
Appendix 1: Order 1/21, Order #5: Alternate Rate Indication

1. Introduction

1 In Order 1/21, directive 10.5, the Public Utilities Board of Manitoba (PUB) ordered that
2 *"In the 2022 GRA, the Corporation shall provide a rate indication by Major Use Class*
3 *including the use of interest rates at points on the yield curve corresponding to the*
4 *duration of liabilities in the determination of the rate indication for each Major Use*
5 *Class, as well as an alternative rate indication by Major Use Class excluding this*
6 *change."*

2. Background

7 MPI's ratemaking methodology currently uses a single investment return to discount
8 all cash flows for the rating year. Per *Ratemaking, page 21*, *"MPI uses the investment*
9 *return to discount future payments is based on the market value weighted yield of the*
10 *marketable bonds portfolio maintained by MPI (i.e. the new money yield)." Further,*
11 *for the 2022/23 rating year, "The investment return of 2.46% reflects the projected*
12 *yield as at the midpoint of rating year 2022/23 (i.e. October 1, 2022)."*

13 The investment return of 2.46% represents the point on the yield curve corresponding
14 to a duration of 10.43 years, which reflects the duration of the unpaid claim liabilities
15 as of October 1, 2022. While this does not reflect the investment return corresponding
16 to the duration of the cash flows for rating year 2022/23, MPI's rationale was that all
17 revenue received gets invested in the same Basic investment portfolio, and therefore
18 the use of 2.46% was appropriate.

3. Methodology

19 In order to comply with Board Order 1/21, Order #5, MPI first determined the
20 duration of the cash flows for rating year 2022/23 separately for the following:

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- 1 • Claims Costs – Durations were determined separately for each coverage
2 corresponding to the breakdown presented in *Ratemaking Appendix 9, Table 1*:
3 ○ Income Replacement Indemnity – Normal and enhancement determined
4 separately
5 ○ Accident Benefits Other – Normal and enhancement determined
6 separately
7 ○ Collision
8 ○ Comprehensive
9 ○ Bodily Injury
10 ○ Property Damage
11 • Claims Expenses – The duration for claims expenses was not determined.
12 Claims expenses represent a load on claims costs. As such, the discounted
13 claims expenses reflect the weighted average discount for total claims costs.
14 • Non-Claims Costs (other than Claims Expenses) – The durations for non-claims
15 costs are one year or less given the assumed cash flows (see *Ratemaking*
16 *Chapter RM.4.2.2*).
17 • Other Income Sources – The durations for other income sources are one year
18 or less given the assumed cash flows (see *Ratemaking Chapter RM.4.2.3*).

19 Given that the duration of the cash flows is a function of the investment return, and
20 the investment return is selected based on the duration of the cash flows, an iterative
21 process is necessary. MPI ran iterations (for each separate item listed above) until
22 there was no difference in the investment returns between two successive iterations.

23 *Figure 1* shows the duration of the cash flows for claims costs and the corresponding
24 investment returns. *Figure 2* shows the projected yield curve as at the midpoint of
25 rating year 2022/23 (i.e. October 1, 2022).

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Figure 1 Duration and Investment Return by Coverage

Line No.	Coverage	Duration (years)	Investment Return
1	Income Replacement Indemnity		
2	Normal	7.92	2.01%
3	Enhancement	11.42	2.58%
4	Accident Benefits - Other (Indexed)		
5	Normal	5.94	1.64%
6	Enhancement	9.94	2.40%
7	Accident Benefits - Other (Non-Indexed)		
8	Normal	2.22	0.88%
9	Enhancement	3.31	0.97%
10	Bodily Injury	3.70	1.08%
11	Property Damage	0.96	0.88%
12	Collision	0.71	0.88%
13	Comprehensive	0.76	0.88%

Figure 2 Investment Return by Duration

Line No.	Duration (years)	Investment Return
1	1	0.88%
2	2	0.88%
3	3	0.88%
4	4	1.17%
5	5	1.46%
6	6	1.65%
7	7	1.83%
8	8	2.02%
9	9	2.22%
10	10	2.41%
11	11	2.54%
12	12	2.64%
13	13	2.75%
14	14	2.86%
15	15	2.93%
16	16	3.00%
17	Thereafter	3.00%

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4. Results

- 1 Figure 3 presents the required rates and required rate changes on an overall basis,
- 2 and for the major classes.

