THE UNIVERSITY OF NEW BRUNSWICK

SHARED RISK PLAN FOR ACADEMIC EMPLOYEES OF THE UNIVERSITY OF NEW BRUNSWICK

Initial Actuarial Valuation as at July 1, 2013

March 27, 2014

Registration Number 0695478

TOWERS WATSON

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Introduction

Purpose

The University of New Brunswick and the Association of the University of New Brunswick Teachers (collectively referred to as the “Parties”) signed a Memorandum of Understanding dated March 31, 2014 (“MOU”), to convert the Pension Plan for Academic Employees of the University of New Brunswick (the “Prior Plan”) into a shared risk plan effective July 1, 2013 (“Conversion Date”), in accordance with the *Pension Benefits Act (New Brunswick)* and Regulations thereto.

This report with respect to the Shared Risk Plan for Academic Employees of the University of New Brunswick has been prepared for The Board of Trustees of the Shared Risk Plan for Academic Employees of the University of New Brunswick (“Board of Trustees”), the plan administrator, and presents the results of the initial actuarial valuation of the plan as at July 1, 2013.

The principal purposes of the report are:

- to present information on the financial position of the plan on the funding policy and the going concern bases as of the Conversion Date;
- to review the hypothetical windup status of the plan as of the Conversion Date;
- to confirm, based on information provided by The University of New Brunswick, a set of reasonable assumptions, and on the stochastic model to be approved by the Superintendent of Pension of New Brunswick, that the primary and secondary risk management objectives are met as of the Conversion Date;
- to present information on the application of the funding policy, including the basis to grant escalated adjustments to members and former members, make adjustments to the initial contribution rates or reduce base benefits, if applicable; and
- to provide certain additional information required for the administration of the plan.

This report outlines the plan’s financial situation as of the Conversion Date, provides the information and the actuarial opinion required by the *Pension Benefits Act (New Brunswick)* and Regulations thereto and provides the information required to maintain plan registration under the *Income Tax Act (Canada)* and Regulations thereto.

This report summarizes the results of the actuarial valuation and contains an actuarial opinion as an integral part of the report. Supporting detailed information on the significant terms of engagement, assets, actuarial basis, membership data and plan provisions is contained in the Appendices.

The information contained in this report was prepared for the Board of Trustees, for its internal use and for filing with the Financial and Consumer Services Commission of New Brunswick and the Canada Revenue Agency, in connection with the actuarial valuation of the plan prepared by Société Towers Watson Canada inc. (“Towers Watson”). This report is not intended, nor necessarily suitable, for other parties or for other purposes. Further distribution of all or part of this report to other parties (except where such distribution is required by applicable legislation) or other use of this report is expressly prohibited without Towers Watson's prior written consent. Towers Watson is available to provide additional information with respect to this report to the above-mentioned intended users upon request.

The numbers in this report are not rounded. The fact that numbers are not rounded does not imply a greater level of precision than if the numbers had been rounded.

Legislative and Actuarial Standards Updates

On June 14, 2012, New Brunswick Bill 63, *an Act to Amend the Pension Benefits Act, 2012*, received Royal Assent. The amendments under Bill 63 permit and provide a framework for establishing new shared risk plans or converting existing pension plans to shared risk plans.

Significant Events

The Prior Plan was converted to the Shared Risk Plan for the Academic Employees of the University of New Brunswick effective July 1, 2013. Further to this conversion, the nature of the plan and the underlying actuarial valuation requirements have fundamentally changed. Consequently, this report does not provide a reconciliation of financial position between the previous valuation date for the Prior Plan and the Conversion Date.

Details regarding the actuarial basis can be found in Appendix C, D, E and F. Details regarding the plan provisions can be found in Appendix H.

Subsequent Events

We completed this actuarial valuation on March 27, 2014.

The Association of the University of New Brunswick Teachers was on strike for a period of 3 weeks in January 2014. During this period, no contributions were remitted to the Shared Risk Plan for Academic Employees of the University of New Brunswick and no base benefits were accrued. The financial impact of this event has not been reflected in this report but will, together with subsequent experience, be reflected in the next actuarial valuation.

The Final Report on Canadian Pensioners’ Mortality was published in February 2014 by the Canadian Institute of Actuaries (“Mortality Study”). The potential financial impact has not been estimated, since the valuation was performed using a customized mortality table and improvement scale that is specified in the MOU. The financial impact of the Mortality Study, if any, will be assessed and considered for subsequent actuarial valuations.

To the best of our knowledge and on the basis of our discussions with the Board of Trustees, no other events which would have a material financial effect on the actuarial valuation occurred between the actuarial valuation date and the date this actuarial valuation was completed.

Section 1: Funding Policy Financial Position

1.1 Statement of Financial Position

	After application of funding policy July 1, 2013	Before application of funding policy July 1, 2013
Funding Policy Value of Assets		
Market value of assets	$ 232,444,686	$ 232,444,686
Present value of excess contributions	83,368,148	83,368,148
Total funding policy value of assets	$ 315,812,834	$ 315,812,834
Funding Policy Liability		
● Active and disabled members	$ 143,730,129	$ 143,730,129
● Retired members and beneficiaries	135,982,354	134,814,811
● Terminated vested members	4,717,048	4,679,170
Total funding policy liability	$ 284,429,531	$ 283,224,110
Funding Policy Excess (Deficit)	$ 31,383,303	$ 32,588,724
Open Group Funded Ratio	111.0%	111.5%
Termination Value Funded Ratio	81.7%	82.1%

Comments:

- The financial position of the plan on a funding policy basis is determined by comparing the funding policy value of assets (market value of assets plus the present value of excess contributions as defined under subsection 1.2) over the funding policy liability. The funding policy liability is the actuarial present value of the past base benefits and past ancillary benefits, excluding escalated adjustments that do not form part of the base benefits. However, the funding policy liability does include the value of escalated adjustments in respect of future Progress-Through-the-Ranks (“PTR”) adjustments, in accordance with the applicable plan provisions.

- The increase in the funding policy liability as at July 1, 2013, which would result from a 1% decrease in the assumed liability discount rate, is $44,733,542, after application of the funding policy at that date. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

1.2 Determination of Present Value of Excess Contributions

The present value of excess contributions as defined under the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)* is based on the following:

- For each year in the fifteen years following the valuation date, the excess of the contributions expected to be made less the funding policy normal cost;
- The discount rate used to calculate the funding policy liabilities and funding policy normal cost; and
- The projected aggregate level of earnings in respect of which contributions are expected to be made for each year in the fifteen years following the valuation date.

Present Value of Excess Contributions

Present value over the next 15 years of	**After application of funding policy July 1, 2013**	**Before application of funding policy July 1, 2013**
A: Expected Contributions	$ 216,852,962	$ 216,852,962
B: Funding Policy Normal Cost	133,484,814	133,484,814
Excess Contributions (A – B)	$ 83,368,148	$ 83,368,148

Comments:

- The present value of funding policy normal cost includes the present value of plan administration expenses.
- The aggregate level of earnings in respect of which contributions are to be made were projected using the projection assumptions detailed in Appendix C.

1.3 Cost of Living Adjustments

Under the shared risk plan framework, cost of living adjustments (“COLAs”) may be granted annually, subject to the plan’s ability to pay and the priorities established under the funding policy. Base COLA is comprised of Base CPI COLA for members who are accruing benefits at the valuation date and Base Pension COLA for members who were receiving a pension or terminated employment prior to the valuation date. These terms are defined further in Appendix H.

The following table presents the eligible Base COLA as at the valuation date, prior to the application of the funding policy.

Eligible Base COLA

In respect of the twelve month period ending	Base CPI COLA[1]	Base Pension COLA[2]	
		For benefits in respect of service prior to June 30, 2004	For benefits in respect of service on or after July 1, 2004
June 30, 2013	N/A	0.96%	0.50%

Notes:

[1] No Base CPI COLA can be granted in respect of the twelve month period ending June 30, 2013 since the base benefits for members who were accruing benefits upon conversion were determined based on actual pensionable salary and PTR Adjustment figures as at July 1, 2013.

[2] Eligible Base Pension COLA determined by applying the plan’s target indexing formulas described in Appendix H for the relevant period, without regard to the conditional nature of such COLA.

Comment:

- The increase in the funding policy liability as at July 1, 2013, which would result from granting the full eligible Base COLA at that date, is $1,205,421.

1.4 Application of Funding Policy

The plan's funding policy lists the actions and priorities that will be triggered when the funding level either exceeds or falls below specified thresholds. As the open group funded ratio exceeds 105% as at July 1, 2013, the funding excess utilization plan will be triggered at that date.

Funding Excess Utilization Plan

Required Actions		**July 1, 2013**
1. Reversal of any prior reductions in base benefits		Not applicable
2. Remove any prior increases in contribution rates		Not applicable
3. Grant conditional Base COLA		
• Funding excess available to grant Base COLA[1]	$	3,132,678
• Cost of granting full eligible Base COLA[2]	$	1,205,421
• Percentage of eligible Base COLA to be granted[3]		100%
4. Grant conditional PTR Recapture[4]		Not applicable
5. Reduce contribution rates[5]		Not applicable

Notes:

[1] Determined as 17% of the funding excess between 105% and 140% in accordance with the plan's funding policy.

[2] Determined as the increase in the plan's funding policy liability as at July 1, 2013, assuming the full eligible Base COLA increases are granted.

[3] In accordance with the plan terms and administrative practice, the Base COLA granted based on the available funding excess as at July 1, 2013 shall be payable effective as of January 1, 2014.

[4] No PTR Recapture, as defined in Appendix H, can be granted based on the available funding excess as at July 1, 2013, since the base benefits for members who are accruing benefits upon conversion were determined based on actual pensionable salary and PTR Adjustment figures as at July 1, 2013.

[5] Only applies if the open group funded ratio is above 140% at the valuation date.

Comments:

- Details on the funding policy procedures are provided in Appendix H.

- The formal funding policy for the plan has not been finalized as at the date this report was signed. Application of the funding policy procedures in this valuation were based on the terms of the MOU and the requirements of the *Pension Benefits Act (New Brunswick)* and regulations thereto.

Section 2: Risk Management Procedures

2.1 Risk Management Test Results

Risk management procedures for a shared risk plan require the use of a stochastic asset liability model to test the viability of a plan.

The primary and secondary risk management goals for the plan are set out in the funding policy in accordance with the requirements of the *Pension Benefits Act (New Brunswick)* and Regulations thereto. The primary and secondary risk management tests were conducted as at the valuation date based on 5,000 economic scenarios over a 20-year period. The results of those tests are indicated in the table below:

	After application of funding policy July 1, 2013	**Before application of funding policy July 1, 2013**
Primary Risk Management Test		
Proportion of scenarios that resulted in a reduction of base benefits in any year over the 20-year period	1.3%	1.2%
Secondary Risk Management Test		
Total COLA provided, on average across all stochastic simulations, as a percentage of the total eligible Base COLA over the 20-year period	78.4%	78.9%

Comments:

- The primary risk management goal requires that at least 97.5% of the modeled outcomes will not result in the past base benefits being reduced in any year over a 20-year period starting on the valuation date.

- The secondary risk management goal requires that, over a 20-year period, the total COLA expected to be provided, on average across all stochastic simulations, will exceed:

  – with respect to accrued benefits for active and disabled members, 75% of the cumulative increase in Consumer Price Index (CPI); and

  – with respect to immediate and deferred pensions, 75% of the cumulative increase that would have been provided in in accordance with the indexing provisions of the Prior Plan that were in effect immediately before it was converted to a shared risk plan.

- Details on the risk management procedures are provided in Appendix D.

Section 3: Going Concern Financial Position

3.1 Statement of Financial Position

		July 1, 2013
Going Concern Value of Assets	$	232,444,686
Actuarial Liability		
• Active and disabled members	$	183,773,441
• Retired members and beneficiaries		147,228,163
• Terminated vested members		5,981,322
Total actuarial liability	$	336,982,926
Actuarial Surplus (Unfunded Actuarial Liability)	$	(104,538,240)

Comments:

- The financial position of the plan on a going concern basis is determined by comparing the going concern value of assets to the actuarial liability and is a reflection of the assets available for the benefits accrued in respect of credited service prior to the actuarial valuation date assuming the plan continues indefinitely and that Base COLA and PTR Recapture are provided in full each year, without regard to the conditional nature of such COLA.

- The increase in the actuarial liability as at July 1, 2013, which would result from a 1% decrease in the assumed liability discount rate, is $57,960,285. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

Section 4: Hypothetical Windup Financial Position

4.1 Statement of Hypothetical Windup Financial Position

		July 1, 2013
Hypothetical Windup Value of Assets		
Market value of assets	$	232,444,686
Provision for plan windup expenses		(300,000)
Total hypothetical windup value of assets	$	232,144,686
Hypothetical Windup Liability		
• Active and disabled members	$	258,052,549
• Retired members and beneficiaries		195,541,127
• Terminated vested members		10,443,033
Total hypothetical windup liability	$	464,036,709
Hypothetical Windup Surplus (Unfunded Hypothetical Windup Liability)	$	(231,892,023)

Comments:

- The financial position of the plan on a hypothetical windup basis is determined by comparing the hypothetical windup value of assets to the hypothetical windup liability (the actuarial present value of benefits accrued in respect of credited service prior to the actuarial valuation date, calculated as if the plan were wound up on that date).

