



UNIVERSITY OF
TORONTO

University of Toronto Registered Pension Plans

Annual Financial Report

For the Year Ended June 30, 2015

University of Toronto Pension Plan Eleven-year Review

(Canadian \$ millions)	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
CHANGE IN NET ASSETS											
Income											
Investment income	\$454.0	\$528.7	\$330.2	\$46.1	\$286.1	\$182.7	(\$721.5)	(\$147.4)	\$499.4	\$197.1	\$244.0
Contributions											
Members/transfers in	63.4	56.2	46.9	41.7	41.9	37.6	36.8	34.8	32.4	29.7	28.0
University	161.2	307.1	157.2	133.8	242.9	88.4	87.1	71.4	69.4	84.0	60.6
Total income	678.6	892.0	534.3	221.6	570.9	308.7	(597.6)	(41.2)	601.2	310.8	332.6
Expenditures											
Benefits paid/transfers out	195.2	182.5	178.3	166.5	154.3	145.6	143.7	136.6	136.8	125.9	109.4
Investment expenses	34.1	27.8	24.5	23.7	22.2	22.1	25.7	25.4	22.5	13.8	12.9
Client service expenses	1.6	1.7	2.2	1.9	2.0	1.9	2.4	2.3	2.1	1.8	1.5
Total expenditures	230.9	212.0	205.0	192.1	178.5	169.6	171.8	164.3	161.4	141.5	123.8
Increase/(decrease) in net assets	\$447.7	\$680.0	\$329.3	\$29.5	\$392.4	\$139.1	(\$769.4)	(\$205.5)	\$439.8	\$169.3	\$208.8
NET ASSETS											
Investments											
Fixed income											
Bonds	\$945.1	\$843.4	\$641.1	\$622.8	\$511.3	\$402.8	\$308.5	\$634.2	\$659.5	\$535.6	\$796.0
Public Equities											
Canadian	320.0	356.2	242.6	417.7	381.9	269.9	199.8	425.2	453.0	293.9	315.5
Non-Canadian	1077.7	1011.9	754.5	514.8	775.5	594.0	537.3	977.3	1199.6	980.7	661.1
Private equities	584.5	430.1	385.7	332.8	330.4	354.4	281.3	236.3	119.9	81.9	73.5
Commodities	56.6	54.9	57.4	52.2	51.6	48.1	38.3	41.0	76.4	68.8	9.6
Real assets											
Real estate	64.8	74.5	113.8	78.8	70.8	55.2	56.3	72.7	43.0	17.2	
Infrastructure	17.7	23.7	26.1	25.7	25.6	20.0	13.5	7.5			
Hedge Funds	606.2	425.0	406.0	365.6	304.5	344.8	380.2	226.7	197.0	442.8	416.7
Money market	320.9	269.7	220.6	92.4	5.6	16.5	148.2	132.0	65.1	35.3	33.4
Derivative-related net receivable (payable)	(31.8)	24.3	(10.9)	3.0	18.4	(22.0)	(17.4)	(37.2)	110.3	26.7	7.0
Net investments	3,961.7	3,513.7	2,836.9	2,505.8	2,475.6	2,083.7	1,946.0	2,715.7	2,923.8	2,482.9	2,312.8
Other assets	16.6	15.5	15.5	13.8	12.4	12.7	12.2	12.5	10.3	11.8	10.8
Total assets	3,978.3	3,529.2	2,852.4	2,519.6	2,488.0	2,096.4	1,958.2	2,728.2	2,934.1	2,494.7	2,323.6
Liabilities	(5.5)	(4.1)	(7.3)	(3.8)	(1.7)	(2.5)	(3.4)	(4.0)	(4.4)	(4.8)	(3.0)
Net assets	3,972.8	3,525.1	2,845.1	2,515.8	2,486.3	2,093.9	1,954.8	2,724.2	2,929.7	2,489.9	2,320.6
Accrued pension benefits	4,393.1	4,222.2	3,800.6	3,631.0	3,443.5	3,126.0	2,983.8	2,889.6	2,745.8	2,540.6	2,407.0
GOING CONCERN (DEFICIT)/SURPLUS	(\$420.3)	(\$697.1)	(\$955.5)	(\$1,115.2)	(\$957.2)	(\$1,032.1)	(\$1,029.0)	(\$165.4)	\$183.9	(\$50.7)	(\$86.4)
SOLVENCY (DEFICIT)/SURPLUS	(\$1,058.2)	(\$1,011.1)	(\$1,314.9)	(\$1,747.9)	(\$1,011.5)	(\$1,171.3)	(\$880.0)	(\$65.5)	\$300.3	\$21.3	(\$10.6)
HYPOTHETICAL WIND-UP (DEFICIT)	(\$2,889.8)	(\$2,721.8)	(\$2,910.5)	(\$3,103.5)	(\$2,269.3)	(\$2,151.7)	(\$1,826.3)	(\$1,139.0)	(\$512.9)	(\$800.1)	(\$701.1)
PERFORMANCE (%)											
Rate of return	11.9	17.4	12.1	0.9	12.7	8.2	(27.6)	(5.9)	20.0	7.0	10.9
Target return (4% plus CPI)	5.0	6.2	5.2	5.5	7.2	5.0	3.7	7.1	6.2	6.5	5.7
PARTICIPANTS	18,116	17,701	17,252	16,854	16,437	16,041	15,595	15,253	14,727	14,254	13,934
GOING CONCERN KEY ACTUARIAL ASSUMPTIONS											
Increase in consumer price index (CPI)	2.00%	2.00%	2.25%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Increase in salaries	4.00%	4.00%	4.25%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Discount rate on liabilities	5.75%	5.75%	6.00%	6.25%	6.25%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%

University of Toronto (OISE) Pension Plan Eleven-year Review

(Canadian \$ millions)	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
CHANGE IN NET ASSETS											
Income											
Investment income	\$11.9	\$14.6	\$9.8	\$1.4	\$10.3	\$7.1	(\$28.2)	(\$6.3)	\$23.0	\$9.1	\$11.6
Contributions											
Members/transfers in	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6
University	4.1	4.1	4.2	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total income	16.4	19.1	14.4	9.0	10.8	7.6	(27.7)	(5.7)	23.6	9.7	12.2
Expenditures											
Benefits paid/transfers out	8.0	6.5	7.6	7.1	6.1	4.9	5.1	18.4	4.3	3.9	4.0
Investment expenses	1.1	1.0	0.8	1.2	1.2	1.0	1.4	1.4	1.3	0.7	0.7
Client service expenses	0.3	0.2	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.3
Total expenditures	9.4	7.7	8.6	8.6	7.5	6.3	6.7	20.0	5.8	4.9	5.0
Increase/(decrease) in net assets	\$7.0	\$11.4	\$5.8	\$0.4	\$3.3	\$1.3	(\$34.4)	(\$25.7)	\$17.8	\$4.8	\$7.2
NET ASSETS											
Investments											
Fixed income											
Bonds	\$24.2	\$22.4	\$18.6	\$19.0	\$15.6	\$14.1	\$11.4	\$26.6	\$29.6	\$24.5	\$37.5
Public Equities											
Canadian	8.2	9.5	7.0	12.7	11.6	9.4	7.4	17.8	20.4	13.5	14.8
Non-Canadian	27.6	26.9	21.8	15.7	23.6	20.8	19.8	41.0	53.9	44.9	31.0
Private equities	15.0	11.4	11.2	10.1	10.1	12.4	10.4	9.9	5.4	3.7	3.5
Commodities	1.4	1.5	1.7	1.6	1.6	1.7	1.4	1.7	3.4	3.1	0.5
Real assets											
Real estate	1.7	2.0	3.2	2.4	2.2	1.9	2.1	3.1	1.9	0.8	
Infrastructure	0.5	0.6	0.7	0.8	0.8	0.7	0.5	0.3			
Hedge Funds	15.5	11.4	11.8	11.1	9.3	12.0	14.0	9.5	8.9	20.3	19.6
Money market	8.2	7.1	6.4	2.8	(0.8)	1.7	6.3	7.9	(3.3)	0.2	1.3
Derivative-related net receivable (payable)	(0.8)	0.6	(0.3)	0.1	1.4	(1.9)	(1.6)	(3.8)	11.1	2.6	0.7
Net investments	101.5	93.4	82.1	76.3	75.4	72.8	71.7	114.0	131.3	113.6	108.9
Other assets											
	0.6	0.6	0.6	0.6	1.2	0.5	0.4	0.4	0.4	0.4	0.3
Total assets	102.1	94.0	82.7	76.9	76.6	73.3	72.1	114.4	131.7	114.0	109.2
Liabilities											
	(1.5)	(0.3)	(0.4)	(0.4)	(0.5)	(0.5)	(0.6)	(8.5)	(0.1)	(0.2)	(0.2)
Net assets	100.6	93.7	82.3	76.5	76.1	72.8	71.5	105.9	131.6	113.8	109.0
Accrued pension benefits	126.3	126.0	116.0	117.8	116.1	109.0	106.6	104.2	115.3	108.6	103.7
GOING CONCERN (DEFICIT)/SURPLUS	(\$25.7)	(\$32.4)	(\$33.7)	(\$41.3)	(\$40.0)	(\$36.2)	(\$35.1)	\$1.7	\$16.3	\$5.2	\$5.3
SOLVENCY (DEFICIT)/SURPLUS	(\$43.8)	(\$43.9)	(\$48.9)	(\$63.1)	(\$46.1)	(\$45.1)	(\$33.0)	\$3.2	\$17.3	\$5.0	\$8.1
HYPOTHETICAL WIND-UP (DEFICIT)	(\$90.0)	(\$89.3)	(\$94.4)	(\$102.1)	(\$86.0)	(\$77.9)	(\$67.4)	(\$35.1)	(\$11.7)	(\$27.7)	(\$18.8)
PERFORMANCE (%)											
Rate of return	11.9	17.4	12.1	0.9	12.7	8.2	(27.6)	(5.9)	20.0	7.0	10.9
Target return (4% plus CPI)	5.0	6.2	5.2	5.5	7.2	5.0	3.7	7.1	6.2	6.5	5.7
PARTICIPANTS	242	247	251	259	265	270	270	274	304	308	319
GOING CONCERN KEY ACTUARIAL ASSUMPTIONS											
Increase in consumer price index (CPI)	2.00%	2.00%	2.25%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Increase in salaries	4.00%	4.00%	4.25%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Discount rate on liabilities	5.75%	5.75%	6.00%	6.25%	6.25%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%

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Purpose of this Report

The Governing Council of the University of Toronto (the “University of Toronto” or the “University”) provides pension benefits to current and future retired members via two registered defined benefit pension plans:

- the University of Toronto Pension Plan (RPP).
- the University of Toronto (OISE) Pension Plan (RPP(OISE)).

An application has been filed with the Financial Services Commission of Ontario (FSCO) to merge the RPP(OISE) into the RPP, which is being considered by FSCO.

The University also provides pension benefits via a Supplemental Retirement Arrangement (SRA), an unregistered arrangement that provided pensions above the maximum pension benefit allowed under the Income Tax Act, up to a University specified maximum salary of \$150,000. This maximum pension benefit now exceeds \$150,000, and therefore no additional current service cost accrues in the SRA. All assets that supported the SRA have been transferred to the RPP, and the SRA is now supported by the University operating budget. See Appendix 2 of this report for more information on the SRA.

The Governing Council of the University of Toronto is the legal administrator of the registered RPP and RPP(OISE), both of which are separate legal entities.

The Pension Committee of Governing Council is composed of 11 members of Governing Council and 9 members representing employee groups with members who participate in the pension plans. It has delegated authority¹ to act for Governing Council in respect of the administration of the pension plans except for matters which Governing Council or its Business Board are required by statute to approve; or which are reserved to Governing Council or the Business Board via the Pension Committee terms of reference, as amended from time to time by Governing Council.

Plan advisors are State Street Trust Company (custodian of assets), Aon Hewitt (actuaries), Ernst & Young LLP (external auditors) and University of Toronto Asset Management Corporation (“UTAM”, investment manager).

The Vice-President, Human Resources and Equity is responsible for formulation of pension policy, member communication, benefits administration and negotiation of benefits. The Chief

¹ *The Pension Committee performs the role with respect to pension plan administration that was previously delegated by the Governing Council to the Business Board. The general limitations on that delegated authority are identical to those that apply to the Governing Council's delegation of authority to the Business Board.*

Financial Officer is responsible for the financial administration of the funds including liaison with the custodian, actuarial consultant, investment manager and external auditors.

This report provides an evaluation of the financial health of the pension plans. It also provides the status of the pension liability, pension asset and pension deficit for the RPP and the RPP (OISE). Included in this report are links to the audited financial statements for the RPP and the RPP(OISE) at June 30, 2015, and the actuarial reports, at July 1, 2015.

How a Defined Benefit Pension Plan Works

A pension plan is any arrangement by which an employer promises to provide retirement income to members. There are essentially two types of pension plans currently permitted under pension legislation in Ontario – a defined contribution plan and a defined benefit plan. A defined contribution plan provides pension benefits to each retired member on the basis of member and employer contributions and investment earnings on those contributions over time. The ultimate pension benefit depends on the amount of funding contributed and the investment earnings both before and after the date of retirement. The investment risk is borne by the member in a defined contribution plan.

