Actuarial Report

University of Toronto

University of Toronto (OISE) Pension Plan

As of July 1, 2014

Preparation of this Actuarial Valuation

University of Toronto (OISE) Pension Plan (the "Plan")
Registration Number: 0353854

This material has been prepared to present to the University of Toronto (the "University"), the current funded status of Plan benefits as of July 1, 2014 and the funding requirements for the Plan Year ending June 30, 2015 and subsequent Plan Years through June 30, 2017, unless superseded by a subsequent valuation. In addition, this material will serve as a source document for information to meet government filing requirements.

The University made an application to the Ministry of Finance, Pension Policy Branch to participate in the two-stage solvency funding relief measures applicable to pension plans in the broader public sector. The application to participate in the Stage Two of the solvency funding relief measures pursuant to Ontario Regulation 178/11 made under the *Pension Benefits Act* was filed on December 17, 2014 and approved on March 6, 2015 through Regulation 38/15. The next actuarial valuation for the purposes of developing funding requirements should be performed no later than at July 1, 2017 based on the Stage Two solvency relief measures for pension plans in the broader public sector, pursuant to Ontario Regulation 178/11.

The University will also be making an application to the Ontario Superintendent of Financial Services to seek approval to transfer the assets and liabilities of the OISE Pension Plan to the University of Toronto Pension Plan with effect from July 1, 2014.

The intended users of this report are the University, the committees involved in the governance of the Plan, the associations and unions representing Plan members, and the Financial Services Commission of Ontario and Canada Revenue Agency.

In conducting the valuation, we have used personnel information provided by the University of Toronto as of July 1, 2014, the statement of net assets prepared by the University of Toronto as of June 30, 2014, and the actuarial assumptions and methods described in the actuarial assumptions section of this report. We have relied on the auditing procedures carried out by Ernst & Young, the external auditors of the Plan, regarding the accuracy and completeness of the asset statements.

The following assumptions and methods have been used in this valuation based on the terms of this engagement:

- for the Going Concern Valuation, a discount rate based on the rate of return on the pension fund including a margin for adverse deviations;
- for the Going Concern Valuation, the projected unit credit cost method as the actuarial cost method;
- for the Going Concern Valuation, the market value of assets;
- for the Statutory Solvency Valuation, the exclusion of indexation from the Solvency Liability pursuant to the *Pension Benefits Act* (Ontario) and its Regulations;
- for the Statutory Solvency Valuation, no smoothing of assets or discount rates to calculate the Solvency Liability; and
- for the determination of contributions, election by the University of the three-year deferral/seven-year amortization option, as permitted under the Stage Two of the solvency funding relief measures.

Preparation of this Actuarial Valuation (continued)

For the purposes of this valuation, it is our opinion that:

- the data upon which the valuation is based are sufficient and reliable;
- the assumptions used are adequate and appropriate; emerging experience differing from the assumptions will result in gains or losses which will be revealed in future valuations;
- the actuarial methods used are appropriate.

To our knowledge, there have been no events from July 1, 2014 (the "valuation date") to the date of this report, other than the solvency funding relief measures referenced above and the collective bargaining agreements referenced later in this report that would have a material impact on the information contained in this report.

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

Aon Hewitt

Andrew M. Hamilton
Fellow of the Canadian Institute of Actuaries

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March 2015

Definition of Terms

Accrued Liability	The actuarial present value of the benefits earned by participants in respect of their service prior to the valuation date. For active participants, the accrued benefits reflect anticipated future salary increases.
Actuarial Value of Assets	For the July 1, 2014 actuarial valuation, the Actuarial Value of Assets has been reset to the Market Value of Assets.
Surplus	Amount by which the Actuarial Value of Assets exceeds the Accrued Liability. Results from experience gains arising from the difference between actual results and those expected under the actuarial assumptions.
Unfunded Accrued Liability	Amount by which the Accrued Liability exceeds the Actuarial Value of Assets. Results from liabilities established at the time the plan is amended and from experience deficiencies arising from the difference between actual results and those expected under the actuarial assumptions.
Deferred Asset Gain (Loss)	The amount by which the Market Value of Assets exceeds/(is less than) the Actuarial Value of Assets.
Participant Salary Base	The salary for active and disabled participants as of the valuation date, capped at $150,000, and reflecting the participant's percentage appointment as of the valuation date.
Current Service Cost	The actuarial present value of the benefits expected to be earned in respect of service during the year following the valuation date. The Required Participant Contributions are subtracted from the Total Current Service Cost to get the University Current Service Cost. For funding purposes, the University Current Service Cost is expressed as a percentage of the Participant Salary Base.

Summary

(Thousands of Dollars)	As of July 1, 2011 (Prior Filed Valuation)	As of July 1, 2014
Going Concern Valuation Results		
Past Service		
Actuarial Value of Assets	$ 87,460[1]	$ 93,675[2]
Less: Accrued Liability	(116,129)	(126,046)
Surplus (Unfunded Accrued Liability)	$ (28,669)	$ (32,371)
As a % of Accrued Liability	(24.7%)	(25.7%)
Market Value of Assets	$ 76,052	$ 93,675[3]
Deferred Asset Gain (Loss)	$ (11,408)	$ 0
Current Service		
Total Current Service Cost	$ 1,677	$ 1,393
Less: Required Participant Contributions[3]	427	436
University Current Service Cost	$ 1,250	$ 957
As a % of Participant Salary Base (Capped at $150,000)	14.73%	15.26%
Participant Salary Base (Capped at $150,000)	$ 8,487	$ 6,271
As a % of Participant Salary Base[4] (Capped at $150,000) Under Assumed Retirement Age	15.86%	16.49%
Participant Salary Base[4] (Capped at $150,000) Under Assumed Retirement Age	$ 7,880	$ 5,805

[1] Actuarial value of assets capped at 115% of market value of assets
[2] Reset to the market value of assets
[3] Includes participant contributions made by University on behalf of disabled participants
[4] Excludes salary for members who are not included in current service cost since they are over the assumed retirement age of 63

Solvency Liability	The actuarial present value of benefits earned for service prior to the valuation date, determined as if the Plan were terminated on the valuation date. The Solvency Liability is calculated using the assumptions summarized on page 48 of this report and excludes liabilities for future escalated adjustments (indexation) and temporary early retirement provision benefits for retirement eligible participants.
Solvency Ratio	The ratio of the Market Value of Assets to the Solvency Liability. The Solvency Ratio is used to determine the frequency of filing the actuarial valuation with the regulator.
Hypothetical Wind-Up Liability	Equal to the Solvency Liability, but including liabilities for future escalated adjustments (indexation) and liabilities for temporary early retirement provision benefits for participants who would be retirement age eligible during the temporary provision period.
Transfer Ratio	The ratio of the Market Value of Assets to the Wind-Up Liability. If the Transfer Ratio is less than 1.00, restrictions may be placed on lump-sum transfers in respect of a participant upon termination of employment.

(Thousands of Dollars)	As of July 1, 2011 (Prior Filed Valuation)	As of July 1, 2014
Solvency Valuation Results		
Solvency Assets[1]	$ 75,652	$ 93,275
Solvency Liability—Without Escalated Adjustments	121,823	137,129
Solvency Excess/(Deficit)	$ (46,171)	$ (43,854)
Solvency Ratio	0.62	0.68
Hypothetical Wind-Up Valuation Results		
Wind-Up Assets[4]	$ 75,652	$ 93,275
Wind-Up Liability—With Escalated Adjustments	161,705	182,599
Wind-Up Excess/(Deficit)	$ (86,053)	$ (89,324)
Transfer Ratio	0.47	0.51

[1] Net of provision of $400,000 for estimated wind-up expenses

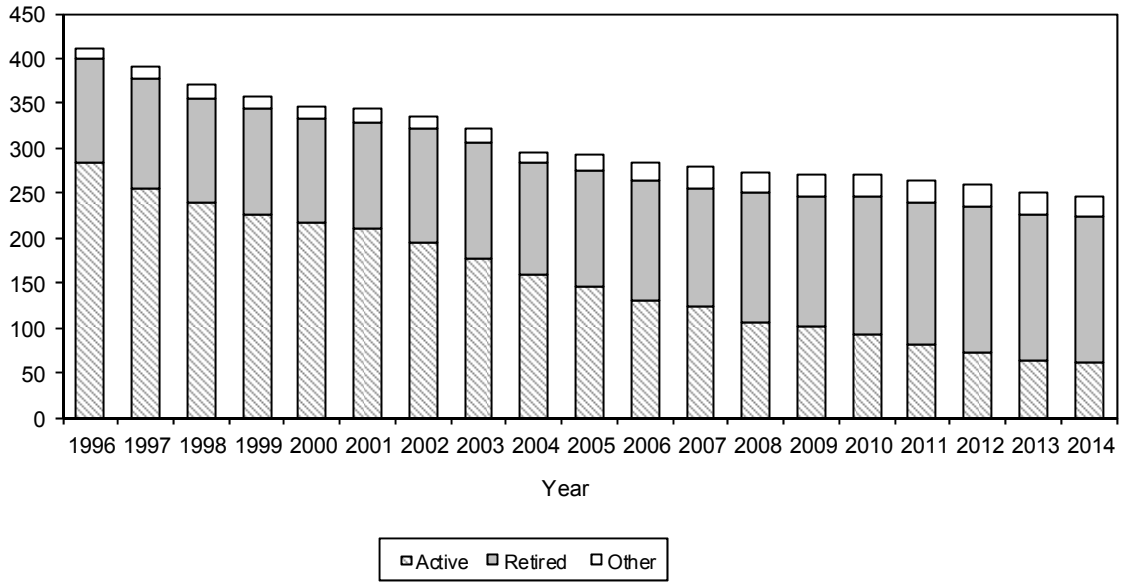
Definition of Terms (continued)

Going Concern Funding Requirements	The University Current Service Cost plus, if an Unfunded Accrued Liability exists, amortization payments (Special Payments) toward liquidating the Unfunded Accrued Liability, plus, to the extent required any Special Payments required to bring the University contributions up to the Statutory Minimum Required University Contribution. Surplus may be applied to offset the Current Service Cost.
Statutory Minimum Required University Contribution	For the period from July 1, 2011 through June 30, 2014, the University Current Service Cost, amortization payments (Special Payments) toward liquidating the Unfunded Accrued Liability and/or Solvency Deficit.
Active and Disabled Participants	Staff members contributing to the Plan as of the valuation date, and disabled participants for whom University is making Required Participant Contributions. Includes both full-time and part-time staff members and members on unpaid leave of absence who have elected to pay both their Required Participant Contributions and the University Current Service Cost.
Retired Participants	Staff members who have retired as of the valuation date and are in receipt of a pension from the pension fund.
Terminated Vested Participants	Staff members who have terminated employment as of the valuation date and who are entitled to a monthly pension commencing at normal retirement date.
Pending Participants	Staff members who have: ■ Terminated employment and no settlement has been made of pension contribution as of the valuation date.