- Under the scenario of a plan windup within the first 5 years following conversion to a shared risk plan, the conversion shall be void and the Shared Risk Plan for Academic Employees of the University of New Brunswick shall be wound-up as a defined benefit plan under Part 1 of the *Pension Benefits Act (New Brunswick)*. Consequently, the hypothetical windup liability shown in this table assumes the Prior Plan provisions.

- The hypothetical windup actuarial valuation results presented in this report are determined under a scenario where, following a plan windup, the employer continues its operations.

- The increase in the hypothetical windup liability as at July 1, 2013, which would result from a 1% decrease in the assumed liability discount rate, is $87,211,899. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

4.2 Hypothetical Windup Incremental Cost

The hypothetical windup incremental cost for a given year represents the present value, at the actuarial valuation date, of the expected aggregate change in the defined benefit hypothetical windup liability during the year, increased for expected benefit payments during the year. The hypothetical windup incremental cost in respect of the year between July 1, 2013 and July 1, 2014 is derived from the projection of the hypothetical windup liability, as follows:

Hypothetical windup liability as at beginning of year	$ 464,036,709
Hypothetical windup incremental cost for the year	17,028,281
Interest on hypothetical windup liability, hypothetical windup incremental cost and expected benefit payments	16,659,731
Expected benefit payments during year	(10,233,389)
Projected hypothetical windup liability as at end of year	$ 487,491,332

Section 5: Contribution Requirements

5.1 Funding Policy Contribution (Ensuing Year)

	After application of funding policy July 1, 2013	Before application of funding policy July 1, 2013
Estimated Employer Contribution		
Estimated contribution	$ 8,072,575	$ 8,072,575
Estimated payroll	$ 70,196,304	$ 70,196,304
% of payroll (blended rate)	11.5%	11.5%
Estimated Member Contributions		
Estimated contribution	$ 8,072,575	$ 8,072,575
Estimated payroll	$ 70,196,304	$ 70,196,304
% of payroll (blended rate)	11.5%	11.5%

Comments:

- In accordance with the terms of the MOU, the member blended contribution rate of 11.5% shall be payable as 10.55% of pensionable salary up to the YMPE and 12.25% of pensionable salary in excess of the YMPE for each Party. The pensionable salary used to calculate the portion in excess of the YMPE as at July 1, 2013 is limited to the post-conversion maximum pensionable salary in effect at that date.

- The University of New Brunswick is required to contribute an amount equal to the total of the members' contributions.

5.2 Funding Policy Normal Actuarial Cost (Ensuing Year)

	After application of funding policy July 1, 2013	Before application of funding policy July 1, 2013
Funding policy normal actuarial cost	$ 10,017,478	$ 10,017,478
Estimated payroll	$ 70,196,304	$ 70,196,304
% of payroll	14.27%	14.27%

Comment:

- The increase in the total funding policy normal actuarial cost rate in respect of the defined benefit provision between the actuarial valuation date and the next actuarial valuation date, which would result from a 1% decrease in the assumed liability discount rate, is 3.54% of payroll, after application of the funding policy. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

5.3 Going Concern Normal Actuarial Cost (Ensuing Year)

		July 1, 2013
Going concern normal actuarial cost	$	13,733,711
Estimated payroll	$	70,196,304
% of payroll		19.56%

Comment:

- The increase in the total normal actuarial cost rate in respect of the defined benefit provision between the actuarial valuation date and the next actuarial valuation date, which would result from a 1% decrease in the assumed liability discount rate, is 5.09% of payroll. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

5.4 Estimated Maximum Contribution (Ensuing Year)

		July 1, 2013
Going Concern Normal Actuarial Cost	$	13,733,711
Greater of the Unfunded Actuarial Liability and the Unfunded Hypothetical Windup Liability		231,892,023
Estimated Maximum Contribution	$	245,625,734

Comment:

- The *Income Tax Act (Canada)* permits the Parties to make contributions up to the above amount less the contributions made in respect of periods since July 1, 2013, provided that all assumptions made for the purpose of the hypothetical windup valuation remain reasonable at the time each contribution is made.

5.5 Timing of Contributions

To satisfy the requirements of New Brunswick pension legislation, the required employer contributions must be paid monthly and within 15 days of the month to which it pertains. Members' contributions must also be remitted to the fund monthly and within 15 days of the month to which they pertain.

5.6 Future Contribution and Benefit Levels

Future contribution levels and/or benefits provided may change as a result of future changes in the actuarial methods and assumptions, the membership data, the plan provisions and the legislative rules, or as a result of future experience gains or losses, none of which has been anticipated at this time. The funding policy provides a framework for making adjustments to the contribution rate and/or benefits. The initial contribution rate established in the MOU may change by up to 2.25% of pensionable salary for each Party in future years, (i.e. total maximum increase or decrease of 4.5% of payroll), as required by the funding policy. Future and/or past benefit may also change as required by the funding policy. Emerging experience, differing from the assumptions, will result in gains or losses that will be revealed in future actuarial valuations. Further details on how future contribution levels may vary are provided in Appendix H.

Section 6: Actuarial Certification and Opinion

6.1 Actuarial Certification

Based on the results of these actuarial valuations, we hereby certify that, in our opinion, as at July 1, 2013:

- The funding policy excess (funding policy deficit), determined by comparing the funding policy liability, the measure of obligations of the plan on a funding policy basis, to the funding policy value of assets, is $32,588,724 before application of the funding policy.

- In accordance with the funding policy, $1,205,421 of the funding policy excess can be used to provide Base COLA.

- The funding policy excess (funding policy deficit), determined by comparing the funding policy liability, the measure of obligations of the plan on a funding policy basis, to the funding policy value of assets, is $31,383,303, after application of the funding policy.

- The results of the primary and secondary risk management tests conducted as at the valuation date based on 5,000 economic scenarios over a 20-year period are:

	After application of funding policy July 1, 2013	**Before application of funding policy July 1, 2013**
Primary Risk Management Test		
Proportion of scenarios that resulted in a reduction of base benefits over a 20-year period	1.3%	1.2%
Secondary Risk Management Test		
Total COLA provided, on average across all stochastic simulations, as a percentage of the total eligible Base COLA over the 20-year period	78.4%	78.9%

- The actuarial surplus (unfunded actuarial liability), determined by comparing the actuarial liability, the measure of obligations of the plan on a going concern basis, to the going concern value of assets, is $(104,538,240).

- The hypothetical windup surplus (unfunded hypothetical windup liability), determined by comparing the hypothetical windup liability, the measure of the obligations of the plan on a hypothetical windup basis, to the hypothetical windup value of assets, is $(231,892,023).

- The excess actuarial surplus, pursuant to section 147.2(2) of the *Income Tax Act (Canada)*, is $0.

- In accordance with the plan provisions, the funding policy and paragraph 9 of the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)*, the Parties are required to make the total contributions until the effective date of the next actuarial opinion as follows:

	After application of funding policy July 1, 2013	Before application of funding policy July 1, 2013
Estimated Employer Contribution		
Estimated contribution	$ 8,072,575	$ 8,072,575
Estimated payroll	$ 70,196,304	$ 70,196,304
% of payroll (blended rate)	11.5%	11.5%
Estimated Member Contributions		
Estimated contribution	$ 8,072,575	$ 8,072,575
Estimated payroll	$ 70,196,304	$ 70,196,304
% of payroll (blended rate)	11.5%	11.5%

- The maximum total contributions permissible under the *Income Tax Act (Canada)* are described in Section 5.

- The open group funded ratio, defined as the ratio of the of the market value of assets plus the present value of contributions in excess of normal cost during the next 15 years to the funding policy liabilities, is 111.0%, after application of the funding policy.

- The termination value funded ratio, defined as the ratio of the market value of assets to the funding policy liabilities, is 81.7%, after application of the funding policy.

- The hypothetical windup ratio, defined as the ratio of the hypothetical windup value of assets to the hypothetical windup liabilities, is 50.0%.

- In accordance with the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)*, the next funding policy actuarial valuation should be performed with an effective date not later than July 1, 2014. The basis for employer contributions presented in this report is effective until the next actuarial opinion is filed.

- The pension benefits provided under the plan are not subject to the limitation imposed under Section 8504(6) of the Regulations to the *Income Tax Act (Canada)*.

6.2 Limitation of Analysis for Risk Management Tests

The analysis contained in this report involves actuarial calculations and stochastic modeling. This requires that we make assumptions about future events. We have used assumptions that we believe are reasonable and appropriate for the purpose for which they have been used. Other assumptions may also be reasonable and could result in substantially different results.

In addition, because it is not possible or practical to model all aspects of a situation, we use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are immaterial in our judgment. We believe that we have not oversimplified the situation being modeled and have not inappropriately included or excluded any items.

Naturally, future events and actual experience will vary from the assumptions we have employed and calculations prepared with actual data will vary from estimates or summaries used for modeling purposes. As these differences arise, contribution levels and benefits payable under the plan will be adjusted in accordance with the priorities set out under the funding policy.

Because of the nature of the primary and secondary risk management objectives set out in the applicable Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)*, the modeled results may be acutely sensitive to changes in the assumptions employed and the model used. While the Towers Watson model and the assumptions employed will need to be approved for use by the New Brunswick Superintendent of Pensions, it is important to note that other acceptable models and assumptions could in theory produce different results. The results presented in this report are not intended nor should they be interpreted to represent a guarantee or warranty with respect to the future financial condition of the Shared Risk Plan for Academic Employees of the University of New Brunswick. Moreover, any determinations of probabilities based on the model represent simulated outcomes and should not be interpreted as being actual probabilities.

6.3 Actuarial Opinion

In our opinion:

- the membership data on which the actuarial valuations are based are sufficient and reliable for the purposes of the risk management procedures and funding policy, going concern and hypothetical windup valuations,

- the assumptions are appropriate for the purposes of the risk management procedures and funding policy, going concern and hypothetical windup valuations, and

- the methods employed in the actuarial valuations are appropriate for the purposes of the risk management procedures and funding policy, going concern and hypothetical windup valuations.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. The valuations have been conducted in accordance with our understanding of the funding and solvency standards prescribed by the *Pension Benefits Act (New Brunswick)* and Regulations thereto, and in accordance with our understanding of the requirements of the *Income Tax Act (Canada)* and Regulations thereto. This actuarial opinion forms an integral part of the report.

The results presented in this report have been developed using a particular set of actuarial assumptions. Other results could have been developed by selecting different actuarial assumptions. The results presented in this report are reasonable actuarial results based on actuarial assumptions reflecting our expectation of future events.

Société Towers Watson Canada inc.

Sylvie Hébert
Fellow of the Canadian Institute of Actuaries

Dylan Moser
Fellow of the Canadian Institute of Actuaries

Montréal, Québec
March 31, 2014

Appendix A: Significant Terms of Engagement

For purposes of preparing this actuarial valuation report, the plan administrator has directed that:

- The actuarial valuation is to be prepared as at July 1, 2013.

- For the purpose of the funding policy valuation, the terms of engagement require the use of the actuarial basis and actuarial cost method described in Appendix C.

- For the purpose of the risk management procedures, the terms of engagement require that the actuarial basis used for the funding policy valuation as at the Conversion Date also be used for the projected funding policy valuations in each subsequent year during the 20-year projection period, regardless of the simulated experience in effect for a given economic scenario at the subsequent valuation date.

- For the purposes of the going concern valuation, the terms of engagement require the use of the margins for adverse deviations described in Appendix E.

- For purposes of determining the going concern liability discount rate, the target asset class allocation used shall be the initial target asset allocation stipulated in the MOU. The Board of Trustees is currently reviewing the target asset class allocation. However, no decision has been made to change the initial target asset allocation as at the date this report as finalized. Consequently changes to the target asset class allocation will be reflected in a subsequent report.

- As specified in the MOU, the July 1, 2013 valuation is based on membership data supplied as at January 1, 2012 for the purpose of the actuarial valuation of the Prior Plan as at July 1, 2012 (“2012 Valuation”) and projected based on the economic going concern actuarial assumptions described in Appendix C of the 2012 Valuation report. All members that were active as at January 1, 2012 were assumed to remain active on July 1, 2013, with the exception of members over the age of 65 as at July 1, 2013 who were assumed to retire on that date. The members assumed to retire on July 1, 2013 were replaced by an equal number of new entrants based on the new entrant membership profile summarized in Table 4 of Appendix C. The University of New Brunswick confirmed the projected membership data was representative of the membership as at July 1, 2013.

- This report is to be prepared on the basis that there will be no retroactive changes to previously filed partial windup reports, if any, and neither the applicable pension regulator nor the plan sponsor will order/declare any partial plan windup with an effective date prior to the actuarial valuation date.

- The hypothetical windup valuation results presented in this report are to be determined under a scenario where the employer continues to operate and certain expenses are paid from the pension fund (consistent with past practice) while the employer pays other plan expenses.

- This report is to be prepared on the basis that the employer is entitled to apply the actuarial surplus, if any, revealed in an actuarial valuation report to meet its contribution requirements under the plan while the plan remains a going concern, to the extent permitted by applicable pension legislation and the funding policy. (This report does not address the disposition of any surplus assets remaining in the event of plan windup.) If an applicable pension regulator or other entity with jurisdiction directs otherwise, certain financial measures contained in this report, including contribution requirements, may be affected.

