## Undertaking \#28

MPI to provide the discount rate used for the calculation of the interest rate impact on claims incurred in PUB-MPI-2-11 and MPI Exhibit Number 27; and, if possible, include the calculations involved in the calculation of the discount rate as at June 30, 2020, and August 31, 2020.

## RESPONSE:

Please see Figures 1 and 2 below supporting the Basic claims discount rate as well as the New Money Yield calculations.

## Figure $1 \quad$ Basic Claims Discount Rate and New Money Yield - 2021 GRA - PUB (MPI) 2-11 revised

| Line |  | 2020/21 | 2021/22 |  |  |  | 2022/23 |  |  |  | 2023/24 |  |  |  | 2024/25 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| 1 | Basic Claims Liability Duration | 10.52 | 10.55 | 10.56 | 10.57 | 10.46 | 10.48 | 10.49 | 10.50 | 10.44 | 10.46 | 10.47 | 10.48 | 10.41 | 10.43 | 10.44 | 10.45 | 10.38 |
| 2 | Fixed Income Weighted Average Duration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Government Bonds | 7.89 | 7.84 | 7.86 | 7.88 | 7.89 | 7.78 | 7.80 | 7.81 | 7.83 | 7.77 | 7.79 | 7.80 | 7.81 | 7.74 | 7.75 | 7.76 | 7.77 |
| 4 | Corporate Bonds | 2.69 | 2.69 | 2.69 | 2.69 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.68 | 2.68 |
| 5 | Total Fixed Income Weighted Average Duration | 10.58 | 10.52 | 10.55 | 10.56 | 10.57 | 10.46 | 10.48 | 10.49 | 10.50 | 10.44 | 10.46 | 10.47 | 10.48 | 10.41 | 10.43 | 10.44 | 10.45 |
| 6 | Net ALM Duration Gap | 0.06 | (0.03) | (0.01) | (0.01) | 0.12 | (0.02) | (0.01) | (0.01) | 0.06 | (0.02) | (0.01) | (0.01) | 0.07 | (0.02) | (0.01) | (0.01) | 0.06 |
| 7 | Percentage Allocations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Government Bonds | 56\% | 57\% | 57\% | 58\% | 58\% | 59\% | 59\% | 59\% | 59\% | 60\% | 60\% | 61\% | 61\% | 61\% | 62\% | 62\% | 62\% |
| 9 | Corporate Bonds | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 10 | MUSH | 23\% | 22\% | 22\% | 21\% | 21\% | 20\% | 20\% | 19\% | 19\% | 18\% | 18\% | 18\% | 17\% | 17\% | 16\% | 16\% | 16\% |
| 11 | Total Fixed Income Assets | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% |
| 12 | Yield To Maturity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 | Government Bonds | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% | 1.61\% |
| 14 | Corporate Bonds | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% | 2.82\% |
| 15 | MUSH | 4.39\% | 4.37\% | 4.34\% | 4.32\% | 4.30\% | 4.28\% | 4.26\% | 4.23\% | 4.21\% | 4.19\% | 4.17\% | 4.15\% | 4.12\% | 4.10\% | 4.08\% | 4.06\% | 4.04\% |
| 16 | Total Fixed Income Yield to Maturity | 2.50\% | 2.47\% | 2.46\% | 2.44\% | 2.43\% | 2.40\% | 2.39\% | 2.38\% | 2.37\% | 2.34\% | 2.33\% | 2.32\% | 2.31\% | 2.29\% | 2.28\% | 2.27\% | 2.26\% |
| 17 | Management Fees | 0.07\% | 0.07\% | 0.07\% | 0.06\% | 0.07\% | 0.07\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% |
| 18 | Basic Claims Discount Rate | 2.43\% | 2.40\% | 2.39\% | 2.38\% | 2.36\% | 2.34\% | 2.33\% | 2.31\% | 2.30\% | 2.28\% | 2.27\% | 2.26\% | 2.25\% | 2.23\% | 2.22\% | 2.21\% | 2.19\% |
| 19 | New Money Yield Calculation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20 | Percentage Allocations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21 | Government Bonds |  |  | 73.41\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 | Corporate Bonds |  |  | 26.59\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | Yield To Maturity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24 | Government Bonds |  |  | 1.61\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25 | Corporate Bonds |  |  | 2.82\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26 | New Money Yield |  |  | 1.93\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Figure 2 Basic Claims Discount Rate and New Money Yield - 2021 GRA - October 9, 2020 update