(Thousands of Dollars)	As of July 1, 2011 (Prior Filed Valuation)	As of July 1, 2014
Funding Requirements		
Required Participant Contributions	$ 427	$ 436
University Current Service Cost	$ 1,250	$ 957
Plus: Special Payments to Amortize Unfunded Liability	3,096[1]	3,492[2]
University Contributions	$ 4,346	$ 4,449
Personnel Data		
Participants Not Affected by Partial Wind-Up		
Active and Disabled Participants	81	61
Retired Participants	159	164
Terminated Vested Participants	23	20
Pending Participants	2	2
Total	265	247

[1] The start date for Special Payments was deferred to one year to July 1, 2012, as per solvency funding relief measures
[2] The start date for the increase in Special Payments is deferred to one year to July 1, 2015, as per Regulation

History of Distribution of Participants



Year	Active	Retired	Other[1]	Total
1996	285	114	13	412
1997	256	121	13	403
1998	239	116	16	371
1999	227	117	13	357
2000	218	115	13	346
2001	210	119	16	345
2002	194	129	12	335
2003	176	131	16	323
2004	159	125[2]	18	302
2005	146	130	17	293
2006	131	134	18	283
2007	124	132	23	279
2008	106	144	22	272
2009	101	146	23	270
2010	93	154	23	270
2011	81	159	25	265
2012	73	162	24	259
2013	64	162	25	251
2014	61	164	22	247

[1] Terminated vested and pending participants
[2] Reflects removal of retirees included in partial wind-up group

Going Concern Valuation Results (Thousands of Dollars)

The going concern valuation results are shown below with the Accrued Liability broken down by participant category, after the changes in actuarial assumptions and asset valuation method.

Past Service		
Actuarial Value of Assets		$ 93,675
Less: Accrued Liability		
Active and Disabled Participants	$ 41,051	
Retired Participants	82,040	
Terminated Vested Participants	2,944	
Pending Participants	11	
Total		$ 126,046
Surplus (Unfunded Accrued Liability)		$ (32,371)
As a % of Accrued Liability		(25.7%)
Market Value of Assets		$ 93,675[1]
Current Service		
Total Current Service Cost		$ 1,393
Less: Required Participant Contributions		436[2]
University Current Service Cost		$ 957
As a % of Participant Salary Base (With $150,000 Pay Cap)		15.26%
Participant Salary Base (With $150,000 Pay Cap)		$ 6,271
As a % of Capped Participant Salary Base Under Assumed Retirement Age[3]		16.49%
Capped Participant Salary Base Under Assumed Retirement Age[3]		$ 5,805

[1] Reset to the market value of assets
[2] Includes participant contributions made by University on behalf of disabled participants
[3] Excludes salary for members of the administrative staff, unionized administrative staff and unionized staff who are not included in Current Service Cost since they are over the assumed retirement age of 63

Going Concern Valuation Sensitivity Results

Canadian Institute of Actuaries practice-specific standards required the disclosure of the impact on the Accrued Liability and the Total Current Service Cost of using a discount rate 1.00% lower than that used for the Going Concern Valuation.

The Accrued Liability and the Total Current Service Cost are based on a nominal discount rate assumption of 5.75% per year. Combined with an assumed inflation rate of 2.00% per year, the real discount rate assumption is 3.75% per year. The impact on these results of lowering the nominal discount rate by 1.00% per year to 4.75% per year, which means lowering the real discount rate assumption to 2.75% per year, is as follows:

Going Concern Valuation Sensitivity Results		July 1, 2014 (000's)
Accrued Liability		
Accrued Liability at Valuation Discount Rate	$	126,046
Accrued Liability at Valuation Discount Rate Less 1.00%	$	140,957
Impact of 1.00% Decrease in Valuation Discount Rate	$	14,911
Percentage Increase from 1.00% Decrease in Valuation Discount Rate		11.8%
Total Current Service Cost		
Total Current Service Cost at Valuation Discount Rate	$	1,393
Total Current Service Cost at Valuation Discount Rate Less 1.00%	$	1,624
Impact of 1.00% Decrease in Valuation Discount Rate	$	231
Percentage Increase from 1.00% Decrease in Valuation Discount Rate		16.6%

Market Value of Asset (Thousands of Dollars)

Market Value of Units Held in University of Toronto Master Trust	$	93,402
Prepaid Expenses[1]		622
Accrued Expenses		(349)
Net Contributions/Payments In-Transit		0
Total Market Value, June 30, 2014	$	93,675

[1] The monthly pension benefits due on July 1, 2014 were paid at the end of June

Asset Values

	As of June 30, 2011 (Prior Filed Valuation)	As of June 30, 2014
Asset Mix (% of Total Market Value)[1]		
Fixed Income	20.8%	27.3%
Canadian Equities	14.4%	14.5%
U.S. Equities	14.4%	10.5%
Non-North American Equities	17.6%	21.4%
Absolute Return	12.7%	8.5%
Private Equity	13.4%	12.2%
Real Assets	6.0%	4.4%
Cash and Other	0.7%	1.2%
Total	100.0%	100.0%

[1] Asset mix is based on the underlying assets excluding prepaid expenses, in-transit payments, accrued expenses, and currency overlay assets

Revenue Account

(Thousands of Dollars)	2011/2012	2012/2013	2013/2014
Market Value of Assets, Beginning of Year	$ 76,052	$ 76,493	$ 82,293
Plus: University Contributions	7,169	4,247	4,076
Participant Contributions	412	389	416
Net Investment Income from Master Trust	1,493	9,761	14,381
Less: Pensions Paid	(6,002)	(6,295)	(6,483)
Lump-Sum Payments	(1,121)	(1,258)	0
Fees (Investment Management, Custodial and Administration)	(1,510)	(1,044)	(1,008)
Market Value, End of Year	$ 76,493	$ 82,293	$ 93,675
Return on Market Value, After Fees and Expenses	0.0%	11.6%	16.4%

The returns (after fees and expenses) on market value have been calculated assuming contributions and benefit payments take place in the middle of the year.

Determination of Actuarial Value of Assets—Before Resetting the Value

The Actuarial Value of Assets as of July 1, 2014 is determined by writing up the prior year's actuarial value and net cash flow at the assumed interest rate used for the prior filed actuarial valuation (6.25% for the period from July 1, 2011 to June 30, 2013; 6.00% from July 1, 2013 to June 30, 2014) and then adjusting the result 25% toward market value. The Actuarial Value of Assets as of the valuation date is limited to no more than 115% of Market Value of Assets.

(Thousands of Dollars)	2011/2012	2012/2013	2013/2014
(1) Actuarial Value of Assets, Beginning of Year	$ 87,460	$ 87,967	$ 88,416
(2) University and Participant Contributions	7,581	4,636	4,492
(3) Incoming Transfers	0	0	0
(4) Pensions Paid	(6,002)	(6,295)	(6,483)
(5) Lump-Sum Payments and Outgoing Transfers	(1,121)	(1,258)	0
(6) Interest at assumed interest rate on:			
Initial Value	5,466	5,498	5,305
University and Participant Contributions	237	145	135
Incoming Transfers	0	0	0
Pensions Paid	(188)	(197)	(194)
Lump-Sum Payments and Outgoing Transfers	(35)	(39)	0
Total	$ 5,480	$ 5,407	$ 5,246
(7) Preliminary Value, End of Year, (1) + (2) + (3) + (4) + (5) + (6)	$ 93,398	$ 90,457	$ 91,671
(8) Market Value, End of Year	$ 76,493	$ 82,293	$ 93,675
(9) Market Value Adjustment, 0.25 x [(8) - (7)]	$ (4,226)	$ (2,041)	$ 501
(10) Actuarial Value of Assets, End of Year, (7) + (9)	$ 89,172	$ 88,416	$ 92,172
(11) 115% of Market Value	$ 87,967	$ 94,637	$ 107,726
(12) Actuarial Value of Assets, End of Year	$ 87,967	$ 88,416	$ 92,172

The Actuarial Value of Assets has been reset to the Market Value of Assets as at July 1, 2014.

History of Asset Returns

The following table shows the history of asset returns.

Year Ending	Return on Market Value	Return on Actuarial Value
June 30, 1997	15.9%	12.6%[1]
June 30, 1998	14.5%	13.5%
June 30, 1999	1.5%	8.6%[2]
June 30, 2000	16.7%	11.4%
June 30, 2001	-5.1%	5.3%
June 30, 2002	-2.6%	3.2%
June 30, 2003	-0.5%	1.7%
June 30, 2004	15.1%	5.6%[3]
June 30, 2005	10.7%	7.2%
June 30, 2006	7.7%	7.2%
June 30, 2007	19.1%	11.2%
June 30, 2008	-6.1%	5.0%
June 30, 2009	-28.7%	-5.9%
June 30, 2010	8.2%	-2.9%
June 20, 2011	12.5%	0.9%
June 30, 2012	0.0%	0.1%
June 30, 2013	11.6%	3.9%[4]
June 30, 2014	16.4%	6.6%

The returns (after fees and expenses) on market value and actuarial value have been calculated assuming contributions and benefit payments take place in the middle of the year.

[1] Assumed interest rate changed to 8.0% effective July 1, 1997
[2] Assumed interest rate changed to 7.0% effective July 1, 1999
[3] Assumed interest rate changed to 6.5% effective July 1, 2004
[4] Assumed interest rate changed to 6.00% effective July 1, 2013

Solvency and Hypothetical Wind-Up Valuation

The solvency test required under the *Pension Benefits Act* (Ontario) measures the funded status of the Pension Plan on a wind-up basis. To the extent that there is a Solvency Deficiency, additional funding is required.

The Solvency Liability is determined as if the Pension Plan is wound up as of July 1, 2014, taking into account Section 74 of the *Pension Benefits Act* (Ontario) (member entitlements on plan wind-up). The liability is discounted based on market interest rates.

The Solvency Liability may be adjusted to reflect the impact of using a weighted-average interest rate over a period of up to five years.

Solvency Assets are the market value of assets in the pension fund on an accrued basis. The Solvency Assets may be adjusted to reflect:

- The impact of using an averaging method that stabilizes short-term fluctuations in the market value of the Plan's assets calculated over a period of not more than five years; plus

- The present value of any remaining special payments required to liquidate any unfunded liability (for service not previously recognized for benefit determination purposes) established after December 31, 1987; plus

- The present value of any remaining special payments other than those above that are scheduled for payment within six years after the valuation date. This period of years may be longer if the Company has elected temporary funding relief options 3 and/or 5.

There are no adjustments to either the Solvency Liability or the Solvency Assets for the July 1, 2009 Solvency Valuation of the Plan, other than reflecting the value of special payments already scheduled.

The Transfer Ratio under the *Pension Benefits Act* (Ontario) is the ratio of the Market Value of Assets to the Hypothetical Wind-Up Liability. The Transfer Ratio as of July 1, 2014 is 0.51. If the transfer ratio is less than 1.00, lump-sum transfers from the pension fund under Section 42 of the *Pension Benefits Act* (Ontario) are limited to the commuted value of the member's pension multiplied by the transfer ratio. The administrator may transfer the entire commuted value if:

- The administrator is satisfied that an amount equal to the transfer deficiency has been remitted to the pension fund; or

The aggregate of transfer deficiencies for all transfers made since the last valuation date does not exceed 5% of the Plan's assets at that time.