Appendix B: Assets

Statement of Market Value

	July 1, 2013	July 1, 2012
Invested assets:		
• Bonds	$ 102,368,000	$ 94,261,000
• Canadian equities	43,203,000	38,952,000
• Global equities	83,518,000	72,692,000
• Cash and short-term investments	3,093,000	1,928,000
• Total invested assets	$ 232,182,000	$ 207,833,000
Net outstanding amounts:		
• Prepaid expenses / account receivable	$ 85,000	$ 0
• Contributions receivable	262,601	
• Benefits payable	271,085	0
• Expenses and other payables	(356,000)	(269,000)
• Total net outstanding amounts	$ 262,686	$ (269,000)
Total	$ 232,444,686	$ 207,564,000

Comments:

- The invested assets are held by RBC Dexia Investor Services under account number 232-M02291-MT.

- The data relating to the invested assets are based on the financial statements prepared by the University of New Brunswick and by RBC Dexia Investor Services. The data relating to net outstanding amounts were provided by the University of New Brunswick. All such data has been relied upon by Towers Watson following tests of reasonableness with respect to contributions, benefit payments and investment income. However, Towers Watson has not independently audited or verified this data.

- The outstanding contributions receivable of $262,601 are comprised of $181,300 of employee contributions, $181,301 of employer contributions and $(100,000) of buyback service contributions.

Asset Class Distribution

The following table shows the target asset allocation stipulated by the plan's investment policy in respect of various major asset classes and the actual asset allocation as at July 1, 2013.

	Target asset allocation [1]	**Asset allocation as at July 1, 2013** [2]
Bonds and debentures	48.0%	44.1%
Canadian equities	18.0%	18.6%
Global equities	19.0%	36.0%
Real Estate	15.0%	0%
Cash and short-term investments	0%	1.3%
Total	100%	100%

Notes:

[1] Initial target asset allocation stipulated in the MOU.

[2] This information was obtained from The University of New Brunswick. All such data has been relied upon by Towers Watson and compared against the target asset allocation in effect at that time to assess reasonableness. However, Towers Watson has not independently audited or verified this data.

Reconciliation of Total Assets (Market Value)

Assets as at July 1, 2012			$	207,564,000
Receipts:				
• Contributions:				
– University of New Brunswick contributions	$	8,561,800		
– Members' contributions		8,561,800		
– Buy-backs		(30,000)	$	17,093,600
• Investment return, net of investment expenses				17,669,000
• Other receipts				0
• Total receipts			$	34,762,600
Disbursements:				
• Benefit payments:				
– Pension payments	$	8,845,000		
– Lump sum settlements		682,914	$	9,527,914
• Non-investment expenses				354,000
• Total disbursements			$	9,881,914
Assets as at July 1, 2013			$	232,444,686

Comments:

- This reconciliation is based on the financial statements issued by the University of New Brunswick and by RBC Dexia Investor Services. All such data has been relied upon by Towers Watson following tests of reasonableness with respect to contributions, benefit payments and investment income. However, Towers Watson has not independently audited or verified this data.

- The rate of return earned on the market value of assets, net of investment expenses, from July 1, 2012 to July 1, 2013 is approximately 8.37% p.a.

Appendix C: Actuarial Basis – Funding Policy

Methods

Asset Valuation Method

The funding policy value of assets was calculated as the sum of the market value of invested assets at the valuation date, adjusted for net outstanding amounts, and the present value of excess contributions.

Present Value of Excess Contributions

The present value of excess contributions as defined under the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)* is based on the following:

- For each year, in the fifteen years following the valuation date, the excess of the contributions expected to be made in the year less the funding policy normal cost;
- The discount rate used to calculate the funding policy liabilities and funding policy normal cost; and
- The projected aggregate level of earnings in respect of which contributions are to be made in each year in the fifteen years following the valuation date.

Actuarial Cost Method

The funding policy liability and the funding policy normal actuarial cost in respect of base benefits were calculated using the projected unit credit cost method.

Prospective benefits were calculated for each active and disabled member according to the plan provisions and actuarial assumptions. The funding policy liability was calculated as the actuarial present value of the member's prospective base benefits and ancillary benefits accrued for credited service to date (the benefit accrual method), excluding any escalated adjustments that do not form part of the base benefits at the valuation date. However, the funding policy liability does include the value of any escalated adjustments attributable to future PTR Adjustments in respect of credited service prior to the valuation date, based on the Indexed PTR Adjustment in effect at the valuation date. The calculation of the actuarial present value of the member's prospective benefits is at least equal to the member's contributions with interest.

The funding policy liability for retired members and beneficiaries and terminated vested members was calculated as the actuarial present value of their respective benefits.

The funding policy normal actuarial cost in respect of benefits for each active and disabled member was calculated as the actuarial present value of the member's prospective base benefits and ancillary benefits accruing in respect of credited service in the ensuing year, excluding any escalated adjustments that will not form part of the base benefits in the year following the valuation date. However, the funding policy normal actuarial cost does include the value of any escalated adjustments attributable to future PTR Adjustments in respect of credited service in the ensuing year, based on the Indexed PTR Adjustment in effect at the valuation date. The funding policy normal actuarial cost rate in respect of benefits determined by the projected unit credit cost method will be stable over time if the demographic characteristics of the active and disabled plan membership remain stable from actuarial valuation to actuarial valuation. All other things being equal, an active and disabled membership whose average age increases (decreases) between actuarial valuations will result in an increasing (decreasing) funding policy normal actuarial cost rate.

Actuarial Assumptions

	July 1, 2013
Economic Assumptions (per annum)	
Liability discount rate	4.50%
Rate of inflation	2.25%
Rate of salary increase	3.25% plus annual PTR Adjustments
Escalation in PTR Adjustment and professor salary ceiling[1]	3.25%
Escalation of *Income Tax Act (Canada)* maximum pension limitation[2]	3.25%
Base COLA	
• Base CPI COLA (active and disabled members)	Nil
• Base Pension COLA (other members)	
– Service before June 30, 2004	Nil
– Service from July 1, 2004 onward	Nil
PTR Recapture	Nil
Demographic Assumptions	
Mortality	1994 Uninsured Pensioner Mortality Table, projected generationally using Scale UNB (refer to Table 1 for Scale UNB)
Withdrawal	Service-related rates (refer to Table 2)
Disability incidence/recovery	Nil
Retirement/pension commencement	
• Active and disabled members	Age-related rates (refer to Table 3)
• Terminated vested members	Age 65
New Entrant Assumptions[3]	
Reduction in complement	-0.25% per annum
New entrant membership profile	Refer to Table 4
Other	
Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form	90%
Years male spouse older than female spouse	3
Percentage of members with eligible dependant other than spouse	0%
Provision for non-investment expenses	0.5% of payroll

Notes:

[1] The estimated PTR Adjustment and professor salary ceiling figures of $2,800 and $152,800, respectively, as at July 1, 2013 will be projected at 3.25% per annum starting in 2014.

[2] The *Income Tax Act (Canada)* maximum pension limit of $2,696.67 per year of service in 2013 is the starting value for maximum pension limit projection as at the current valuation and is indexed starting in 2014. The *Income Tax Act (Canada)* maximum pension at retirement is used to ensure that pension at retirement, including escalated adjustments in respect of future PTR Adjustments, does not exceed the limit.

[3] Assumptions used for the purpose of determining the present value of excess contributions.

Table 1 — Scale UNB

Age	Male	Female	Age	Male	Female	Age	Male	Female
16	0.029	0.060	45	0.020	0.064	74	0.030	0.021
17	0.029	0.056	46	0.021	0.068	75	0.024	0.024
18	0.029	0.056	47	0.023	0.072	76	0.024	0.024
19	0.029	0.060	48	0.024	0.072	77	0.022	0.021
20	0.029	0.064	49	0.026	0.072	78	0.020	0.021
21	0.027	0.068	50	0.027	0.068	79	0.019	0.021
22	0.026	0.068	51	0.029	0.064	80	0.017	0.014
23	0.023	0.064	52	0.030	0.056	81	0.015	0.014
24	0.020	0.060	53	0.030	0.048	82	0.014	0.014
25	0.015	0.056	54	0.030	0.040	83	0.014	0.014
26	0.009	0.048	55	0.030	0.032	84	0.012	0.014
27	0.008	0.048	56	0.029	0.024	85	0.011	0.009
28	0.008	0.048	57	0.027	0.020	86	0.011	0.008
29	0.008	0.048	58	0.026	0.020	87	0.009	0.006
30	0.008	0.040	59	0.026	0.020	88	0.008	0.006
31	0.008	0.032	60	0.029	0.025	89	0.008	0.005
32	0.008	0.032	61	0.027	0.025	90	0.006	0.005
33	0.008	0.036	62	0.027	0.025	91	0.006	0.005
34	0.008	0.040	63	0.025	0.025	92	0.005	0.005
35	0.008	0.044	64	0.025	0.025	93	0.005	0.003
36	0.008	0.048	65	0.028	0.020	94	0.005	0.003
37	0.008	0.052	66	0.026	0.020	95	0.003	0.003
38	0.009	0.056	67	0.026	0.020	96	0.003	0.003
39	0.011	0.060	68	0.028	0.020	97	0.003	0.002
40	0.012	0.060	69	0.028	0.020	98	0.002	0.002
41	0.014	0.060	70	0.030	0.015	99	0.002	0.002
42	0.015	0.060	71	0.030	0.018	100	0.002	0.002
43	0.017	0.060	72	0.030	0.018	101+	0.000	0.000
44	0.018	0.060	73	0.030	0.021			

Table 2 — Withdrawal Rates

Service	%
Under 5	6.0%
5 – 9	2.0%
10 – 14	1.0%
15 – 19	0.5%
20 – 24	0.5%
25 and over	Nil

Table 3 — Retirement Rates

Age	% If 85 points	% Otherwise
55	0%	0%
56	0%	0%
57	0%	0%
58	8%	4%
59	8%	4%
60	8%	4%
61	8%	4%
62	15%	4%
63	15%	4%
64	15%	4%
65	100%	100%

Table 4 — New entrant membership profile

• Number[1]		24
• Average age		41
• Average credited service		0
• Average pensionable salary	$	79,513

Note:

1 Number of distinct new entrant profiles. Actual number of new entrants in a given year will be determined in accordance with the complement reduction assumption.

Rationale for Actuarial Assumptions

The actuarial assumptions used in the funding policy valuation were specified in the MOU.

The rationale for the material actuarial assumptions used in the funding policy valuation is summarized below.

The assumptions do not include margins for adverse deviations, except as noted below.

Liability discount rate

The liability discount rate of 4.50% per annum is specified in the MOU. The assumption was determined by the Parties in a manner consistent with the purposes of the Shared Risk Plan for Academic Employees of the University of New Brunswick, the funding policy, the investment policy and the risk management goals and procedures.

This assumption includes the margin for adverse deviations described below. The economic assumptions used for determining the margin for adverse deviations included in the liability discount rate have been developed based on Towers Watson’s capital market model. The capital market model simulates economic variables (e.g. inflation and yields) and asset class returns, with the assumptions being developed through both the analysis of historical rates and returns, and the application of econometric theory. In modeling inflation and bond yields, current conditions and long term expectations are used and the serial correlation inherent in these parameters is recognized.

Our long term nominal rate of return assumption was determined using the expected long term asset mix for the plan based on the initial target asset allocation stipulated in the MOU.

Based on Towers Watson's capital market model, a best estimate long term gross nominal rate of return as of July 1, 2013 of 5.89% is appropriate. The following adjustments were subsequently made before selecting the long term nominal rate of return assumption:

• Best estimate long term nominal rate of return before adjustments	5.89%
• Adjustment for investment expenses paid by the plan (excluding active management fees)	(0.05)
• Best estimate long term nominal rate of return after adjustments	5.84%

In determining the best estimate long term nominal rate of return after adjustements, we have assumed that additional returns associated with employing an active investment management strategy would equal the additional expenses associated with employing such strategy. Consequently, any potential additional returns have been ignored.

After rounding the best estimate long term nominal rate of return after adjustments to the nearest 0.25%, a 1.25% margin for adverse deviations would be required to obtain the liability discount rate of 4.50%.

Rate of inflation

The assumption reflects an estimate of future rate of inflation considering economic and financial market conditions at the valuation date.

Rate of salary increase

The assumption reflects an assumed rate of inflation of 2.25% per annum, plus an allowance of 1.00% per annum to reflect the effect of real economic growth and productivity gains in the economy. In addition, Pensionable Salary is also assumed to increase annually with future PTR Adjustments until the Pensionable Salary exceeds the salary ceiling of the rank of professor.

Escalation in PTR Adjustment and professor salary ceiling

The assumption reflects an assumed rate of inflation of 2.25% per annum, plus an allowance of 1.00% per annum to reflect the effect of real economic growth and productivity gains in the economy.

Escalation of Income Tax Act (Canada) maximum pension limitation

The maximum pension limitation under the *Income Tax Act (Canada)* is scheduled to be indexed annually based on assumed increases in the Industrial Aggregate Wage index. The assumption reflects an assumed rate of inflation of 2.25% per annum, plus an allowance of 1.00% per annum for the effect of real economic growth and productivity gains in the economy.

