

## McMaster

### Description on How Commuted Values are Calculated

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A commuted value represents the lump sum present value of the pension you would otherwise receive as a monthly payment for your lifetime upon retirement. Commuted values are calculated using the assumptions prescribed under the Pension Benefits Act (Ontario).

The interest rate used to calculate a commuted value is based on yields on long-term Government of Canada bonds and hence can change from month to month. When the commuted value interest rate increases, the commuted value will decrease, and conversely, when the commuted value interest rate decreases the commuted value will increase.

In other words, a higher interest rate means you would have to set less aside today (a lower commuted value or present value) to earn a specified annuity in the future.

As an example, consider a payment of \$100 to be made one year from today.

- If the interest rate is 10%, the commuted value (or present value) today would be  $(1/1.10) \times 100$ , or \$90.91
- If the interest rate is 5%, the commuted value (or present value) today would be  $(1/1.05) \times 100$ , or \$95.23

The higher the interest rate results in a lower commuted value and visa versa.

The pension plan provides post-retirement indexing based on the excess of the 5-year average of the annual rates of return earned by the pension fund over 4.5%<sup>1</sup>. This indexation formula is included in the calculation of a commuted value. When determining a commuted value, our actuaries assume the 5-year average of the annual rates of return on the pension fund will be same as the commuted value interest rate and therefore reflect the value of the post-retirement indexing provision in the commuted value if the commuted value interest rate exceeds 4.5%. For example, if the commuted value interest rate is 5.5%, the commuted value calculation would have assumed a 1.0% average annual increase in the Member's pension.

The mortality table used to calculate a commuted value is the 2014 Canadian Pensioners Mortality Table (CPM2014) Combined with generational improvements in mortality based on Scale CPM-B<sup>2</sup>. Based on blended male/female mortality rates the life expectancy at sample ages are as follows:

Age in 2020	Life Expectancy
55	32.98
60	28.22
65	23.60

A commuted value takes into account the death benefits payable under the McMaster University Salaried Pension Plan in the event of your death either before or after retirement. For example, the commuted value reflects the guarantee that your pension will continue to be paid for 7 years following retirement. The commuted value calculation also takes into consideration the life expectancy of a Member's spouse (if applicable).

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<sup>1</sup> 4.5% is replaced with 5.0% for Members who are newly hired by the University on or after May 1, 2010 and in respect of service as a Unifor Local 5555 Member only.

<sup>2</sup> The Pension Benefits Act (Ontario) requires that the gender of a member not to be taken into account when determining commuted values. Therefore, a unisex blend of 50% of the male rates and 50% of the female rates from the CPM2014 Combined mortality table is used to calculate values under the McMaster pension plans.