MORNEAU SHEPELL

Newfoundland and Labrador Teachers' Pension Plan

Actuarial Valuation as at August 31, 2015 for Funding Purposes

Report prepared May 2016

Table of Contents

Introduction

This report presents the results of the actuarial valuation as at August 31, 2015 of the Newfoundland and Labrador Teachers' Pension Plan (the "Plan"). The Government of Newfoundland and Labrador (the "Government") retained the services of Morneau Shepell Ltd ("Morneau Shepell") to perform this actuarial valuation. The last complete valuation that was filed with the Newfoundland and Labrador Office of the Superintendent of Pensions and the Canada Revenue Agency was performed as at August 31, 2012.

On June 15, 2015, significant changes to the Plan were announced. The changes impacted benefits, contributions, the long-term asset mix, and introduced a formal Joint Trustee structure.

One of the Plan changes introduced on September 1, 2015, was an increase in Member required contributions of 2.00% to 11.35% effective September 1, 2015. Section 8503(4)(a) of the *Income Tax Regulations* ("Regulations") generally limits member contributions to 9% of earnings. However, this maximum may be waived under subsection 8503(5) of the Regulations upon application to and approval of the Minister. In conjunction with this report, Government is making application to the Minister to waive this maximum contribution rate.

This report was prepared for the Government, the Newfoundland and Labrador Office of the Superintendent of Pensions and the Canada Revenue Agency for the following purposes:

- to provide the information required in support of the waiver application under subsection 8503(5) of the Regulations;
- to determine the funded status of the Plan on the going-concern basis;
- to determine the funded status of the Plan on both solvency and hypothetical wind-up bases;
- to estimate the Government contributions required under the Plan during the period from this valuation date up to the next valuation in accordance with the Newfoundland and Labrador *Pension Benefits Act, 1997*; and
- to provide the information and the actuarial opinion required by the Newfoundland and Labrador *Pension Benefits Act, 1997* and the Income Tax Act (Canada).

Terms of Engagement

This report takes into account discussions with the Government on the terms of engagement.

Restriction on Use of this Report

This report was prepared for the Government for the specific purposes noted above. It will also be filed with the Newfoundland and Labrador Office of the Superintendent of Pensions and the Canada Revenue Agency. This report and any of its content may not be distributed, published, made available or relied upon by any other person, without the express written permission of Morneau Shepell, unless and only to the extent otherwise provided by applicable law.

Subsequent Events

In conjunction with the changes in Plan benefits announced as a part of TPP Pension Reform, the TPP Corporation, a distinct and separate entity from Government whose purpose is to act as trustee of the fund and to administer the Plan, will be created in the upcoming months. Government will also issue a Promissory Note to the TPP Corporation, which will amortize $1,862 million over 30 years. Other than these special payments, Government and Plan Members will share equally in future Plan surpluses and deficits, and all Plan funding will be on a 50/50 basis.

The sponsors of the Plan, namely Government and the Newfoundland and Labrador Teachers' Association, also intend to reduce the risk associated with Plan investments, such that the total equity exposure will be reduced. The target asset mix has not yet been determined, and therefore has not been reflected in this report. However, as identified in the Plan's Funding Policy (Appendix A of the Joint Sponsorship Agreement dated March 15, 2016), the sponsors anticipate and expect that the target asset mix will support a 6.00% discount rate.

Under a 6.00% discount rate at August 31, 2015:

- the going-concern actuarial liabilities of the Plan would increase by $435.00 million;
- the normal cost would increase to 18.5% of payroll;
- the excess of matching employee and Government contributions over the total current service cost would decrease to 4.2% of payroll, estimated to be $19.13 million for the 12-month period following the valuation date;
- including the present value of the Promissory Note in the market value of assets, the Plan's unfunded liability on a going-concern basis would be $188.55 million and the funded ratio would be 96.3%; and
- in conjunction with the waiver request under section 8503(5) of the ITA Regulations to allow member contributions in excess of the limit set under section 8503(4)(a), the present value of regular required member contributions for each active member divided by the present value of future benefits in respect of regular pensionable service would reduce to 43.9%.

When the Plan's new target asset mix is determined, the actuarial opinion provided in this report will need to be revised with a supplemental cost certificate.

Finally, we note that on June 15, 2015, the Actuarial Standards Board promulgated the use of the 2014 Canadian Pensioner Mortality Table (CPM2014), combined with improvement scale CPM Improvement Scale B (CPM-B), for use in the calculation of pension commuted values, effective October 1, 2015. The impact of the use of CPM2014 and CPM-B in determining pension commuted values for solvency purposes has not been taken into account in this report but will be taken into account in future reports. The estimated impact of the new mortality table and improvement scale is an increase in the solvency liabilities of $462.8 million.

Section 1 – Actuarial Opinion

This opinion is given with respect to the Newfoundland and Labrador Teachers' Pension Plan. We performed a valuation of the Plan as at August 31, 2015, based on the Plan provisions and data as at that date. The Government has confirmed that, between August 31, 2015 and the date of this report, no subsequent events, modifications or extraordinary changes to the membership or the Plan that would materially affect the results of this actuarial valuation have occurred, except as indicated in this report.

We hereby certify that, in our opinion, as at August 31, 2015:

- The Plan is not fully funded on the going-concern basis. The actuarial liabilities exceed the actuarial value of assets by $1,615.55 million.
- According to the solvency test required under the Newfoundland and Labrador *Pension Benefits Act, 1997*, the Plan is not solvent. On the solvency basis, the actuarial liabilities exceed the value of assets by $3,848.91 million.
- The Plan assets would have been less than the actuarial liabilities by $3,848.91 million if the Plan had been wound up on the valuation date.
- The solvency ratio of the Plan, as defined under the Newfoundland and Labrador *Pension Benefits Act, 1997*, is equal to 43.7%.
- In accordance with paragraph 41(2) of the Regulations to the Newfoundland and Labrador *Pension Benefits Act, 1997*, the Plan is exempt from the funding requirements set out in the Newfoundland and Labrador *Pension Benefits Act* and Regulations.
- The total normal cost for the 12-month period following the valuation date is 16.0% of payroll, and is estimated to be $73.55 million for the 12-month period following the valuation. This compares to 17.2% of payroll as at the previous valuation.

  The estimated normal cost, employee and matching Government contributions are shown below in Table 1.1. We note that while amounts are shown for three Plan years, a new cost certificate will be required when the Plan asset mix is changed and both the normal cost and total contribution excess will change.