Solvency and Hypothetical Wind-Up Valuation Results

	As of July 1, 2011 (000's)	As of July 1, 2014 (000's)
Solvency Valuation Results		
Solvency Assets[1]	$ 75,652	$ 93,275
Solvency Liability—Without Escalated Adjustments		
Active and Disabled Participants	$ 50,922	$ 48,889
Retired Participants	67,180	84,894
Terminated Vested Participants	3,711	3,335
Pending Participants	10	11
Total	$ 121,823	$ 137,129
Solvency Excess/(Deficit)	$ (46,171)	$ (43,854)
Solvency Ratio	0.62	0.68
Hypothetical Wind-Up Valuation Results		
Wind-Up Assets[1]	$ 75,652	$ 93,275
Wind-Up Liability—With Escalated Adjustments		
Active and Disabled Participants	$ 70,180	$ 67,986
Retired Participants	85,513	109,263
Terminated Vested Participants	6,002	5,339
Pending Participants	10	11
Total	$ 161,705	$ 182,599
Wind-Up Excess/(Deficit)	$ (86,053)	$ (89,324)
Transfer Ratio	0.47	0.51

As provided under the Regulations to the *Pension Benefits Act* (Ontario), the Solvency Liability excludes the liabilities associated with escalated adjustments (future indexing). Reflecting future escalated adjustments in the Hypothetical Wind-Up Valuation increases the liabilities by $45,470,000.

The assumptions used to determine the Solvency Liability are summarized on page 48 of this report. Note that the interest rates-with escalated adjustments reflect the value of future indexation of pensions during both the preretirement and postretirement periods.

In our opinion, the value of Plan assets, less a reasonable allowance for wind-up expenses, would be less than the actuarial liabilities (including escalated adjustments) by $89,324,000, if the Plan were wound-up on the valuation date, assuming that there is a competitive market for inflation-indexed annuities, or that a reasonable fixed rate of indexation could be substituted for inflation-linked indexation to facilitate annuity purchases.

[1] Net of provision of $400,000 for estimated wind-up expenses

Solvency Valuation Sensitivity Results

The CIA standards also require the disclosure of the impact on the Solvency Liability of using a discount rate 1.00% lower than that used for the Solvency Valuation.

Solvency Valuation Sensitivity Results	July 1, 2014 (000's)
Solvency Liability	
Solvency Liability at Solvency Discount Rates	$ 137,129
Solvency Liability at Solvency Discount Rates Less 1.00%	$ 153,023
Impact of 1.00% Decrease in Solvency Discount Rates	$ 15,894
Percentage Increase from 1.00% Decrease in Solvency Discount Rates	11.6%

Note that using a discount rate 1.00% higher than that assumed would result in a comparable reduction in the Solvency Liability.

Solvency Valuation Incremental Cost

The revised practice-specific standards also require the calculation of the incremental cost on a solvency basis. This represents the present value at July 1, 2014 of the expected aggregate change in the Solvency Liability between July 1, 2014 and June 30, 2017, the date of the next required valuation. The Actuarial Assumptions section of this report provides more detail regarding the calculation methodology and assumptions. An educational note was published in December 2010 by the Canadian Institute of Actuaries to provide guidance to actuaries for this calculation.

The main purpose of this new disclosure requirement is to provide insight regarding the expected growth in the Solvency Liability, assuming there will be no change in applicable discount rates. This disclosure requirement is more useful when combined with the expected return on Plan assets and comparing this net amount with the total current service cost contributions and special payments expected to be paid into the fund between those dates.

Based on this methodology and on these assumptions, the incremental cost on a solvency basis for the period from July 1, 2014 to June 30, 2017 is estimated to be $7,288,000.

Contributions

Minimum Required Contribution

For a Plan Year, the minimum required contribution is equal to the sum of:

(a) Current Service Cost for the Plan Year. Any Going Concern Surplus may be used to reduce or eliminate the Current Service Cost payment.

(b) Special Payments toward amortizing any Going Concern Unfunded Accrued Liability over 15 years from the date on which the unfunded liability was established.

(c) Special Payments toward amortizing any Solvency Deficiency over five years from the date on which the deficiency was established.

In order to satisfy the requirements of the *Pension Benefits Act* (Ontario) and its Regulations, contributions to the Plan must be made in accordance with the following rules:

(a) Required Participant Contributions to the Plan must be remitted to the pension fund within 30 days following the end of the month in which the contributions were received from the employee or deducted from his or her remuneration.

(b) University Current Service Cost Contributions must be remitted to the pension fund within 30 days after the month for which the contributions are payable.

(c) University Special Payments must be remitted to the pension fund by the end of the month for which they are payable.

Solvency Funding Relief Applicable to Pension Plans in the Broader Public Sector

On December 15, 2014, the University submitted an application for the Plan to participate in Stage Two of the solvency relief measures applicable to broader public sector pension plans. In 2015, the Plan was accepted into Stage Two through Amended Ontario Regulation 178/11.

In accordance with Section 9(4) of the Ontario Regulation 178/11, the University has made an election to liquidate any solvency deficiency determined in this report using the three-year deferral/seven-year amortization option.

In accordance with Section 9(5) of the Ontario Regulation 178/11, the next required valuation will be as at July 1, 2017.

Minimum Special Payments Under Solvency Relief Measures Applicable to Broader Public Sector Pension Plans

Stage One of Solvency Funding Relief Measures as at July 1, 2011

Pursuant to Ontario Regulation 178/11 made under the *Pension Benefits Act* as of February 16, 2012, the Plan was approved to participate in the first stage of the solvency funding relief measures applicable to broader public sector pension plans.

Under the solvency funding relief measures, the minimum Special Payment each year during the Stage One period was determined as the greater of the two tests below:

- Test No. 1 (in thousands of dollars)
  Interest on Solvency Deficit
  $46,171 x 4.15%[1] = $1,916
- Test No. 2 (in thousands of dollars)
  Solvency Assets - 80% of Solvency Liabilities
  $76,052 - 0.8 x $121,823 = $21,406
  Amortization of 50% of above result over 4 years at 4.15% = $2,904

In the first Plan Year (July 1, 2011 to June 30, 2012), the minimum Special Payment was $2,904. In the Plan Years after June 30, 2012, the going concern Special Payments exceed the minimum Special Payments required under the Stage One solvency funding relief measures.

Stage Two of Solvency Funding Relief Measures as at July 1, 2014

Amended Ontario Regulation 178/11 under the *Pension Benefits Act* (i.e., Regulation 307/13) requires the University to make special payments to the Plan to liquidate any solvency deficiency determined in the Stage Two Valuation Report (i.e., July 1, 2014 actuarial valuation report) according to the following rules:

- Rule 1 – Amortize the solvency deficiency identified in the Stage Two Valuation Report over a period of 10 years; and make such monthly special payments for three years starting no later than 12 months after the Stage Two Valuation Date.
- Rule 2 – The minimum monthly special payments during the three-year period starting no later than 12 months after the Stage 2 valuation date is the greater of zero and (i) minus (ii) where (i) and (ii) are defined as follows:
  - (i) Interest on solvency deficiency (without regards to estimated wind-up expenses), payable on a monthly basis,
  - (ii) The monthly special payments to liquidate the going concern unfunded liability.
- Rule 3 – During the remaining seven-year period, special payments must be made to liquidate the solvency deficiency as at July 1, 2014.

[1] Liability-weighted average of interest rates used for solvency valuation as at July 1, 2011

- Rule 1 will result in a solvency deficiency payment of $1,392,000 starting July 1, 2015.
- Rule 2 will result in $0 determined as follows:
  - (i) Interest on the solvency deficiency (without regards to estimated wind-up expenses) of $1,347,000 ($43,454,000 x 3.1%[1]) minus
  - (ii) The special payments of $3,492,000 to liquidate the Unfunded Accrued Liability, but not less than zero.
- Rule 3 will result in a solvency deficiency payment of $2,088,000 starting July 1, 2018.

Therefore, special payment of $3,492,000 to fund the Unfunded Accrued Liability of $32,371,000 as at July 1, 2014 will be contributed from July 1, 2015 to July 1, 2018 (one year after the effective date of the Stage Two Valuation Report as at July 1, 2014). Starting July 1, 2018, the special payments will increase to $5,580,000 ($3,492,000 plus $2,088,000).

[1] Liability-weighted average of interest rates used for solvency valuation as at July 1, 2014

Development of Special Payments

The following table summarizes the amortization schedules of special payments prior to the application of the Stage Two solvency relief funding measures (i.e., amortization of the solvency deficiency over 5 years). In accordance with the Regulation, the University will defer all new going concern and solvency special payments established as at July 1, 2014 by 12 months. The following schedule is for the benefit of the report only:

				Present Value as of July 1, 2014	
Nature of Deficiency	**Effective Date**	**End Date**	**Annual Special Payment (000's)**	**For Going Concern Valuation[1] (000's)**	**For Solvency Valuation[2] (000's)**
Going Concern	July 1, 2012	June 30, 2027	$ 3,096	$ 28,575	$ 16,974
Going Concern	July 1, 2015[3]	June 30, 2030	396	3,796	1,780
Solvency	July 1, 2015[3]	June 30, 2019	5,580	N/A	25,100
			$ 9,072	$ 32,371	$ 43,854

The following table summarizes the amortization schedules of special payments after application of the Stage Two solvency relief funding measures under the 10-year amortization period. In accordance with Regulation, the University will defer all new going concern and solvency special payments established as at July 1, 2014 by 12 months.

Since the effective date of this valuation is prior to December 31, 2014, the University has the option to amortize the solvency deficit over 10 years. The following schedule is for the benefit of the report only. The University has not elected this option.

				Present Value as of July 1, 2014	
Nature of Deficiency	**Effective Date**	**End Date**	**Revised Annual Special Payment (000's)**	**For Going Concern Valuation[1] (000's)**	**For Solvency Valuation[4] (000's)**
Going Concern	July 1, 2012	June 30, 2027	$ 3,096	$ 28,575	$ 28,891
Going Concern	July 1, 2015[3]	June 30, 2030	396	3,796	3,306
Solvency	July 1, 2015[3]	June 30, 2025	1,392	N/A	11,657
			$ 4,884	$ 32,371	$ 43,854

[1] The values in the table were developed using the going concern interest rate of 5.75% per year compounded monthly in arrears.
[2] The values in the table were developed using the weighted average solvency interest rate of 3.10% per year compounded monthly in arrears. For the present value of the going concern special payments, only a maximum of six years of such payments were considered in the calculation.
[3] Minimum Special Payment under solvency funding relief based on University electing one-year deferral of Special Payments to fund Going Concern Unfunded Accrued Liability.
[4] The values in the table were developed using the weighted average solvency interest rate of 3.00% per year compounded monthly in arrears. For the present value of the going concern special payments, only a maximum of 11 years of such payments were considered in the calculation.

The following table summarizes the amortization schedules of special payments after application of the Stage Two solvency relief funding measures under the three-year deferral/seven-year amortization option, which the University has elected. In accordance with Regulation, the University will defer all new going concern and solvency special payments established as at July 1, 2014 by 12 months.