Base COLA

No allowance for future Base COLA is included in the liability. This assumption is consistent with the requirements of the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)*.

PTR Recapture

No allowance for future PTR Recapture is included. This assumption is consistent with the requirements of the Shared Risk Plans Regulation to the *Pension Benefits Act (New Brunswick)*.

Mortality

The mortality assumption was specified by the MOU. Tests have been performed to assess the reasonableness of this assumption relative to a best estimate assumption based on the CPM-RPP

2014 Public (projected generationally using Scale A1-2014) table in the draft report issued by the Canadian Institute of Actuaries and concluded that the assumption is reasonable. The 1994 Uninsured Pensioner Mortality Table reflects the mortality experience projected to 1994 for a large sample of North American pension plans. Applying a Projection Scale UNB (Projection Scale AA modified to reflect life expectancy of professors) generationally provides allowance for improvements in mortality after 1994. No allowance has been made for mortality prior to retirement with respect to terminated vested members in order to approximate the value of pre-retirement death benefits.

The Canadian Institute of Actuaries has recently published the final study on Canadian pension plan mortality experience. The results of this study may lead to changes in the mortality assumption in future valuations.

Withdrawal

The rates of withdrawal were developed based on a review of plan experience over the 5-year period from 2004 to 2008 and an assessment of future expectations.

Disability incidence/recovery

There are no disability benefits under the plan other than the accrual of retirement income (earnings remain constant) during disability. Consequently, the assumption of no incidence of disability or recovery therefrom makes an appropriate allowance, in combination with the other assumptions, for such continued accruals.

Retirement/pension commencement

Active and disabled members

The rates of retirement were developed based on a review of plan experience over the 5-year period from 2004 to 2008 and an assessment of future expectations.

Terminated vested members

All terminated members are assumed to commence their pension at age 65, which is the average expected retirement age for terminated members.

Reduction in complement

As specified in the MOU, retiring and terminating members are assumed to be partially replaced by new entrants such that the active membership will decrease by 5% over a 20-year period following the valuation date.

New entrant membership profile

The profile for new entrants used for purposes of the demographic projections was developed based on the age, earnings and gender of actual new entrants in the plan between January 1, 2011 and January 1, 2012.

Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form

When provided, the actual data on the spouse and form of payment were used for retired members. For other members, the assumed percentage of members with a spouse is based on the percentages for the general population. All members with eligible spouses were assumed to elect a joint and survivor pension form.

Years male spouse older than female spouse

When provided, the actual data on the spouse were used for retired members. For other members, the assumption is based on surveys of the age difference in the general population and an assessment of future expectations for members of the plan.

Provision for non-investment expenses

The liability discount rate is net of investment expenses (with the exception of any fees associated with employing an active investment management strategy). An explicit provision has been made in the funding policy normal cost for non-investment related expenses expected to be paid from the pension fund. The assumed level of expenses is based on recent experience of the plan and an assessment of future expectations.

Appendix D: Actuarial Basis – Risk Management Procedures

Capital Market Investment Model Assumptions

The risk management procedures were performed using the July 1, 2013 Towers Watson's Canadian capital market investment model for use in asset/liability modeling studies for Canadian Plans. This stochastic capital market model and associated Capital Market Assumptions are based on the following set of principles:

- It is designed to simulate a wide range of plausible scenarios of future capital market performance (based on 5,000 stochastic simulations).
- Results should not be interpreted as a prediction of exact capital market performance for any period.
- Towers Watson's Global Investment Committee provides the framework in which we develop our economic and capital market assumptions, including interest rates and other asset portfolio assumptions.
- It reflects the capital market conditions prevailing at the starting date of the simulation. The transition from these initial conditions to assumed long-term levels is a significant factor underlying the simulation results.
- The long-term average, or normative, levels incorporate a blend of historical capital market data and future expectations. The sources consulted in the determination of normative levels include practitioners in our global actuarial and investment consulting practices, plan sponsors, investment managers, economists, and academicians.
- Asset classes (equities, alternative and bonds), the Government of Canada yield curve and inflation are included in the capital market model. Each is simulated from a Canadian Dollar perspective.

Stochastic Asset/Liability Model

The stochastic simulations have been performed over a 20-year projection period utilizing ALPro, our proprietary comprehensive stochastic asset/liability modeling system. Our proprietary tools enable us to create detailed liability forecasts using plan membership data from the most recent actuarial valuation of the plan. The financial module of ALPro combines the results of the liability forecasts with asset portfolio simulations to generate integrated financial results on a stochastic basis using a variety of assumptions. The ALPro system also has the flexibility to analyze any of a plan's financial results, including all forms of plan cost, surplus measures, funded ratios and cash flows.

This tool captures the funding policy requirements and risk management framework applicable to shared risk plans. Specifically, the tool determines what funding policy actions would be triggered in each year over the 20-year projection period, based on the projected funding policy valuation results for each simulated economic scenario. For the purpose of the risk management tests, once COLA has been granted in a given year, it forms part of the base benefits for the remaining years of that simulated economic scenario. The actuarial basis used for the projected funding policy valuations in each subsequent year during the 20-year projection period is the same as the actuarial basis used for the funding policy valuation as at the Conversion Date, regardless of the simulated experience in effect for a given economic scenario up to the subsequent valuation date.

Additional details on the assumptions underlying this simulation are provided in the following tables.

Projection Assumptions for Annual Plan Experience

Economic Assumptions (per annum)

Fund rate of return on plan assets	Varies by stochastic scenario[1]
Rate of inflation	Varies by stochastic scenario
Rate of salary increase	Inflation + 1% plus annual PTR Adjustments
Escalation in PTR Adjustment and professor salary ceiling[2]	Inflation + 1%
Escalation of YMPE under Canada/Québec Pension Plan[3]	Inflation + 1%
Escalation of *Income Tax Act (Canada)* maximum pension limitation[4]	Inflation + 1%
Eligible Base COLA	
• Base CPI COLA (active and disabled members)	100% of inflation[5]
• Base Pension COLA (other members)	
– Service before June 30, 2004	100% of inflation[5]
– Service from July 1, 2004 onward	33% of inflation[5]
PTR Recapture	Nil

Demographic Assumptions

Mortality	1994 Uninsured Pensioner Mortality Table, projected to generationally using Scale UNB (refer to Table 1 in Appendix C for Scale UNB)
Withdrawal	Service-related rates (refer to Table 2 in Appendix C)
Disability incidence/recovery	Nil
Retirement/pension commencement	
• Active and disabled members	Age-related rates (refer to Table 3 in Appendix C)
• Terminated vested members	Age 65
Future credited service accruals for active and disabled members	Full service credited each year until decrement age

New Entrant Assumptions

Reduction in complement	-0.25% per annum
New entrant membership profile	Refer to Table 4 in Appendix C

Other	
Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form	90%
Years male spouse older than female spouse	3
Percentage of members with eligible dependant other than spouse	0%
Provision for non-investment expenses	0.5% of payroll

Notes:

[1] Based on the initial target asset allocation specified in the MOU and the underlying economic scenario each year.

[2] The estimated PTR Adjustment and professor salary ceiling figures of $2,800 and $152,800, respectively, as at July 1, 2013 will be projected to each subsequent valuation date during the 20-year projection period, based on the applicable rate of inflation for a given economic scenario.

[3] The YMPE of $51,100 for 2013 is the starting value for the YMPE projection and is indexed starting in 2014.

[4] The *Income Tax Act (Canada)* maximum pension limit of $2,696.67 per year of service in 2013 is the starting value for maximum pension limit projection and is indexed starting in 2014.

[5] Subject to the funding excess utilization priorities described in Appendix H, eligible Base COLA will only be granted over the 20-year projected period when the necessary funding excess is projected to be available for a given economic scenario.

Capital Market Assumptions

Summary Statistics

Summary Assumptions for July 1, 2013 Towers Watson Canadian Investment Model								
Asset Class	1st Year Returns		10th Year Returns		10 Year Returns		20 Year Returns	
	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation	Geometric Mean	Average STD	Geometric Mean	Average STD
Inflation	2.0%	1.6%	2.0%	2.2%	2.0%	2.1%	2.0%	2.2%
Canadian Fixed Income								
Cash / T-Bills	1.2%	1.0%	3.1%	2.1%	2.4%	1.8%	2.9%	2.0%
Universe Govt Bonds	2.2%	5.5%	3.9%	5.2%	2.9%	5.4%	3.6%	5.3%
Long Term Govt Bonds	3.1%	11.8%	4.1%	10.0%	3.0%	10.7%	3.6%	10.3%
Universe Corporate Bonds	3.2%	5.6%	4.4%	5.7%	3.5%	5.9%	4.1%	5.8%
Long Term Corporate Bonds	5.0%	14.4%	4.6%	13.3%	3.6%	14.3%	4.0%	13.7%
Universe Bonds	2.5%	5.5%	4.0%	5.2%	3.1%	5.5%	3.8%	5.3%
Long Term Bonds	3.5%	12.2%	4.2%	10.4%	3.2%	11.3%	3.8%	10.8%
20+ Strip Bonds	4.2%	23.1%	4.7%	20.4%	2.4%	21.3%	3.2%	21.0%
Real Return Bonds	1.3%	9.9%	3.7%	11.3%	2.3%	11.3%	2.8%	11.2%
Other Fixed Income								
Emerging Market Debt	0.7%	10.6%	5.1%	9.2%	3.8%	9.6%	4.3%	9.4%
Global Bonds ex Canada (h)	2.8%	4.0%	4.2%	4.0%	3.4%	4.0%	3.8%	4.0%
High Yield Bonds (h)	2.2%	12.6%	5.1%	10.3%	4.0%	11.0%	4.3%	10.6%
Equity Investments								
Cdn Large Cap	8.7%	23.0%	8.2%	19.1%	6.6%	20.2%	6.7%	19.6%
Cdn Small Cap	9.7%	28.0%	8.9%	24.0%	6.5%	25.1%	6.5%	24.5%
US Large Cap (u)	8.2%	19.6%	7.6%	16.1%	6.4%	17.2%	6.6%	16.7%
US Small Cap (u)	9.1%	24.7%	8.2%	21.1%	6.3%	22.2%	6.4%	21.6%
EAFE (u)	8.7%	21.1%	7.8%	17.3%	6.5%	18.4%	6.6%	17.8%
Global (u)	8.4%	18.7%	7.7%	15.3%	6.7%	16.4%	6.8%	15.9%
Emerging Markets (u)	9.4%	27.7%	8.7%	24.0%	6.0%	25.1%	6.1%	24.6%
Alternatives								
Fund of Hedge Funds (h)	5.5%	8.0%	6.1%	7.2%	5.4%	7.4%	5.8%	7.3%
Private Equity	8.8%	24.9%	8.0%	21.6%	5.7%	22.7%	5.7%	22.2%
Real Estate	5.8%	11.0%	6.7%	10.0%	6.0%	10.3%	6.1%	10.1%
Infrastructure	7.0%	17.2%	7.4%	13.3%	6.4%	14.5%	6.6%	13.9%
Commodities	3.4%	12.4%	4.9%	9.7%	4.1%	10.5%	4.1%	10.1%

Note: for asset classes with foreign currency exposure, (u) indicates unhedged and (h) indicates hedged

Correlations for 10 year Cumulative Returns

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Inflation	1.0																								
2	Cash / T-Bills	0.4	1.0																							
3	Universe Govt Bonds	(0.2)	(0.1)	1.0																						
4	Long Term Govt Bonds	(0.2)	(0.1)	1.0	1.0																					
5	Universe Corporate Bonds	(0.1)	0.0	0.9	0.9	1.0																				
6	Long Term Corporate Bonds	(0.1)	(0.1)	0.9	0.9	1.0	1.0																			
7	Universe Bonds	(0.1)	(0.1)	1.0	1.0	1.0	0.9	1.0																		
8	Long Term Bonds	(0.2)	(0.1)	1.0	1.0	0.9	0.9	1.0	1.0																	
9	20+ Strip Bonds	(0.2)	(0.1)	0.9	1.0	0.9	0.9	0.9	1.0	1.0																
10	Real Return Bonds	0.2	0.0	0.4	0.4	0.3	0.3	0.3	0.3	0.3	1.0															
11	Emerging Market Debt	(0.4)	(0.1)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	1.0														
12	Global Bonds ex Canada (h)	(0.1)	(0.1)	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.2	1.0													
13	High Yield Bonds (h)	(0.4)	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.0	0.8	0.2	1.0												
14	Cdn Large Cap	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.2	0.4	1.0											
15	Cdn Small Cap	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.2	0.4	0.7	1.0										
16	US Large Cap (u)	(0.1)	0.0	(0.1)	(0.1)	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.1	0.3	0.6	0.4	1.0									
17	US Small Cap (u)	(0.1)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.2	0.4	0.6	0.7	0.6	1.0								
18	EAFE (u)	(0.1)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.2	0.3	0.5	0.4	0.7	0.5	1.0							
19	Global (u)	(0.1)	0.0	(0.1)	(0.1)	0.1	0.1	0.0	0.0	0.0	(0.1)	0.4	0.2	0.4	0.6	0.5	0.9	0.6	0.9	1.0						
20	Emerging Markets (u)	0.0	0.0	(0.1)	(0.1)	0.0	0.0	0.0	0.0	(0.1)	(0.1)	0.5	0.1	0.3	0.5	0.5	0.5	0.5	0.7	0.7	1.0					
21	Fund of Hedge Funds (h)	0.0	0.3	0.0	(0.1)	0.0	0.0	0.0	0.0	(0.1)	(0.1)	0.4	0.1	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.4	1.0				
22	Private Equity	(0.1)	0.0	(0.1)	(0.1)	0.1	0.1	0.0	0.0	(0.1)	(0.1)	0.1	0.1	0.3	0.4	0.3	0.5	0.4	0.5	0.5	0.3	0.3	1.0			
23	Real Estate	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.3	1.0		
24	Infrastructure	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	1.0	
25	Commodities	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	(0.2)	0.2	0.3	0.2	0.0	0.1	(0.1)	(0.1)	0.0	0.0	0.0	0.2	0.2	1.0

Rationale for Projection Assumptions for Annual Plan Experience

The rationale for the material actuarial assumptions used to project the annual plan experience for the risk management procedures is summarized below.