Table 1.1 – Estimated Total and Residual Normal Cost

Plan year	Total normal cost	Employee contributions	Government contributions	Excess / (deficit)
	$000	$000	$000	$000
2015-2016	73,550	52,240	52,240	30,930
2016-2017	75,750	53,810	53,810	31,870
2017-2018	78,220	55,560	55,560	32,900

- At the valuation date, member contributions are, in aggregate, 11.35% of payroll (and are estimated to be $52.24 million for the 12-month period following the valuation). When considering the Government's matching contribution, the current service cost funding surplus is 6.7% of payroll (and is estimated to be $30.93 million for the 12-month period following the valuation).
- The minimum Government contribution in the 12-month period following the valuation is estimated to be $52.24 million, or 11.35% of payroll.
- In conjunction with this report, the Government is formally requesting a waiver under section 8503(5) of the ITA Regulations to allow member contributions in excess of the limit set under section 8503(4)(a), with effect from September 1, 2015. The present value of regular required member contributions for each active member divided by the present value of future benefits in respect of regular pensionable service is 49.8%.

These contributions conform to the eligibility requirements of the Income Tax Act (Canada) if contributed within the fiscal year or remitted within 120 days after the end of the fiscal year. They also conform to the Newfoundland and Labrador *Pension Benefits Act, 1997*. This Act requires that the current service employer contributions and the employee contributions be remitted to the fund monthly, within 30 days of the month to which they pertain.

In our opinion, for the purposes of this report:

- The membership data on which the valuation is based are sufficient and reliable for the purposes of the valuation.
- The assumptions are appropriate for the purposes of the valuation.
- The methods employed in the valuation are appropriate for the purposes of the valuation.

This report has been prepared, and our opinion given, in accordance with accepted actuarial practice in Canada.

The assumptions that form the going-concern basis used in this report were reasonable at the time this actuarial valuation report was prepared and contributions were determined.

This actuarial valuation was performed in accordance with the going-concern and solvency standards prescribed under the Newfoundland and Labrador *Pension Benefits Act, 1997*.

The calculations in this actuarial valuation report have been prepared in accordance with subsection 147.2(2) of the *Income Tax Act* (Canada).

The recommendations and opinions are given exclusively from a financial viewpoint. This valuation report does not constitute a legal opinion on the rights and duties of the Plan administrator, the Government or the members over the pension fund.

Actuarial valuation results are only estimates. Actuarial valuations are performed based on assumptions and methods that are in accordance with sound actuarial principles. Emerging experience differing from these assumptions may result in gains or losses, which may affect future contribution levels. These gains or losses will be revealed in future actuarial valuations.

The next actuarial valuation will have to be performed not later than as at August 31, 2018. Further, a cost certificate will be required when the Plan's target asset mix is changed.

The undersigned are available to provide supplementary information and explanation, as appropriate, concerning this report.

Stephen Kelloway, FCIA
Principal

Mike O'Connell, FCIA
Partner

MORNEAU SHEPELL LTD
7071 Bayers Road
Suite 3007
Halifax NS B3L 2C2

May 2016

Section 2 – Going-Concern Funded Status

Going-Concern Funded Status

The funded status of the Plan on the going-concern basis is determined by comparing the actuarial value of the assets to the actuarial liabilities. The actuarial liabilities are based on the benefits earned up to the valuation date assuming the Plan continues indefinitely.

Table 2.1 – Going-Concern Funded Status

	August 31, 2015	August 31, 2012
	$000	$000
Actuarial value of assets:		
Market value	3,001,390	2,286,180
Actuarial liabilities:		
Active members	1,325,130	1,424,530
Active members on leave	42,520	-
Inactive members valued as active	12,580	-
Vested inactive members	27,840	36,320
Non-vested inactive members	10,380	10,050
Pensioners and beneficiaries	3,198,490	2,883,740
Total	4,616,940	4,354,640
Actuarial surplus (unfunded liability)	(1,615,550)	(2,068,460)
Funding ratio	65.0%	52.5%

** Numbers may not add up due to rounding*

Changes since the Previous Valuation

Changes since the previous valuation are discussed below. The financial impact of these changes is shown in the section "Reconciliation of Going-Concern Funded Status".

Changes in Plan Provisions

Since the last valuation, the Plan has been amended to provide survivor benefits on all bridge benefits.

In addition, the following Plan changes were made in conjunction with TPP Pension Reform:

- Effective September 1, 2015, post-retirement indexing on future service will be suspended.
- Effective September 1, 2015, the earnings average formula will move to a best average eight year basis for future service. For past service, the earnings averaging formula will be determined as the greater of the best eight years of pensionable earnings, or the frozen best five years of average earnings at September 1, 2015.
- Effective September 1, 2015, Member contributions increase to 11.35% of earnings.
- Effective September 1, 2016, any active member who terminates employment with less than 24.5 years of credited service shall be eligible to retire at age 62.

Please refer to Appendix E for a summary of the Plan provisions at the date of the valuation.

Changes in Actuarial Basis

Since the last valuation, the following assumptions have been changed:

- The assumed rate of salary increase has been updated to reflect contractual pay increases of 3.00% effective September 1, 2015. The long-term assumed rates of contractual increase and the service based merit scale are unchanged.
- The mortality assumption was updated to reflect the results of the 2014 Canadian Pensioner Mortality (CPM2014) experience study conducted by the Canadian Institute of Actuaries and released as a final report on February 13, 2014. The prior mortality assumption applied 85% of the UP94 table with generational projection based on Scale AA.

  The CPM table applies the rates applicable to Public Sector employees (CPM2014 Public) and CPM improvement Scale B (CPM-B) to reflect expectations for future rates of mortality improvement. In addition, the CPM final report notes that income is a significant factor when considering mortality rates. We have applied a 1.02 adjustment factor for males and a 0.96 adjustment factor for females to reflect the expected size of pensions payable under each plan. Please refer to Appendix A for a summary of the actuarial assumptions as at the valuation date.

Reconciliation of Going-Concern Funded Status

The table below describes the change in the Plan's going-concern funded status since the last valuation:

Table 2.2 – Reconciliation of Going-Concern Funded Status

	$000	$000
Actuarial surplus (unfunded liability) as at August 31, 2012		(2,068,460)
Expected changes in funded status:		
Interest on surplus (unfunded liability)	(447,770)	
Employer special payments (with interest)	118,610	
Contribution in excess of service accruals	10,250	
Total		(318,910)
Expected surplus (unfunded liability) as at August 31, 2015		(2,387,370)
Actuarial gains (losses) due to the following factors:		
Investment return on actuarial value of assets	691,650	
Salary experience	115,420	
Retirement experience	4,320	
Termination experience	(6,370)	
Mortality experience	(21,000)	
Disability experience	1,410	
Indexing experience	3,580	
Data corrections	(2,060)	
Other factors	22,610	
Total		809,560
Other gains (losses):		
Change in mortality assumption	(99,010)	
Change in salary scale assumption	2,170	
Change in termination assumption	(4,650)	
Changes to Plan provisions	63,750	
Total		(37,740)
Actuarial surplus (unfunded liability) as at August 31, 2015		(1,615,550)

Sensitivity Analysis on the Going-Concern Basis

The table below illustrates the effect of a 1% decrease in the discount rate on the going-concern actuarial liabilities. With the exception of the discount rate, all other assumptions and methods used for this valuation were maintained.