				Present Value as of July 1, 2014	
Nature of Deficiency	**Effective Date**	**End Date**	**Revised Annual Special Payment (000's)**	**For Going Concern Valuation[1] (000's)**	**For Solvency Valuation[2] (000's)**
Going Concern	July 1, 2012	June 30, 2027	$ 3,096	$ 28,575	$ 28,891
Going Concern	July 1, 2015[3]	June 30, 2030	396	3,796	3,306
Solvency	July 1, 2018[3]	June 30, 2025	2,088	N/A	11,657
			$ 5,580	$ 32,371	$ 43,854

Development of Minimum Required University Contribution (Thousands of Dollars)

The table below presents the development of the Minimum Required University Contribution for the Plan Years beginning on July 1, 2014, July 1, 2015 and July 1, 2016.

	2014/2015 (000's)	**2015/2016 (000's)**	**2016/2017 (000's)**
Total Current Service Cost	$ 1,393	$ 1,449	$ 1,507
Less: Required Participant Contributions	436	453	472
Equals: University Current Service Cost	$ 957	$ 996	$ 1,035
Plus: Special Payments Toward Amortizing Unfunded Accrued Liability	3,096	3,492	3,492
Plus: Solvency Special Payments[3] (Minimum Special Payments)	0	0	0
Equals: Minimum Required University Contribution	$ 4,053	$ 4,488	$ 4,527

[1] The values in the table were developed using the going concern interest rate of 5.75% per year compounded monthly in arrears.
[2] The values in the table were developed using the weighted average solvency interest rate of 3.10% per year compounded monthly in arrears. For the present value of the going concern special payments, only a maximum of 11 years of such payments were considered in the calculation.
[3] In accordance with Section 9(4) of the Ontario Regulation 178/11, the University has elected the three-year deferral/seven-year amortization option to one-year deferral of the new going concern and solvency special payments.

Maximum Eligible Contribution

Under Subsection 8502(b) of the Regulations to the *Income Tax Act* (the "Act"), each Employer contribution made after 1991 in respect of a defined benefit provision of a registered pension plan must be an eligible contribution pursuant to Subsection 147.2(2) of the Act.

The following contributions are eligible under Section 147.2 of the Act.

- the University Current Service Cost, eligible under Section 147.2(2) subject to certification by the actuary and approval by the Canada Revenue Agency; plus
- Special Payments eligible under Section 147.2(2) up to the amount of the greater of the Unfunded Accrued Liability and Hypothetical Wind-Up Deficiency subject to certification by the actuary and approval by the Canada Revenue Agency; less
- required application of Excess Surplus; plus
- annual operating expenses that are eligible to be paid from the fund.

The University Current Service Cost and Special Payments for this plan will be eligible under Section 147.2(2) of the Act, subject to the approval of the Canada Revenue Agency.

Reconciliation of Going Concern Surplus/(Deficit) (Thousands of Dollars)

	2011/2012	2012/2013	2013/2014
Surplus/(Unfunded Liability) at July 1	$ (28,669)	$ (29,801)	$ (27,602)
Less: University Current Service Cost	1,246	1,147	976
Plus: University Current Service Cost Contributions	1,246	1,147	976
Plus: University Special Payments	5,923	3,100	3,100
Plus: Interest	(1,607)	(1,768)	(1,564)
Plus: Expected Recognition of Deferred Asset Gain/(Loss)	0	(3,049)	(92)
Equals: Expected Surplus/(Unfunded Liability) at End of Year, Before Experience Gains/(Losses)	$ (24,353)	$ (31,518)	$ (26,158)
Plus: Increase/(Decrease) Due to:			
Gains/(Losses):			
Return on Assets	(5,431)	1,007	361
Indexation of Benefits	16	1,039	547
Increase in Salaries	279	122	(34)
Increase in *Income Tax Act* Maximum Pension	(46)	375	58
Termination Experience	97	215	(19)
Retirement Experience	380	597	(8)
Mortality Experience	462	460	(546)
All Other Sources	(1,205)	530	(169)
Equals: Surplus/(Unfunded Liability) at End of Year, Before Changes in Assumptions/Methods	$ (29,801)	$ (27,173)	$ (25,968)
Plus: Increase/Decrease Due to Changes in Actuarial Assumptions	0	(429)	(7,906)
Increase/Decrease Due to Reset to Market Value of Assets	0	0	1,503
Equals: Surplus/(Unfunded Accrued Liability) at June 30	$ (29,801)	$ (27,602)	$ (32,371)

Comments Regarding Experience from July 1, 2011 to July 1, 2014

Return on Assets

The total return based on the market value of assets, assuming contributions and benefit payments take place in the middle of the year, was as follows:

- 2011/2012: 0.0%
- 2012/2013: 11.6%
- 2013/2014: 16.4%

The assumed rate of return for actuarial valuation purposes was 6.25% per year as at July 1, 2011 and July 1, 2012, and 6.00% per year as at July 1, 2013, resulting in an actuarial loss of $3,772,000 over the three-year period.

Indexation of Benefits

Benefit entitlements for retired and terminated vested participants were increased by 1.73% at July 1, 2012, 0.62% at July 1, 2013 and 0.93% at July 1, 2014 under the 75% of CPI indexing provision (and corresponding higher percentages for retirees under one of the pre-integration provisions). The increases were less than the 1.875% increase anticipated under the actuarial assumptions, resulting in an actuarial gain of $1,602,000 over the three-year period.

Increase in Salaries

The assumed salary increase was 4.50% per year for the July 1, 2011 and July 1, 2012 actuarial valuations, and 4.25% per year for the July 1, 2013 actuarial valuation. Actual salary increases varied by staff group, but on average were lower than assumed resulting in an actuarial gain of $367,000 over the three-year period.

Income Tax Act Maximum Pension

The assumed increase in the *Income Tax Act* maximum pension was 3.5% per year for the July 1, 2011 and July 1, 2012 actuarial valuations and 3.0% per year for the July 1, 2013 actuarial valuation. The increase in the *Income Tax Act* maximum pension was 3.7% from 2011 to 2012, 1.9% from 2012 to 2013, and 2.7% from 2013 to 2014, resulting in a net actuarial gain of $387,000 over the three-year period.

Termination Experience

Termination experience since July 1, 2011 was higher than expected under the valuation assumptions. This resulted in an actuarial gain of $293,000 over the three-year period.

Retirement Experience

The age at which members retired since July 1, 2011 was later than expected under the valuation assumptions. This resulted in an actuarial gain of $969,000 over the three-year period.

Mortality Experience

Mortality rates since July 1, 2011 were higher than expected under the valuation assumptions. This resulted in an actuarial loss of $376,000 over the three-year period.

All Other Sources

Other factors such as personnel changes and data adjustments, etc., deviated from expected, resulting in a net actuarial loss of $844,000 over the three-year period.

Discussion of Changes in Actuarial Assumptions

Actuarial valuations of the Plan were performed as of July 1, 2012 and July 1, 2013 for management purposes. Following is a summary of the assumptions that were changed effective July 1, 2012, July 1, 2013 and July 1, 2014.

Assumptions Changed Effective July 1, 2012

- The interest rate on required member contributions was changed from 4.50% to 3.00% to reflect a change in plan provisions

Assumptions Changed Effective July 1, 2013

- The increase in Consumer Price Index was reduced from 2.50% per year to 2.25% per year
- The increase in CPP Maximum Salary and increase in ITA Maximum Pension was reduced from 3.50% per year to 3.00% per year
- The increase in salary was reduced from 4.50% per year to 4.25% per year
- The discount rate was reduced from 6.25% per year to 6.00% per year

Assumptions Changed Effective July 1, 2014

- The increase in CPI was reduced from 2.25% per year to 2.00% per year
- The increase in CPP Maximum Salary and increase in ITA Maximum Pension was reduced from 3.00% per year to 2.75% per year
- The increase in salary was reduced from 4.25% per year to 4.00% per year
- The discount rate was reduced from 6.00% per year to 5.75% per year
- The mortality rates were changed from the 1994 Uninsured Pensioner Mortality Table with fully generational mortality improvements at Scale AA to the CIA Canadian Pensioner Mortality (CPM) 2014 Public Sector Mortality Table with Improvement Scale CPM-B.
- The interest rate on required member contributions was reduced from 3.00% per year to 2.50% per year
- The retirement rates were changed for Faculty and Librarians to reflect later retirement ages

These changes in actuarial assumptions combined to increase the Accrued Liability by $8,335,000, and the Total Current Service Cost by $67,000.

Discussion of Changes in Asset Valuation Method

In conjunction with the changes to the actuarial assumptions effective July 1, 2014 (including lowering the expected nominal investment return), the actuarial value of assets was reset to be equal to the Market Value of Assets. This change in asset valuation method resulted in the immediate recognition of $1,503,000 of deferred gains as of July 1, 2014.

Participant Data

The actuarial valuation was based on participant data provided by the University as of July 1, 2014. The last actuarial valuation filed with the pension regulators was as of July 1, 2011. In the interim years, actuarial valuations were performed for management purposes. Tests of the sufficiency and reliability of the data were performed for each actuarial valuation and the results were satisfactory. The main tests included the following:

- a reconciliation of participant data against the participant data used for the prior year's actuarial valuation. This test was performed to ensure that all participants were accounted for.
- a reconciliation of birth, hire and participation dates against the dates provided for the prior year's actuarial valuation, to ensure consistency of data.
- a reconciliation of credited service against the credited service provided for the prior year's actuarial valuation to ensure that no participant accrued more than three years of pensionable service. This test also revealed any participants who accrued less than three years of pensionable service.
- a reconciliation of pensionable earnings against pensionable earnings compensation provided for the prior year's actuarial valuation. Any unusual changes were investigated.
- a reconciliation of inactive participant benefit amounts against similar amounts provided for the prior year's actuarial valuation to ensure consistency of data.

A copy of a letter from the University certifying the accuracy and completeness of the data is included in an appendix to this report.

For salary increases as of July 1, 2014 that were not reflected in the data provided due to timing of collective bargaining, an estimate was used for valuation purposes based on guidance provided by the University.

Reconciliation of Membership Status

The table below reconciles the number of participants as of July 1, 2011 with the number of participants as of July 1, 2014 and the changes due to experience in the period.

	Active/ Disabled	Retired	Terminated Vested	Pending	Total
Participants, July 1, 2011	81	159	23	2	265
Changes Due to:					
Transfer to Pending	-	-	-	-	-
Retirements	(18)	20	(2)	-	-
Terminations					
Vested—Deferred Pension	(1)	-	1	-	-
Vested—Paid Lump Sum	-	-	(1)	-	(1)
Vested—Payment In-Transit	-	-	-	-	-
Deaths					
Paid Out	(1)	-	-	-	(1)
No Further Payments	-	(15)	-	-	(15)
Surviving Spouse	-	(2)	-	-	(2)
End of Guarantee Period	-	-	-	-	-
New Beneficiary	-	2	-	-	2
Data Corrections	-	-	(1)	-	(1)
Net Change	(20)	5	(3)	-	(18)
Participants, July 1, 2014	61	164	20	2	247

Personnel Characteristics

The valuation was based on personnel data supplied by the University as of July 1, 2014. This section presents the characteristics of active and disabled participants for both the July 1, 2011 and July 1, 2014 valuations.