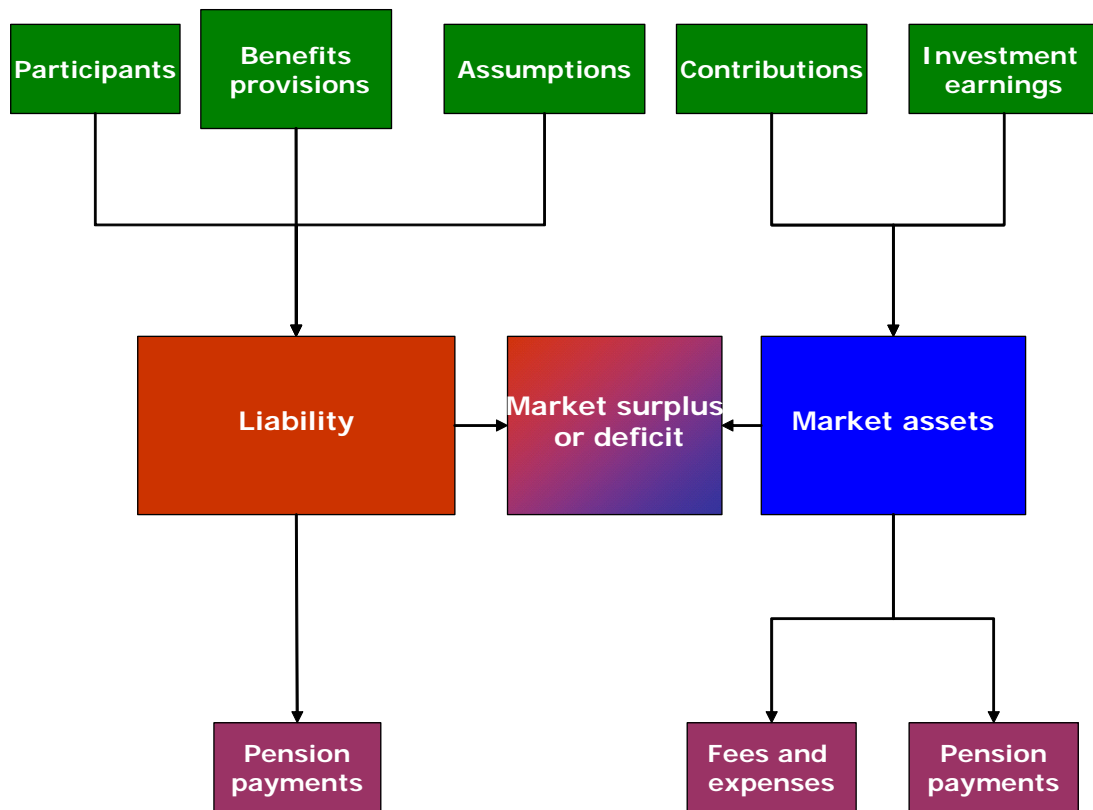
A defined benefit pension plan provides pension benefits to each retiring member on the basis of defined percentages applied to salary and years of service. Members and the employer provide funding, and the member will ultimately receive pension benefits that result from the salary and years of service formula. The investment risk is borne by the employer in a defined benefit plan.

The University of Toronto pension plans are defined benefit plans. For each year that the member works and participates in the plan, an additional year of pensionable service is earned. At retirement, the number of years of pensionable service is multiplied by a percentage of the average of the highest 36 months of average earnings to determine the annual pension payable to that person. After retirement, pension payments are indexed¹.

The objective of a defined benefit pension plan is to ensure that there are sufficient resources to pay for the current pensions of retired members and to ensure that there will be sufficient funds to pay for the pensions of members who will retire in the future. The plan engages an actuary to determine what the annual funding of the plan must be to ensure that this objective is met.

The challenge for defined benefit plans is to find a way to reasonably estimate the current net present value of what pensions will be paid to retired members over time (the liabilities) and to set aside money now to support payment of those pensions in future (the assets). The relationship is illustrated as follows:

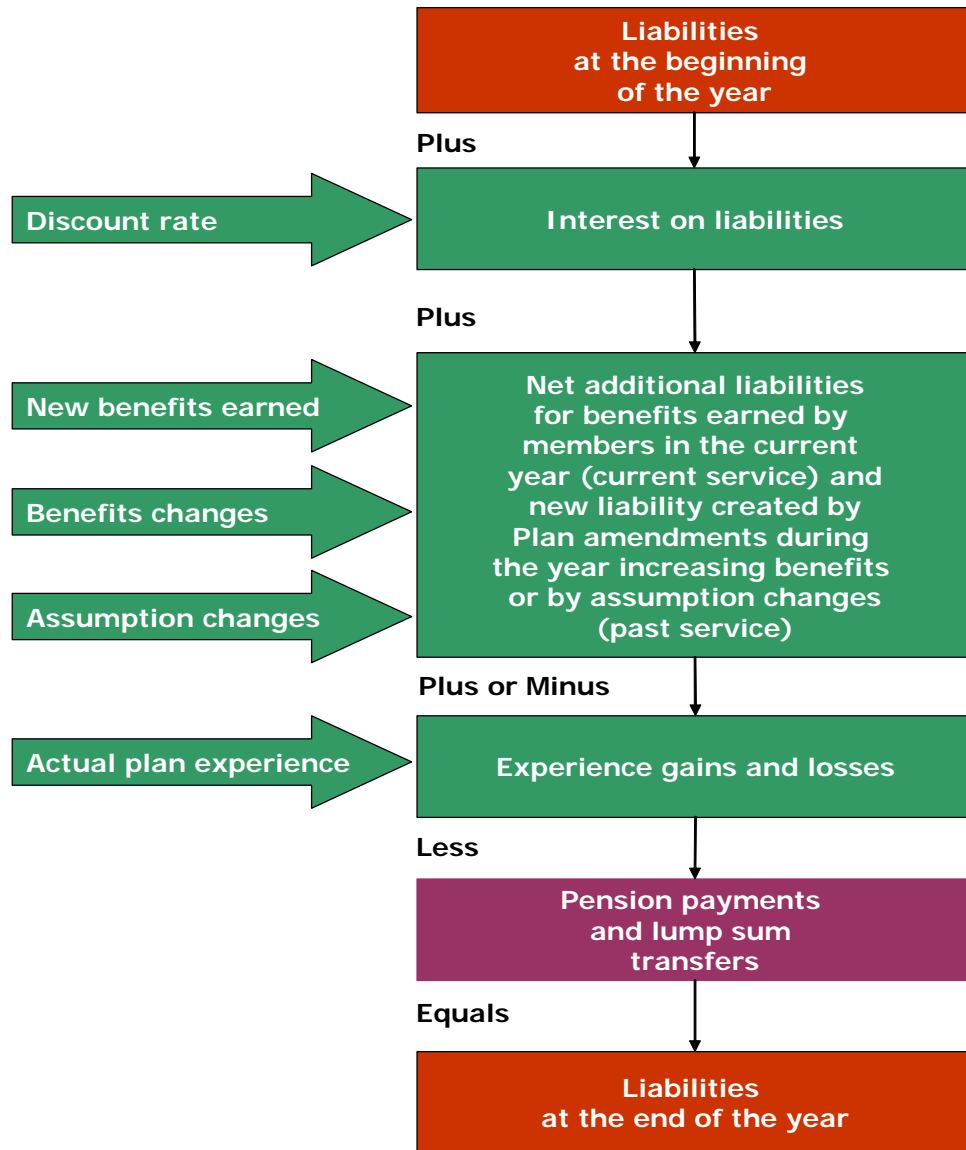
¹ Pensions are increased as of July 1 each year by the greater of (a) the increase in the Consumer Price Index for Canada (CPI) for the previous calendar year minus 4.0%; or (b) 75% of the increase in the CPI for the previous calendar year to a maximum CPI increase of 8%, plus 60% of the increase in CPI in excess of 8%.



As you can see from the diagram, the difference between the estimated net present value of current and future pensions (the liability), and the amount of funds actually on hand (the market assets) is the market surplus or deficit.

The Liability

The net present value of current and future pensions (the liability) depends on assumptions made about the members in the pension plan, including their length of service, their estimated salaries at retirement, the kinds of benefits they are receiving or will receive, and future inflation. The liability represents the discounted net present value of pension benefits earned for service up to the valuation date, based on those assumptions. The following table shows how liabilities change from year to year.



As shown above, liabilities change when:

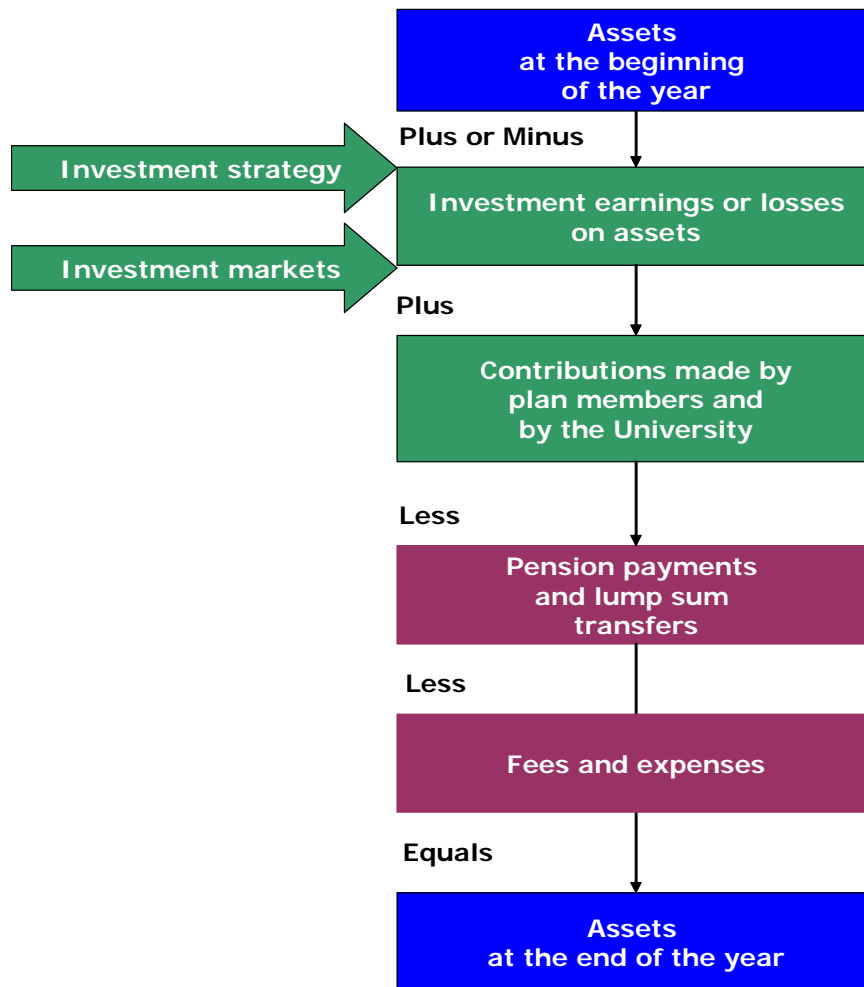
- members work an additional year, thus increasing their pension benefit at retirement. This is known as current service and increases the liability.
- members receive a larger pension benefit for the same salary and years of service through improvements to past service benefits. This increases the liability.
- new participants are added to the plan. This adds to the liability over time.
- assumptions that forecast the amount of pension benefits to be paid in future (e.g. salary increase assumption) change. These changes may increase or decrease the liability.
- assumptions that discount future liabilities to the present change. Increases in the discount rate DECREASE the liability while decreases in the discount rate INCREASE the liability.

- actual experience in the plan (e.g. actual salary increases, terminations, longevity, etc.) results in actual benefit payments that are different from those expected according to the actuarial assumptions. Actual experience may increase or decrease the liability.

Liabilities also have interest calculated on them, just like any other discounted obligation that has to be paid in future. This interest is added to the liabilities and also increases them.

The Assets

The amount of money that has actually been set aside (the assets) comes from only two sources: 1) contributions from members and from the University (including transfers in from other plans), and 2) investment earnings. The pension financial statements report the assets at fair value (which is essentially market value) at June 30. The following table shows how assets change from year to year:



The Surplus or Deficit

The difference between the liabilities and assets is a surplus if the assets exceed liabilities or a deficit if liabilities exceed assets. When the assets are valued at market value, the difference is a “market” surplus or deficit. Pension regulation also permits an “actuarial” surplus or deficit, whereby changes in market value are smoothed over more than one year instead of being recognized immediately. The actuarial surplus is used for certain requirements under the Pension Benefits Act. However, for our financial evaluation purposes, to assess the financial health of our plans, the market surplus or deficit is more useful since it records all gains or losses immediately. This report focuses primarily on the market value of assets and the market surplus or deficit.

Tools for Assessment of Pensions

The key tools for assessing the current financial health of the pension plans are financial statements and actuarial reports:

- **Pension financial statements** provide an audited confirmation at the valuation date of the fair value (essentially market value) of the pension assets of the registered plans. It also provides an audited confirmation of the pension obligations of the registered plans at the valuation date. The plan fiscal year for the RPP and RPP(OISE), each of which is a registered plan and separate legal entity, is July 1 to June 30. Assets for each registered plan are valued at June 30 of each year and reported on the registered pension plan balance sheets, which are called the *statement of financial position*. The changes in assets from one year to the next are shown on the registered pension plan income statements, which are called the *statement of changes in net assets available for benefits*. The changes in the pension liabilities from one year to the next are shown on the *statement of changes in pension obligations*.
- **Pension actuarial reports** estimate the net present value of the pension benefits of the registered plans based on assumptions, as noted earlier, and compare that net present value to the audited assets reported in the financial statements to determine the financial status of the plan at the valuation date. For both registered plans, the actuarial valuation date is July 1 of each year, incorporating the annual salary increases that become effective on that date.

Various financial reporting and regulatory requirements result in four types of valuations that make different assumptions and that produce very different results. Under these different types of valuations, the liabilities can change dramatically. However the assets are normally

valued at fair value as of the date of valuation, with some very minor adjustments made to asset values for different types of valuations. Here are the similarities and differences between them.

Going Concern Actuarial Valuation:

This valuation assumes that the pension plan is a going concern. This means that it is expected to be continuing to operate for the foreseeable future. Assumptions that determine the net present value of the benefits are long-term. Assets are valued at the fair value as of the date of valuation as reported on the audited financial statements. This valuation is done for a single point in time, as of July 1 each year, and is used for purposes of funding the pension plan.

Solvency Actuarial Valuation:

This valuation varies from the going concern valuation in that it assumes the plan will be wound-up on the valuation date and uses a market interest rate assumption. It assumes that benefits will be settled through purchase of annuities or payment of lump sum values. However, indexation (inflation) after termination or retirement is excluded from the liability calculation, in accordance with regulation. This valuation utilizes the audited fair value of the assets as reported on the audited financial statements, and adjusts that audited value with a provision for hypothetical wind-up costs. This valuation is done on the plan year, as of July 1 each year. To the extent there is a deficiency under a filed solvency valuation, additional funding may be required.