Table 2.3 – Sensitivity of Actuarial Liabilities on the Going-Concern Basis

	August 31, 2015	Discount rate 1% lower
	$000	$000
Actuarial liabilities:		
Active members	1,325,130	1,583,140
Active members on leave and inactive members valued as active	55,100	68,200
Vested inactive members	27,840	32,230
Non-vested inactive members	10,380	10,380
Pensioners and beneficiaries	3,198,490	3,519,310
Total	4,616,940	5,213,260
Increase in actuarial liabilities		596,320
Percentage increase in actuarial liabilities		12.9%

** Numbers may not add up due to rounding*

Section 3 – Solvency and Hypothetical Wind-Up Funded Status

Solvency Funded Status

A solvency valuation is a hypothetical valuation prescribed by the Newfoundland and Labrador *Pension Benefits Act, 1997*.

Table 3.1 – Solvency Funded Status

	August 31, 2015	August 31, 2012
	$000	$000
Solvency assets:		
Market value of assets	3,001,390	2,286,180
Provision for expenses	(10,000)	(10,000)
In-transits	0	0
Total	2,991,390	2,276,180
Solvency liabilities:		
Active members	2,055,260	1,817,580
Active members on leave	61,090	-
Vested inactive members	63,680	72,810
Non-vested inactive members	12,880	12,870
Pensioners and beneficiaries	4,647,390	4,103,530
Total	6,840,300	6,006,790
Solvency surplus (deficiency)	(3,848,910)	(3,730,610)
Solvency ratio	43.7%	37.9%

** Numbers may not add up due to rounding*

Solvency Ratio

The solvency ratio is equal to the ratio of the solvency assets to the solvency liabilities as indicated in Table 3.1.

Hypothetical Wind-Up Funded Status

Since all benefits have been valued in the solvency valuation, if the Plan had been liquidated as at August 31, 2015 and assuming that the asset liquidation value had been equal to the market value, the hypothetical wind-up funded status would have been similar to the solvency funded status.

Sensitivity Analysis on the Solvency Basis

The table below illustrates the effect on the actuarial liabilities of using discount rates 1% lower than those used for the solvency valuation. All other assumptions and methods, as used in this valuation, were maintained.

Table 3.2 – Sensitivity of Actuarial Liabilities on the Solvency Basis

	August 31, 2015	Discount rate 1% lower
	$000	$000
Actuarial liabilities:		
Active members	2,055,260	2,615,260
Active members on leave	61,090	81,190
Vested inactive members	63,680	77,480
Non-vested inactive members	12,880	12,880
Pensioners and beneficiaries	4,647,390	5,262,120
Total	6,840,300	8,048,930
Increase in actuarial liabilities		1,208,630
Percentage increase in actuarial liabilities		17.7%

** Numbers may not add up due to rounding*

Incremental Cost on the Solvency Basis

The incremental cost on the solvency basis represents the present value of the expected aggregate change in the solvency liabilities from August 31, 2015 to August 31, 2018, adjusted for expected benefit payments in the inter-valuation period. This incremental cost is $619.57 million as at August 31, 2015.

On June 15, 2015, the Actuarial Standards Board promulgated the use of the 2014 Canadian Pensioner Mortality Table (CPM2014), combined with improvement scale CPM Improvement Scale B (CPM-B), for use in the calculation of pension commuted values, effective October 1, 2015. The impact of the use of CPM2014 and CPM-B in determining pension commuted values for solvency purposes has not been taken into account in this report but will be taken into account in future reports.

Section 4 – Normal Cost and Amortization Payments

Normal Cost

The table below summarizes the estimated going-concern cost of pension benefits being earned in the twelve-month period after the valuation date (the normal cost).

Table 4.1 – Normal Cost

	As at August 31, 2015		As at August 31, 2012	
	$000	% of payroll	$000	% of payroll
Normal cost	73,550	16.0	88,790	17.2
Less employee contributions	52,240	11.3	48,240	9.3
Less Government contributions	52,240	11.3	48,240	9.3
Total contributions	104,480	22.7	96,480	18.7
Normal cost funding excess/(deficit)	30,930	6.7	7,690	1.5
Total payroll	460,260		515,940	

** Numbers may not add up due to rounding*

Reconciliation of Normal Cost

The factors contributing to the change in the normal cost are shown below:

Table 4.2 – Reconciliation of Normal Cost

	% of payroll
Normal cost as at August 31, 2012	17.2
Demographic changes	0.3
Changes in Plan provisions	(1.7)
Changes in actuarial assumptions and methodology	0.2
Normal cost as at August 31, 2015	16.0

Sensitivity Analysis on the Going-Concern Basis

The table below illustrates the effect on the normal cost of using a discount rate 1% lower than the one used for the going-concern valuation. All other assumptions and methods, as used in this valuation, were maintained.

Table 4.3 – Sensitivity of Normal Cost on the Going-Concern Basis

	As at August 31, 2015		Discount rate 1% lower	
	$000	% of payroll*	$000	% of payroll*
Normal cost	73,550	16.0	89,860	19.5
Increase in normal cost			16,310	3.5

**Based on a payroll of $460.26 million*

Amortization of Going-Concern Unfunded Liability

We note that following the Plan benefit and funding changes introduced with TPP Pension Reform, the combination of excess current service contributions and the special payments made by Government through the Promissory Note are expected to fully fund the Plan's deficit. Therefore, no additional information is provided in respect of the amortization of the unfunded liability.

Income Tax Regulation 8503(5) Waiver Request

The current Member contribution rate with effect from September 1, 2015, is 11.35% of earnings, subject to the limits of section 8503(4)(a) of the ITA Regulations. Government is requesting a waiver (as permitted under section 8503(5) of the ITA Regulations) of the contribution condition under section 8503(4)(a).

Assuming the contributions stated above, the following calculations are as requested by the Registered Plans Directorate in support of Government's request for a waiver under subsection 8503(5):

- The aggregate present value of future employee contributions (PVEEC) for each active member was determined. This equals the sum of each active member's accumulated contributions with interest as of August 31, 2015 plus the present value of contributions to be made by the member from the valuation date to the member's date of retirement based on the contribution formula assuming waiver is granted.
- The present value of future benefits (PVFB) for each active member was determined. This is the liability for benefits in respect of all periods of pensionable service (i.e. both past and future service).
- The PVFB does not include any liability relating to the minimum employer contribution rule (i.e., the 50% rule). We note that the Plan is not subject to the 50% rule minimum benefit under the Newfoundland and Labrador *Pension Benefits Act*.
- The ratio of the sum of the PVEEC to the sum of the PVFB was determined.

Table 4.5 – 8503(5) Waiver Request Results

	$000
Aggregate PVEEC	1,046,670
Aggregate PVFB	2,100,540
Ratio of Aggregate PVEEC to Aggregate PVFB	0.498

The present value of regular required member contributions for each active member divided by the present value of future benefits in respect of regular pensionable service is 49.8%.