Figure 3 Rating Year 2022/23 Major Classification Required Rate Changes - Breakeven Rates Adjusted for DSR Discount Changes

Line No.	Coverage	Overall	Private Pass	Comm	Public	Motor-Cycle	Trailer	ORV
1	22/23 Units	1,232,900	847,100	47,600	12,000	19,000	226,700	80,500
2	Claims	707.89	935.90	699.11	1,811.38	730.47	46.87	5.39
3	Claims Expense	125.46	165.87	123.90	321.03	129.46	8.31	0.96
4	Road Safety	10.54	14.04	14.04	14.04	14.04	0.00	0.00
5	Operating Expense	62.73	83.55	83.55	83.55	83.55	0.00	0.00
6	Regulatory/Appeal	3.74	4.98	4.98	4.98	4.98	0.00	0.00
7	Commission: Vehicle	35.01	46.21	34.93	87.59	35.09	2.74	0.26
8	Prem Tax: Vehicle	28.01	36.97	27.95	70.07	28.07	2.19	0.20
9	Comm & Prem Tax: Driver	3.16	4.21	4.21	4.21	4.21	0.00	0.00
10	Commission Flat Fee	5.05	6.73	6.73	6.73	6.73	0.00	0.00
11	Reins: Casualty	1.24	1.65	1.65	1.65	1.65	0.00	0.00
12	Reins: Catastrophe	11.82	12.86	12.86	12.86	0.00	12.86	0.00
13	Fleet Rebates	14.86	20.21	20.21	20.21	0.00	0.00	0.00
14	Anti-Theft Discount	1.08	1.57	0.00	0.00	0.00	0.00	0.00
15	Driver Prem	51.95	69.19	69.19	69.19	69.19	0.00	0.00
16	Service Fees	25.05	33.36	33.36	33.36	33.36	0.00	0.00
17	Req Rate (Raw)	933.59	1,232.19	931.56	2,335.74	935.70	72.96	6.80
18	Req Rate (Bal)	929.52	1,226.82	927.50	2,325.56	931.62	72.64	6.77
19	21/22 Average Rate	888.59	1,165.66	867.45	2,145.90	905.87	73.36	7.02
20	Major Class Drift	5.3%	6.3%	5.4%	0.9%	0.2%	5.0%	0.0%
21	22/23 Average Rate	935.98	1,238.66	914.17	2,165.03	907.45	77.00	7.02
22	Without Rate Change							
23	Full Cred Req Change	-0.7%	-1.0%	1.5%	7.4%	2.7%	-5.7%	-3.5%
24	Applied for Change	1.9%	1.9%	1.6%	7.9%	6.0%	-5.7%	-3.5%
25	Credibility		99.3%	88.8%	66.7%	76.0%	97.4%	93.1%
26	Cred Wtd Change		1.9%	1.6%	5.9%	5.0%	-5.5%	-3.2%
27	Cred Wtd Req Rate		1,261.83	928.93	2,293.08	953.07	72.79	6.80
28	Cred Wtd Req Rate (Bal)	954.13	1,262.44	929.38	2,294.18	953.53	72.83	6.80
29	Cred Wtd Change (Bal)		1.9%	1.7%	6.0%	5.1%	-5.4%	-3.1%

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- 1 *Figure 4* presents a comparison of the required rates and required rate changes in
2 *Figure 3* to *Ratemaking Chapter, Figure RM-14*. The 2.1% higher overall required rate
3 change is due to the significantly shorter duration of the cash flows for rating year
4 2022/23 compared to the duration of the unpaid claim liabilities as of October 1, 2022.

Figure 4 Impact of Changing the Investment Return to Match the Duration of Liabilities for Rating Year 2022/23

Line No.	Coverage	Overall	Private Pass	Comm	Public	Motor-Cycle	Trailer	ORV
1	2022 General Rate Application - Per Part VI, Ratemaking							
2	Credibility Weighted Required Rate	934.20	1,236.44	907.36	2,243.85	917.44	71.98	6.50
3	Credibility Weighted Required Rate Change	-0.2%	-0.2%	-0.7%	3.6%	1.1%	-6.5%	-7.4%
4	Change: Investment Return Matching the Duration of Liabilities for Rating Year 2022/23							
5	Credibility Weighted Required Rate	954.13	1,262.44	929.38	2,294.18	953.53	72.83	6.80
6	Impact of Change	19.94	26.00	22.02	50.33	36.09	0.85	0.30
7	Credibility Weighted Required Rate Change	1.9%	1.9%	1.7%	6.0%	5.1%	-5.4%	-3.1%
8	Impact of Change	2.1%	2.1%	2.4%	2.3%	4.0%	1.1%	4.3%