The assumptions do not include margins for adverse deviations.

Economic Assumptions

Fund rate of return on plan assets

The experience varies annually by economic scenario in accordance with the Capital Market Assumptions and stochastic simulations described herein.

Rate of inflation

The experience varies annually by economic scenario in accordance with the Capital Market Assumptions and stochastic simulations described herein.

Rate of salary increase

The assumption reflects an allowance of 1.00% per annum to reflect the effect of real economic growth and productivity gains in the economy over the inflation experience for a given economic scenario. In addition, Pensionable Salary is also assumed to increase annually with future PTR Adjustments until the Pensionable Salary exceeds the salary ceiling of the rank of professor.

Escalation in PTR Adjustment and professor salary ceiling

The assumption reflects an allowance of 1.00% per annum to reflect the effect of real economic growth and productivity gains in the economy over the inflation experience for a given economic scenario.

Escalation of YMPE under Canada/Québec Pension Plan

The YMPE is indexed annually based on increases in the Industrial Aggregate Wage index for Canada. The assumption reflects an allowance of 1.00% per annum for the effect of real economic growth and productivity gains in the economy over the inflation experience for a given economic scenario.

Escalation of Income Tax Act (Canada) maximum pension limitation

The maximum pension limitation under the *Income Tax Act (Canada)* is scheduled to be indexed annually based on assumed increases in the Industrial Aggregate Wage index. The assumption reflects an allowance of 1.00% per annum for the effect of real economic growth and productivity gains in the economy over the inflation experience for a given economic scenario.

Base CPI COLA

This assumption has been determined based on the underlying inflation experience for a given economic scenario.

Base Pension COLA

The assumption has been determined as an approximation of the annual indexing that would result, on average, from the application of the target indexing formulas specified in the plan provisions, based on the underlying inflation experience for a given economic scenario.

PTR Recapture

Due to the complexity of the stochastic projections, the potential PTR Recapture over and above annual inflation has been ignored. If PTR Recapture had been reflected in the stochastic projections, both the number of scenarios which would result in a reduction in base benefits in any year over the 20-year period and the cumulative indexing as a percentage of targeted COLA would have been slightly higher than indicated in this report. However, it would not have materially impacted the risk management test results indicated in this report.

Demographic Assumption

See rationale for funding policy assumptions in Appendix C for demographic assumptions.

Rationale for Capital Market Assumptions

The rationale for the Capital Market Assumptions is described on page D-1.

The assumptions do not include margins for adverse deviations.

Appendix E: Actuarial Basis – Going Concern

Methods

Asset Valuation Method

The going concern value of assets was calculated as the market value of invested assets at the valuation date, adjusted for net outstanding amounts.

Actuarial Cost Method

The actuarial liability and the current service actuarial cost in respect of benefits were calculated using the projected unit credit cost method.

Prospective benefits were calculated for each active and disabled member according to the plan provisions and actuarial assumptions. The actuarial liability was calculated as the actuarial present value of the member's prospective benefits multiplied by the ratio of the member's credited service prior to the actuarial valuation date to the member's total potential credited service (the service prorate method). The calculation assumes that eligible Base COLA and PTR Recapture are granted in full each year, without regard to the conditional nature of such increases. The calculation of the actuarial present value of the member's prospective benefits is at least equal to the member's contributions with interest.

The actuarial liability for retired members and beneficiaries and terminated vested members was calculated as the actuarial present value of their respective benefits.

The current service actuarial cost in respect of benefits for each active and disabled member was calculated as the actuarial present value of the member's prospective multiplied by the ratio of the member's expected credited service during the ensuing year to the member's total potential credited service. The calculation assumes that eligible Base COLA and PTR Recapture are granted in full each year, without regard to the conditional nature of such increases. The current service actuarial cost rate in respect of benefits determined by the projected unit credit cost method will be stable over time if the demographic characteristics of the active and disabled plan membership remain stable from actuarial valuation to actuarial valuation. All other things being equal, an active and disabled membership whose average age increases (decreases) between actuarial valuations will result in an increasing (decreasing) current service actuarial cost rate.

Actuarial Assumptions

	July 1, 2013
Economic Assumptions (per annum)	
Liability discount rate	5.50%
Rate of inflation	2.25%
Rate of salary increase	3.25% plus annual PTR Adjustments
Escalation in PTR Adjustment and professor salary ceiling[1]	3.25%
Escalation of YMPE under Canada/Québec Pension Plan[2]	3.25%
Escalation of *Income Tax Act (Canada)* maximum pension limitation[3]	3.25%
Interest on members' contributions	5.50%
<u>Base COLA</u>	
• Base CPI COLA (active and disabled members)	2.25%
• Base Pension COLA (other members)	
– Service before June 30, 2004	2.25%
– Service from July 1, 2004 onward	0.75%
PTR Recapture	1.00%
Demographic Assumptions	
Mortality	1994 Uninsured Pensioner Mortality Table, projected generationally using Scale UNB (refer to Table 1 in Appendix C for Scale UNB)
Withdrawal	Service-related rates (refer to Table 2 in Appendix C)
Disability incidence/recovery	Nil
Retirement/pension commencement	
• Active and disabled members	Age-related rates (refer to Table 3 in Appendix C)
• Terminated vested members	Age 65

	July 1, 2013
Other	
Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form	90%
Years male spouse older than female spouse	3
Percentage of members with eligible dependant other than spouse	0%
Provision for non-investment expenses	0.5% of payroll

Notes:

[1] The estimated PTR Adjustment and professor salary ceiling figures of $2,800 and $152,800, respectively, as at July 1, 2013 will be projected at 3.25% per annum starting in 2014.

[2] The YMPE of $51,100 for 2013 is the starting value for the YMPE projection as at the current valuation and is indexed starting in 2014.

[3] The *Income Tax Act (Canada)* maximum pension limit of $2,696.67 per year of service in 2013 is the starting value for maximum pension limit projection and is indexed starting in 2014.

Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the going concern valuation is summarized below.

The going concern assumptions do not include margins for adverse deviations, except as noted below.

Liability discount rate

Economic assumptions used for establishing the liability discount rate have been developed based on Towers Watson's capital market model. The capital market model simulates economic variables (e.g. inflation and yields) and asset class returns, with the assumptions being developed through both the analysis of historical rates and returns, and the application of econometric theory. In modeling inflation and bond yields, current conditions and long term expectations are used and the serial correlation inherent in these parameters is recognized.

Our long term nominal rate of return assumption was determined using the expected long term asset mix for the plan based on the initial target asset allocation stipulated in the MOU.

Based on Towers Watson's capital market model, a best estimate long term gross nominal rate of return as of July 1, 2013 of 5.98% is appropriate. The following adjustments were subsequently made before selecting the long term nominal rate of return assumption:

• Best estimate long term nominal rate of return before adjustments	5.89%
• Adjustment for investment expenses paid by the plan (excluding active management fees)	(0.05)
• Best estimate long term nominal rate of return after adjustments	5.84%

In the selection of the discount rate, we have assumed that additional returns associated with employing an active investment management strategy would equal the additional expenses associated with employing such strategy. Consequently, any potential additional returns have been ignored.

After allowing a 0.40% margin for adverse deviations and rounding to the nearest 0.25%, we established 5.50% as the nominal rate of return assumption for the plan.

Base CPI COLA

This assumption has been determined based on the underlying inflation assumption without regard to the conditional nature of such increases, as permitted under the *Income Tax Act (Canada)* and Regulations thereto.

Base Pension COLA

The assumption has been determined as an approximation of the annual indexing that would result, on average, from the application of the target indexing formulas specified in the plan provisions, based on the underlying inflation assumption, without regard to the conditional nature of such increases, as permitted under the *Income Tax Act (Canada)* and Regulations thereto.

PTR Recapture

The assumption has been determined as the annual increase, in excess of the assumed Base CPI COLA, necessary to increase the Indexed PTR Adjustment and Indexed Professor Salary Ceiling, up to the actual PTR Adjustment and the actual professor salary ceiling, respectively, without regard to the conditional nature of such increases, as permitted under the *Income Tax Act (Canada)* and Regulations thereto.

Other Assumptions

The rationale for any other going concern actuarial assumption not described above is the same as the rationale for the respective funding policy valuation assumption described in Appendix C.

Appendix F: Actuarial Basis – Hypothetical Windup Valuation

Methods

Asset Valuation Method

The market value of assets, adjusted for net outstanding amounts, has been used for the hypothetical windup valuation. The resulting value has been reduced by a provision for plan windup expenses.

Liability Calculation Method

In the event that the Plan was wound-up by the Parties within the first 5 years following conversion to a shared risk pension plan, the conversion would be void and the plan would be wound-up as a defined benefit plan under Part 1 of the *Pension Benefits Act (New Brunswick)*. This hypothetical wind-up valuation was performed under this scenario. Consequently, the hypothetical wind-up liability was calculated based on the Prior Plan provisions in effect for service on or before July 1, 2013.

The hypothetical windup liability for active and disabled members was calculated as the actuarial present value of all benefits accrued up to the valuation date (treating all members as if vested). This calculation is at least equal to the member's contributions with interest.

The hypothetical windup liability for retired members and beneficiaries and terminated vested members was calculated as the actuarial present value of their respective benefits.

Other Considerations

The hypothetical windup actuarial valuation has been prepared on a hypothetical basis. In the event of an actual plan windup, the plan assets may have to be allocated between various classes of plan members or beneficiaries in the manner determined by the Board of Trustees in accordance with the plan provisions, the funding policy, or as required by applicable pension legislation. Such potential allocation has not been performed as part of this hypothetical windup valuation.

Hypothetical Windup Incremental Cost Actuarial Method

The hypothetical windup incremental cost for a given year represents the present value, at the valuation date, of the expected aggregate change in the hypothetical windup liability during the year, increased for expected benefit payments during the year.

The hypothetical windup incremental cost reflects expected decrements and related changes in membership status, accrual of service, any expected changes in benefits, entitlements, members' contributions, pension formula or increases in the maximum pension limits, and projected pensionable earnings during the year.

The hypothetical windup incremental cost has been calculated for the year following the valuation date as the projected hypothetical windup liability at the end of the year, minus the hypothetical windup liability at the beginning of the year, increased for expected benefit payments during the year. Each of these amounts is discounted to the valuation date using the projected hypothetical windup liability discount rate.

The method used to calculate the projected hypothetical windup liability at the end of the year is the same as used in the hypothetical windup valuation.

Actuarial Assumptions

	July 1, 2013
Economic Assumptions (per annum)	
Liability discount rate	
• Annuity purchase	3.50%
• Commuted value	N/A
Pension increases	See notes below [1]
Escalation of *Income Tax Act (Canada)* maximum pension limitation	Nil
Rate of inflation	
• Annuity purchase	3.70%
• Commuted value	N/A
Demographic Assumptions	
Mortality	1994 Uninsured Pensioner Mortality Table, projected generationally using Scale AA
Disability incidence/recovery	Nil
Retirement/pension commencement	Described in detail on page F-5
Other	
Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form	90%
Years male spouse older than female spouse	3
Percentage of members receiving settlement by commuted value	0%
Provision for expenses	$300,000

Notes:

[1] For annuity purchase: 3.70% per annum for pension accrued up to June 30, 2004, 0.75% for pension accrued from July 1, 2004 onward.

Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the hypothetical windup valuation is summarized below.

The actuarial assumptions used in the hypothetical windup valuation do not include margins for adverse deviations.

Liability discount rate

In the event of a plan windup, it is expected that all liabilities will be settled by a group annuity purchase.

For the calculation of the portion of the hypothetical windup liability relating to the benefits that are expected to be settled by a group annuity purchase, the liability discount rate corresponds to an approximation of the annuity purchase rates as at the valuation date following application of the relevant guidance on assumptions for solvency and hypothetical windup valuations issued by the Canadian Institute of Actuaries' committee on Pension Plan Financial Reporting.

Rate of inflation

For the benefits that are expected to be settled by a group annuity purchase, the assumption has been set following application of the relevant guidance on assumptions for solvency and hypothetical windup valuations issued by the Canadian Institute of Actuaries' committee on Pension Plan Financial Reporting.

Escalation of Income Tax Act (Canada) maximum pension limitation

The *Income Tax Act (Canada)* maximum pension limitation specified in the Act as at the valuation date is applied without consideration for future scheduled increases, as pension entitlements are determined as at the valuation date.