Appendix A – Going-Concern Actuarial Basis

Asset Valuation Method

The actuarial value of assets used to determine the going-concern funded status is equal to the market value. This method is the same as the one used in the last valuation.

Actuarial Cost Method

The actuarial liabilities and the normal cost on the going-concern basis were calculated using the projected accrued benefit (or projected unit credit) actuarial cost method, which is the same method used in the previous valuation.

The actuarial liabilities are equal to the actuarial present value of benefits earned by members for services prior to the valuation date, taking into account the assumptions as indicated hereafter.

The normal cost is equal to the actuarial present value of benefits expected to be earned by members in the year following the valuation date. The ratio of the total normal cost to the covered payroll for the period will tend to stabilize over time if the demographic characteristics of the active members remain stable. All other things being equal, an increase in the average age of the active members will result in an increase in this ratio.

For valuation purposes, the age used is the age on the date of the nearest birthday to determine eligibility for benefits and for any other use. These methods are the same as those used in the last valuation.

Members on Leave

In the case of members who are on some form of leave at the date of the valuation, liabilities are determined in the same manner as active members, reflecting salary increases and the potential to meet early retirement eligibility. However, no normal cost is determined for this group.

Inactive Members

Because the Plan covers all teachers in the Province, many individuals whose employment is terminated will return to active employment at a future point. In those cases, provided the Member did not elect a refund or commuted value transfer of their entitlement, prior and future service is considered together when determining Plan benefits and eligibility requirements.

To reflect this fact, 50% of all inactive members who terminated employment within the last three years are treated as active for valuation purposes when determining liabilities. No normal cost is determined for this group.

Actuarial Assumptions

The main actuarial assumptions used in the going-concern valuation are summarized in the following table. All rates and percentages are annualized unless otherwise noted.

Table A.1 – Going-Concern Actuarial Assumptions

	August 31, 2015		August 31, 2012	
Discount rate		6.75% per year		6.75% per year
Inflation		2.50% per year		2.50% per year
Indexation		1.20% per year		1.20% per year
Salary increases:				
> Service based merit	<10 yrs svc 10+ yrs svc	4.00% 0.75%	<10 yrs svc 10+ yrs svc	4.00% 0.75%
> Contractual	2015	3%	All years	3.25%
	2016 onwards	3.25%		
> Total salary increases		Service based merit plus contractual		Service based merit plus contractual
YMPE and ITA DB Limit increases		3.25%		3.25%
Mortality		CPM2014 Public Sector Mortality Table, CPM Improvement Scale B (two-dimensional) with size adjustment factor 1.02 for male and 0.96 for female Sex-distinct		85% of the 1994 Uninsured Pensioners Mortality Table with generational projection using Scale AA Sex-distinct
Termination of employment (100% deferred pension election)	Age	Rate	Age	Rate
	< 26	7.50%	< 26	7.50%
	26-34	5% decreasing to 1%	26-34	5% decreasing to 1%
	35-44	1.00%	35-44	1.00%
	45-54	0.50%	45-54	0.50%
	55+	0%	55+	0%
Disability	Age	Rate	Age	Rate
	< 40	0.20%	< 40	0.20%
	40-44	0.30%	40-44	0.30%
	45-49	0.40%	45-49	0.40%
	50-54	0.50%	50-54	0.50%
	55+	0.60%	55+	0.60%
Retirement		Earliest age member is entitled to unreduced pension		Earliest age member is entitled to unreduced pension
Married %		At retirement or death: 85%		At retirement or death: 85%
Spousal age difference		Male is 3 years older than female		Male is 3 years older than female
Asset valuation method		Market value		Market value
Administrative expenses		Implicitly recognized in the interest rate		Implicitly recognized in the interest rate

Choice of Assumptions

The assumptions have been reviewed in light of current economic conditions.

Inflation rates

As stated in its monetary policy, the Bank of Canada aims to keep inflation at the 2% target, i.e. the midpoint of the 1% to 3% inflation-control target range.

For an actuarial funding valuation, given historical increases in consumer prices in Canada, the rates expected by the market, portfolio managers' expectations and the Bank of Canada policy and the long-term forecasts of the Conference Board of Canada, a reasonable expectation of the range for long-term rate of inflation is 2.00% to 2.50%. We have assumed going-concern inflation of 2.50% per annum.

Expected real return

Morneau Shepell annually develops expected long-term asset class returns. These returns are established by reviewing historical real returns for various periods, current market conditions as well as fund managers' long-term expectations. Using these expected long-term real returns and the Plan's target asset mix we develop an expected long-term real return for the Plan as follows:

Table A.2 – Expected real return by asset class (passive management)

Asset classes	Target asset mix	Expected real return
	%	%
Bonds (Universe)	20	0.90
Canadian equity	35	4.85
Global equity	40	5.25
Real estate	5	4.00
Expected average real return		4.18

Portfolio rebalancing and effect of diversification

Portfolio rebalancing affects a diversified portfolio's expected long-term return. In other words, realigning a portfolio's weightings to the target determined in the investment policy from time to time will have an impact on the long-term return. The impact of portfolio rebalancing depends on its frequency, the weightings between asset classes and the investment horizon. Our stochastic projections show that rebalancing generally has a modest but positive impact.

The expected return is also influenced by the level of diversification of the portfolio. The correlations between the asset categories have a positive impact on the portfolio's expected return. Therefore, a portfolio's expected long-term return should include the impact of rebalancing and diversification.

Our stochastic projections show that the median return of a diversified portfolio that is rebalanced from time to time is higher than the weighted average of expected returns of each asset category. For the Plan's portfolio, our stochastic projection suggests that the impact of rebalancing and diversification on the portfolio's return (weighed average of returns of asset categories) is 0.38%.

Expected value added for active management

Additional investment management fees of 0.19% are associated with the active management of the Plan's assets over those for passive management. Consequently, in accordance with the CIA's Educational Note – Determination of Best Estimate Discount Rates for Going Concern Funding Valuations published in December 2010, we have assumed that active management will add value (provide returns above index returns) of 0.19% for the purpose of this valuation.

Margin for adverse deviations

As directed by the Government, the discount rate includes a margin for adverse deviations of 0.20%. Using stochastic projections, we have determined that a margin of 0.20% for the Plan results in the target return to be obtained with 54% probability over 25 years.

Expected expenses

We have reviewed investment and administration expenses for the Plan over the inter-valuation period and believe that an assumption of 0.30% is reasonable when considering past experience and future expectations.