Active and Disabled Participants	July 1, 2011 (Prior Filed Valuation)	July 1, 2014
Number of Participants	24	17
Males	57	44
Females	81	61
Total		
Average Present Age		
Males	60.0	59.9
Females	58.1	59.9
Total	58.7	59.9
Average Years of Service		
Males	26.0	25.1
Females	26.7	26.4
Total	26.5	26.0
Average Age at Hire		
Males	34.0	33.4
Females	31.4	32.0
Total	32.2	32.4
Average Salary[1]	$ 115,636	$ 124,329

[1] Without $150,000 cap on salary; full-time equivalent for part-time members

Retired Participants

Following are some pertinent characteristics of the retired participants' data as of July 1, 2014. The corresponding data for prior years is also shown for comparison purposes.

	Retired Participants		
	Number	Average Age	Average Monthly Benefit[1]
July 1, 2014	164	74.8	$3,423
July 1, 2013	162	74.3	$3,300
July 1, 2012	162	74.1	$3,189
July 1, 2011	159	73.8	$2,994
July 1, 2010	154	73.6	$2,831
July 1, 2009	146	73	$2,714
July 1, 2008	144	72.6	$2,655
July 1, 2007	132	73.2	$2,483
July 1, 2006	134	72.9	$2,233
July 1, 2005	130	72.9	$2,233
July 1, 2004[1]	145	72.5	$2,077
July 1, 2003	131	72.6	$1,695
July 1, 2002	129	72.2	$1,634
July 1, 2001	119	72.2	$1,502
July 1, 2000	115	71.5	$1,352
July 1, 1999	117	71.1	$1,292
July 1, 1998	116	69.9	$1,260
July 1, 1997	121	69.6	$1,206

[1] July 1, 2004 retiree statistics includes 20 retirees who are in the Partial Wind-Up Group; from July 1, 2006 onward, the retiree statistics reflects ongoing plan members only and excludes the retirees who are in partial wind-up group

Distribution of Active and Disabled Participants by Age and Service

The following chart shows a distribution of active and disabled participants in the Plan by age last birthday and completed years of service on July 1, 2014. All participants hired at the same age lie along the same diagonal line.

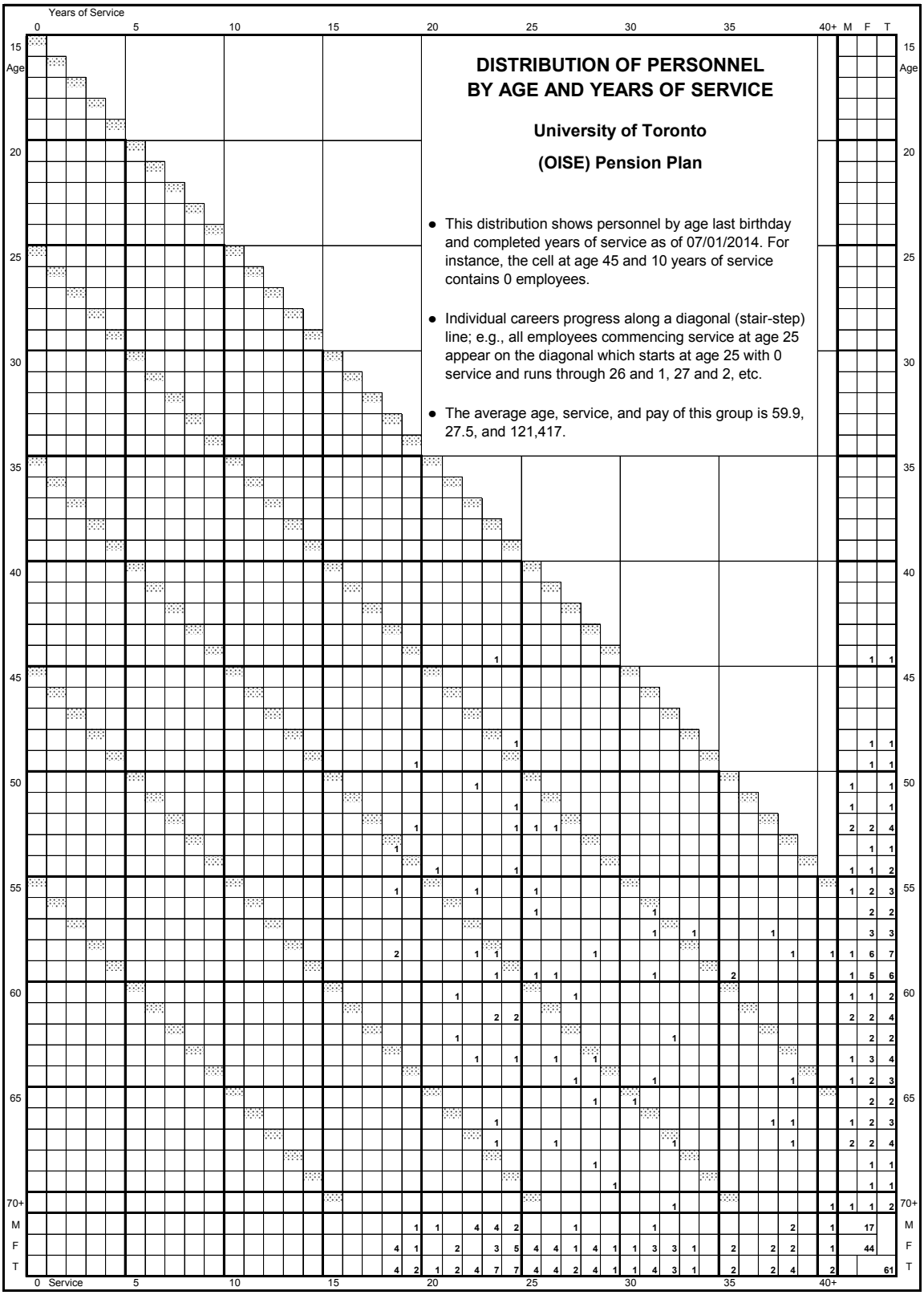
Several observations can be made by the user of this chart:

- the number of participants who will become eligible for early or normal retirement benefits in the next few years;
- the number of participants who will be affected by changes in plan provisions affecting eligibility for benefits;
- the number of participants affected by changes in other benefits which are related to service (e.g., additional vacation for those with certain minimum service);
- the number of hires per year for all past years who have remained with the University and hiring patterns by age of hire; and
- the distribution of participants by age and service around median age and median service.

Supplementing this age/service distribution are two graphs. The first graph (page 30) illustrates the percentage of active participants in each of the five-year age groups, showing average service and compensation for each group.

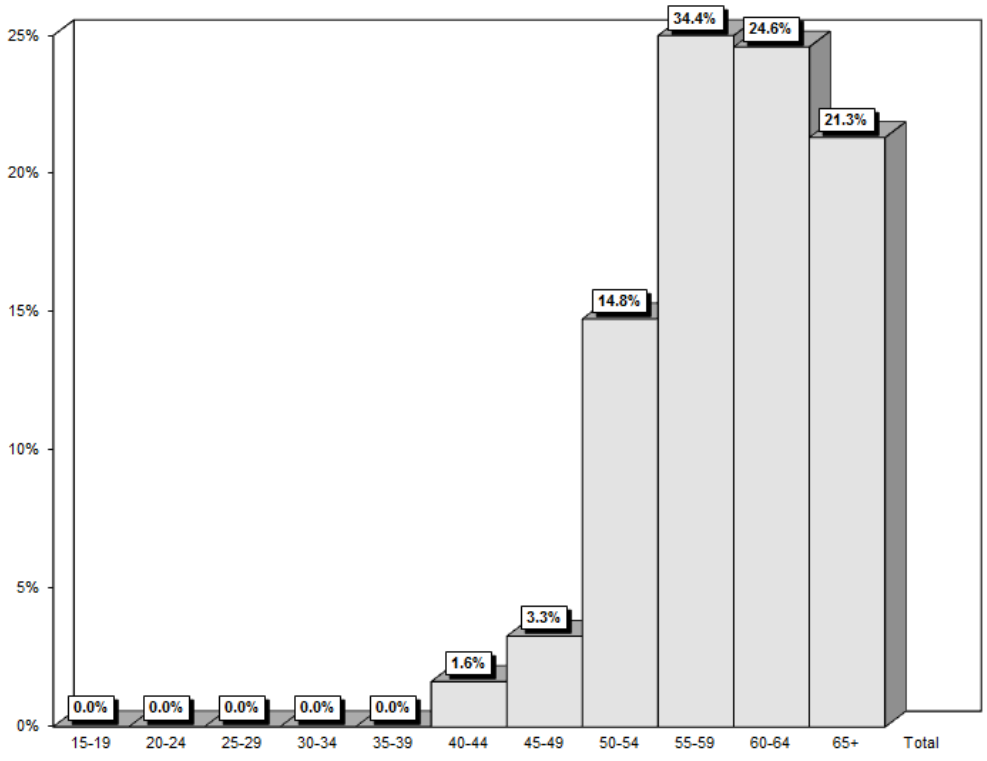
The second graph (page 31) shows the percentage of active employees age 55 and over by expected service at age 65. This second graph can assist in reviewing the level of retirement benefits these individuals will receive at retirement.

Personnel Information (continued)



Distribution of Personnel by Age

University of Toronto (OISE) Pension Plan



Age:

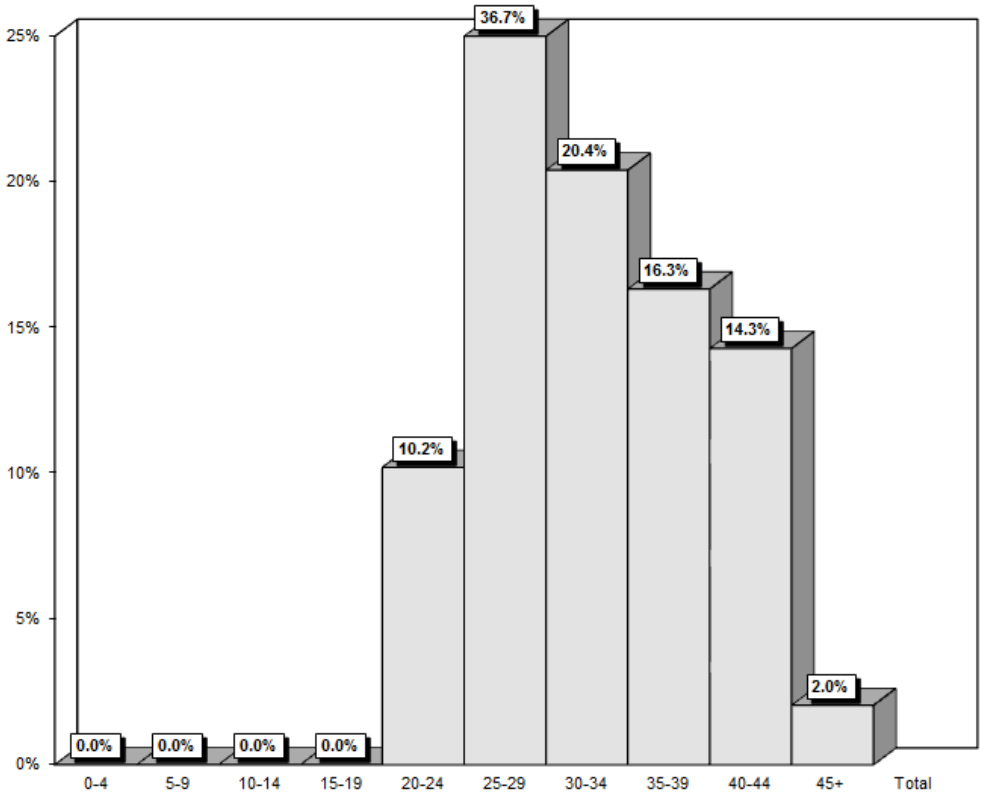
Number	0	0	0	0	0	1	2	9	21	15	13	61
Average Pay	0	0	0	0	0	$	80,614	105,943	100,203	126,695	170,137	121,417
Average Service	0.0	0.0	0.0	0.0	0.0	23.8	22.2	23.0	28.3	26.4	31.7	27.5