| Line |  | 2020/21 | 2021/22 |  |  |  | 2022/23 |  |  |  | 2023/24 |  |  |  | 2024/25 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| 1 | Basic Claims Liability Duration | 10.66 | 10.65 | 10.67 | 10.68 | 10.57 | 10.60 | 10.61 | 10.62 | 10.61 | 10.63 | 10.64 | 10.65 | 10.63 | 10.65 | 10.66 | 10.66 | 10.65 |
| 2 | Fixed Income Weighted Average Duration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Government Bonds | 7.85 | 7.91 | 7.90 | 7.92 | 7.93 | 7.83 | 7.86 | 7.87 | 7.89 | 7.88 | 7.90 | 7.91 | 7.92 | 7.90 | 7.92 | 7.93 | 7.94 |
| 4 | Corporate Bonds | 2.74 | 2.75 | 2.75 | 2.75 | 2.75 | 2.74 | 2.74 | 2.74 | 2.74 | 2.73 | 2.73 | 2.73 | 2.73 | 2.72 | 2.72 | 2.72 | 2.72 |
| 5 | Total Fixed Income Weighted Average Duration | 10.60 | 10.66 | 10.65 | 10.67 | 10.68 | 10.57 | 10.60 | 10.61 | 10.62 | 10.61 | 10.63 | 10.64 | 10.65 | 10.63 | 10.65 | 10.66 | 10.66 |
| 6 | Net ALM Duration Gap | (0.07) | 0.01 | (0.01) | (0.01) | 0.11 | (0.03) | (0.01) | (0.01) | 0.01 | (0.02) | (0.01) | (0.01) | 0.03 | (0.02) | (0.01) | (0.01) | 0.02 |
| 7 | Percentage Allocations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Government Bonds | 57\% | 56\% | 57\% | 57\% | 57\% | 58\% | 58\% | 59\% | 59\% | 59\% | 60\% | 60\% | 60\% | 61\% | 61\% | 61\% | 62\% |
| 9 | Corporate Bonds | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 23\% | 23\% | 23\% |
| 10 | MUSH | 22\% | 23\% | 22\% | 22\% | 21\% | 20\% | 20\% | 20\% | 19\% | 19\% | 18\% | 18\% | 17\% | 17\% | 16\% | 16\% | 16\% |
| 11 | Total Fixed Income Assets | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% |
| 12 | Yield To Maturity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 | Government Bonds | 1.65\% | 1.66\% | 1.66\% | 1.66\% | 1.66\% | 1.65\% | 1.65\% | 1.65\% | 1.66\% | 1.65\% | 1.66\% | 1.66\% | 1.66\% | 1.66\% | 1.66\% | 1.66\% | 1.66\% |
| 14 | Corporate Bonds | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% | 2.69\% |
| 15 | MUSH | 4.39\% | 4.37\% | 4.35\% | 4.33\% | 4.31\% | 4.28\% | 4.26\% | 4.24\% | 4.22\% | 4.20\% | 4.18\% | 4.16\% | 4.14\% | 4.12\% | 4.10\% | 4.08\% | 4.06\% |
| 16 | Total Fixed Income Yield to Maturity | 2.48\% | 2.49\% | 2.47\% | 2.46\% | 2.45\% | 2.41\% | 2.40\% | 2.39\% | 2.38\% | 2.35\% | 2.34\% | 2.33\% | 2.32\% | 2.30\% | 2.29\% | 2.28\% | 2.27\% |
| 17 | Management Fees | 0.07\% | 0.07\% | 0.07\% | 0.06\% | 0.06\% | 0.07\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% | 0.06\% |
| 18 | Basic Claims Discount Rate | 2.41\% | 2.42\% | 2.41\% | 2.40\% | 2.38\% | 2.35\% | 2.34\% | 2.33\% | 2.31\% | 2.29\% | 2.28\% | 2.27\% | 2.26\% | 2.24\% | 2.23\% | 2.22\% | 2.21\% |
| 19 | New Money Yield Calculation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20 | Percentage Allocations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21 | Government Bonds |  |  | 72.76\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 | Corporate Bonds |  |  | 27.24\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | Yield To Maturity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24 | Government Bonds |  |  | 1.66\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25 | Corporate Bonds |  |  | 2.69\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26 | New Money Yield |  |  | 1.94\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