Resulting discount rate

Based on the components developed above, the derivation of the discount rate used for purposes of this valuation is as follows:

Table A.3 – Discount Rate

	%
Expected inflation	2.50
Expected real return	4.18
Value added for rebalancing and diversification effect	0.38
Value added for active management	0.19
Margin for adverse deviations	(0.20)
Expected expenses	(0.30)
Discount rate	6.75

Increases in Year's Maximum Pensionable Earnings ("YMPE") and Income Tax Act Defined Benefit Limit ("DB Limit")

Both YMPE and DB Limit amounts adjust annually to keep pace with the average industrial wage. The assumption reflects an assumed rate of inflation of 2.50% per annum, plus an allowance of 0.75% per annum for the effect of real economic growth and productivity gains in the Canadian economy, which is consistent with historical real economic growth.

Salary increases

The 2015 contractual portion of the salary increase assumption was updated to 3.00% per annum. The assumption for 2015 is consistent with our understanding of contractual salary increases. The assumption for years beyond 2015 is a best estimate of expected increases.

Mortality

The mortality table used for the valuation on the going-concern basis as at August 31, 2015 was changed from 85% of the UP94 generational mortality with improvement scale AA to reflect the improvements in life expectancy recently substantiated by the Canadian Institute of Actuaries in its report on Canadian Pensioners' Mortality (published on February 13, 2014). The current valuation uses the CPM2014 Public Sector Table with generational projection using improvement scale CPM-B. Adjustments of 102% for males and 96% for females are applied.

Termination

The termination scale was kept the same as the previous valuation as there have been no changes to the Plan's termination provision and no significant gains or losses have been experienced since the previous valuation. The results obtained during future actuarial valuations will continue to be monitored and the termination assumption will be adjusted if appropriate.

Disability

The disability scale was kept the same as the previous valuation as there have been no changes to the Plan's disability provisions and no significant gains or losses have been experienced since the previous valuation.

Retirement

The retirement age assumptions was kept the same as the previous valuation as there have been no changes to the Plan's retirement provisions and no significant gains or losses have been experienced since the previous valuation.

Appendix B – Solvency and Hypothetical Wind-Up Actuarial Basis

Asset Valuation Method

The actuarial value of the assets used to determine the solvency and hypothetical wind-up funded status is equal to the market value of assets, adjusted for amounts payable and receivable. This valuation method is the same as the one used in the last valuation

The actuarial value of the solvency assets must also be reduced to take into account the provision for expenses. This valuation method is the same as the one used in the last valuation.

Actuarial Cost Method

The solvency liabilities are determined using the accrued benefit (or unit credit) actuarial cost method. The solvency liabilities are equal to the actuarial present value of all benefits earned by members for services prior to the valuation date assuming the Plan is wound up on the valuation date. This method is the same as the one used in the last valuation.

For valuation purposes, to determine eligibility for benefits and for any other uses, the age used is the age on the date of the nearest birthday. This method is the same as the one used in the last valuation.

Actuarial Assumptions

The main actuarial assumptions used in the solvency and hypothetical wind-up valuations correspond to those prescribed by the applicable legislation.

These assumptions are summarized in the following table. For comparison purposes, the assumptions used in the last valuation are also included. All rates and percentages are annualized unless otherwise noted.

Table B.1 – Solvency and Hypothetical Wind-Up Actuarial Assumptions

	August 31, 2015	August 31, 2012
Discount rates:		
Active members not eligible for immediate retirement	Annuity purchase: 2.57% Transfer value: 2.00% for 10 years and 3.70% thereafter	Annuity purchase: 3.04% Transfer value: 2.30% for 10 years and 3.60% thereafter
Pensioners, deferred pensioners and active members eligible for immediate retirement	2.57%	3.04%
Indexing	Annuity purchase: 1.20% Transfer value: 0.49% for 10 years and 1.07 thereafter	1.20%
Salary increases:	Same as going-concern	Same as going-concern
Mortality	1994 Uninsured Pensioners Mortality Table with Generational Projection (Scale AA) Sex distinct	1994 Uninsured Pensioners Mortality Table with Generational Projection (Scale AA) Sex distinct
Retirement	Age that maximizes the value of each member's benefits	Age that maximizes the value of each member's benefits
Married %	At retirement or death: 85%	At retirement or death: 85%
Spousal age difference	Male is 3 years older than female	Male is 3 years older than female
Wind-up expenses	$10,000,000	$10,000,000

Termination scenario

The termination scenario used in the solvency and hypothetical wind-up valuations includes the following assumptions:

- Plan wind-up would not result from Government insolvency.
- All assets could be realized at their reported market value.

This approach is the same as the one used in the last valuation.

Margin for adverse deviations

As specified by the Standards of Practice of the Canadian Institute of Actuaries, the solvency assumptions do not include a margin for adverse deviations.

Choice of Assumptions

Provision for fees

Allowance has been made for administrative, actuarial and legal costs which would be incurred if the Plan were to be wound up, based on sufficient and reliable data. It is assumed that the wind-up date, the calculation date and the settlement date are coincident. Expenses related to the resolution of surplus and deficit issues are not taken into account. The amount of expenses is only an approximation and may differ significantly from real expenses incurred on plan wind-up, for example, in case of litigation, bankruptcy and eventual replacement by a third-party administrator.

Incremental Cost

The incremental cost on the solvency basis is based on the actuarial method and assumptions described below.

Actuarial cost method

The incremental cost for active members and leaves is determined as the difference between:

1. Projected solvency liabilities as at August 31, 2018, discounted to August 31, 2015; less
2. Solvency liabilities as at August 31, 2015.

The projected liabilities as at August 31, 2018 take into account:

- accrual of service to August 31, 2018;
- expected changes in benefits to August 31, 2018; and
- projection of pensionable earnings to August 31, 2018.

The incremental cost for all other members is assumed to be nil. No new entrants were considered between August 31, 2015 and August 31, 2018 as the impact on the incremental cost is not material.

Actuarial assumptions

The actuarial assumptions used to calculate the incremental cost may be described as follows:

- The assumptions used to calculate the expected service accruals, expected changes in benefits and projected changes in the pensionable earnings in item 1. above correspond to those used in the going-concern valuation as at August 31, 2015.
- The assumptions used to calculate the projected solvency liabilities as at August 31, 2018 in item 1. above correspond to those used for the solvency valuation as at August 31, 2015, taking into account the method of settlement applicable to each member as at August 31, 2018.
- However, we assume that the discount rates remain at the levels applicable as at August 31, 2015 and that the select period is reset as at August 31, 2018 for discount rate assumptions that are select and ultimate.
- We also assume that the standards of practice for the calculation of commuted values and the guidance for estimated annuity purchase costs in effect as at August 31, 2015 remain in effect as at August 31, 2018. We have not taken into account the change in mortality table used in the calculation of commuted values that takes effect October 1, 2015.
- The projected solvency liabilities as at August 31, 2018 in item 1. above is calculated using the same postulated scenario as is used for the solvency valuation as at August 31, 2015.
- The rates used to discount item 1. above from August 31, 2018 to August 31, 2015 correspond to those used for the solvency valuation as at August 31, 2015. However, these rates are adjusted to take into account the applicable method of settlement applicable to each member as at August 31, 2018.
- No new entrants were considered between August 31, 2015 and August 31, 2018 as the impact on the incremental cost is not material.