Hypothetical Wind-up Actuarial Valuation:

This valuation takes the solvency valuation and provides for the indexation that occurs before and after retirement. It also assumes that benefits will be settled through purchase of annuities or payment of lump sum values. And it also adjusts the audited fair value of the assets with a provision for hypothetical wind-up costs. This valuation is done on the plan year, as of July 1 each year.

Accounting Valuation:

This valuation is done for accounting purposes and estimates numbers that are required to be included in the University's financial statements (not the pension financial statements). This valuation is done on the University's fiscal year end, April 30. Pension liabilities are valued using the funding assumptions utilized for the going concern valuation.

While it is important to be aware of the existence of these various valuations, and their purposes, this report assumes that the pension plans are going concerns and evaluates pension financial health using the going concern actuarial valuation. The following sections will

show the status of the registered pension plans at July 1, 2015 and will apply the elements of defined benefit pension plans (shown in the diagram on page 8) to the University pension plans, with particular emphasis on the assumptions, the contributions, and the investment earnings, and their associated policies and strategies.

Status of the Registered Pension Plans at July 1, 2015

At July 1, 2015, the going concern accrued liabilities and market value of assets for the University of Toronto registered defined benefit plans and pension reserve were (in thousands of dollars):

July 1, 2015	Going Concern Liabilities	Market Value of Assets	Market Surplus (Deficit)	Market Surplus (Deficit) as % of Liabilities
RPP	4,393.1	3,972.8	(420.3)	(9.6%)
RPP(OISE)	126.3	100.6	(25.7)	(20.3%)
Pension Reserve		11.8	11.8	
Total	4,519.4	4,085.2	(434.2)	(9.6%)

At July 1, 2014, the liabilities and assets for the University of Toronto registered defined benefit plans and pension reserve were:

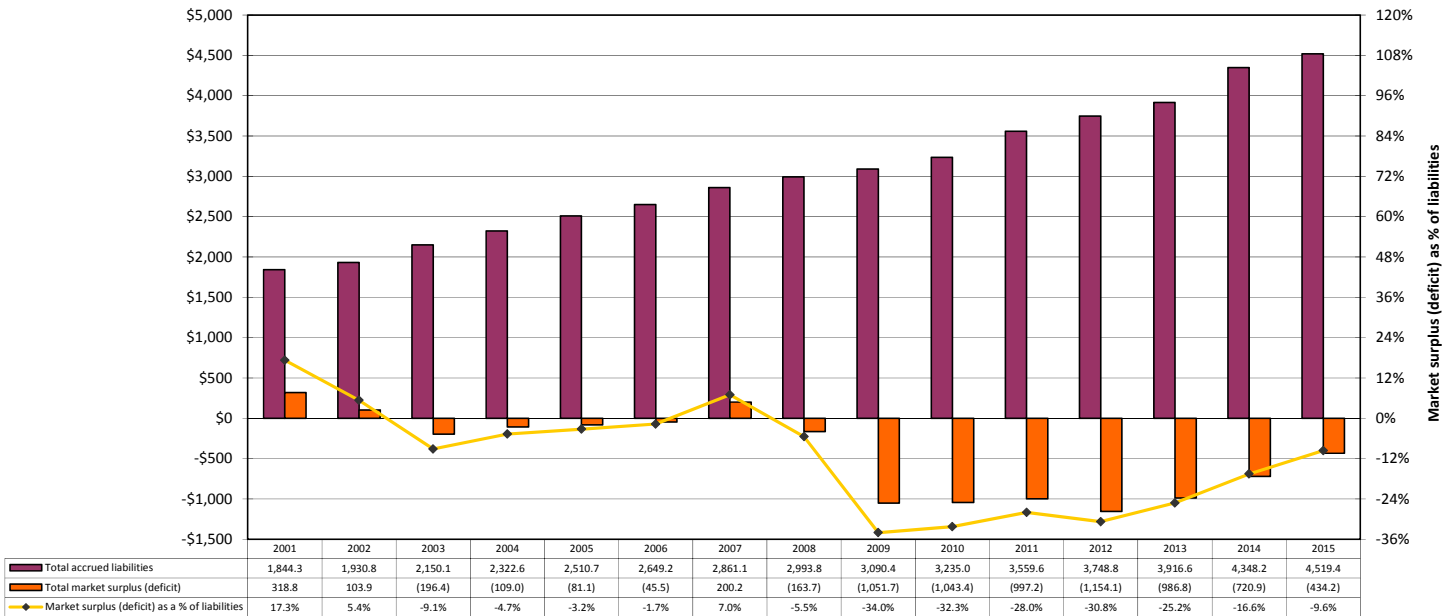
July 1, 2014	Going Concern Liabilities	Market Value of Assets	Market Surplus (Deficit)	Market Surplus (Deficit) as % of Liabilities
RPP	4,222.2	3,525.1	(697.1)	(16.5%)
RPP(OISE)	126.0	93.7	(32.4)	(25.7%)
Pension Reserve		8.6	8.6	
Total	4,348.2	3,627.4	(720.9)	(16.6%)

As you can see from the above tables, the overall financial health of the registered pension plans showed significant improvement between July 1, 2014 and July 1, 2015 due mainly to a) investment returns of 11.9% that exceeded the target return of 5.0% (4%¹ plus actual CPI of 1.0%) for the period, and b) employer special payments totaling \$69.8 million.

A longer history of combined results for the three plans is shown on the following chart.

¹ See the *Investment Earnings* section which explains in more detail the difference between the target return for investment earnings (4% plus actual CPI) which is one of the tools used for assessing investment performance (in addition to the benchmark/reference portfolio), and the 3.75% real return built into the discount rate, which is intended to provide a margin of error for adverse events when calculating plan liabilities.

**University of Toronto RPP and RPP(OISE) Combined and Pension Reserve
Accrued Liabilities and Market Surplus (Deficit)
as at July 1
(millions of dollars)**



As you can see from the above chart, the registered plans were in surplus in 2001 and 2002. A deficit emerged in 2003 which was extinguished by 2007. Beginning in 2008, and much more pronounced in 2009, the impact of the global financial crisis was to reduce market returns significantly. The overall financial position of the plans was essentially unchanged between 2009 and 2010 and improved somewhat in 2011 as a result of a rebound in markets and additional special contributions from the University. In 2012, with markets underperforming target returns, the market deficit of the plans increased slightly. In 2013 through 2015, the financial position of the plans has improved significantly, mainly as a result of investment returns in excess of target returns and significant additional special payments, partly offset by changes to certain actuarial assumptions.

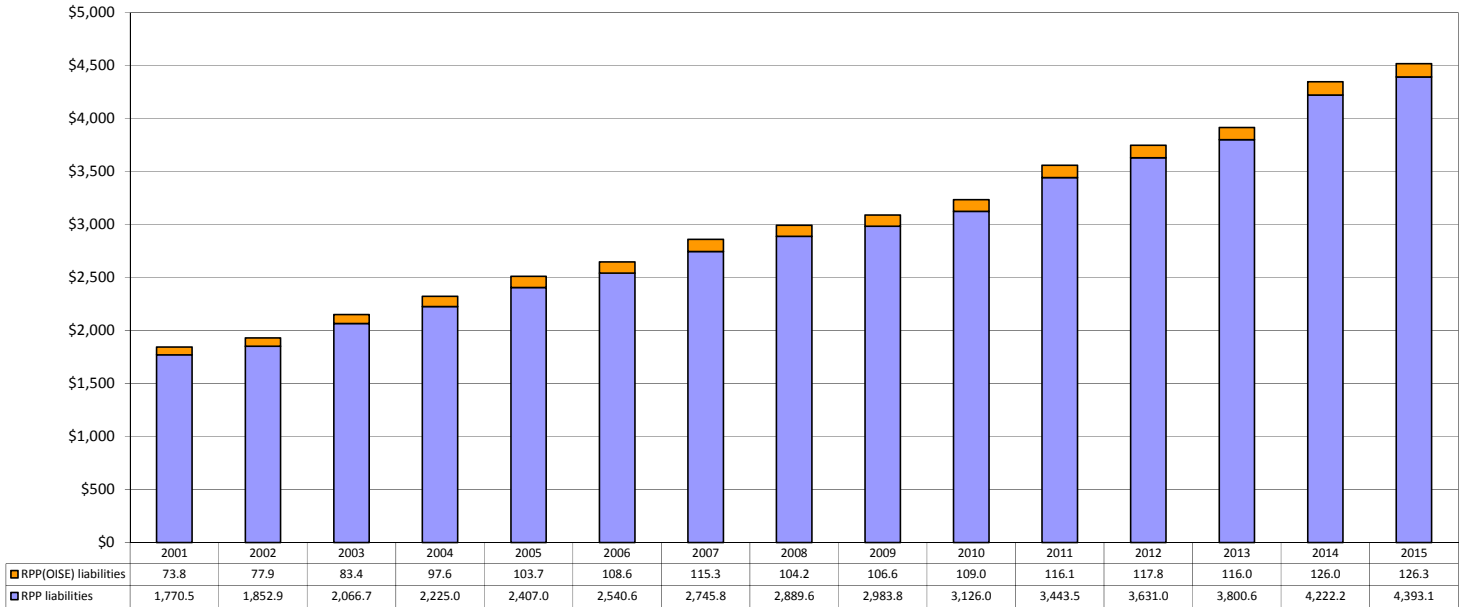
Pension Liabilities

Going concern pension liabilities for the University of Toronto registered pension plans totalled \$4,519.4 million at July 1, 2015, comprising:

- \$ 4,393.1 million RPP pension liabilities
- \$ 126.3 million RPP(OISE) pension liabilities

The growth in those liabilities since 2001 is shown on the following chart.

**Going Concern Pension Liabilities
RPP and RPP(OISE)
at July 1
(millions of dollars)**



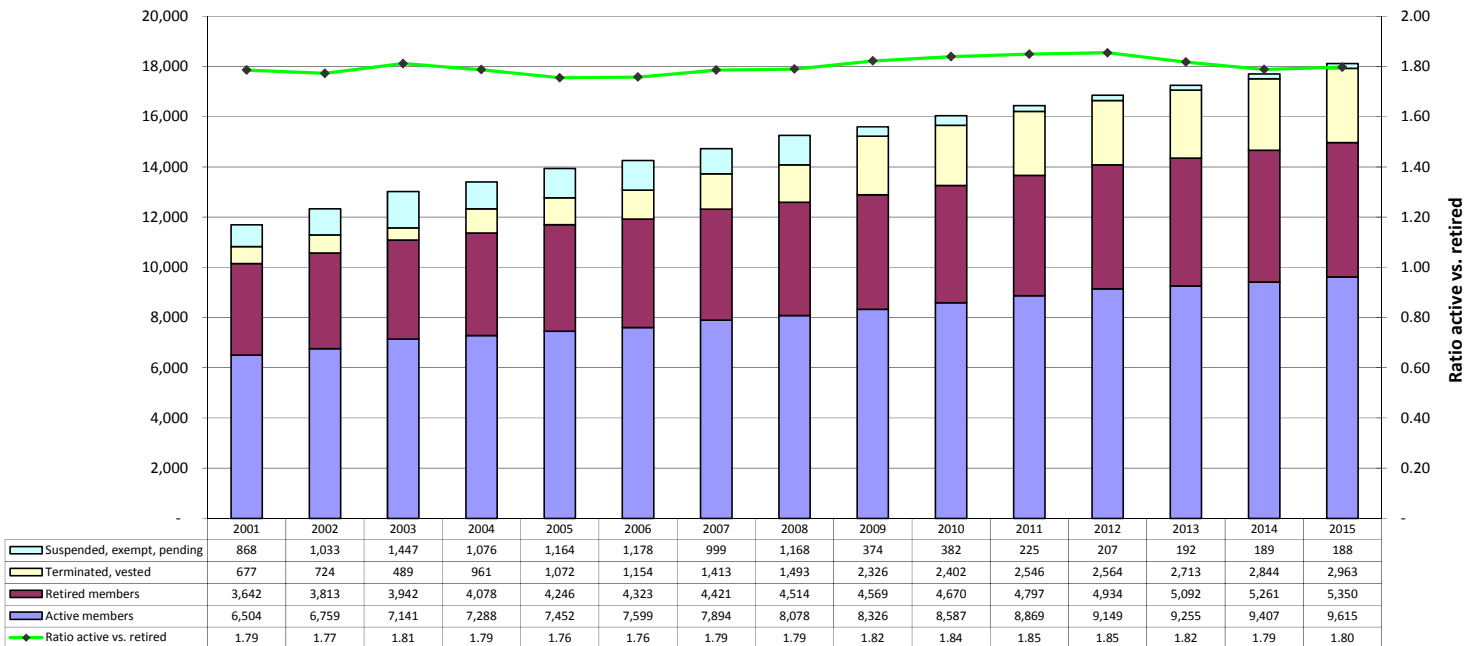
As noted earlier, pension liabilities are valued at July 1 and are dependent on a number of factors. The following sections will examine the impact of these factors on the total going concern pension liabilities for the University of Toronto plans.

Participants

RPP

The RPP is a growing plan, with member participation increasing over time. An increase in the number of plan participants adds to pension liabilities over time. At July 1, 2015, total member participation was 18,116.