Pension increases

The assumption has been determined by applying the pension increase provision specified in the Prior Plan to the rate of inflation assumption.

Mortality

For the benefits that are expected to be settled by a group annuity purchase, the assumption has been set following application of the relevant guidance on assumptions for solvency and hypothetical windup valuations issued by the Canadian Institute of Actuaries' committee on Pension Plan Financial

Reporting. No pre-retirement mortality has been assumed in order to approximate the value of pre-retirement death benefits.

Retirement/pension commencement

- Active and disabled members: pension commences at the age that produces the highest value.
- Terminated vested members: pension commences at the age that produces the highest value.

  For the benefits that are expected to be settled by a group annuity purchase, this is consistent with the expected assumption that would have been used by insurers to price the group annuity.

Percentage of members with eligible spouses at pension commencement and electing joint and survivor pension form

See rationale for funding policy assumptions in Appendix C.

Years male spouse older than female spouse

See rationale for funding policy assumptions in Appendix C.

Percentage of members receiving settlement by commuted value

This assumption has been determined by considering the benefit provisions of the Prior Plan, legislative requirements to offer specific settlement options to various classes of members, and, in particular, the options to be provided to members upon plan windup.

Provision for expenses

Allowance was made for normal administrative, actuarial, legal and other costs which would be incurred if the plan were to be wound up (excluding costs relating to the resolution of surplus or deficit issues). The valuation is premised on a scenario in which the employer continues to operate after the windup date. In establishing the allowance for plan windup costs, certain administrative costs were assumed to be paid from the pension fund (consistent with past practice) while other costs were assumed to be borne directly by the University of New Brunswick.

Hypothetical Windup Incremental Cost Actuarial Assumptions

Demographic and Benefit Projection Actuarial Assumptions

Except as noted below, the projected population, benefits and members' contributions valued in the hypothetical windup liability projection are based on the demographic and benefit projection assumptions used for the going concern valuation described in Appendix E.

Other demographic assumptions

No allowance has been made for withdrawal, retirement and disability incidence/recovery between the current actuarial valuation date and next actuarial valuation date in the demographic projections on the basis that such assumptions would not have a material impact on the solvency incremental cost.

Hypothetical Windup Liability Projection Actuarial Assumptions

The assumptions for the hypothetical windup liability projections for purposes of calculating the hypothetical windup incremental cost are the same assumptions as those used in the hypothetical windup valuation described previously.

Appendix G: Membership Data

Demographic Projection to July 1, 2013

As specified in the MOU, the July 1, 2013 valuation is based on membership data supplied as at January 1, 2012 for the purpose of the 2012 Valuation and projected based on the economic going concern actuarial assumptions described in Appendix C of the 2012 Valuation report. All members that were active as at January 1, 2012 were assumed to remain active on July 1, 2013, with the exception of members over the age of 65 as at July 1, 2013 who were assumed to retire on that date. The members assumed to retire on July 1, 2013 were replaced by an equal number of new entrants based on the new entrant membership profile summarized in Table 4 of Appendix C.

The University of New Brunswick confirmed the projected membership data was representative of the membership as at July 1, 2013.

Summary of Membership Data

Active and Disabled Members

	July 1, 2013	July 1, 2012
• Number	607	607
• Average age	50.0	50.5
• Average credited service [1]	11.6	11.7
• Total pensionable salary [2]	$ 70,196,304	$ 68,115,397
• Average pensionable salary [2]	$ 115,645	$ 112,216
• Accrued pension [1]	$ 12,308,125	N/A

Notes:

[1] Excluding credited service under the Public Service Shared Risk Plan (the “PSSRP”).

[2] Pensionable salary is capped at $152,719 in 2013 and $149,869 in 2012.

Comment:

The following distribution relates to active and disabled members. The following meanings have been assigned to age and credited service:

Age	Age as at July 1, 2013
Service	Credited service as at July 1, 2013
Pensionable salary	Annual pensionable salary as at July 1, 2013

Active and Disabled Members

		Service								
Age		*0 - 4*	*5 - 9*	*10 - 14*	*15 - 19*	*20 - 24*	*25 - 29*	*30 - 34*	*35 +*	*Total*
< 20	Number									
	Average Salary									
20 - 24	Number									
	Average Salary									
25 - 29	Number	4								4
	Average Salary	63,023								63,023
30 - 34	Number	21	1							22
	Average Salary	76,233	72,178							76,049
35 - 39	Number	35	18	2						55
	Average Salary	81,909	87,394	106,522						84,600
40 - 44	Number	27	31	27	2					87
	Average Salary	88,388	93,865	109,385	113,046					97,423
45 - 49	Number	22	31	42	11	2				108
	Average Salary	84,522	103,071	117,690	123,598	152,175				107,978
50 - 54	Number	9	22	36	27	27				121
	Average Salary	107,220	105,009	121,034	130,738	144,179				124,423
55 - 59	Number	8	11	27	21	52				119
	Average Salary	155,398	102,795	125,198	132,983	146,348				135,773
60 - 64	Number	3	11	15	8	54				91
	Average Salary	59,320	111,029	120,334	137,711	147,457				134,821
65 +	Number									
	Average Salary									
Total	Number	129	125	149	69	135				607
	Average Salary	87,999	99,300	118,470	130,579	146,444				115,645

Average Age = 50.0 Average Service = 11.6

Retired Members and Beneficiaries

	July 1, 2013	July 1, 2012
• Number	468	432
• Average age	72.0	71.6
• Total lifetime annual pension	$ 10,144,574	$ 8,590,267
• Average lifetime annual pension	$ 21,676	$ 19,885
• Number of temporary annual pension payable from 55 to 60	5	8
• Total temporary annual pension payable from age 55 to 60	$ 148,010	$ 249,265
• Number of temporary annual pension payable from 60 to 65	19	39
• Total temporary annual pension payable from 60 to 65	$ 59,195	$ 33,694

Terminated Vested and Non-Vested Members

	July 1, 2013	July 1, 2012
Terminated vested members:		
• Number	64	64
• Average age	52.9	51.9
• Total annual pension	$ 510,081	$ 501,780
• Average annual pension	$ 7,970	$ 7,840
Terminated non-vested members:		
• Number	N/A	17
• Average age	N/A	44.0

Review of Membership Data

The membership data were supplied by the University of New Brunswick's third-party administrator, Morneau Shepell, as at January 1, 2012.

The membership data have been relied upon by Towers Watson following tests for reasonableness and found to be sufficient and reliable for the purposes of the actuarial valuations. Elements of the data review included the following:

- ensuring that the data were intelligible (i.e., that an appropriate number of records was obtained, that the appropriate data fields were provided and that the data fields contained valid information);
- preparation and review of membership reconciliations to ascertain that the complete membership of the pension plan was accounted for;
- review of consistency of individual data items and statistical summaries between the current valuation and the previous valuation;
- review of reasonableness of individual data items, statistical summaries and changes in such information since the previous valuation date; and
- comparison of the membership data and the plan's financial statements for consistency.

However, the tests conducted as part of the membership data review may not have captured certain deficiencies in the data.

Membership Reconciliation

Active and disabled members

• As at July 1, 2012	607
• New entrants (based on sample profiles)	36
• Retirements	(36)
• Terminations:	
– Without vested benefit	0
– With lump sum settlement	0
– With deferred pension entitlement	0
• Deaths:	
– Without vested benefit	0
– With lump sum settlement (outstanding)	0
– With survivor's pension	0
• Data corrections	0
• As at July 1, 2013	607

Retired members and beneficiaries

• As at July 1, 2012	432
• New retirements	36
• New beneficiaries	0
• Deaths:	
– Without survivor's pension	0
– With survivor's pension	0
• Data corrections	0
• As at July 1, 2013	468

Terminated Vested Members

• As at July 1, 2012	64
• New vested terminations (including from non-vested group)	0
• Lump sum settlements	0
• Retirements	0
• Deaths:	
– With lump sum settlement	0
– With survivor's pension	0
• Re-employed	0
• Data corrections	0
• As at July 1, 2013	64

Terminated Non-Vested Members

• As at July 1, 2012	17
• New non-vested terminations	0
• New deaths with lump sum settlement outstanding	0
• Re-employed	0
• Lump sum settlements	(17)
• Data corrections	0
• As at July 1, 2013	0

Appendix H: Summary of Plan Provisions

The following is an outline of the principal features of the plan which are of financial significance to valuing the plan benefits. This summary is based on the most recent MOU and does not make any provisions for the possibility that a change or action (retroactive or otherwise) could be imposed by order of a regulatory body or a court. It is not a complete description of the plan terms and should not be relied upon for administration or interpretation of benefits. For a detailed description of the benefits, please refer to the MOU as the plan text has yet to be officially filed.

Plan Effective Date

July 1, 2013

Date of Last Amendment

Not applicable

Definitions

Conversion Date

July 1, 2013

Plan Membership

Means the period of continuous service on and after January 1, 1993 while a member of the plan or the Prior Plan.

Pensionable Salary

The normal salary (including administrative stipends) received by a member from the University of New Brunswick.

Indexed Pensionable Salary

Pensionable Salary adjusted to reflect any Base CPI COLA granted by the Board of Trustees and Indexed PTR Adjustments credited between the date the Pensionable Salary was received and the relevant date of determination. Indexed PTR Adjustments are credited in years that the member's Indexed Pensionable Salary does not exceed the Indexed Professor Salary Ceiling and the member actually receives a PTR Adjustment.

Maximum Pensionable Salary

For service before July 1, 2013:

for a given calendar year shall be equal to (a) divided by (b), where:

a) is the sum of (i) the maximum pension limit set forth in the Income Tax Act (Canada) and Regulations in respect of one year of service, and (ii) 0.7% of the YMPE for that calendar year; and

b) is 2.0%.

For service on or after July 1, 2013:

for a given calendar year shall be equal to (a) divided by (b), where:

a) is the sum of (i) the maximum pension limit set forth in the Income Tax Act (Canada) and Regulations in respect of one year of service, and (ii) 0.7% of the YMPE for that calendar year; and

b) is 1.8%.

Best Average Pensionable Salary at Conversion

The average annual Pensionable Salary of the member during the 60 consecutive months in which Pensionable Salary were highest determined at the Conversion Date.

Indexed Best Average Pensionable Salary at Conversion

The Best Average Pensionable Salary at Conversion, adjusted to reflect any Base CPI COLA that has been granted by the Board of Trustees and Indexed PTR Adjustments credited between the Conversion Date and the relevant date of determination. Indexed PTR Adjustments are credited for any year that the member’s Indexed Best Average Pensionable Salary at Conversion does not exceed the Indexed Professor Salary Ceiling and the Member actually receives a PTR Adjustment.

YMPE

The Year’s Maximum Pensionable Earnings as defined under the Canada Pension Plan.

Indexed YMPE

YMPE adjusted to reflect any Base CPI COLA that has been granted by the Board of Trustees.

Average Year's Maximum Pensionable Earnings (YMPE) at Conversion

Average of the YMPE in 2013 and the immediately preceding two years.

Indexed Average YMPE at Conversion

Average YMPE at Conversion adjusted to reflect Base CPI COLA that has been granted by the Board of Trustees.

PTR Adjustment

Annualized amount of PTR related salary increase determined in accordance with the collective agreement in effect on the date of determination.

Indexed PTR Adjustment

The lesser of:

a) PTR Adjustment in effect immediately prior to the Conversion Date, adjusted to reflect any Base CPI COLA and PTR Recapture that has been granted by the Board of Trustees; and

b) PTR Adjustment in effect on the date of determination.

Indexed Professor Salary Ceiling

The lesser of:

a) The salary ceiling of the rank of professor in effect immediately prior to the Conversion Date, adjusted to reflect Base CPI COLA and PTR Recapture granted by the Board of Trustees; and

b) The salary ceiling of the rank of professor in effect on the date of determination, in accordance with the collective agreement in effect at that date.

Base COLA

A type of COLA that may be granted by the Board of Trustees in accordance with the funding policy. Base COLA is comprised of Base Pension COLA and Base CPI COLA.

Base Pension COLA

The Base COLA that may be granted by the Board of Trustees in accordance with the funding policy for members who are receiving a pension or have terminated employment at the relevant date.

The amount of eligible Base Pension COLA for a given year is determined based on the target indexing formula, which varies by period of Pensionable Service, as follows:

Pensionable Service	Target Indexing Formula
prior to July 1, 2003	Increase in Pension Index in latest year, to a maximum of 6.0%
between July 1, 2003 and June 30, 2004	Increase in Pension Index in latest year, to a maximum of 4.5%
from July 1, 2004	Increase in Pension Index in latest year, to a maximum of 0.5%; plus the lesser of: a) excess average investment return over a benchmark rate of 7.75%; and b) excess of the 3 years average percentage increase in the Pension Index over 0.5%

The Pension Index is determined as the rate of increase in the average Consumer Price Index (CPI) for the 12-months ending June 30th of the current year over the average CPI for the 12-months ending June 30th of the previous year.

The eligible Base Pension COLA determined for a given year based on the target indexing formula described above may only be partially granted or waived depending on the funding excess available and the funding excess utilization priorities specified in the plan's funding policy.

Any Base Pension COLA granted based on the available funding excess as at July 1st of a given year shall increase pensions effective as of January 1st of the following calendar year. Such Base Pension COLA will apply to all pensions, including spouses' pensions and deferred pensions. Deferred pensions are increased both before and after normal retirement. Increases are pro-rated for members retiring in the year prior to when the increase is granted.