Detail of Employees 55 & Over

Age	55	56	57	58	59	60	61	62	63	64	65	66+
Number	3	2	3	7	6	2	4	2	4	3	2	11
Average Pay	111,797	67,499	65,919	97,502	125,601	127,923	145,452	112,352	142,929	88,782	125,004	178,343
Average Service	22.3	28.6	33.9	27.3	29.6	24.5	23.7	27.0	25.2	32.6	29.8	32.0

Distribution of Personnel
By Expected Service At Age 65
(Based Upon Personnel Age 55 And Over)

University of Toronto
(OISE) Pension Plan



Service:

Number	0	0	0	0	5	18	10	8	7	1	49
Average Pay	0	0	0	0	90,776	155,393	111,278	145,495	89,259	$	126,867
Average Service At Age 65*	0.0	0.0	0.0	0.0	23.7	27.6	32.4	37.6	42.1	47.8	32.3

* Or Current
Age if Older

History of the Plan

Effective July 1, 1996, the Ontario Institute for Studies in Education ("OISE") was amalgamated with the University of Toronto. The OISE Board of Governors was replaced as Administrator by the Governing Council of the University of Toronto.

Due to the integration, the provisions of the Pension Plan were changed prospectively to mirror the provisions of the University of Toronto Pension Plan. Effective dates of these changes ("integration date") and the relationship between pre-integration date and post-integration date staff groups is as follows:

Pre-Integration Staff Group	Integration Date	Post-Integration Staff Group for Pension Purposes
Academic Staff and Librarians	January 1, 1997	Academic Staff and Librarians
Professional Staff	July 1, 1997	Administrative and Unionized Staff
General Support Staff	July 1, 1997	Administrative and Unionized Staff
Professional Research Staff	December 13, 1999	Administrative and Unionized Staff

As of result of agreements reached with the various associations and unions, the provisions of the University of Toronto Pension Plan for service after the integration date have been extended in their entirety to service prior to the integration date. The effective date of this harmonization of provisions was July 1, 1999 for Academic Staff, Librarians, and non-unionized administrative staff; the effective date of this harmonization of plan provisions was December 13, 1999 for Professional Research Staff and January 25, 2000 for unionized staff (USWA).

This summary is not intended to be an exhaustive description of the terms of the Plan. In the event that a conflict arises between this summary and the Plan document, the Plan document will prevail.

Effective Date

January 1, 1966.

Eligibility

All members of the University staff in receipt of a rate of annual salary of at least 35% of the CPP Maximum Salary are eligible to become participants of the Plan on the July 1, October 1, January 1 or April 1 coincident with or next following attainment of such annual salary, and provided that they are not eligible (at present or over time) for participation in any other concurrent pension plan which the University has established or to which it contributes (other than the Canada Pension Plan).

Participation

Participation is required of all eligible members of the staff with the following exceptions:

(a) Members of the staff whose percentage of appointment is less than 25% of full-time.

(b) Members of the staff whose percentage of appointment is at least 25% of full-time and who have not attained age 35.

(c) Members who can demonstrate to the satisfaction of the University that they have a more advantageous arrangement elsewhere.

Normal Retirement

Eligibility

June 30 coincident with or next following attainment of age 65.

Benefit

For Full-Time Service, and Part-Time Service on or after July 1, 1987:
Annual benefit equal to (a) + (b) below for each year of Pensionable Service.

Academic Staff and Librarians

(a) 1.5% of Highest Average Salary up to the Average CPP Maximum Salary.

(b) 2.0% of Highest Average Salary in excess of the Average CPP Maximum Salary.

Normal Retirement (continued)

Benefit (continued)

Administrative Staff, Unionized Administrative Staff and Unionized Staff

(a) 1.6%* of Highest Average Salary up to the Average CPP Maximum Salary.

(b) 2.0% of Highest Average Salary in excess of the Average CPP Maximum Salary.

* *Some Unionized Staff and Research Associates are at 1.5%.*

For Part-Time Service before July 1, 1987

Annual benefit equal to 2% of indexed Salary for each year of participation, where indexed Salary is the Salary paid in the University year in which the benefit is earned, indexed by the increases in the Average Industrial Wage from the end of the University Year to the beginning of the University Year in which the participant retires, terminates, or dies in active service of the University, whichever occurs first.

Maximum Pension

The annual benefit for a participant cannot exceed the lesser of:

- $2,770.00 times years of Pensionable Service in 2014 and indexed thereafter.
- 2.0% of the average of the best three consecutive years of salary times Pensionable Service.

Regulation 8504(6) imposes a lower maximum benefit limit in respect of any pre-1990 service that is granted after June 8, 1990 (e.g., buy-back or granting of years of pre-1990 service that was not previously counted as Pensionable Service).

Unreduced Early Retirement

Eligibility	**Academic Staff and Librarians (Excluding Clinicians)** Age 60 and 10 or more years of Pensionable Service. **Administrative Staff—P/Ms 6 through 9** Age 60 and 15 or more years of Pensionable Service. **Administrative Staff (Other Than Above), Unionized Administrative Staff, Unionized Staff and Research Associates** Age 60 and age plus Continuous Service totaling 80 or more.
Benefit	The benefit calculated under the normal retirement formula based on Highest Average Salary and Pensionable Service as of early retirement date, without reduction for early commencement.

Reduced Early Retirement

Eligibility	Within 10 years of normal retirement date and two years of Pensionable Service, and not eligible for unreduced early retirement.
Benefit	The benefit calculated under the normal retirement formula based on Highest Average Salary and Pensionable Service as of early retirement date, reduced 5% for each year that actual retirement precedes the normal retirement date.

Postponed Retirement

Eligibility	Any age after normal retirement date, but for Plan purposes pension benefits must commence no later than December 1 of the year in which the participant's 71st birthday occurs.
Benefit	The benefit calculated under the normal retirement formula based on Highest Average Salary and Pensionable Service as of postponed retirement date.

Disability

Eligibility

Any age up to normal retirement date.

Benefit

If eligible (or deemed eligible) to receive disability income from Long-Term Disability Plan:

The benefit calculated under the normal retirement formula, payable at normal retirement date, based on Pensionable Service which continues to accrue during periods of disability and on Salary which is increased during each year of disability by the lesser of:

(a) 7%;

(b) The "across-the-board" economic increase granted to active employees during the preceding 12 months;

(c) The actual increase in the CPI during the preceding 12 months.

Termination of Service

Eligibility

Any age.

Benefit

A terminating participant may choose one of the following options:

(a) A benefit calculated under the normal retirement formula above based on Highest Average Salary and Pensionable Service at termination date, payable at normal retirement date (or actuarially reduced for early commencement).

(b) A transfer of two times the participant's contributions with credited interest to a new employer's pension plan, an individual Registered Retirement Savings Plan (RRSP), or other prescribed vehicle (provided the funds are transferred on a "locked-in" basis and provided the participant has not attained early retirement age).

(c) A transfer of the commuted value of the accrued benefit to a new employer's pension plan, or individual RRSP, or other prescribed vehicle, provided the funds are transferred on a "locked-in" basis.

Death in Service

Eligibility	Any age.
Benefit	Lump-sum death benefit equal to the commuted value of the accrued benefit calculated under the normal retirement formula above based on Highest Average Salary and Pensionable Service at date of death. If the beneficiary is the spouse, the spouse has the option to convert the lump sum to an immediate or deferred pension.

Minimum Employer Cost

On retirement, death, or termination, the required participant contributions with interest, cannot provide more than 50% of the commuted value of the benefit. In the event that required participant contributions provide for more than 50%, the excess will be refunded to the participant or beneficiary, if applicable.

Normal Form of Annuity

The normal form for participants with a spouse at pension commencement date is a life annuity with 60% continuing thereafter to the surviving spouse for his or her lifetime. If the spouse is more than 15 years younger than the participant, the pension will be actuarially reduced to reflect the number of years in excess of 15 that the spouse is younger than the participant. For participants without a spouse at pension commencement, the normal form is a life annuity with a 5-year guarantee period.

For participants who terminated prior to July 1, 1996 and are entitled to a future pension under the Plan, the normal form will be determined based on the Plan provisions in effect at the time of termination.

Cost-of-Living Adjustments

Pensions payable under this Plan and the Prior Plans (including pensions for participants who have terminated service on or after July 1, 1982, and pensions for participants who have postponed retirement—whether deferred or not, but excluding pensions arising from voluntary additional contributions and from non-reciprocal transfers and excluding those paid from the Teachers Insurance and Annuity Association and the Government Annuities Branch under Prior Plans) will be increased as from July 1 each year by the greater of (a) and (b):

(a) The increase in the Consumer Price Index for Canada (CPI) for the previous calendar year minus 4.0%, or

(b) 75% of the increase in the CPI for the previous calendar year to a maximum CPI increase of 8%, plus 60% of the increase in CPI in excess of 8%.

For participants who retired on or before the applicable Integration Date, pensions in payment are increased as of July 1 each year under the terms of the Plan in effect immediately prior to the Integration Date.

Participant Contributions

Each participant contributes each year an amount equal to:

Administrative Staff, Unionized Administrative Staff and Unionized Staff
6.80%[1] of the participant's Salary up to the CPP Maximum Salary plus 8.40% of the participant's Salary in excess of the CPP Maximum Salary, up to the maximum salary recognized under the Plan.

Academic Staff and Librarians
6.30% of the participant's Salary up to the CPP Maximum Salary plus 8.40% of the participant's Salary in excess of the CPP Maximum Salary, up to the maximum salary recognized under the Plan.

[1] 6.30% for CUPE 2484 and Research Associates

Definitions

Average CPP Maximum Salary	The average of the CPP Maximum Salary during the last 36 months of full-time participation.
CPP Maximum Salary	The maximum salary taken into account for purposes of the Canada Pension Plan (i.e., the Year's Maximum Pensionable Earnings) as at the beginning of a University Year.
Credited Interest	4% per year up to June 30, 1981; after June 30, 1981, an annual rate equal to the increase in the CPI plus 2% subject to the minimum rate prescribed by the *Pension Benefits Act* (Ontario) and its Regulations; from July 1, 2012 onward, the increase in CPI plus 2% is removed in conjunction with the increase in required participant contribution rates for participants noted on the previous page.
Highest Average Salary	The highest average of the regular salary received by a participant during any 36 completed months of participation.
Pensionable Service	Participant's years and completed months of continuous service with the University while a participant in the Plan. For service of a participant employed on a full-time basis or the service on or after July 1, 1987 of a participant employed on a part-time basis, the period of service is multiplied by the percentage appointment.
Salary	Gross regular salary/wages including academic administrative stipends, but excluding all other payments to a maximum salary of $150,000 per year.
University Year	The period of 12 consecutive months which commences on July 1.