**RPP
Member Participation
at July 1**



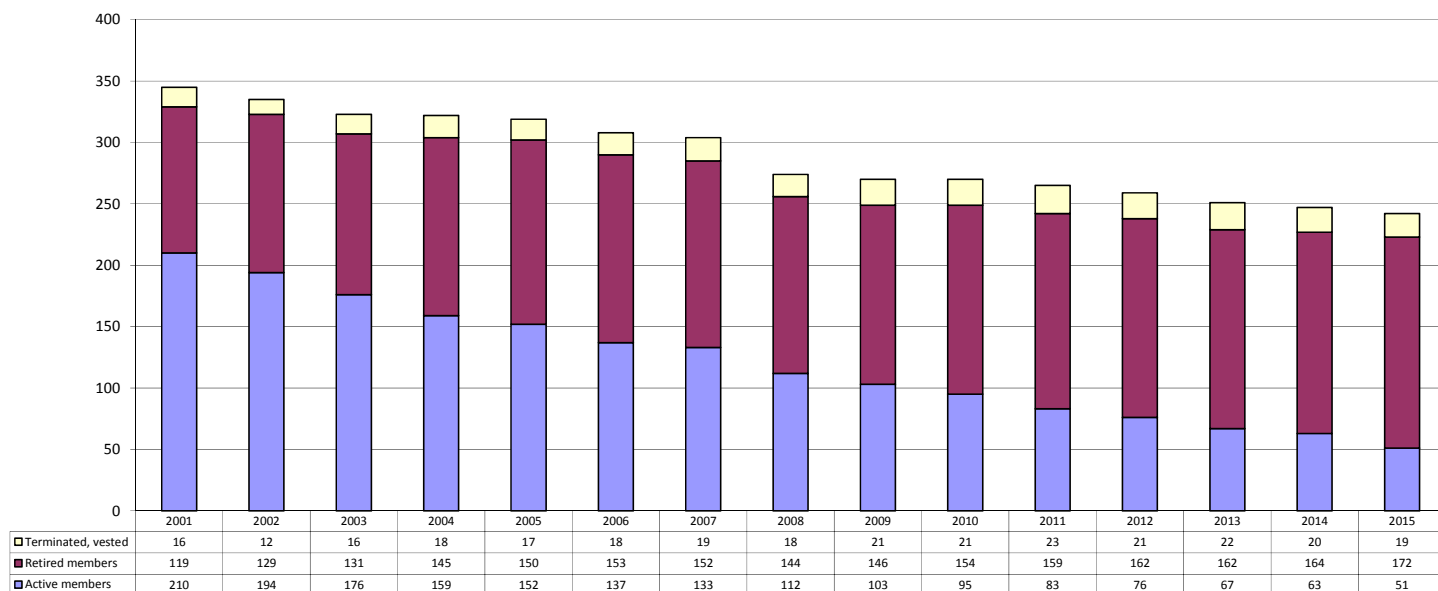
The continued growth in active membership helps to maintain a stable duration¹ of liabilities, with the ratio of active to retired liabilities remaining relatively constant. It also supports the growth of cash flow into the plan due to increasing contributions from both participants and the University.

RPP(OISE)

The RPP(OISE) is a closed plan, and has been closed to new entrants since 1996 when the Ontario Institute for Studies in Education merged with the University of Toronto's Faculty of Education. All new employees who are eligible for the University's pension plan become members of the RPP. Therefore, the RPP(OISE) has a declining participation that totalled 242 at July 1, 2015.

¹ Duration is a weighted-average sensitivity measure which calculates the average length of time to the payment of benefits.

**RPP(OISE)
Member Participation ¹
at July 1**



¹ Including partial wind-up members up to 2007. The partial wind-up distribution was approved by the Financial Services Commission of Ontario on October 1, 2007, and partial wind-up members have been excluded since 2008.

It should be noted that the University has applied for regulatory approval for the transfer of the net assets and pension obligations of the RPP (OISE) plan to the RPP. The effective date of the proposed transfer is July 1, 2014. As of November 2015, the merger of the two plans was still subject to regulatory approval.

Pension Benefit Provisions

The pension benefit is the provision of retirement income to participants in the pension plan. It is calculated on the basis of defined percentages (“benefit rates”) applied to the salary and years of pensionable service for each plan participant. Pension benefits are the same for the members in any particular member group.

Benefits improvements arise from negotiations with member groups and from mediation and arbitration and are not normally determined unilaterally. Pension benefits are the same for the RPP and the RPP(OISE).

Key benefit provisions are as follows:

Benefits

accrual: Pension benefits accrue at the rate of 1.5% of highest average salary up to the average CPP maximum salary (1.6% for USW members, various other unions and non-unionized administrative staff) plus 2.0% of highest average salary in excess of the average CPP maximum salary to a maximum of \$150,000 per year.

Retirement

dates: The normal retirement date is the June 30 following the 65th birthday. Retirement is possible within 10 years of the normal retirement date, with a reduction of 5% per year between actual retirement and normal retirement. No reduction is applied once members reach 60 years of age, and meet certain service requirements, which vary by staff group. There is no longer a requirement to retire at age 65.

Cost of living

adjustments: The pension benefits of retired members are subject to cost of living adjustments equal to the greater of a) 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% and b) the increase in the CPI for the previous calendar year minus 4.0%. The first cost of living adjustment is made at date of retirement.

Any improvement in the benefit being provided to current retired members and/or to be provided to future retired members results in an increase to the pension liabilities. **There were no benefits improvements during the year ended June 30, 2015.**

When benefits improvements are agreed, they may be implemented in various ways – for active participants only, or for both retired and active participants, on current service only or on both current and past service. When provided for current service, they require current service contributions from members and the University on a go forward basis. When provided for past service as well as current service, they require current service contributions and funding of past service costs as well. Benefits improvements to retired persons, such as augmentation, generate past service costs. There are only two ways of funding defined benefit pension plans, including benefits improvements – contributions and investment earnings. These elements of defined benefit plans will be discussed in later sections of this report.

Assumptions

No one knows what salaries will be for plan participants at retirement, and therefore, what their actual pension benefit will be, nor does anyone know how long plan participants will receive those benefits after retirement or what the cost of living adjustments will be after retirement. Actuarial assumptions are used to estimate the pension benefits that will be paid to current and future retired members in the future. Those estimated pension benefits are then discounted to the present time, using an interest discount rate to calculate the net present value.

Changes in actuarial assumptions impact the value of the liabilities. Some changes increase liabilities while other changes decrease liabilities and some assumptions are interrelated in their impact on the value of the liabilities.

Actuarial assumptions are approved annually by the Pension Committee. The same actuarial assumptions are in place for both registered pension plans. All actuarial assumptions can be found in the full actuarial reports located at <http://www.finance.utoronto.ca/alerts/pensionrpts.htm>.

Key actuarial assumptions at July 1, 2015 are as follows:

Assumption	Description	Impact of assumption change on liabilities
Retirement age	<p><i>Academic staff and librarians</i> – retirement rates from ages 60 to 70, but not earlier than one year after valuation date, subject to early retirement provisions, if applicable.</p> <p><i>Administrative Staff, unionized administrative staff, unionized staff and research associates</i> – age 63, subject to early retirement provisions.</p>	The earlier the retirement age with an unreduced pension, the higher the liability.
Mortality rates:	Canadian Pensioner Mortality 2014 Public Table with Improvement Scale CPM-B	Increases in life span increase liabilities.

Increase in Consumer Price index (CPI):	2.00% per year	An increase in CPI alone increases liabilities, but should be considered in concert with salary increases and discount rate.
Cost of living adjustments:	1.50% per year (75% of CPI)	An increase in cost of living adjustments increases liabilities.
Increase in CPP maximum salary:	2.75% per year	An increase in CPP maximum salary decreases liability since pensionable service is accumulated at 1.5% or 1.6% up to the CPP maximum salary and at 2.0% over that maximum.
Increase in <i>Income Tax Act</i> maximum benefit limit:	\$2,818.89 in 2015 increasing by 2.75% per year thereafter (<i>previous valuation was \$2,770.00</i>).	An increase in the Income Tax Act maximum pension increases the liability in the RPP.
Increase in Salaries:	4.00% per year (2.00% CPI plus 2.00% merit and promotion/progression).	An increase in the total assumption, whether impacted by CPI or by merit and promotion/progression, increases liabilities.
Interest rate (Discount rate on liabilities):	5.75% per year (2.00% increase in CPI plus 3.75% real investment return, net of fees).	An increase in the interest rate, whether through an increase in CPI or real return, DECREASES liabilities. Conversely, a decrease in the interest rate INCREASES liabilities.

It is very important to note that these assumptions are **long-term** assumptions. In other words, they predict the results over a very long-term horizon.

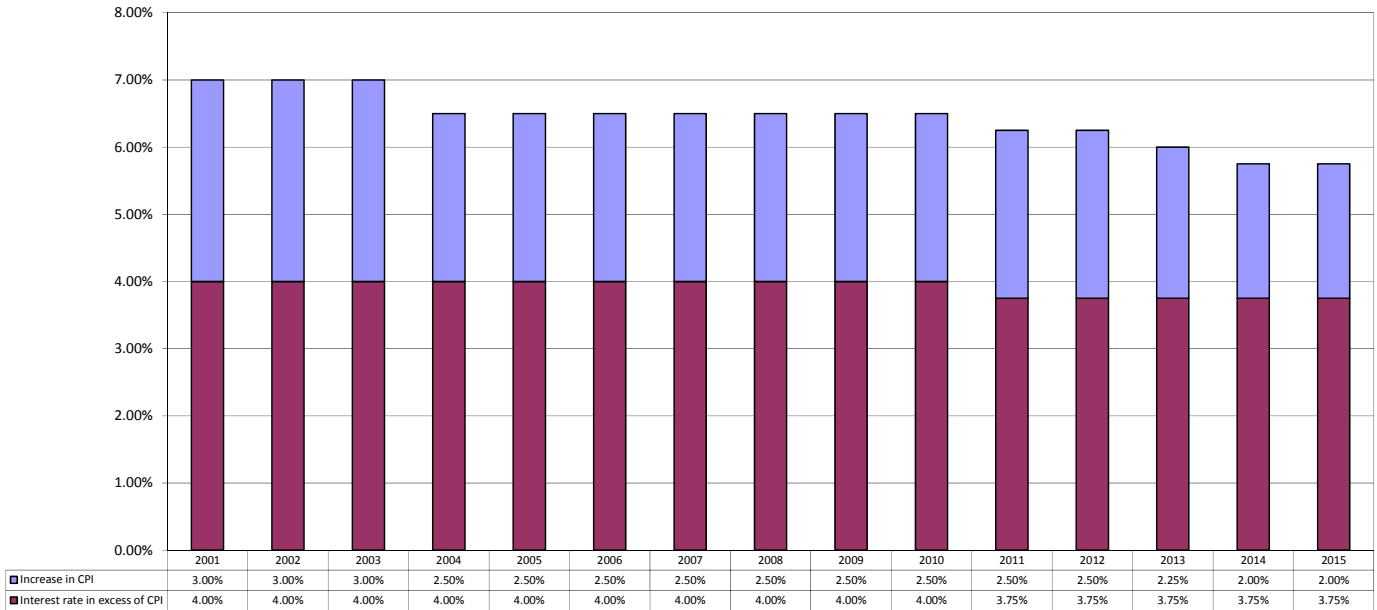
Each year, the actuarial valuation records the actual results and compares them to the assumptions. These variances, over time, provide a rationale for ongoing adjustments to the assumptions. Consistent variances in one direction, either negative or positive, suggest that an assumption needs to be changed. When actuarial assumptions do change, they tend to be adjusted in very small increments, rather than in the larger swings that can be experienced in the short and medium term.

Key interdependent assumptions are the assumed increase in CPI, and the assumed increases in salaries and the interest rate (discount rate), both of which reflect the CPI assumption. At July 1, 2015, they are 2.0% increase in CPI, 4.0% increase in salaries (2.0% CPI and 2.0% merit and promotion/progression), and 5.75% interest rate/discount rate (2.0% CPI and 3.75% real return).

Discount Rate on Liabilities

The following chart illustrates the history of this assumption from 2001 and shows that the discount assumption had remained quite steady over the past several years with the only variation coming from changes in CPI. For purposes of the actuarial report, a 4.0% real return discount assumption had been in place for many years. Effective July 1, 2011 the discount rate on liabilities was reduced from 6.50% to 6.25%, reflecting a reduction in the real return discount assumption from 4.00% to 3.75% (the CPI assumption remaining at 2.50%), with the discount rate assumption remaining at 6.25% in 2012. Effective July 1, 2013 the discount rate on liabilities was reduced to 6.00% from 6.25%, reflecting a reduction in the increase in the CPI from 2.50% to 2.25%, and effective July 1, 2014 the discount rate was reduced again, from 6.00% to 5.75%, reflecting a further reduction in the increase in the CPI from 2.25% to 2.00%. There was no change to the discount rate in 2015.