Appendix C – Assets

Source of Information

CIBC Mellon Global Securities Service provides custodial service for the pension fund. At the valuation date the pension fund was invested by multiple external professional investment management firms in accordance with the investment policy.

We have relied upon the unaudited financial information provided by the Province of Newfoundland and Labrador for the following information.

Tests have been performed to ensure that contributions and benefits payments were reasonable. We note that the reported individual benefit payments were materially lower than those shown in the unaudited financial information provided by the Province of Newfoundland and Labrador, but assume that this is a limitation in the data compilation process.

Changes in Net Assets

The following table shows changes affecting the assets from August 31, 2012 to August 31, 2015, based on the unaudited financial information provided by Government.

Table C.1 – Reconciliation of Market Value of Assets

	Sept. 1, 2012 to Aug. 31, 2013	Sept. 1, 2013 to Aug. 31, 2014	Sept. 1, 2014 to Aug. 31, 2015
	$000	$000	$000
Market value of assets at beginning of period	2,286,176	2,512,182	2,993,688
Receipts			
> Member contributions	48,147	48,198	47,871
> Government contributions	44,365	44,070	41,769
> Special Government contributions	29,680	75,795	0
> Investment return	372,706	591,855	203,028
Total Receipts	494,898	759,918	292,668
Disbursements			
> Pension payments	255,338	266,815	271,839
> Lump sum payments	5,768	3,051	6,776
> Expenses	7,786	8,546	6,347
Total Disbursements	268,892	278,412	284,962
Market value of assets at end of period	2,512,182	2,993,688	3,001,394

[1] *Totals may not add due to rounding.*

RETURN ON ASSETS

The Plan assets earned the following annualized rates of return, net of investment management fees and other expenses charged to the fund:

Table C.2 – Net Investment Return

Year	Market value basis	Investment gain/(loss)
	%	$000
Sept. 1, 2012 to Aug. 31, 2013	16.5%	215,292
Sept. 1, 2013 to Aug. 31, 2014	23.7%	417,172
Sept. 1, 2014 to Aug. 31, 2015	6.8%	985

Appendix D – Membership Data

Description of Membership Data

Our valuation is based on data provided to us by the Government's Pensions Administration Division, Human Resource Secretarial and was compiled as at August 31, 2015. We have taken the following steps to review the data to ensure its completeness, accuracy and consistency with the data used in the previous valuation:

- Basic data checks were performed to ensure that age, salary and service data were reasonable for the purposes of the valuation.
- The membership was reconciled with the previous valuation and queries were submitted to the Government.
- A reconciliation was prepared in order to follow the changes concerning some of the active members, retirees and vested members.

Following our review of the data, professional judgment was required in making assumptions where comprehensive data was not available:

1. A small group of active members who were on an extended leave of absence had zero earnings in the five calendar years prior to the valuation date. To be conservative in valuing their accrued benefits, we assumed they had earnings equal to the average earnings for all active members.
2. An accrued pension was not available for a number of deferred vested members. If these members were also deferred vested in the prior valuation, their August 31, 2012 accrued pension was used for the August 31, 2015 valuation. If they were not deferred vested in the prior valuation, we estimated their accrued pension based on their actual credited service and the average earnings for all active members.
3. For the 50% of members who terminated between August 31, 2012 and August 31, 2015 that are valued assuming they return to active service on the valuation date, certain assumptions were required relating to their salary. For members who were active as at the August 31, 2012 valuation, we projected their 2012 earnings forward based on the August 31, 2012 valuation salary increase assumption and the actual contractual salary increases for those years. Otherwise the average active earnings for their age and service bracket per Table D.3 were used.

Summary of Membership Data

The following tables were prepared using data provided by the Pension Administration Division, Human Resource Secretarial regarding the active members, retirees and former members of the Plan. These tables show the following:

D.1 A summary of membership data as at August 31, 2015 as well as August 31, 2012 for comparison purposes

D.2 Changes in Plan membership

D.3 Distribution of active members by age and credited service as at August 31, 2015

D.4 Distribution of pensioners and vested inactive members by age as at August 31, 2015

D.5 A summary of membership data for inactive member as at August 31, 2015 as used for going-concern valuation purposes

D.6 A summary of membership data for pensioners and beneficiaries as at August 31, 2015 as well as August 31, 2012 for comparison purposes

Table D.1 – Summary of Membership Data

		August 31, 2015	August 31, 2012
Active members	Number	5,746	6,137
	Average age	42.6	41.8
	Total pensionable earnings (past year)	$467,359,153	$479,439,577
	Average pensionable earnings (past year)	$81,336	$78,123
	Average pensionable service	14.1	14.0
	Average worked service	13.8	13.4
	Total contributions with interest	$508,669,724	$483,106,819
	Average contributions with interest	$88,526	$78,720
Active members on leave	Number	358	-
	Average age	37.1	-
	Total pensionable earnings (past year)	$28,121,530	-
	Average pensionable earnings (past year)	$78,552	-
	Average pensionable service	8.4	-
	Average worked service	8.2	-
	Total contributions with interest	$18,001,058	-
	Average contributions with interest	$50,282	-
Vested inactive members	Number	426	515
	Average age	56.2	54.4
	Total annual lifetime pension	$3,175,437	$4,295,905
	Average annual lifetime pension	$7,454	$8,342
	Total annual bridge	$749,278	$858,709
	Average annual bridge	$2,827	$2,992
Non-vested inactive members	Number	4,223	4,370
	Average age	53.5	51.0
	Total pending refund	$12,879,288	$12,871,980
	Average pending refund	$3,050	$2,946
Pensioners and beneficiaries	Number	8,868	8,365
	Average age	67.7	66.1
	Total annual lifetime pension	$250,584,825	$226,954,395
	Average annual lifetime pension	$28,257	$27,131
	Total annual bridge	$26,400,448	$27,063,490
	Average annual bridge	$8,037	$7,577
Total Membership		**19,621**	**19,387**

Table D.2 – Changes in Plan Membership

	Active members	Accruing members on leave	Vested inactive members	Non-vested inactive members	Pensioners and beneficiaries	Total
Members as at August 31, 2012	6,137	—	515	4,370	8,365	19,387
Active members on leave	(358)	358	—	—	—	—
New members	814	—	—	—	—	814
Returned to active employment	298	—	(42)	(256)	—	—
Retirement and disability pensions	(626)	—	(68)	(4)	698	—
Terminations:						
Deferred vested members	(54)	—	62	(8)	—	—
Non-vested or pending	(395)	—	—	395	—	—
Fully settled (transfers/refunds)	(56)	—	(28)	(162)	—	(246)
Deaths	(13)	—	(5)	(1)	—	(19)
Pensioner deaths	—	—	—	—	(337)	(337)
New survivors	—	—	—	—	121	121
New limited members	—	—	—	—	12	12
Data correction	(1)	—	(8)	(111)	9	(111)
Members as at August 31, 2015	5,746	358	426	4,223	8,868	19,621