Going Concern Valuation

Demographic Assumptions

Retirement Age	**Academic Staff and Librarians** In accordance with Table A following, but no earlier than one year after valuation date, subject to early retirement provisions. July 1, 2011 valuation used a different retirement rates outlined in Table A. **Administrative Staff, Unionized Administrative Staff, Unionized Staff and Research Associates** Age 63, subject to early retirement provisions **Terminated Vested Participants** Age 65½[1]
Mortality Rates	CPM 2014 Public Sector Mortality Table with Improvement Scale CPM-B. July 1, 2011 valuation used 1994 Uninsured Pensioner Mortality Table, with fully generational mortality improvements using projection Scale AA.
Withdrawal Rates	Table B following
Disability Rates	None assumed
Percentage With Spouse	Male participants: 85% of participants have a spouse at retirement with spouse four years younger. Female participants: 70% of participants have spouse at retirement with spouse two years older. July 1, 2011 valuation used 86.7% with female spouse four years younger than male spouse.

Economic Assumptions

Increase in Consumer Price Index (CPI)	2.00% per year. July 1, 2011 valuation used 2.50% per year.
Cost-of-Living Adjustments	1.5% per year (75% of CPI). For Pre-Integration Date Benefits, 1.70% or 1.80% per year for benefits indexed at 85% and 90% of CPI.
Increase in CPP Maximum Salary	2.75% per year (2.00% increase in CPI + 0.75% real wage growth); July 1, 2011 valuation used 3.50% per year.
Increase in *Income Tax Act* Maximum Pension	$2,770.00 in 2014; increasing by 2.75% per year thereafter and effective each year at January 1; July 1, 2011 valuation was $2,552.22 in 2011 increasing by 3.50% per year thereafter.

[1] Reflects that Normal Retirement Date is June 30th coincident with or following age 65

Going Concern Valuation (continued)

Increase in Salaries	4.00% per year (2.00% increase in CPI + 2.00% merit and promotion/progression); July 1, 2011 valuation was 4.50% per year (2.50% CPI + 2.00% merit and promotion).
Discount Rate	5.75% per year (2.00% increase in CPI + 3.75% real return, net of all fees); July 1, 2011 valuation was 6.25% per year (2.50% increase in CPI + 3.75% real return, net of all fees).
Interest Rate on Participant Contributions	2.50% per year; July 1, 2011 valuation used 4.50% per year.
Loading for Administrative Expenses	Implicit in investment return.

Methods

Valuation of Assets	The actuarial value of assets has been determined by writing up the prior year's actuarial value and net cash flow at the valuation interest rate and then adjusting the result 25% toward market value. The Actuarial Value of Assets is limited to 115% of the Market Value of Assets. For July 1, 2014 actuarial valuation, the actuarial value has been reset to Market Value of Assets.
Actuarial Cost Method	Projected unit credit cost method.

Table A
Retirement Rates For Academic Staff and Librarians

	July 1, 2011 Valuation		July 1, 2014 Valuation	
Age	**10 or More Years of Pensionable Service**	**10 or More Years of Pensionable Service**	**10 or More Years of Pensionable Service**	**10 or More Years of Pensionable Service**
60	10%[1]	-	5%[1]	-
61	5%	-	5%	-
62	5%	-	5%	-
63	5%	-	5%	-
64	5%	-	5%	-
65	50%	50%	30%	30%
66	25%	25%	30%	30%
67	50%	50%	30%	30%
68	50%	50%	30%	30%
69	75%	75%	50%	50%
70	100%	100%	50%	50%
71	N/A	N/A	100%	100%

[1] Applies at age 60 or, if later, first age at which participant is eligible for an unreduced pension

Table B
Withdrawals per 1,000 Participants

Present Age	Rates	Present Age	Rates
20	100	45	17
21	100	46	16
22	100	47	15
23	100	48	14
24	100	49	13
25	100	50	12
26	90	51	11
27	80	52	10
28	71	53	9
29	63	54	8
30	56	55	7
31	50	56	6
32	45	57	5
33	40	58	4
34	36	59	3
35	32	60	2
36	30	61	1
37	28	62+	0
38	26		
39	24		
40	22		
41	21		
42	20		
43	19		
44	18		

Rationale for Actuarial Assumptions

Going Concern Valuation—Demographic Assumptions

Retirement Age

For Faculty/Librarians, retirement rates from age 60 (earliest unreduced retirement age) to age 70 (to reflect the elimination of mandatory retirement) are used. For all other staff groups, a single point retirement age of age 63 is used to reflect the various unreduced early retirement provisions available at age 60 or later (with minimum requirements for pensionable service or age-plus-continuous service points). We monitor actual experience against this assumption at each valuation and consider this retirement age to be appropriate.

Mortality Table

The Canadian Institute of Actuaries (CIA) has completed a study of Canadian pensioner mortality levels and trends. Some conclusions of the study are:

- The 1994 Uninsured Pensioner (UP94) mortality table together with generational improvements using Scale AA overstates average Canadian pensioner mortality rates, and therefore understates expected future pension payments for many plans; and
- More rapid improvements in longevity have been observed than suggested by Improvement Scale AA.

In light of these findings, we have modified the mortality assumptions of the going concern basis and are now using the 2014 Public Sector Mortality Table, with mortality improvements in accordance with CPM Improvement Scale B (CPM-B) as recently published in the CIA report[1]. This table is expected to be used for valuations where the mortality experience of the membership of a plan is insufficient to assess plan specific experience and where there is no reason to expect the mortality experience of the Plan to differ significantly from that of other pension plans.

Termination of Employment

The rates of termination of employment before retirement represent a best estimate of termination rates for a Plan of the size and workforce characteristics of this Plan. The termination assumption does not have as significant an impact on the valuation as in some other plans because of indexing in the deferral period. The experience gains and losses attributable to this assumption have been relatively small. Therefore, we continue to find this Table appropriate.

Option Elections on Termination

We have assumed 100% of members will take a deferred pension entitlement.

Disability Incidence

If an active Plan member becomes disabled, credited service continues to accrue until Normal Retirement Date, but employee contributions are waived. Since this benefit is substantially the same as the benefit that accrues to an active member, no disability assumption has been used. Use of an actual disability assumption in this case would reduce liabilities slightly, so a nil disability incidence assumption represents a small element of conservatism. A disability assumption would have very little impact on the valuation results.

Percentage with Spouse and Spousal Age Difference

These assumptions are required to value the Plan's fully subsidized 60% joint-and-survivor pension. The assumptions for the percentage of members retiring with a spouse and the spousal age difference reflect Plan experience.

[1] Canadian Institute of Actuaries Canadian Pensioners' Mortality Final Report released on February 13, 2014

Going Concern Valuation—Economic Assumptions

Inflation

The assumed inflation rate of 2.00% reflects a long-term rate of inflation at the upper end of the 1.00% to 3.00% band that the Bank of Canada has set for inflation. The other economic assumptions are built off of the assumed inflation rate.

Discount Rate

The discount rate reflects the best estimate of the rate of return on the pension fund assets net of investment expenses, less a provision for administrative expenses and a margin for adverse deviations.

The best-estimate real rate of return was developed using best-estimate real returns for each major asset class in which the pension fund is invested, and then using a building block approach, based on the plan's investment policy, to develop an overall best-estimate real rate of return for the entire pension fund based on a 30-year period. This method produced an assumed real rate of return of 4.25% per year, without any additional returns from active management net of investment expenses. Administrative and custodial expenses are estimated to be 0.15% per year and a margin for adverse deviation of 0.35% has been applied, resulting in a real discount rate of 3.75% per year. Combined with an assumed inflation rate of 2.00%, this produces an assumed nominal discount rate of 5.75% per year.

Non-Investment Expenses

Since the discount rate has been established net of all expenses, no explicit assumption is required for non-investment expenses.

Real Wage Growth

We have assumed real wage growth in the Canadian economy will be 0.75% per year. The assumption reflects our best estimate, which is consistent with historical real wage growth.

Increases in the YMPE

The YMPE increases each year by the increase in the Average Industrial Wage, which we assume will increase by inflation plus real wage growth, or 2.75% per year based on the above.

Increases in the ITA Maximum Pension

The ITA maximum pension is assumed to increase from its 2014 level of $2,770.00 per year of pensionable service at the rate of increase in the Average Industrial Wage. Therefore, we have assumed future increases of 2.75% per year after 2014.

Salary Increases

We have assumed future salary increases will be 4.00% per year. The assumption reflects an assumed rate of inflation of 2.00% per year, plus an allowance of 2.00% per year for the effect of progression through the ranks/grid steps/merit and promotion.

Interest Credited on Participant Contributions

Interest is credited on participant contributions annually at 2.50%

Asset Valuation Method

Assets are smoothed for the going concern valuation to remove the short-term volatility that is associated with investment in capital markets.

We determine the smoothed asset value by writing up the prior year's actuarial value and net cash flow at the valuation interest rate and then adjusting the result 25% toward market value. The Actuarial Value of Assets is limited to 115% of the Market Value of Assets.

The Actuarial Value of Assets was reset to Market Value of Assets as at July 1, 2014.

Calculation of Solvency Valuation Incremental Cost

The Solvency Valuation Incremental Cost represents the present value, as at July 1, 2014, of the expected aggregate change in the Solvency Liability between July 1, 2014 and June 30, 2017, the date of the next required valuation, adjusted upwards for expected benefit payments between July 1, 2014 and June 30, 2017.

The calculation methodology can be summarized as follows:

The present value at July 1, 2014 of expected benefit payments between July 1, 2014 and June 30, 2017, discounted to July 1, 2014,

plus

A projected Solvency Liability at June 30, 2014, discounted to July 1, 2014, allowing for, if applicable to the pension plan being valued:

- expected decrements and related changes in membership status between July 1, 2014 and June 30, 2017,
- accrual of service to June 30, 2017,
- expected changes in benefits to June 30, 2017,
- a projection of pensionable earnings to June 30, 2017,

minus

The Solvency Liability at July 1, 2014.

The projection calculations take into account the following assumptions and additional considerations:

- The assumptions for the expected benefit payments and decrement probabilities, service accruals, and projected changes in benefits and/or pensionable earnings would be consistent with the assumptions used in the Plan's going concern valuation.
- No provision has been made for new entrants since the additional solvency liability for new entrants is expected to be covered by their required contributions plus the matching employer contributions.

Solvency and Hypothetical Wind-Up Valuations

Retirement Age	
Active Participants with less than 55-age-plus-service points	Normal Retirement Date
Active Participants with at least 55 age-plus-service points	June 30 between Early Retirement Date and Normal Retirement Date that produces highest present value. For Academic Staff and Librarians, unreduced benefits are available at age 60 with 10 or more years of Pensionable Service. For Administrative, Unionized Administrative and Unionized Staff, unreduced benefits are available at age 60 with 80 or more age-plus-service points (or 15 or more years of Pensionable Service if applicable).
Mortality Rates	1994 Uninsured Pensioner Mortality Table, with fully generational mortality improvements under Scale AA
Interest Rates—Without Escalated Adjustments	
Active Participants age 55 and over, and Retired Participants	3.10% per year (4.20% per year as of July 1, 2011).
Active Participants under Age 55	2.80% per year for 10 years; 4.20% per year thereafter (3.60% per year for 10 years, 4.90% per year thereafter as of July 1, 2011).
Terminated Vested Participants	3.10% per year (4.20% per year as of July 1, 2011).
Interest Rates—With Escalated Adjustments	
Active Participants age 55 and over, Retired Participants, and Terminated Vested Participants	0.55% per year (1.65% per year as of July 1, 2011).
Active Participants under age 55	1.70% per year for 10 years; 2.40% per year thereafter (2.20% per year for 10 years; 2.80% per year thereafter, as of July 1, 2011).
Percentage With Spouse	Male participants: 85% of participants have a spouse at retirement with spouse four years younger. Female participants: 70% of participants have spouse at retirement with spouse two years older. July 1, 2011 valuation used 86.7% with female spouse four years younger than male spouse.