**University of Toronto Registered Pension Plans
Interest Rate Assumed on Investments, including Increase in CPI, at July 1**

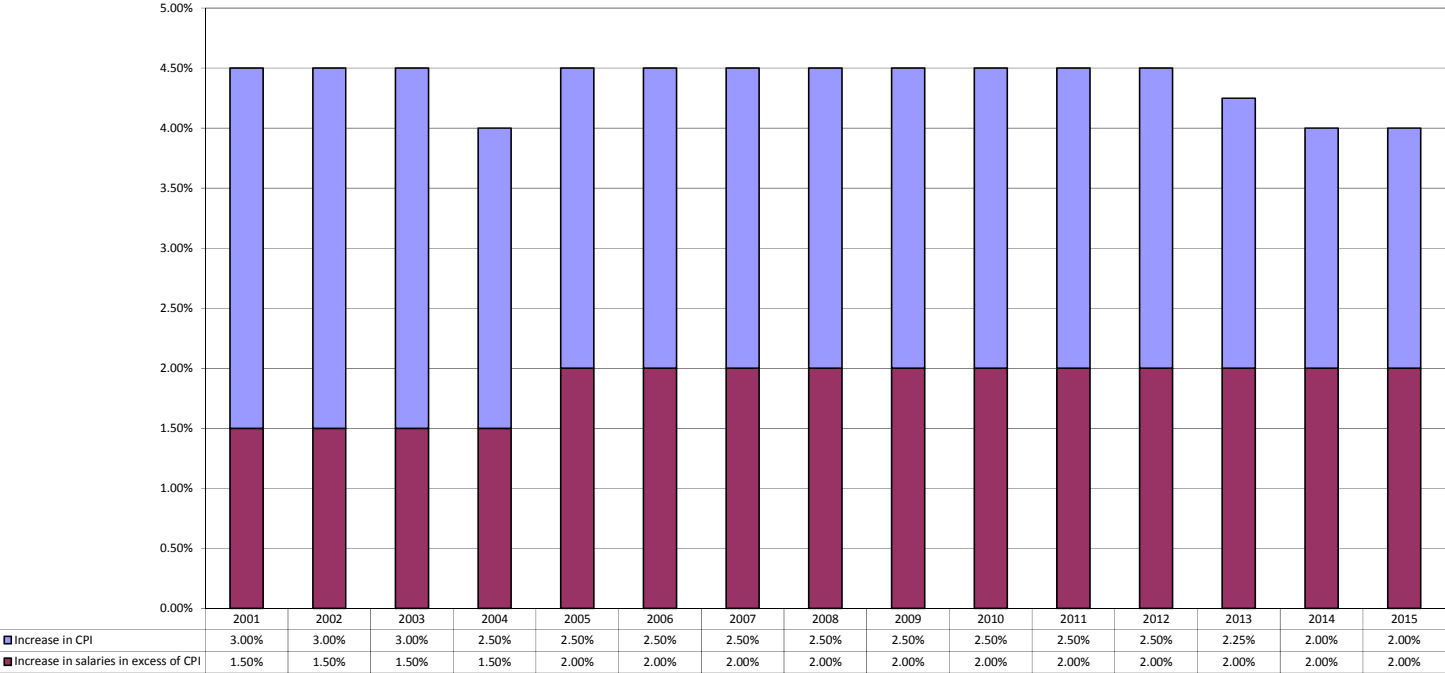


The significance of this assumption is that the liabilities represent the discounted net present value of future pension payments, and the discount rate is used to discount the pension payments to the present. The lower the discount rate, the higher the liabilities and the higher the funding needed for the defined benefit pension. Or another way of looking at this, the lower the expected investment earnings, the more funding that has to come from contributions.

Salary increase assumption

This assumption attempts to predict what salary increases will be over the long term, and thus what will be the 36 months of highest average earnings for each plan participant at retirement. The percentage increase in salary in excess of CPI was adjusted in 2005 to reflect ongoing salary settlements that, including merit and promotion/progression, were trending higher than 4.00%. Although the inflation assumption was reduced, the salary settlements themselves did not seem to decline. Therefore, the 4.50% total percentage assumption was re-established in 2005 and remained in effect through 2012. In 2013, the salary increase assumption was changed from 4.50% to 4.25% to reflect the change in the increase in the CPI from 2.50% to 2.25%, and changed again in 2014 from 4.25% to 4.00% to reflect the change in the increase in the CPI from 2.25% to 2.00%. There was no change in this assumption in 2015.

**University of Toronto Registered Pension Plans
Salary Increase Assumed, including Increase in CPI, at July 1**



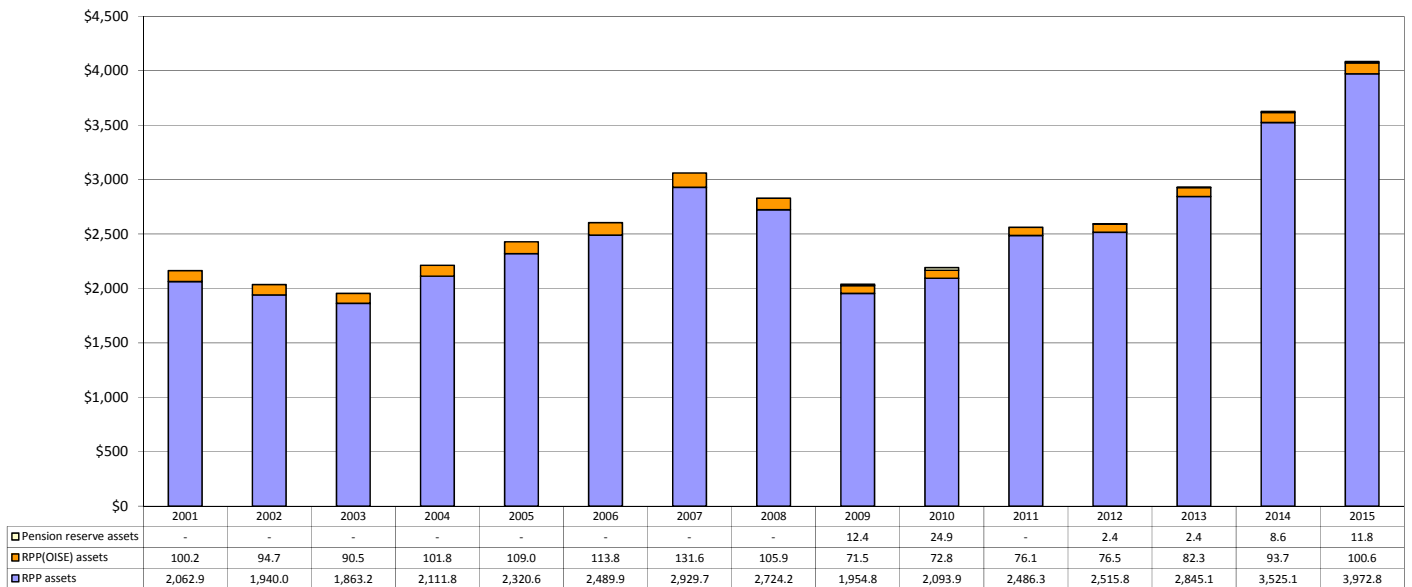
Pension Assets

Total assets for the two registered pension plans and the pension reserve were \$4,085.2 million at June 30, 2015, comprising:

\$ 3,972.8 million	RPP pension assets
\$ 100.6 million	RPP(OISE) pension assets
\$ 11.8 million	Pension reserve university assets

The change in those assets since 2001 is shown on the following chart.

**Market Value of Pension Assets ^{1,2}
at June 30
(millions of dollars)**



¹ Including partial wind-up members in RPP(OISE) assets in years up to 2007.

² Pension reserve assets of \$25.0 million were transferred to the RPP in 2011.

The RPP and RPP(OISE) represent separate legal trusts¹ containing pension assets, and a link to their financial statements is included in appendix 1. The pension reserve assets are University funds that are not held in trust. This report considers contributions to the pension reserve but does not focus on investment earnings of this fund.

¹ Funds cannot be transferred between the two registered plans.

The investment of the pension plans in the Pension Master Trust since 2012¹ is as follows:

RPP and RPP(OISE) Investment in Pension Master Trust, at fair value				
(thousands of dollars)				
	2015	2014	2013	2012
Short-term investments	62,708	21,682	2,282	95,151
Government and corporate bonds	1,295,455	1,132,557	882,696	761,019
Canadian equities	606,578	573,618	463,504	515,848
United States equities	693,182	610,888	521,020	455,104
International equities	625,136	577,681	478,634	377,567
Emerging markets equities	409,253	359,511	302,136	116,483
Absolute return funds	403,512	306,298	284,043	257,730
	4,095,824	3,582,235	2,934,315	2,578,902
Derivative-related net (payable) receivable	(32,613)	24,905	(15,305)	3,078
	4,063,211	3,607,140	2,919,010	2,581,980

As noted earlier, there are only two ways of funding a defined benefit pension plan – contributions and investment earnings. Contributions, plus investment earnings, minus the fees and expenses incurred in administering the pension plans and earning investment returns, and minus the payments to retired members result in the pension assets that are on hand and set aside to meet the pension liabilities.

It is important to note that there is a strong relationship between contributions and investment earnings. Since the amount that must be set aside in assets is driven by the pension liabilities, the key question on the asset side is:

How much of the pension funding should be targeted to come from CONTRIBUTIONS and how much should be targeted to come from INVESTMENT EARNINGS?

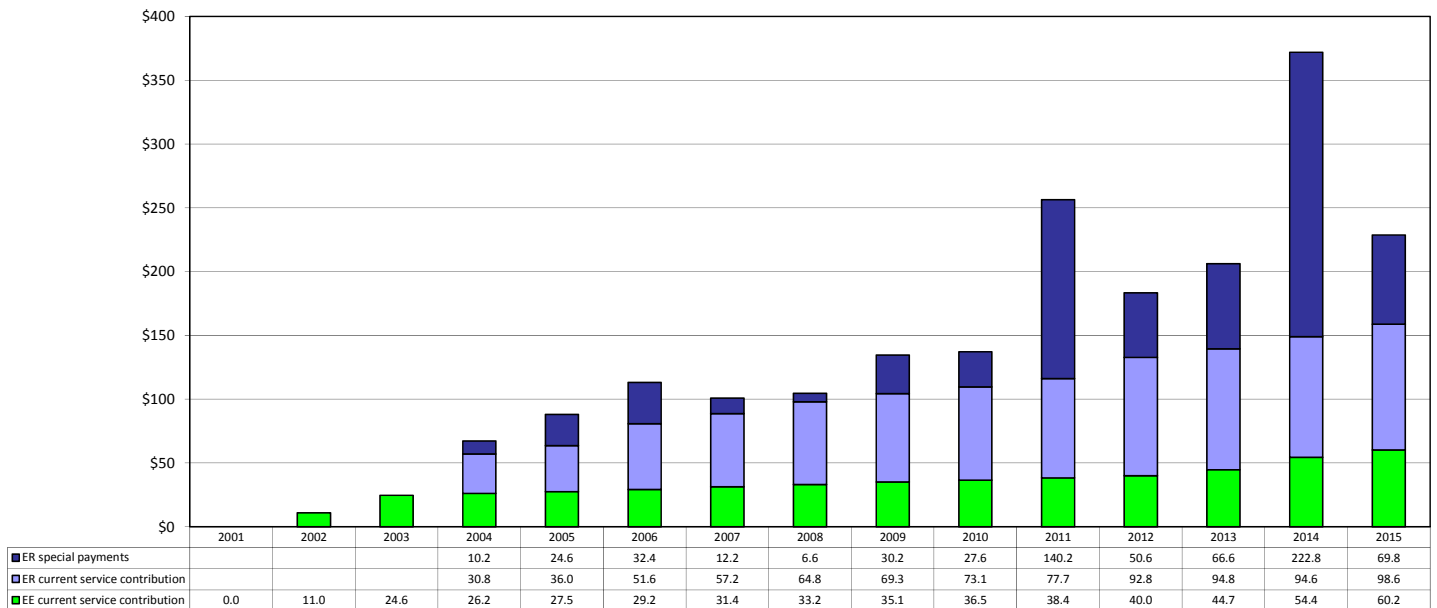
The higher the investment earnings that can be generated, the lower the contributions needed to be provided by members and by the University. However, there are significant risks inherent in investment markets and the higher the return that is targeted, the higher the risk of losing money is likely to be. The next two sections will examine the role of contributions and investment earnings and the following two sections will discuss fees and expenses and payments.

¹ The registered pension plans' Investment in Master Trust from the audited financial statements of the pension plans. Net Assets Available for Benefits (referred to as Pension Assets elsewhere in this report) includes the Investment in Master Trust combined with receivables and prepaid expenses net of administrative liabilities of the plans.

Contributions

The University of Toronto pension plans are defined benefit **contributory** plans. As noted earlier, there are only two ways of funding a defined benefit pension plan – contributions and investment earnings. This section focuses on the contributions that have been made by the University and by employees. The following chart shows the contributions made by the University and by employees since 2001.

Contributions by Source (Employee and Employer)^{1,2}
for the year ended June 30
(millions of dollars)



¹ Voluntary Early Academic Retirement Program (VEARP) contributions included in ER special payments.

² ER special payments in 2011 exclude the \$25.0 million transfer of pension reserve assets to the RPP (for total ER special payments to the RPP of \$165.2 million) since increases to pension reserve assets had already been included as contributions in previous years for the purposes of the Pension Report. In 2014 and 2015, ER special payments include contributions to the pension reserve of \$6.2 million and \$3.2 million respectively.

Contributions are to be made by members and by the employer to fund pension benefits earned in the current year, also known as the current service cost. The member share of those contributions is determined by formula, with the employer contribution representing the difference between the total current service contribution required (actuarially determined) and the portion paid by members.

Contributions by employers are not permitted under the Income Tax Act (Canada) into registered plans when there is an actuarial surplus greater than 25% of accrued liabilities (changed from 10% in 2010).

Contributions by employers are required to fund any going concern deficits over 15 years. These special payment contributions are in addition to regular current service contributions.

Contributions by employers are required to fund any solvency deficits over 5 years. These special payment contributions are in addition to regular current service contributions. (The Province of Ontario has established a temporary solvency funding relief program that makes provision to vary this requirement – described later in this section).

In 2001 and 2002 (and for some years prior), the RPP had a sufficiently high actuarial surplus that no employer contributions were permitted except for two years where a partial contribution was permitted, and four years where a full contribution was permitted. Members experienced a pension contribution holiday from 1997 to 2002.¹ The RPP(OISE) was in surplus throughout the same period.