Base CPI COLA

The Base COLA that may be granted by the Board of Trustees in accordance with the funding policy for members who are accruing benefits at the relevant date.

The amount of eligible Base CPI COLA for a given year is determined as 100% of increase in the average CPI for the 12-months ending June 30th of the current year over the average CPI for the 12-months ending June 30th of the previous year.

The eligible Base CPI COLA determined for a given year may only be partially granted or waived depending on the funding excess available and the funding excess utilization priorities specified in the plan's funding policy.

Any Base CPI COLA granted based on the available funding excess as at July 1st of a given year will apply, effective as of January 1st of the following calendar year, to the following:

- The member's Indexed Best Average Pensionable Salary at Conversion, excluding any Indexed PTR Adjustments;
- The member's Indexed Pensionable Salary in respect of each year since the Conversion Date, excluding any Indexed PTR Adjustments;
- The Indexed Average YMPE at Conversion;
- The Indexed YMPE in respect of each year since the Conversion Date;
- The Indexed PTR Adjustment in effect at the beginning of the year; and
- The Indexed Professor Salary Ceiling in effect at the beginning of the year.

PTR Recapture

A type of COLA that may be granted by the Board of Trustees in accordance with the funding policy, after all eligible Base COLA has been granted.

The eligible PTR Recapture is the amount necessary to increase the Indexed PTR adjustment and the Indexed Professor Salary Ceiling to the actual PTR Adjustment and salary ceiling of the rank of professor, respectively, in effect at the relevant date.

Any such increases are subject to the maximum increases allowed by applicable legislation.

Eligibility for Membership

A full-time academic employee shall become a member of the plan on the effective date, or date of hire if later, except that:

a) such person shall not become a member until he or she has attained age 18, and

b) if such person would not have completed 5 years of continuous service at normal retirement date may elect to join on a voluntary basis.

A part-time academic employee may elect to become a member of the plan on a voluntary basis, subject to completion of minimum earnings conditions for two consecutive years.

Member Contributions

Each member who is an academic employee is required to contribute at the rates specified in the plan. The initial contribution rates specified in the plan may be adjusted by the Board of Trustees from time to time, subject to the triggering mechanism and limitations imposed by the funding policy. However, the initial contribution rates for each member who is an academic employee shall not be increased or decreased by an amount greater than 2.25% of Pensionable Salary, unless required in accordance with the Income Tax Act (Canada).

Contributions are limited to Pensionable Salary up to the Maximum Pensionable Salary.

The contribution requirements for the University of New Brunswick shall, at all times, be equal to the total of the Members' contributions, including any adjustments which may be made to the initial contribution rates.

Normal Retirement

Eligibility

Normal retirement date is the June 30 next following the member's 65th birthday.

Annual Pension

Members who retired prior to the Conversion Date, surviving spouses or beneficiaries in receipt of a pension prior to the Conversion Date, and members with a deferred pension entitlement prior to the Conversion Date receive an annual pension under this plan equal to the amount of pension paid or payable at the Conversion Date, plus all Base COLAs granted by the Board of Trustees.

Members who retire, terminate employment or die prior to terminating employment on or after the Conversion Date receive an annual pension under this plan equal to the sum of:

- for each year of pensionable service related to the periods of service before July 1, 2007, the sum of:

  (i) 1.3% of the member's Indexed Best Average Pensionable Salary at Conversion up to the Indexed Average YMPE at Conversion; plus

  (ii) 2.0% of the member's Indexed Best Average Pensionable Salary at Conversion in excess of the Indexed Average YMPE at Conversion; plus

- for each year of pensionable service related to the periods of service between July 1, 2007 to June 30, 2013, the sum of:

  (i) 1.0% of the member's Indexed Best Average Pensionable Salary at Conversion up to the Indexed Average YMPE at Conversion; plus

  (ii) 1.7% of the member's Indexed Best Average Pensionable Salary at Conversion up to the Maximum Pensionable Salary at the date of determination in excess of the Indexed Average YMPE at Conversion; plus

- for each year of pensionable service on or after the Conversion Date, the sum of:

  (i) 1.1% of the member's Indexed Pensionable Salary up to the Indexed YMPE; plus

  (ii) 1.8% of the member's Indexed Pensionable Salary up to the Maximum Pensionable Salary at the date of determination in excess of the Indexed YMPE; and

- all Base Pension COLAs granted by the Board of Trustees following the member’s date of retirement, termination of employment or death prior to termination of employment, as applicable.

Maximum Pension

The pension payable under the plan is subject to the maximum limits set forth in the Income Tax Act (Canada) and Regulations. These limit lifetime pensions for each year of pensionable service to, $2,646.67 in 2012, $2,696.67 in 2013. The limit after 2013 is scheduled to increase in line with average wages in Canada.

Regular Early Retirement

Eligibility

Any time within 10 years of normal retirement date.

Annual Pension

Eligible to receive a pension calculated the same way as a normal retirement pension, except that:

- For years of pensionable service prior to the Conversion Date: the pension is reduced by 5/12 of 1% for each month between the date of retirement and the member's 65^{th} birthday (or the actuarially equivalent pension if higher); and

- For years of pensionable service after the Conversion Date: the pension is reduced on an actuarial equivalent basis.

Unreduced Early Retirement for years of service before the Conversion Date

Eligibility

Eligible to receive an unreduced early retirement pension if the member's combined years of age and eligible service (pensionable service plus service counted as pensionable service under the PSSRP for those who joined this plan prior to February 28, 2009) total 85 or more.

Annual Pension

Eligible to receive an unreduced early retirement pension which equal to:

a) for each year of pensionable service before the Conversion Date, the pension calculated in the same way as a normal retirement pension; plus

b) a temporary pension equal to 0.7% of the member's Indexed Best Average Pensionable Salary at Conversion up to the Indexed Average YMPE at Conversion for the periods of pensionable service prior to the Conversion Date and payable to age 60.

c) for each year of pensionable service under the PSSRP, the excess of:

  - the pension determined in (a) above, over
  - the pension actually paid under the PSSRP.

A member is also eligible to receive an unreduced early retirement pension if he or she has served as a deputy head as defined under the PSSRP for at least one year, has completed 25 years of pensionable service prior to the Conversion Date under the PSSRP and this plan, and has attained age 55.

Normal Form of Pension

The pension shall be payable during the lifetime of the member and shall continue after the member's death in accordance with the following provision:

- The pension payable to the surviving spouse is equal to 60% of the member's accrued pension, payable for the lifetime of the spouse.

Termination of Employment

Eligibility

Employment terminates after completing two years of plan membership under PSSRP and this plan.

Annual Pension

Eligible to a deferred pension commencing at normal retirement date equal to the pension accrued at the date of termination adjusted for Base Pension COLAs granted by the Board of Trustees since termination. Such a member may elect to start receiving pension payments on the first day of any month within 10 years preceding normal retirement date. In that case, the amount of early retirement pension will be equal to the normal retirement pension reduced by 5/12 of 1% for each month preceding normal retirement date for periods of service prior to the Conversion Date and to the actuarial equivalent pension for period of service on or after the Conversion Date. The amount of deferred pension is also subject to the minimum requirements of New Brunswick pension legislation.

Such a member may elect to leave his or her entitlements in the plan or, if not entitled to an immediate early retirement pension, transfer the termination value to a subsequent employer's pension plan, to an individual Registered Retirement Saving arrangement or to purchase a lifetime pension.

Any other terminating member is entitled to a refund of his or her contributions with interest.

Pre-retirement Death Benefit

The benefits payable on or after the death of a member before retirement are guaranteed to be at least equal to the member's contributions with interest. For periods of service prior to the Conversion Date, subject to a minimum of two years of plan membership, the surviving spouse's pension payable should be at least equal to the greater of:

a) 60% of the value of the member's accrued pension entitlement; or

b) 100% of the termination value of the deferred pension to which the member was entitled.

For periods of service on or after the Conversion Date, the surviving spouse's pension payable should be equal to 100% of the termination value of the deferred pension to which the member was entitled.

Disability Benefit

The period during which a member is absent on account of disability and receives a disability benefit from a long term disability plan established by the University of New Brunswick shall be deemed to be pensionable service. A member who is absent on account of such a disability shall be treated as a full-time academic employee or a part-time academic employee, depending on the member's employment status at the date of disability.

A member shall not be required to make contributions to the plan during such period.

Termination Value

The termination value of the member's entitlements corresponds to the funding policy liability for that member times the Termination Value Funded Ratio in accordance with Applicable Legislation.

Special Provisions on Plan Windup

There are no special benefits payable on plan windup, other than those prescribed by legislation.

Historical COLA Granted by the Board of Trustee

Effective date	Base CPI COLA	Base Pension COLA	
		For benefits in respect of service prior to June 30, 2004	For benefits in respect of service on or after July 1, 2004
January 1, 2014[1]	N/A	0.96%	0.50%

Note:

[1] Current year COLA increase subject to approval of the Board of Trustees.

Funding Policy

Funding Deficit Recovery Plan

Triggered when the open group funded ratio drops below 100% in two successive valuation reports. The following actions must be taken prior to any other:

1. Increase Member and employer contributions equally, subject to funding policy limits; and

2. Reduce base benefits (required only if the primary risk management goal is not met following the maximum permitted contribution increase), subject to the following conditions:

   - Base benefits must be reduced in equal proportion for all members; and

   - As soon as funding position improves, any reductions to base benefits must be reversed.

Funding Excess Utilization Plan

Triggered when the open group funded ratio exceeds 105%. The funding excess available for benefit improvements is defined by the plan's funding policy as:

- 17% of the funding excess between funding levels 105% and 140%; and

- 100% of any funding excess above a 140% funding level.

The following actions must be taken prior to any other:

1. Reverse any previous reductions to base benefits;

2. Remove any contribution increases in effect;

3. Provide Base COLA; and

4. After the above priorities have been met:

   A. 50% of any available funding excess will be used to provide PTR Recapture.

   B. 50% of any available funding excess above a 140% funding level shall be used to reduce contributions in accordance with the funding policy limits.

Appendix I: Open Group Funded Ratio and Termination Value Funded Ratio

Open Group Funded Ratio		**July 1, 2013**[1]
Funding Policy Value of Assets	$	315,812,834
Funding Policy Liability	$	284,429,531
Open Group Funded Ratio		111.0%
Termination Value Funded Ratio		
Market Value of Assets	$	232,444,686
Funding Policy Liability	$	284,429,531
Termination Value Funded Ratio		81.7%

Note:

[1] After application of the funding policy.

Comment:

- The funding policy value of assets includes the present value of future excess contributions.

Appendix J: Certificate of the Board of Trustees

I hereby certify that to the best of my knowledge and belief:

- the significant terms of engagement contained in Appendix A of this report are accurate and reflect the plan administrator's judgement of the plan provisions and/or an appropriate basis for the actuarial valuation of the plan;
- the information on plan assets forwarded to Société Towers Watson Canada inc. and summarized in Appendix B of this report is complete and accurate;
- the data forwarded to Société Towers Watson Canada inc. and summarized in Appendix G of this report are a complete and accurate description of all persons who are members of the plan, including beneficiaries who are in receipt of a retirement income, in respect of service up to the date of the actuarial valuation;
- the summary of plan provisions contained in Appendix H of this report is accurate; and
- Other than the events described in the Introduction section of this report, there have been no events which occurred between the valuation date and the date this valuation was completed that may have a material impact on the results of the valuation.

[signatures]	March 28, 2014
Signature	Date
L. GUITARD Norm Betts	Co. Chairs
Name	Title

Appendix K: Actuarial Information Summary

ACTUARIAL INFORMATION SUMMARY

Please see the instructions for completing this form. If an item does not apply, enter "N/A".