Benefits Valued

	Solvency Valuation	Hypothetical Wind-Up Valuation
Vesting	All accrued benefits are treated as vested on Plan wind-up.	All accrued benefits are treated as vested on Plan wind-up.
Grow-In Benefits	Active members with 55 age-plus-continuous service points as of the valuation date are assumed to grow into the enhanced early retirement reduction.	Active members with 55 age-plus-continuous service points as of the valuation date are assumed to grow into the enhanced early retirement reduction.
Indexing	In accordance with the *Pension Benefits Act* (Ontario), solvency liability excludes the value of future escalated adjustments (future indexation) for both the preretirement and postretirement period.	The Hypothetical Wind-Up Valuation results include the value of future escalated adjustments (future indexation) in the postretirement period and the preretirement period as provided for in the plan.

Method of Benefit Settlement

We have assumed that all Plan benefits would be settled on Plan wind-up either by purchase of single premium annuities or by lump-sum transfer (including payment in cash).

Discount Rate and Mortality

We have set the Solvency and Hypothetical Wind-Up Valuation assumptions based on guidance prepared by the Canadian Institute of Actuaries ("CIA") Committee on Pension Plan Financial Reporting ("PPFRC") in the Education Note Supplement: Guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations Update – Effective June 30, 2014 and Applicable to Valuations with Effective Dates between June 30, 2014 and December 30, 2014 released on August 12, 2014.

For benefit entitlements that are expected to be settled by lump sum transfer, we based the assumptions on the CIA Standard of Practice for Determining Pension Commuted Values, effective April 1, 2009, using rates corresponding to a valuation date of July 1, 2014. The interest rates with escalated adjustments reflect indexing of 75% of the increase in CPI during both the preretirement and postretirement periods.

Preretirement Mortality
We have made no allowance for preretirement mortality. The impact of including such an assumption would not have a material impact on the valuation, since the value of the death benefit is approximately equal to the value of the accrued pension.

Salaries
To estimate active and disabled members' best average earnings at the valuation date, we have used actual historical member earnings.

Assumptions Not Needed
The following are not relevant to the solvency or hypothetical wind-up valuation:

- Salary Increases
- Termination Rates
- Increases in ITA Maximum Pension
- Disability Rates

Plan Wind-up Expenses
Plan wind-up expenses would normally include such items as fees related to preparation of the actuarial wind-up report, fees imposed by a pension supervisory authority, legal fees, administration, custodial and investment management expenses. We have assumed these fees would be $1 million.

Discussion of Actuarial Assumptions and Methods

Ultimate Cost

The ultimate cost of a pension plan can be measured only when the obligation to all participants has been fully discharged. The cost will then be:

The benefits paid from the plan
plus
administrative expenses
less
investment gains
plus
investment losses.

The actuarial process assigns pension costs to the current year by estimating, based on both current and future service, the benefits to be paid to current plan participants. These estimates are determined through an actuarial valuation which uses three basic elements to project payments from the plan:

- Benefit provisions of the plan.
- Data on the present workforce, terminated vested, and retired employees.
- Certain predictions (actuarial assumptions) about the future as it applies to this workforce.

Actuarial Assumptions

The first step in the actuarial process is to determine the magnitude of the pension liability by determining the benefits expected to be paid. To determine how many employees will become eligible for benefits, what benefits will be paid, and how long benefits will be paid, it is necessary to make some economic and demographic predictions (usually called actuarial assumptions) such as:

- An assumed retirement age predicting when employees will begin to receive retirement benefits.
- A mortality rate predicting the number of employees who will die before retirement and the duration of benefit payments after retirement.
- A withdrawal rate predicting the number of employees who will leave the workforce before retirement. (Sometimes certain kinds of withdrawal such as disabilities are predicted separately.)
- If the benefits are based on compensation, an assumed rate of pay increases predicting employees' compensation in future years.

These assumptions are applied to the data for each employee to predict the amount of benefits expected to be paid each year in the future. The total future benefit payments in each year are then discounted at a selected interest rate to determine the current amount which with future investment return, will be sufficient to pay the expected benefits as they become payable. The discounted payments are usually called the present value of future benefits.

Total Future Benefit Payments

Future Investment Return	**Present Value of Future Benefits**

Actuarial Method

The actuarial method is the mathematical process which determines the contributions required to pay for the present value of future benefits, by allocating costs to the years of an employee's career. Some costs are allocated to future years in an employee's career (*future service liability*) and other costs are allocated to past years (*past service liability*).

Total Future Benefit Payments

Future Investment Return	**Present Value of Future Benefits**

Future Service Liability	**Past Service Liability**

There is a fair amount of flexibility in this allocation of costs between future and past. Some methods assign relatively little cost to past years in an employee's career, others assign a more significant portion to the past. All methods produce allocations of contributions which will accumulate to an amount sufficient to provide the benefits at retirement. However, the various methods produce widely different allocation of contributions to past and future employment.

Usual terminology refers to the future allocation as the *present value of future current service costs* and the past allocation as the *accrued liability*.

The portion of the accrued liability which is not covered by the assets of the plan is called the *unfunded accrued liability*. The value of the assets used in the actuarial process must take into account fair market value, but this may be done in a way which eliminates much of the short-term fluctuation of market value from one valuation to the next.

Total Future Benefit Payments			
Future Investment Return	**Present Value of Future Benefits**		
	Future Service Liability	**Past Service Liability**	
	Present Value of Future Current Service Costs	**Unfunded Accrued Liability**	**Assets**

For the current year, the method produces a *current service cost*. Payment of the current service cost each year would eventually discharge all future service liability.

The unfunded accrued liability must also be discharged, and this is done by an *amortization payment*. The amortization payment is flexible, and may be increased or decreased within certain allowable bounds. The sum of both the current service cost and the amortization payment is the current year's pension cost.

Total Future Benefit Payments			
Future Investment Return	**Present Value of Future Benefits**		
	Future Service Liability	**Past Service Liability**	
	Present Value of Future Current Service Costs	**Unfunded Accrued Liability**	**Assets**

Current Service Cost			**Amortization Payment**

Current Year's Contribution

Valuations to determine contributions to the ongoing plan use the *Unit Credit Cost Method.*

Under this actuarial method, the cost attributed to past service (*past service liability* or *accrued liability*) is determined on the valuation date as the present value of the benefits actually earned (accrued) as of that date. The *unfunded accrued liability* is the amount by which the accrued liability exceeds the valuation assets.

The current year's *current service cost*, determined on the valuation date, is the amount required to fund the benefit expected to be earned in the current year.

Because the value of the future service liability is not used in the calculation of current service cost, it is often omitted from the actuarial report which may show only an accrued liability.

The calculations for any disability, termination or death benefits take into consideration that the entitlement to benefits may begin at various future times. Each age prior to retirement has associated with it appropriate probabilities of disability, termination and death.

Cost Certificate

University of Toronto (OISE) Pension Plan
Registration Number: 0353854

This cost certificate is intended to cover the period from July 1, 2014 to June 30, 2017, unless superseded by a subsequent valuation.

On the basis of data which we consider sufficient and reliable, we have prepared a valuation as of July 1, 2014 as a result of Stage Two solvency funding relief approval and we hereby certify that:

(1) The estimated University cost of benefits for current service in the year beginning July 1, 2014 is $957,000 or 15.26% of the Participant Salary Base capped at $150,000 for July 1, 2014 to June 30, 2015, in addition to required participant contributions. The estimated University cost of benefits for current service for the Plan Years beginning July 1, 2015 and July 1, 2016 is 15.26% of the Participant Salary Base capped at $150,000.

(2) Participants are required to contribute as follows up to a maximum salary of $150,000:

	Participant Contributions	
Effective Date	**Below CPP Maximum Salary**	**Above CPP Maximum Salary**
Administrative Staff, Unionized Administrative Staff and Unionized Staff	6.80%[1]	8.40%
Academic Staff and Librarians	6.30%	8.40%

The estimated participant contributions in the year beginning July 1, 2014 are $436,000. The estimated participant contributions for the years beginning July 1, 2015 and July 1, 2016 are $453,000 and $472,000 respectively.

(3) The Plan has a Going Concern Unfunded Accrued Liability of $32,371,000 as of July 1, 2014.

(4) The Plan has a Solvency Deficiency of $43,854,000 as of July 1, 2014.

[1] 6.30% for CUPE 2484 and Research Associates

(5) The following table summarizes the amortization schedules of special payments after application of the Stage Two solvency relief funding measures under the three-year deferral/seven-year amortization option, which the University has elected. In accordance with Regulation, the University will defer all new going concern and solvency special payments established as at July 1, 2014 by 12 months.

Nature of Deficiency	Effective Date	End Date	Revised Annual Special Payment
Going Concern	July 1, 2012	June 30, 2027	$ 3,096,000
Going Concern	July 1, 2015[3]	June 30, 2030	396.000
			$ 3,492,000
Solvency	July 1, 2018[1]	June 30, 2025	2,088,000
			$ 5,580,000

(6) The Transfer Ratio under the Pension Benefits Act (Ontario) and its Regulations is 0.51 as of July 1, 2014. In our opinion, the value of Plan Assets less a reasonable allowance for wind-up expenses would be less than the actuarial liabilities of the Plan were wound up on the valuation date.

(7) The current service costs shown in this certificate are annual amounts calculated on the basis of monthly payments.

(8) The Prior Year Credit Balance as of July 1, 2014 is $0.

(9) The pre-1990 past-service benefit restrictions under subsection 8504(6) of the *Income Tax Act* apply to a limited number of participants.

(10) The Ontario Pension Benefits Guarantee Fund (PBGF) assessment base is $43,454,000 as of July 1, 2014.

[1] In accordance with Section 9(4) of the Ontario Regulation 178/11, the University has elected the three-year deferral/seven-year amortization option to one-year deferral of the new going concern and solvency special payments

(11) For the purposes of this valuation, it is our opinion that:

- the data upon which the valuation is based are sufficient and reliable.
- the assumptions used are adequate and appropriate; emerging experience differing from the assumptions will result in gains or losses which will be revealed in future valuations.
- the methods employed in this valuation are appropriate.

(12) To our knowledge, there have been no events from July 1, 2014 (the "valuation date"), other than those disclosed, to the date of this report that would have a material impact on the information provided in this report.

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

Aon Hewitt

Andrew M. Hamilton
Fellow of the Canadian Institute of Actuaries

Allan H. Shapira
Fellow of the Canadian Institute of Actuaries

March 2015