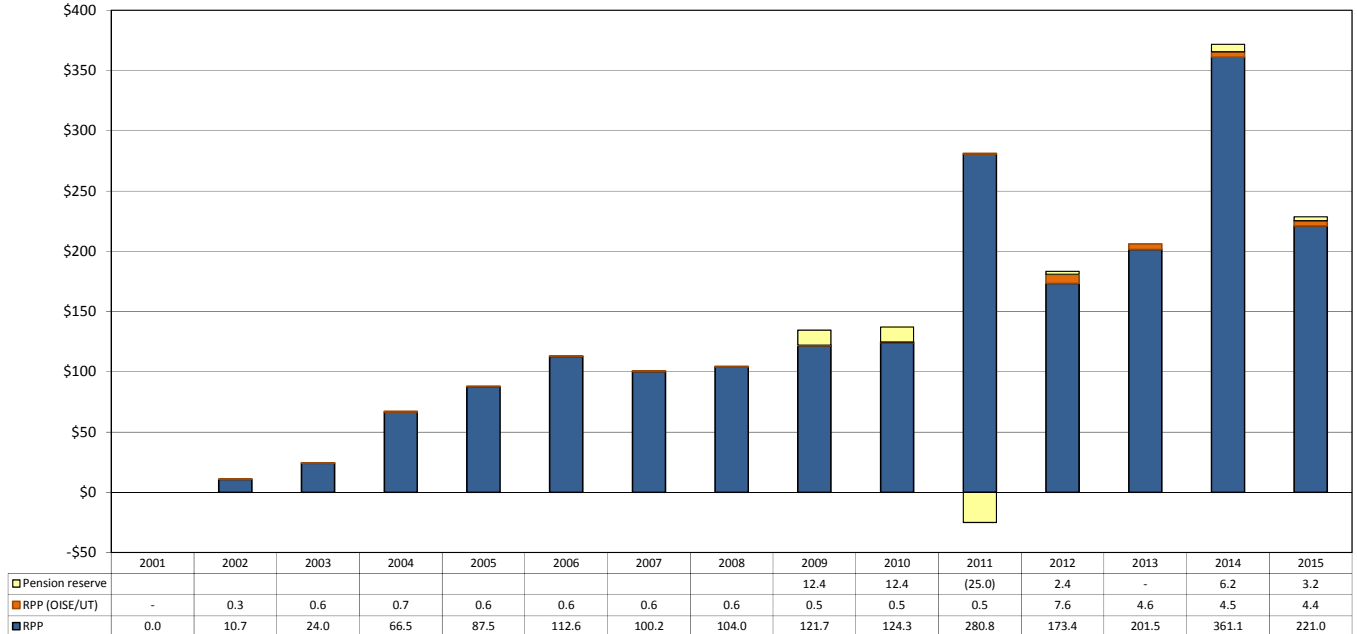
After 2002, due in large part to poor investment markets, the surplus declined significantly. The University adopted a new pension contribution strategy, approved by the Business Board in January 2004, with the objective of providing smoothed funding to deal with these deficits over a multi-year period, while permitting stable, predictable funding via the University's operating budget and while taking the Income Tax Act funding constraint into account. The key elements of the 2004 pension contribution strategy were as follows:

- Members and the University contribute 100% annual current service contributions (no contribution holidays).
- The SRA would be "funded" on the same basis as the registered pension plans, that is over 15 years.
- The University would allocate special payments of no less than \$26.4 million (increased to \$27.2 million to reflect subsequent benefits enhancements) to deal with the RPP and SRA deficits by way of a smoothed budget allocation over 15 years. This smoothed approach provided for higher payments than required in the earlier years, with the intent of protecting against solvency issues and providing for budget predictability within the University's operating fund.
- If some, or all, of the special payment amount is not needed or permitted to be made into the RPP under the Income Tax Act, it must be set aside and reserved outside the RPP.

¹ *The University redirected \$88.1 million of its contribution holiday to fund the SRA over the 5 year period following its establishment effective July 1, 1996, which included current service contributions and special payments to fund past service. These assets were ultimately deposited into the RPP in 2014.*

The following chart shows the allocation of contributions by plan since 2001.

**Allocation of Contributions (both Employer and Employee) by Plan ¹
for the year ended June 30
(millions of dollars)**



¹ Pension reserve assets were transferred to the RPP in 2011. Since additions to the pension reserve in 2009 and 2010 were shown as contributions in those years, the transfer of pension reserve assets to the RPP in 2011 is shown as a negative contribution to the pension reserve in that year, and a positive contribution to the RPP.

This contribution strategy delivered additional funding to the pension plan to deal with the deficit that had emerged in 2003 and, through the requirement to maintain the \$27.2 million per year special payments budget even after the deficit was extinguished, made provision for a base funding level in the event of future deficits.

Beginning in 2008, and much more pronounced in 2009, the impact of the global financial crisis was to reduce market returns significantly, necessitating an overhaul of the pension contribution strategy to address the resulting large deficit. Rapidly falling interest rates also impacted solvency calculations, necessitating government action around solvency funding regulations.

In 2010 the Province of Ontario put in place a two stage process that is intended to provide institutions in the broader public sector (which includes universities) with an opportunity to make net solvency payments over a longer period than would otherwise be required. The University has been accepted to both stage 1 and stage 2 of this process. It should be noted that to qualify for stage 2 of this process, the Government expected institutions to negotiate

with plan members, and their representatives, ways to enhance the long term sustainability of defined benefit pension plans. The University has put into place member contribution increases to meet the conditions required for acceptance to stage 2 of the process. The Government also requires that during the relief period, and for a significant period of time following the relief period, contribution holidays would be restricted and any benefit improvements would require accelerated funding.

The pension contribution strategy was significantly revised to address the deficit and to reflect the Government's temporary solvency relief program. This revised pension contribution strategy, including a plan for funding the pension deficit, was approved by the Business Board on May 3, 2012 based on actuarial results to July 1, 2011 and assumptions about future years to 2030. The key elements of the current pension contribution strategy are as follows:

- Members and the University make 100% of required current service contributions into the registered pension plans each year.
- University pension plan current service contributions are to be no less than 10.77% of the capped participant salary base.
- In the event that legislation or regulation prohibits some or all of the University current service contributions from being deposited into the registered pension plans, those contributions will be reserved for pensions outside the registered pension plans.
- Supplemental Retirement Arrangement (SRA):
 - No further current service or special payment contributions will be made into the SRA.
 - The balance of the SRA assets will be deposited into the registered pension plan(s) by June 30, 2014 (see point below regarding second lump sum payment).
 - SRA payments to current and future pensioners will be made by the University.
- A second lump sum payment in the amount of \$150 million will be made into the registered pension plans before July 1, 2014, utilizing SRA assets (see above) and approved internal borrowing as required.
- Up to \$150 million of internal borrowing for pensions (Note: the Business Board approved internal borrowing for pensions of up to \$150 million on January 31, 2011. Inclusion of this item again here is for completeness).
- Letters of Credit will be utilized to address the net solvency special payments to the fullest extent permitted by legislation and regulation.
- Increase Operating Fund Special Payments Budget:

- To an amount deemed sufficient to meet the plan's special payment funding requirements, currently estimated to be \$97.2 million per year.¹
- To fund special payments into the registered pension plans and other costs related to this pension contribution strategy such as borrowing repayment costs, SRA pension payments for pensioners, letter of credit fees, and Pension Benefit Guarantee Fund (PBGF) fees.
- Maintain that higher budget, currently estimated at \$97.2 million¹, until the pension deficit is extinguished.
- Maintain the annual special payments budget at \$27.2 million per year, even after the deficit and other costs related to this strategy have been extinguished.
- Maintain the Pension Reserve structure.

The full text of the Pension Contribution Strategy can be found on the governing council website at: <http://www.governingcouncil.utoronto.ca/AssetFactory.aspx?did=8516>.

Under current solvency funding relief regulations, the solvency deficit as of July 1, 2014 would have to be amortized over 10 years based on qualifying for stage 2 of the process. Under the amended solvency funding relief regulations, the University has elected the one-year deferral period and an additional 3-year period during which the minimum special payment is the interest on the solvency deficit. After the 3-year period, any solvency deficit at that time would be amortized over 7 years (the remaining period in the original 10-year period). As a result, based on results at July 1, 2014, which was a "filing year" in which the actuarial reports were filed with FSCO, for the 7-year period beginning July 1, 2018 and ending June 30, 2025, the annual solvency special payments with stage 2 solvency funding relief will be \$58.7 million. This is in addition to the annual going concern special payments of \$78.7 million for the 15-year period beginning July 1, 2015.

The following certification summarizes the contributions to the plans for the period from July 1, 2014 to June 30, 2015:

¹ *Subsequently increased to \$112.2 million per year via the Budget Report, approved by Governing Council on April 8, 2014.*



December 8, 2015

Governing Council of the University of Toronto
27 King's College Circle
Toronto, ON M5S 1A1

**Contributions to: University of Toronto Pension Plan
 University of Toronto (OISE) Pension Plan**

This letter confirms that the University of Toronto has made all required pension contributions to the University's registered pension plans for the pension fiscal year ending June 30, 2015. The contributions to the plans totaled \$225,432,702. The following table summarizes the contributions by plan and by type:

	<u>RPP</u>	<u>RPP(OISE)</u>	<u>Total</u>
Employee – current service	\$ 59,805,005	\$ 411,697	\$ 60,216,702
Employer – current service	97,647,000	957,000	98,604,000
Employer – special required	<u>63,516,000</u>	<u>3,096,000</u>	<u>66,612,000</u>
Totals	<u>\$ 220,968,005</u>	<u>\$ 4,464,697</u>	<u>\$ 225,432,702</u>

The above contributions to the plans exclude portability and reciprocal transfers from other plans of \$3,566,078.

(signed)

Sheila Brown
Chief Financial Officer

Investment Earnings

As noted earlier, pension assets arise from only two sources of funding – contributions (including transfers in) and investment earnings. These sources of funding must pay for the payments to retired members and lump sum transfers, and for the fees and expenses incurred in administering and investing the pension plans. Investment earnings are dependent on several elements:

- How much risk are we willing to take to try to achieve an acceptable level of investment earnings, understanding that the higher the investment earnings we want, generally speaking, the higher the risk of loss we are going to have to tolerate and to plan for?
- What investments do we make – the investment strategy, including asset mix – to try to achieve investment earnings?
- How are investment markets performing, in Canada and around the world?

The registered pension plans are invested through the unitized pension master trust (PMT) which combines for investment purposes the assets of the RPP and the RPP (OISE). The PMT was created on August 1, 2000 to provide the assets of the two registered pension plans with the same economies of scale, diversification and investment performance. The pension assets in the PMT are invested by the University of Toronto Asset Management Corporation (UTAM) on behalf of the pension plans. UTAM, which was formed in April 2000, is a professional investment management organization, is a separate non-share capital corporation controlled by its one member, the University of Toronto, and is governed by a Board of Directors. The UTAM Board is responsible for the oversight and direction at UTAM. The current framework for investment policy, strategy and monitoring for the PMT is as follows:

- The investment return and risk targets are developed by the University administration, reviewed by the President's Investment Advisory Committee (IAC), embedded in the Pension Fund Statement of Investment Policies and Procedures (SIP&P) and approved by the University of Toronto Pension Committee.
- The Policy or Reference Portfolio which defines both the policy asset mix and the benchmark portfolio with respect to passive investing, is based on the investment return and risk targets. It is developed by the IAC and UTAM, working together, embedded in the SIP&P, and approved by the Pension Committee. The Reference Portfolio and the associated risk limits, once approved, also constrain the flexibility that UTAM can exercise in actively managing the actual portfolio.
- Investment performance is monitored by UTAM, the IAC, the University administration and the Pension Committee through regular reporting by UTAM to these various groups. That reporting includes current period and multi-year comparisons of actual

performance to the PMT target returns and risk limits and to the Reference Portfolio's returns and risk limits.

The current methodology is based on a belief that we should primarily be concerned with the achievement of the risk and return targets as stated in the SIP&P. Achieving the return target is paramount because, as noted above, funding for the pension plans comes only from two sources – contributions (from plan members and the University) and investment earnings. While there is a margin of error for adverse events (3.75% real investment return discount rate actuarial assumption as compared to the real investment return target of 4.0% over 10 years in the SIP&P, both net of investment fees and expenses), it is still very important that actual investment returns meet the investment return target over the long-term, to sustain the pension plans over the long-run.

The challenge is to find a way to evaluate performance towards these longer-term investment return targets over a multi-year period while taking into account the influence of underlying financial markets conditions on short-term results, and to put those short-term results in perspective.

The University evaluates investment performance for the PMT against the investment return targets, the Reference Portfolio returns and the risk limits, as specified in the SIP&P. The primary objective must be the achievement of the PMT investment return targets while controlling risk to within the specified risk limits.

Here is the actual PMT performance compared with the investment return targets and the Reference/Benchmark Portfolio returns.

PMT Performance - Comparing Actual Performance with Target and Benchmark Returns				
	1 year return to Jun 30/15	2 year return to Jun 30/15	4 year return to Jun 30/15	5 year return to Jun 30/15
PMT actual investment return	11.88%	14.62%	10.42%	10.86%
PMT target investment return (4.0% + CPI)	4.96% *	5.66%	5.47%	5.80%
Reference / Benchmark portfolio return	7.65%	11.69%	8.20%	9.00%
Difference between PMT actual and target of which:	6.92%	8.96%	4.95%	5.06%
the % attributable to good investment markets is:	2.69%	6.03%	2.73%	3.20%
the % attributable to active management decisions is:	4.23%	2.93%	2.22%	1.86%
Note: all investment return percentages are net of all investment fees and expenses				