Part I – Plan Information and Contributions

A. 001. Name of registered pension plan

SHARED RISK PLAN FOR ACADEMIC EMPLOYEES OF THE UNIVERSITY OF NEW BRUNSWICK

B. 002. Registration number

Canada Revenue Agency: 0695478 Other:

C. 003. Is this plan a designated plan? ☐ Yes ☑ No

D. 004. Valuation date of report (YYYY MM DD): 2013 07 01

E. 005. End date of period covered by report (YYYY MM DD): 2014 07 01

F. 006. Purpose of the report (indicate all reasons for which the report was prepared)

☐ Initial report for a newly established plan ☐ Regular (triennial or annual) report for an ongoing plan ☐ Interim report in respect of an amendment to an ongoing plan ☐ Partial Termination

☐ Termination ☑ Conversion ☐ Other (please explain)

G. Contributions (prior to application of any credits or surplus) for covered period

Periods (see instructions)	Period 1	Period 2	Period 3	Period 4
007. Period start date (YYYY MM DD)	2013 07 01	2014 07 01	2015 07 01	
008. Period end date (YYYY MM DD)	2014 06 30	2015 06 30	2016 06 30	
Normal cost (defined benefit provision) 009. Members	$5,008,739.00	$5,171,523.00	$5,339,598.00	
010. Employer	$5,008,739.00	$5,171,523.00	$5,339,598.00	
010a. Explicit expense allowance included in employer normal cost above				
Normal cost (money purchase provision) 011. Members				
012. Employer				
Special payments 013. Special payments for going-concern unfunded liability and/or solvency deficiency	$6,127,672.00	$6,326,821.00	$6,532,443.00	
Fixed contributions 014. Estimated dollar amounts of fixed employer and, if applicable, member contributions (defined benefit provision)				
014a. Estimated dollar amounts of fixed employer and, if applicable, member contributions (money purchase provision)				

Part II – Membership and Actuarial Information

H. Membership information

	Number	Average Age	Average Pensionable Service	Average Salary	Average Annual Pension
015. Active members	607	50	11.6	$115,645.00	
016. Retired members	468	72	N/A	N/A	$21,676.00
017. Other Participants	64	53	N/A	N/A	$7,970.00

I. Actuarial basis for going-concern valuation (see instructions)

020. Asset valuation method

☑ Market ☐ Smoothed Market ☐ Book ☐ Book and Market combination ☐ Other

021. Liability valuation method

☐ Accrued benefit (unit credit) ☐ Entry age normal ☐ Individual level premium ☐ Aggregate

☑ Other (specify) Projected unit credit

I. Actuarial basis for going-concern valuation (cont'd) **Protected B** when completed

Selected actuarial assumptions

Where a flat rate is used, enter the rate under "Ultimate rate" and "N/A" under "Initial rate" and "Number of years."*

Valuation interest rate

	Initial rate	Number of years*	Ultimate rate
025. Active members	%		5.50 %
026. Retired members	%		5.50 %
027. Rate of indexation (Variables rates, please see report)	%		%
028. Rate of general wage and salary increase	%		3.25 %
029. YMPE escalation rate	%		3.25 %
030. *Income Tax Regulations'* maximum pension limit escalation	%		3.25 %
031. Rate of CPI increase	%		2.25 %

* from valuation date before ultimate rate becomes effective

035. Year *Income Tax Regulations'* maximum pension limit escalation commences 2014

036. Mortality table

- [ ] 1994 GAM Static
- [ ] 1994 Group Annuity Reserving (GAR)
- [x] 1994 UP
- [ ] 80% of 1983 GAM
- [ ] Other (specify)

036a. Generational Mortality Table
Has an assumption of generational mortality improvements been made? [x] Yes [ ] No

036b. Projected Mortality Table
Has a projection of mortality improvements been made? [ ] Yes [x] No

036b.(i) If *yes*, what is the year to which the mortality improvements have been projected (see instructions)? YYYY

037. Allowance for promotion, seniority and merit increases

- [ ] Included in (line **028**) above
- [x] Separate scale based on age or service
- [ ] No allowance

038. Allowance for expenses

038a. Allowance for investment expenses

- [x] Implicit
- [ ] Explicit

038b. Allowance for administrative expenses

- [ ] Implicit
- [x] Explicit

039. If a multi-employer plan, number of hours of work per member per plan year

040. Was a withdrawal scale used? [x] Yes [ ] No

041. Were variable retirement rates used? [x] Yes [ ] No

042. If *no*, what is the assumed retirement age?

J. Actuarial basis for solvency valuation

Valuation interest rate

	Initial rate	Select period	Ultimate rate
045. Benefits to be settled by lump sum transfer	%		%
046. Benefits to be settled by purchase of deferred annuity	%		3.5 %
047. Benefits to be settled by purchase of immediate annuity	%		3.5 %
048. Rate of indexation (Variable rates, please see report)	%		%

049. Mortality table [x] 1994 UP Generational [ ] 1994 UP [ ] Other (specify)

049a. Year of projection (see instructions) YYYY

K. Balance sheet information (DB provisions, see instructions)

050. Market value of assets, adjusted for receivables and payables **$232,444,686.00**

051. Amount of contributions receivable included in market value above **$262,601.00**

Going-concern valuation

052. Going-concern assets **$232,444,686.00**

053. Optional ancillary contributions account balance included in going-concern assets above for a flexible pension plan (if applicable)

Going-concern liabilities

060. For active members **$183,773,441.00**

061. For retired members **$147,228,163.00**

062. For other participants **$5,981,322.00**

063. For optional ancillary benefits to be provided under a flexible pension plan (if applicable)

064. Other reserve

K. Balance sheet information (DB provisions, see instructions) (cont'd) **Protected B** when completed

070. Net funded position—surplus/deficit .... - $104,538,240.00

071. Additional voluntary contributions .... ______

072. Money purchase assets (if applicable) .... ______

Solvency Valuation

Complete lines **080** to **100** only if the report contains an explicit solvency valuation

Solvency Assets (Windup valuation)

080. Solvency assets with adjustment for expense provision, if any $232,144,686.00

081. Amount of wind-up expense provision reflected in line **080** $300,000.00

082. Optional ancillary contributions account balance included in solvency assets above for a flexible pension plan (if applicable) .... ______

Solvency Liabilities

090. For active members $258,052,549.00

091. For retired members $195,541,127.00

092. For other participants $10,443,033.00

093. For optional ancillary benefits to be provided under a flexible pension plan (if applicable) .... ______

094. Other reserve .... ______

100. Net solvency position—surplus/deficit .... - $231,892,023.00

If the plan provides benefit increases coming into effect during the period covered by the report but after the valuation date, have those increases been reflected in:

102. The going-concern liabilities in lines **060** to **064**? .... ☑ N/A ☐ Yes ☐ No

103. The solvency liabilities in lines **090** to **094**? .... ☑ N/A ☐ Yes ☐ No

L. Actuarial gains or losses

110. Was a gain or loss analysis done? .... ☐ Yes ☑ No

111. If line **110** is *yes*, indicate the date of the last filed funding valuation report and the net funded position as at that date .... YYYY | MM | DD .... ______

If line 110 is *yes*, indicate amount of gain or loss due to:

112. interest on surplus (unfunded liability) .... ______

113. special payments made .... ______

114. amounts used for contribution holiday .... ______

115. change in actuarial assumptions .... ______

116. change in the asset valuation method .... ______

117. change in liability valuation method .... ______

118. plan amendments/changes .... ______

119. investment experience .... ______

120. retirement experience .... ______

121. mortality experience .... ______

122. withdrawal experience .... ______

123. salary increase experience .... ______

124. optional ancillary contributions forfeited .... ______

Are there major contributing sources other than lines **112** to **124** above (if *yes*, specify)

125. .... ______

126. .... ______

127. all other sources (combined) .... ______

M. Subsequent events

135. Are there any subsequent event(s) that have not been reflected in the valuation? (refer to the SOP) .... ☑ Yes ☐ No

N. Statements of opinion

136. Does the report include the statements of opinion required by the SOP (data, assumptions, methods, accepted actuarial practice)? .... ☑ Yes ☐ No

136a. Are any of the actuary's statements of opinion qualified? .... ☐ Yes ☑ No

Part III – Information required by the Financial Services Commission of

Financial Services Commission of Ontario | Commission des services financiers de l'Ontario

O. Additional valuation information

Going-concern valuation

140. Have escalated adjustments been included in going-concern liabilities? ☐ N/A ☐ Yes ☐ No

Solvency valuation

141. Have any of the **excludable** benefits been excluded? ☐ N/A ☐ Yes ☐ No

142. If line **141** is ***yes***, enter the total amount of liabilities being excluded ______

143. With respect to the type of benefits provided under the plan for service after the valuation date, complete the following table:

Provision Type	Benefit Accruals for Service After Valuation Date (Yes/No)	Closed (Yes/No)
Defined Benefit		
Defined Contribution		

144. (i) Has an averaging method been applied to the market value of assets in determining the solvency asset adjustment? ☐ Yes ☐ No

a. If line **(i)** is ***yes***, indicate the positive or negative amount by which the solvency assets are adjusted as a result of applying the averaging method ______

(ii) Has the averaging method used in determining the solvency asset adjustment changed since the last valuation? ☐ Yes ☐ No

If line (ii) is ***yes***, complete **(ii)a** or **(ii)b**, as appropriate:

a. The change in method increases solvency asset adjustment by the amount of ______

b. The change in method decreases solvency asset adjustment by the amount of ______

P. Miscellaneous

145. Prior year credit balance ______

146. Transfer ratio (express in decimal format) ______

Guarantee fund assessment

147. PBGF liabilities ______

148. PBGF assessment base ______

149. Amount of additional liability for plant closure and/or permanent layoff benefits as described in clause 37(4)(a)(ii)(A) of Regulation 909, R.R.O. 1990, as amended ______

149a. Number of Ontario plan beneficiaries ______

Part IV – Information required by the Office of the Superintendent of Financial Institutions Canada

Office of the Superintendent of Financial Institutions Canada | Bureau du surintendant des institutions financières du Canada

Q. Additional solvency valuation information

150a. Adjusted Solvency Ratio at the valuation date ______

150b. Adjusted Solvency Ratio one year prior (the **prior valuation date**) ______

150c. Adjusted Solvency Ratio two years prior (the **prior second valuation date**) ______

151. Average Solvency Ratio ______

152a. Solvency Liabilities ______

152b. Adjusted Solvency Asset Amount ______

152c. Solvency Deficiency ______

153. Value of the Letters of Credit included in solvency assets on the valuation date ______

160. Solvency ratio (express in decimal format) ______

162. Liability for active members who are within 10 years of pensionable age and whose entitlement is valued at an interest rate basis stated on line **045** ______

163. Liability for active members who are within 10 years of pensionable age and whose entitlement is valued at an interest rate basis stated on line **046** ______

164. Liability for active members who are not within 10 years of pensionable age ______

Protected B when completed

165. Pensionable age:

a. May a member become entitled – with no employer consent required – to an unreduced retirement pension prior to the normal retirement age? ☐ Yes ☐ No

b. If ***yes*** to a., state the applicable age and service conditions:

		Age requirement	Service requirement			Age requirement	Service requirement
Active members	1)			Deferred vested members	1)		
	2)				2)		
	3)				3)		
	4)				4)		
	5)				5)		

c. Are these benefits reflected in the solvency valuation? ☐ N/A ☐ Yes ☐ No

166. Do the liabilities determined in the report include the impact of one or several plan amendments that affect the value of benefits having accrued prior to the report's valuation date, and which were not included in the prior report? ☐ Yes ☐ No

167. Does the report account for one or several plan amendments that affect only the cost of benefits that will accrue after the report's valuation date, and which were not included in the prior report? ☐ Yes ☐ No

168. If the answer to either question **166** or **167** is ***yes***, provide the amendment number and effective date ________ Amendment number

YYYY MM DD Effective date

Part V – Information required by the Canada Revenue Agency

R. Additional information

173. Surplus/deficit determined at the valuation date as per the instructions:

173a. Going-concern basis: **- $104,538,240.00**

173b. Wind-up basis: **- $231,892,023.00**

173c. For designated plans, maximum funding valuation basis: ________

174. Excess surplus determined at the valuation date:

174a. Going-concern basis: **$0.00**

174b. For designated plans, maximum funding valuation basis: ________

175. For designated plans, employer normal cost determined under the maximum funding valuation basis:

Period 1 ________

Period 2 ________

Period 3 ________

Period 4 ________

176. Minimum surplus required under applicable pension benefit legislation before contribution holiday:

176a. Going-concern basis ________

176b. Wind-up basis ________

177. Maximum amount that could be claimed as eligible employer contribution(s) – defined benefit provisions – under subsection 147.2(2) of the *Income Tax Act:*

177a. Unfunded liability: **$104,538,240.00**

177b. Normal cost:

Period 1: **$13,733,711.00**

Period 2: **$14,180,057.00**

Period 3: **$14,640,908.00**

Period 4 ________

Protected B when completed

Part VI – Information required by the Régie des rentes du Québec

Régie des rentes Québec

S. Additional information

	YYYY	MM	DD
185. Date on which the valuation report was prepared			

186. Value of additional obligations arising from an amendment on a funding basis ____

187. Value of additional obligations arising from an amendment on a solvency basis ____

188. Surplus assets that can be appropriated to the payment of employer contributions ____

189. Special amortization payments ____

190. Total of the letters of credit taken into account in the assets on a solvency basis ____

191. Pensions insured by an insurer taken into account in the actuarial valuation on a solvency basis ____

T. Additional information for plans whose employer is a municipality, a municipal housing bureau, an educational institution at the university level, or a childcare service

195. Reserve on a funding basis ____

196. Provision for adverse deviations on a funding basis ____

	Present Value	Amortization Payments		
		Period 1	Period 2	Period 3
197. Technical funding deficiency				
198. Improvement funding deficiency				

U. Additional information pertaining to pension plans other than those mentioned in section T

200. Reserve on a solvency basis ____

201. Provision for adverse deviations on a solvency basis ____

	Present Value	Amortization Payments		
		Period 1	Period 2	Period 3
202. Funding deficiency				
203. Technical solvency deficiency	/			
204. Improvement solvency deficiency				

Part VII – Certification by Actuary

As the actuary who signed the funding valuation report (the report), I certify that this completed form accurately reflects the information provided in the report.

Dated this **31** (day) day of **03** (month), **2014** (year)

Signature of actuary

Sylvie Hébert
Print or type name of actuary

Towers Watson
Name of firm

514-982-2224
Telephone number

sylvie.hebert@towerswatson.com
Email address*

* Optional information. The Canada Revenue Agency will not communicate on plan specific matters with clients by email, since we cannot guarantee the confidentiality of emailed information.