Table D.3 – Age/Service Distribution for Active Members as at August 31, 2015

		Years of Credited Service								
Age		**0 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35+**	**Total**
20 - 24	Number	43	-	-	-	-	-	-	-	43
	Avg. Salary	55,726	-	-	-	-	-	-	-	55,726
25 - 29	Number	431	89	-	-	-	-	-	-	520
	Avg. Salary	62,122	73,600	-	-	-	-	-	-	64,087
30 - 34	Number	291	520	45	-	-	-	-	-	856
	Avg. Salary	66,511	79,162	87,748	-	-	-	-	-	75,313
35 - 39	Number	106	294	406	28	-	-	-	-	834
	Avg. Salary	70,571	79,881	86,866	90,050	-	-	-	-	82,440
40 - 44	Number	62	123	330	329	24	-	-	-	868
	Avg. Salary	70,821	78,930	85,405	88,023	87,473	-	-	-	84,495
45 - 49	Number	44	73	185	380	463	150	15	-	1,310
	Avg. Salary	70,365	76,639	83,158	85,354	88,961	90,460	88,248	-	85,947
50 - 54	Number	28	35	72	137	182	312	216	6	988
	Avg. Salary	71,074	76,085	81,297	84,097	86,955	86,680	89,611	97,693	85,870
55 - 59	Number	7	14	29	37	75	45	34	24	265
	Avg. Salary	68,684	77,393	79,390	78,330	84,170	84,625	90,457	101,398	84,509
60 - 64	Number	5	4	7	12	8	5	5	7	53
	Avg. Salary	92,304	81,278	82,296	83,363	87,093	77,620	84,238	92,188	85,178
65+	Number	1	1	1	3	2	1	-	-	9
	Avg. Salary	<>	<>	<>	81,418	<>	<>	-	-	81,546
Total	**Number**	**1,018**	**1,153**	**1,075**	**926**	**754**	**513**	**270**	**37**	**5,746**
	Avg. Salary	**65,335**	**78,614**	**85,223**	**85,939**	**87,921**	**87,481**	**89,543**	**99,055**	**81,336**

Notes : *<> Certain figures not shown to protect confidentiality.*

The age is rounded down to the nearest integer.

Years of service means the number of years credited for pension plan purposes, rounded down to the nearest integer.

Table D.4 – Distribution for Vested Inactive Members and Pensioners as at August 31, 2015

	Vested Inactive Members			Pensioners and Survivors		
Age	Count	Avg. Ann Pension	Avg. Ann Bridge	Count	Avg. Ann Pension	Avg. Ann Bridge
20 - 25	-	-	-	2	<>	<>
25 - 29	-	-	-	-	-	-
30 - 34	12	4,157	1,663	-	-	-
35 - 39	27	5,405	2,014	1	<>	<>
40 - 44	35	5,869	1,985	2	<>	<>
45 - 49	61	7,014	2,473	10	15,472	4,796
50 - 54	81	11,160	3,509	242	39,775	9,392
55 - 59	77	11,336	3,497	1,011	37,947	8,874
60 - 64	34	7,369	3,170	2,330	28,729	7,551
65 - 69	29	4,915	2,933	2,331	27,278	5,732
70 - 74	37	3,480	-	1,465	27,435	-
75 - 79	20	1,663	-	773	24,477	-
80 - 84	12	1,186	-	378	20,060	-
85 - 89	1	<>	<>	215	17,626	-
90 - 94	-	-	-	81	13,724	-
95 - 99	-	-	-	21	10,582	-
100 +	-	-	-	6	9,254	-
Average	**-**	**7,454**	**2,827**		**28,257**	**8,037**
Total	**426**	**3,175,437**	**749,278**	**8,868**	**250,584,825**	**26,400,448**

Notes : <> Certain figures not shown to protect confidentiality.

Avg. Ann Pension is the annualized pension payable at August 31, 2015

Avg. Ann Bridge is the annualized bridge payable at August 31, 2015

The age is rounded down to the nearest integer.

Table D.5 – Summary of Membership Data for Inactive Members as used for Going-Concern Purposes

		August 31, 2015
Vested inactive members valued as deferred vested	Number	383
	Average age	56.4
	Total annual lifetime pension	2,752,474
	Average annual lifetime pension	7,187
	Total annual bridge	618,586
	Average annual bridge	2,749
Vested inactive members valued as active members	Number	43
	Average age	54.2
	Total pensionable earnings (past year)	3,449,125
	Total pensionable earnings (past year)	80,212
	Average pensionable service	11.0
	Average worked service	11.0
	Total contributions with interest	2,740,481
	Average contributions with interest	63,732
Non-vested inactive members valued as inactives	Number	3,960
	Average age	54.5
	Total pending refund	10,381,522
	Average pending refund	2,622
Non-vested inactive members valued as active members	Number	263
	Average age	38.4
	Total pensionable earnings (past year)	18,310,918
	Total pensionable earnings (past year)	69,623
	Average pensionable service	1.7
	Average worked service	1.7
	Total contributions with interest	2,497,766
	Average contributions with interest	9,497

Table D.6 – Summary of Membership Data for Pensioners and Beneficiaries

		August 31, 2015	August 31, 2012
Pensioners and beneficiaries with indexing	Number	4,926	4,364
	Average age	62.7	60.8
	Total annual lifetime pension	151,173,426	125,174,882
	Average annual lifetime pension	30,689	28,684
	Total annual bridge	26,392,086	27,063,490
	Average annual bridge	8,041	7,577
Pensioners and beneficiaries with no indexing	Number	3,942	4,001
	Average age	74.0	71.9
	Total annual lifetime pension	99,411,398	101,792,428
	Average annual lifetime pension	25,219	25,442-

Appendix E – Summary of Plan Provisions

The Newfoundland and Labrador Teachers' Pension Plan became effective April 1, 1967. Following is a synopsis of the main Plan provisions in effect at the valuation date. The official Plan documents should be referenced for a more detailed Plan description. In the case of discrepancy, the official Plan text shall prevail.

Amendments

Since the last valuation, the Plan has been amended to provide survivor benefits on the bridge benefits in pay to pensioners. In addition, the following Plan changes were introduced as a part of TPP Pension Reform:

- Effective September 1, 2015, post-retirement indexing on future service will be suspended.
- Effective September 1, 2015, the earnings average formula will move to a best average eight year basis for future service. For past service, the earnings averaging formula will be determined as the greater of the best eight years of pensionable earnings, or the frozen best five years of average earnings at September 1, 2015.
- Effective September 1, 2015, Member contributions increase to 11.35% of earnings.
- Effective September 1, 2016, any active member who terminates employment with less than 24.5 years of credited service shall be eligible to retire at age 62.