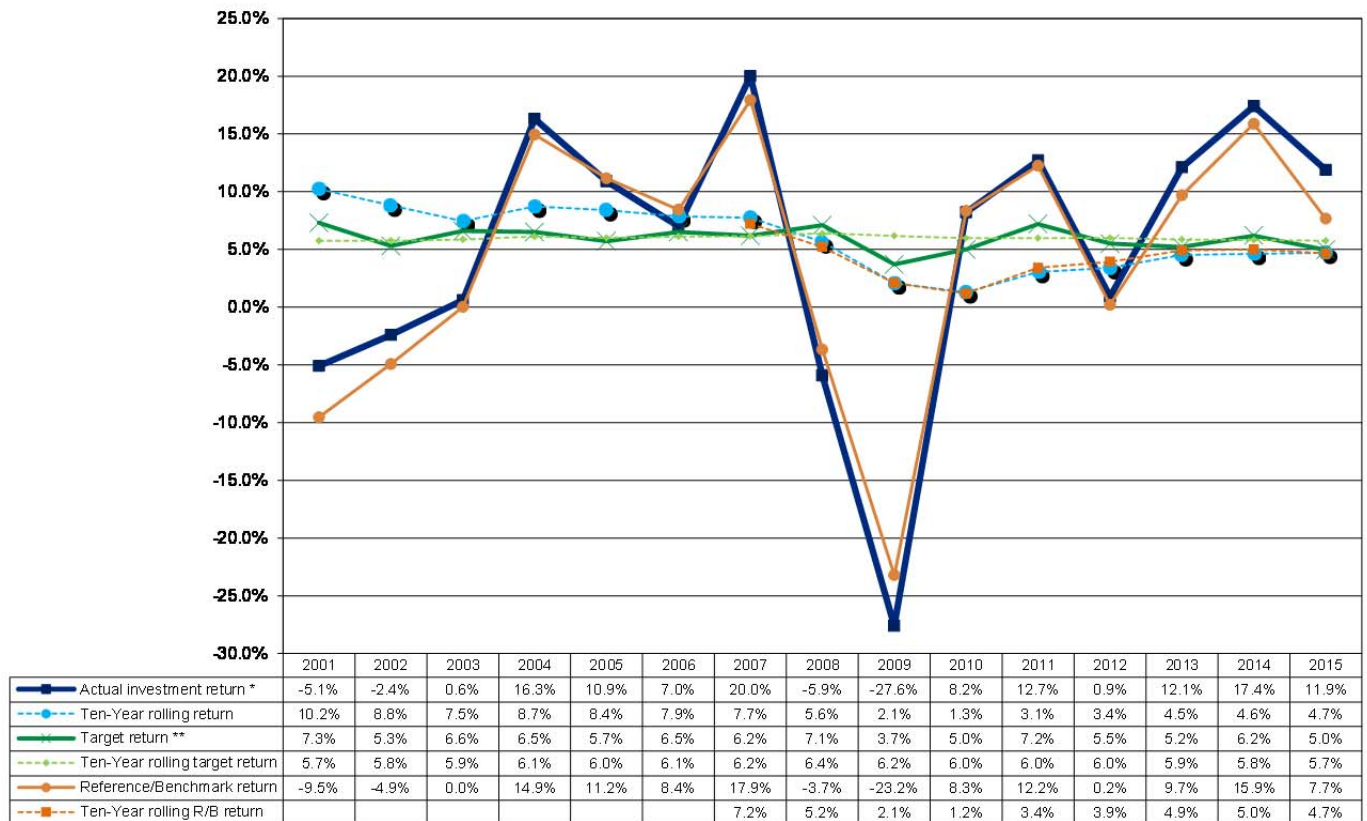
* rounded to 5.0% elsewhere in this report

As the above table shows, for the one-year period from July 1, 2014 to June 30, 2015, the target investment return for the PMT was 4.96%, representing 4.0% real investment return

plus inflation of 0.96%, net of investment fees and expenses. The actual return for the year was 11.88%, a difference of 6.92%. The actual return for the year also exceeded the Reference Portfolio return (which is the benchmark return to indicate how markets performed) by 4.23% (11.88% - 7.65%) meaning that active management added value. It is important to emphasize that all of the return percentages are net of investment fees and expenses.

The same analytical framework applies to the other periods shown in the table above. For the five-year period from July 1, 2010 to June 30, 2015, the actual annual return for the PMT was 10.86%. This actual return exceeded the target annual return of 5.80% by 5.06% (10.86% - 5.80%). This actual return also exceeded the Reference/Benchmark return of 9.00% by 1.86% (10.86% - 9.00%).

**Pension Master Trust (PMT)
Actual, Target and Reference/Benchmark Returns**



* Returns are time-weighted, calculated in accordance with industry standards, are net of investment fees and expenses, and exclude returns on private investment interests prior to 2008.

** Target return is 4.0% plus CPI.

If we look at the ten-year rolling returns, we find that for the period from 2001 to 2007, the actual ten-year rolling returns were above the PMT ten-year target return for the entire period. However, if we concentrate on the more recent past, the market environment has been

considerably less hospitable to earning the target return. In 2008, the PMT suffered a negative return of 5.7% and in 2009 a negative return of 27.6% due to the global financial crisis (the Benchmark portfolio returns were -3.7% and -23.2% respectively). Since then, all major financial markets have rebounded from the meltdown experienced in 2008 and 2009, but not enough to fully achieve the PMT's target return.

In 2007, pre-financial crisis, the actual ten-year rolling actual return of 7.7% exceeded the ten-year rolling target return of 6.2% by 1.5%, and the ten-year rolling Benchmark portfolio return of 7.2% by 0.5%. By 2010, following the financial crisis, the ten-year rolling actual return of 1.3% was less than the ten-year rolling target return of 6.0% by 4.7% even though it was in line with the ten-year rolling Benchmark portfolio return of 1.2%. By 2015, the ten-year rolling actual return has rebounded to 4.7%, still less than the ten-year rolling target investment return of 5.7% (by 1.0%), but in line with the ten-year rolling Benchmark portfolio return of 4.7%. Please see the section **Status of the Pension Plans – In Perspective** for how investment performance impacts the financial health and status of the pension plans.

A detailed review of the investment performance, which is managed and measured on a calendar basis by UTAM, is available on the UTAM website at www.utam.utoronto.ca. Please see the next section for a discussion of fees and expenses.

Fees and Expenses

It costs money to manage, administer and invest pension plan assets. There are several categories of fees, including those for pension administration services (e.g. recordkeeping, calculation of benefits, payments to retired members), custody of pension assets, and investment of pension funds. The fees and expenses incurred for the pension master trust (excluding the SRA which is managed together with University endowments) for the year ended June 30, 2015 were as follows, for the RPP and RPP(OISE), in millions of dollars:

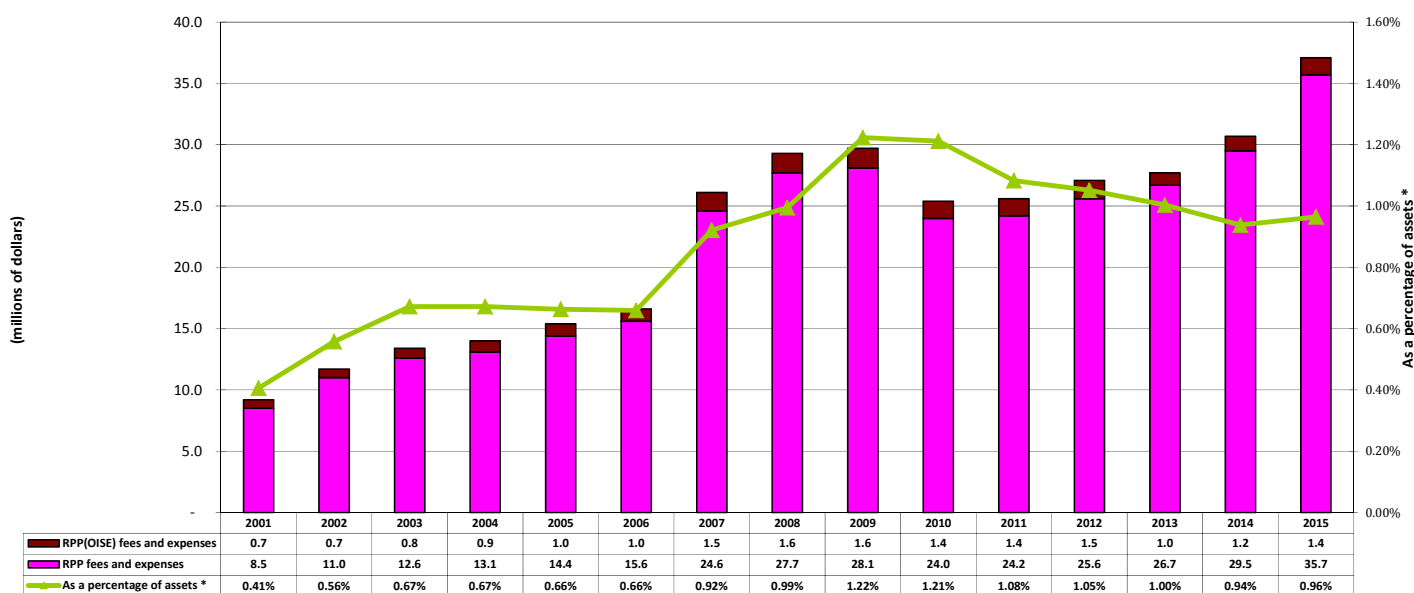
	RPP	RPP(OISE)	2015 Total	2014 Total
Investment management fees - external managers ¹	29.7	0.9	30.6	25.0
Investment management costs - UTAM	3.6	0.1	3.7	3.1
Pension administration services	0.7	0.1	0.8	0.8
University of Toronto administrative costs	0.6	0.1	0.7	0.6
Actuarial and administration fees	0.4	0.2	0.6	0.6
Custodial costs	0.3	0.0	0.3	0.3
Transaction fees	0.2	0.0	0.2	0.1
Other fees	0.2	0.0	0.2	0.2
Total	35.7	1.4	37.1	30.7

¹ Increase primarily due to increase in assets under management as well as the depreciation of CAD in relation to USD resulting in higher foreign asset management fees.

External investment management fees, which represent 82% of total fees and expenses in 2015 (81% in 2014), are normally related to the size of assets under management. Total external investment management fees increased from \$25.0 million in 2014 to \$30.6 million in 2015.

The following chart provides a historical perspective on the fees and expenses:

**University of Toronto Registered Pension Plans
Fees and Expenses as a Percentage of Assets *
for the Year Ended June 30**



* based on the average of opening and closing market value of assets.

During 2015, RPP and RPP(OISE) assets under management increased from \$3,618.8 million to \$4,073.4 million. Total fees and expenses increased from \$30.7 million in 2014 to \$37.1 million in 2015. As indicated in the above chart, total fees and expenses for the plans in 2015 were 0.96% of the average market value of assets of the pension master trust, an increase from 0.94% in 2014.

The management expense ratio (MER) is a standard investment industry ratio which compares the costs of investment management, both direct and indirect, to the total assets under management. The MER includes expenses incurred by UTAM and all investment management fees. It excludes other pension administration costs such as external audit fees, records administration, actuarial fees and University of Toronto administrative fees. It also uses the average annual market values for the year. The MER for the pension master trust was 0.91% in 2015, an increase from 0.88% in 2014.

A question of obvious interest is why total fees and expenses for the RPP and RPP(OISE) increased in percentage terms during the period from 2001 to 2003, and during the period 2007 to 2009. This was due to several factors. Investment management for the pension plans changed between 2001 and 2003 from a balanced fund type strategy, to an active professional investment strategy managed by UTAM since 2000. In addition, the investment strategy also placed increasing emphasis on alternative assets such as hedge funds and private investment interests, which generally have higher investment management fees than traditional investments such as public fixed income or public equities. It is anticipated that despite their higher management fees, alternative assets will generate higher investment returns in the long-run as well as diversify portfolio risk.

It is important to note that fees and expenses cannot be evaluated on their own, but need to be viewed in the context of the value generated as well as the underlying assets' return potential in the long-term. While it is desirable to have positive and high investment returns each year, it is important to bear in mind that there will be variability in returns from one year to another due to general market cycle and conditions, but perhaps more importantly, that the investment strategy is crafted for a long-term horizon that aligns with the pension master trust's 10-year target objectives.

For more information on fees and expenses refer to note 6 of the University of Toronto Pension Plan financial statements, and note 6 of the University of Toronto (OISE) Pension Plan financial statements at <http://www.finance.utoronto.ca/alerts/pensionrpts.htm>.

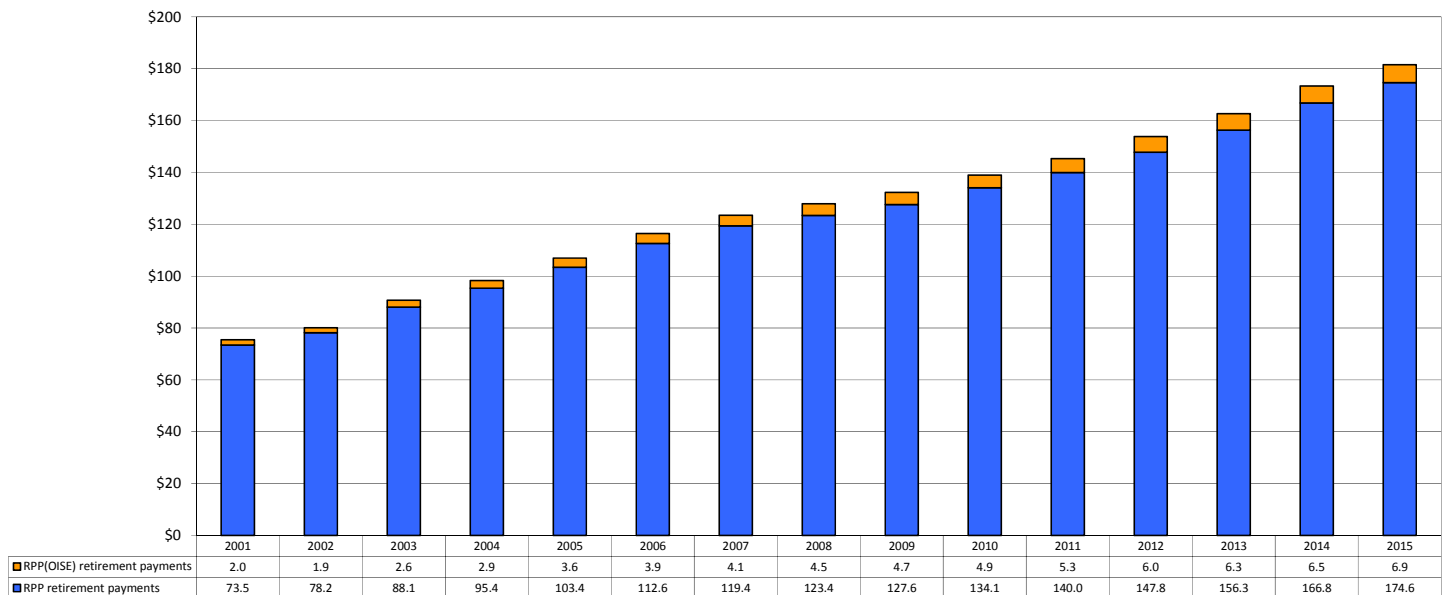
Pension Payments

The section on participants showed that the number of retired members in the RPP has increased from 3,642 in 2001 to 5,350 in 2015, an increase of 46.9%; the number of retired members in the RPP(OISE) has increased from 119 in 2001 to 172 in 2015, an increase of 44.5%. Payments to retired members reflect this increase in numbers as well as the cost of living adjustments and augmentations that have occurred in certain years for certain member groups.

