RESPONSE:

- a) The impacts on claims and investment income due to interest rate movements are not perfectly offsetting because the interest rate risk mitigation strategy has been implemented on a Corporate basis. There is a small amount of mismatch on a Basic basis. As a result, lower forecasted interest rates will have a negative impact on net income and higher forecasted interest rates will have a positive impact on net income.

Interest rate movements were smaller in 2015/2016 and 2016/2017 in the August interest rate forecast compared to base, causing a small negative impact on net income, as expected.

In 2017/18, the net income impact was (\$2.0) million even though the interest rate movement was 9 bps higher in the August interest rate forecast than the March interest rate forecast. The (\$2.0) million net income impact with positive movement in interest rates can be explained due to three small cumulative negative impacts in 2017/18 relative to base.

- Interest income from marketable bonds was (\$1.6) million lower in 2017/18 due to lower absolute levels of interest rates in the August interest rate forecast relative to base.
- The positive net income impact from bond amortization in 2017/18 was (\$1.1) million lower in the August interest rate forecast compared to the base forecast.
- Third, the yield on the MUSH bonds was 0.04% lower in the August forecast even though the market interest rate increased by 9 bps during the year. This lower MUSH yield has a negative impact on the claims discount rate, which negatively impacts net income by (\$1.7) million. The MUSH bond yield is based on the book yield, therefore, it does not immediately react to changes in market interest rates.

If 2017/18 net income was adjusted by these three negative factors, the adjusted net income would be positive \$2.4 million [(\$2.0) unadjusted net income + \$1.6 higher investment income + \$1.1 amortization of bond impact + \$1.7 MUSH yield impact].

- b) The decline of 79 basis points in that scenario is from 2015 Q4 interest rate of 2.04% to 1.25%. However, when evaluating the interest rate impact it should be compared at the same point in time. As is shown in Table 3, the impacts on a per basis point change are similar. The change in interest rates from the DCAT Interest Rate Scenario to the 2016 GRA Base is a decrease of 145 basis points.

Furthermore, the \$68 million adverse impact on net income of the DCAT report includes interest rate impact on Deferred Policy Acquisition Costs and Premium Deficiency. To make the proper comparison, net income without Deferred Policy Acquisition Costs and Premium Deficiency should be used as is in Table 2.

Table 1 – Interest Rate Forecast

	Government of Canada 10 Year Bond Rate Forecast				
	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4
2016 GRA	2.04%	2.21%	2.40%	2.57%	2.70%
2016 GRA with August Interest Rate Forecast	1.95%	2.09%	2.23%	2.41%	2.54%
DCAT Interest Rate Scenario	2.04%	1.25%	1.25%	1.25%	1.25%

Table 2

	Change from 2015 Q4 to 2016 Q4	2016 Net Income (\$ millions)
2016 GRA	+66bps	(11.4)
2016 GRA with August Interest Rate Forecast	+59bps	(15.0)
DCAT Interest Rate Scenario	-79bps	(66.8)

Table 3 – Comparison to 2016 GRA

	Change from 2015 Q4 to 2016 Q4	2016 Net Income (\$ millions)	\$ per +1bps (\$ millions)
Compared to 2016 GRA			
2016 GRA with August Interest Rate Forecast	-7bps	(3.6)	0.5
DCAT Interest Rate Scenario	-145bps	(55.4)	0.4