During the period from August 31, 2015 to the date of this report, no other amendments to the Plan have been brought to our attention by Government.

Eligibility

All full-time teachers must join the Plan on their date of employment.

Contributions

At the valuation date, each member contributes 11.35% of salary to the pension fund each year.

The Government matches member contributions and contributes any additional amounts as may be prescribed.

Normal Retirement Date

The normal retirement date is the first day of the month coincident with or next following the member's 60th birthday provided that the member has at least 5 years of pensionable service.

Disability Retirement

A member who has been credited with at least 5 years of pensionable service, has used up all sick leave entitlement and is unable to perform efficiently the duties of his or her position owing to an incapacity which is medically certified to the satisfaction of the minister as likely to be permanent, shall be retired on account of disability. The pension payable shall be the pension accrued by the member to the date of disability.

Early Retirement Date

A member may elect to retire to receive a pension on the first day of the month following the completion of at least 25 years of pensionable service and provided that the member is also at least age 55. Alternatively, a member may elect to retire at any age provided that member has completed 30 years of worked service.

Retirement Benefits – Normal, Disability or Unreduced Retirement

The annual amount of pension payable on retirement on or after Normal, Disability or Unreduced early Retirement is the sum of the following:

- Service prior to December 31, 1990: 2.22% of the greater of the average of the members' best five years frozen at September 1, 2015 and the average of the member's best eight years salary less 0.60% of the average of the YMPE in the last three years multiplied by the years of pensionable service between April 1, 1967 and December 31, 1990; plus
- Service from January 1, 1991 to March 31, 1993: 2.00% of the greater of the average of the members' best five years frozen at September 1, 2015 and the average of the member's best eight years salary less 0.60% of the average of the YMPE in the last three years multiplied by the years of pensionable service between January 1, 1991 and March 31, 1993; plus
- Service from April 1, 1993 to March 31, 1994: 1.25% of the greater of the average of the members' best five years frozen at September 1, 2015 and the average of the member's best eight years salary less 0.60% of the average of the YMPE in the last three years multiplied by the years of pensionable service between April 1, 1993 and March 31, 1994; plus
- Service from April 1, 1994 to August 31, 2015: 2.00% of the greater of the average of the members' best five years frozen at September 1, 2015 and the average of the member's best eight years salary less 0.60% of the average of the YMPE in the last three years multiplied by the years of pensionable service between April 1, 1994 and August 31, 2015.
- Service from September 1, 2015: 2.00% of the average of the member's best eight years salary less 0.60% of the average of the YMPE in the last three years multiplied by the years of pensionable service since August 31, 2015*.

In the event that a member accrues more than 35 years of pensionable service, the service accrual is no longer integrated with CPP and the member earns a pension equal to 2.00% of the member's best eight years salary on pensionable service in excess of 35 years.

In addition, members who retire prior to age 65 will receive a bridge benefit equal to 0.60% of the lesser of the average of the YMPE in the last three years and the member's best eight years salary multiplied by the years of pensionable service to a maximum of 35 years.

Post-Retirement Indexing

Pensions accrued on service prior to September 1, 2015 are indexed each September 1st where the member retired from active employment on or after September 1, 1998. The first such increase occurs following the later of the date the primary annuitant attains age 65 or 1 year after retirement. The increases are equal to 60% of the increase in CPI, capped at a maximum annual increase of 1.2%.

Maximum Benefit

The benefits payable from the Plan to any member shall be limited by the provisions of the *Income Tax Act*.

Vesting

Members are vested after attainment of five years of pensionable service.

Termination Benefits

Non Vested Member: If a member terminates employment prior to becoming vested, for any reason other than retirement, disability or death, the member is entitled to receive a refund of the member's contributions with credited interest to the date of settlement.

Vested Member: If a member terminates employment after to becoming vested, for any reason other than retirement, disability or death, the member is entitled to

- a transfer equal to the greater of the member's contributions with credited interest or the commuted value of the member's accrued pension, or
- a deferred pension payable from the member's normal retirement date.

Death Benefits

Before Retirement

Non Vested Member: If a member dies prior to pension commencement and prior to becoming vested, the beneficiary will receive a death benefit equal to the member's contributions with credited interest to the date of settlement.

Vested Member with a Spouse: If a vested member dies prior to pension commencement the member's spouse is entitled to

- A monthly survivor pension equal to 60% of the member's accrued pension to the date of death, or
- A lump sum transfer equal to the greater of the commuted value of the member's entitlement assuming the member terminated employment on the date of death, or the commuted value of the 60% survivor pension.

Vested Member without a Spouse: If a member dies prior to pension commencement the member's beneficiary is entitled to the commuted value of the member's entitlement assuming the member terminated employment on the date of death

After Retirement

If a pensioner has an eligible spouse, the spouse will receive 60% of the pension and bridge received by the member. If there is no surviving spouse but there are dependent children, 60% of the pension received by the member will be paid equally to each dependent child until the child reaches age 18 (or age 24 if in full-time education program).

If a pensioner has no eligible spouse or dependents the pension will cease on death of the member.

However, if the total of all pension payments made to the member (and spouse and dependent children, if applicable) is less than the member's contributions with interest at retirement then the excess will be paid to the member's beneficiary or estate.

Appendix F – Employer Certification

With respect to the actuarial valuation report of The Newfoundland and Labrador Teachers' Pension Plan as at August 31, 2015, we hereby confirm that to the best of our knowledge:

- the data regarding Plan members and beneficiaries provided to Morneau Shepell constitutes a complete and accurate description of the information contained in our files;
- the data regarding Plan assets provided to Morneau Shepell are complete and accurate;
- copies of the official text of the Plan and all amendments to date were provided to Morneau Shepell and the summary of Plan provisions contained in this report is accurate;
- there are no subsequent events nor any extraordinary changes to the membership other than those listed in this actuarial report on the Plan, which would materially affect the results.

M McCarthy

Signature

MAUREEN McCARTHY

Name (printed)

DIRECTOR OF PENSIONS

Title

June 9, 2016

Date

MORNEAU SHEPELL

Morneau Shepell is the only human resources consulting and technology company that takes an integrative approach to employee assistance, health, benefits, and retirement needs. The Company is the leading provider of employee and family assistance programs, the largest administrator of retirement and benefits plans and the largest provider of integrated absence management solutions in Canada. Through health and productivity, administrative, and retirement solutions, Morneau Shepell helps clients reduce costs, increase employee productivity and improve their competitive position. Established in 1966, Morneau Shepell serves approximately 20,000 clients, ranging from small businesses to some of the largest corporations and associations in North America. With almost 4,000 employees, Morneau Shepell provides services to organizations across Canada, in the United States, and around the globe. Morneau Shepell is a publicly-traded company on the Toronto Stock Exchange (TSX: MSI). For more information, visit morneaushepell.com.

MENTAL HEALTH PARTNER

Business. Needs. People.