The dollar value of payments from the two registered pension plans has increased from \$75.5 million in 2001 to \$181.5 million in 2015.

The rate of increase in payments is higher than the rate of increase in the number of members mainly due to pension indexation, augmentation of existing pension payments and higher starting pensions for more recently retired members reflecting higher average earnings.

**University of Toronto Registered Pension Plans
Retirement Payments* for the year ended June 30
(millions of dollars)**



* excluding refunds and transfers to other plans upon termination

Pension Market Deficit

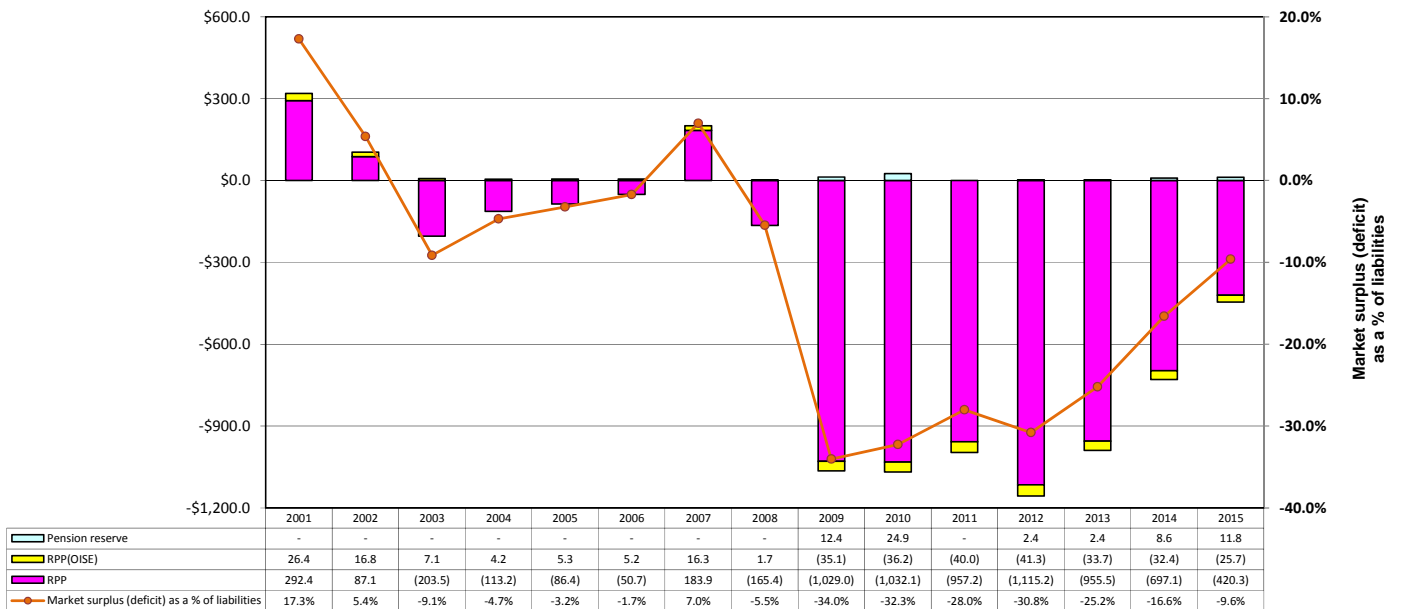
Going concern pension liabilities minus pension assets at market value result in the net funded status of the pension plans, the market surplus or market deficit. The going concern market deficit of the registered pension plans and the pension reserve at July 1, 2015 totalled \$434.2 million, comprising:

\$	(420.3) million	RPP market deficit
\$	(25.7) million	RPP(OISE) market deficit
\$	11.8 million	Pension reserve university assets

As noted earlier, funds cannot be transferred between the two registered plans. Funds can be transferred from the pension reserve into either of the registered plans.

The change in the going concern market surplus or deficit since 2001 is shown on the following chart:

**Going Concern Market Surplus (Deficit)
as at July 1
(millions of dollars)**



Since 2001, the RPP position has varied from a surplus high of \$292.4 million in 2001 to a deficit low of \$1,115.2 million in 2012. The current market deficit of \$420.3 million is due in large part to the unprecedented level of investment losses resulting from the global financial and economic crisis, which increased the market deficit from \$165.4 million in 2008 to \$1,029.0 million in 2009. In 2010, the deficit increased slightly to \$1,032.1 million, improved

in 2011 to a deficit of \$957.2 million (the net result of actuarial assumption changes offset by a \$150 million lump sum contribution and investment returns of 12.7%), increased to \$1,115.2 million mainly as a result of investment returns of only 0.9% in 2012 while pension liabilities continued their upward trend, and then improved in 2013 to a deficit of \$955.5 million, the net result of investment returns of 12.1% and special contributions of \$66.6 million partly offset by actuarial assumption changes. In 2014, the deficit reduced to \$697.1 million as a result of investment returns of 17.4% and a \$150 million lump sum contribution, partially offset by updated actuarial assumptions, and in 2015 the deficit was further reduced to \$420.3 million as a result of investment returns of 11.9% in excess of a target return of 5.0% (4% plus CPI) and special contributions of \$66.6 million.

The RPP(OISE) plan moved to a market deficit position in 2009 after being in a surplus position for many years¹. The plan deficit position worsened slightly in 2010 mainly due to the increase in plan liabilities offset by an improved financial environment, worsened in 2011 mainly due to the increase in plan liabilities (primarily the result of changes to plan assumptions) offset by improved investment earnings, the deficit increasing further in 2012 with a continued increase in liabilities which was only slightly offset by investment earnings which were below target, and then improved in 2013 mainly due to investment returns above target partly offset by actuarial assumption changes. In 2014, similar to the RPP, the plan experienced positive investment returns offset by updated actuarial assumptions, with the deficit falling from \$33.7 million in 2013 to \$32.4 million in 2014. The deficit was further reduced to \$25.7 million in 2015.

The financial position of the registered pension plans and the pension reserve has worsened since 2008, moving from a small deficit overall, representing about 5.5% of going concern liabilities to a larger deficit overall representing about 9.6% of liabilities in 2015, though there has been a marked improvement since 2009 when the deficit represented over 34% of going concern liabilities. See the section “Status of the Pension Plans – In Perspective” for more detailed analysis of the components of the change in the pension deficit over the past 9 years.

With respect to the solvency deficiency calculation, which is a regulatory calculation, the Ontario Government has put in place a two stage process that is intended to provide institutions in the broader public sector (which includes universities) with an opportunity to make net solvency payments over a longer period than would otherwise be required. The University was accepted to stage 2 of this process in 2014. A revised contribution strategy reflecting plans to deal with the pension deficit was approved by the Business Board on May 3, 2012. As stated earlier, the amendments to the solvency funding relief regulations have delayed required solvency payments for an additional 3 years (to July 1, 2018), with solvency

¹ A partial wind-up distribution was approved by the Financial Services Commission of Ontario on October 1, 2007.

payments at the end of that 3-year period being amortized over the remaining 7 years (July 1, 2018 to June 30, 2025).

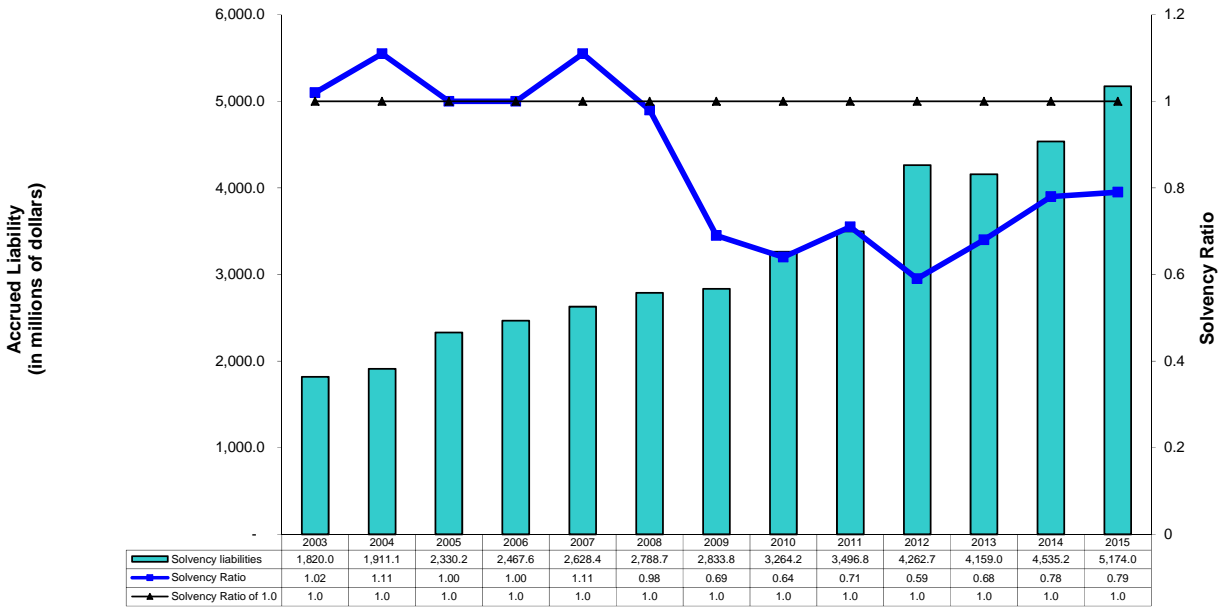
The surplus (deficit) varies with the type of actuarial valuation and with the assumptions used to estimate the liabilities. The following section shows the impact of solvency and hypothetical wind-up assumptions on the surplus or deficit.

The Role of Solvency and Hypothetical Wind-up Valuations

As noted earlier, we are legally required to calculate the solvency and hypothetical wind-up actuarial valuations, which have different assumptions from the going concern valuation. The solvency valuation essentially determines the status of a pension plan as if it were to be wound up on the valuation date and requires that the liabilities be discounted at current market rates, rather than at long-term rates, but without indexing.

The RPP solvency ratio (the ratio of assets to solvency liabilities) improved slightly from 0.78 at July 1, 2014 to 0.79 at July 1, 2015 due to investment returns exceeding target returns offset by a decrease in the discount rates used in the solvency liability calculation (from 3.1% to 2.6%). As of July 1, 2015, the plan had a solvency deficit of \$1.06 billion versus a solvency deficit of \$1.01 billion as of July 1, 2014. The main reasons for the current solvency deficit of the RPP include the unprecedented investment losses during 2008 and 2009, a continuing decline in interest rates that has resulted in a unprecedentedly low discount rates that must be used to value solvency liabilities, and lengthening life spans which required updated tables to be used for the mortality rates assumption in both 2011 and 2014.

**RPP
Solvency Ratio and Solvency Liabilities (without Escalated Adjustments)
as at July 1**



As stated previously, the solvency ratio refers to the ratio of solvency assets to solvency liabilities (excluding indexation). A solvency ratio of 1.0 or higher means that at a particular point in time there is a solvency excess. A solvency ratio of less than 1.0 indicates that at a particular point in time there is a solvency deficit. If the solvency ratio is less than 0.85 at the time the valuation is filed with the regulators, an actuarial valuation must then be filed annually until such a point when the solvency ratio is above 0.85. Otherwise, valuations must be filed at least triennially. However, as a result of qualifying for stage 2 of the temporary solvency funding relief process, the effective date of the next required actuarial valuation to be filed with the regulators is July 1, 2017.

The hypothetical wind-up valuation extends the solvency valuation by adding in the indexing and incorporating early retirement windows. On a hypothetical wind-up basis, the RPP market deficit at July 1, 2015 would be \$2.89 billion ¹.

The RPP(OISE) solvency ratio was 0.70 at July 1, 2015, an increase from a solvency ratio of 0.68 at July 1, 2014.

The RPP solvency ratio of 0.79 at July 1, 2015 would normally trigger large net solvency payments over a five year period. As noted earlier, the Ontario Government has put in place a two stage process that is intended to provide institutions in the broader public sector (which includes universities) with an opportunity to make net solvency payments over a longer period than would otherwise be required. The University was accepted to stage 2 of this process in 2014. As described earlier in this document (page 30), a revised pension contribution strategy reflecting plans to deal with the pension deficit was approved by the Business Board on May 3, 2012.

Under the amended solvency relief regulations, the University has elected an additional 3-year period during which the minimum special payment is the interest on the solvency deficit (to June 30, 2018). After the 3-year period, the solvency deficit would be amortized over 7 years (the remaining period in the original 10-year period).

¹ *There are in fact capacity constraints within the Canadian group annuity market that make it very unlikely that the indexed liabilities for a plan of this size could be settled through the purchase of indexed annuities. Based on Educational Notes prepared by the Canadian Institute of Actuaries, in such cases, the actuary may make a reasonable hypothesis on the manner in which benefits may be settled on wind-up. That could include a modification on the benefits provided such as converting from floating to fixed indexation. If such a change was made for this Plan with indexation fixed at 75% of the expected inflation underlying long-term Government of Canada bonds at the time of wind-up, the market would treat this as a non-indexed annuity with a fixed escalator. The impact would be to reduce the wind-up liabilities by approximately \$0.71 billion.*

Status of the Pension Plans – In Perspective

The RPP is in a market deficit of \$420.3 million at July 1, 2015. This is in contrast to the small market deficit in the plan of \$50.7 million at July 1, 2006, the beginning of the nine-year period being analyzed. This section looks at all the components that contribute to changes in the RPP's financial status.

Investment performance is one of the key components of the financial health of the pension plans. If we look at the period from July 1, 2006 to July 1, 2015, investment earnings/(losses), net of fees and expenses, was \$1.46 billion, slightly higher than the target return of \$1.43 billion for the period. However if we exclude the 2009 investment result (the year in which financial markets performed worse than any year since the Great Depression), the actual return for this period was above target by \$839 million, highlighting the magnitude that the low investment returns in 2009 had on the plans. **Fees and expenses** (primarily investment management fees and expenses) totalled \$245 million.

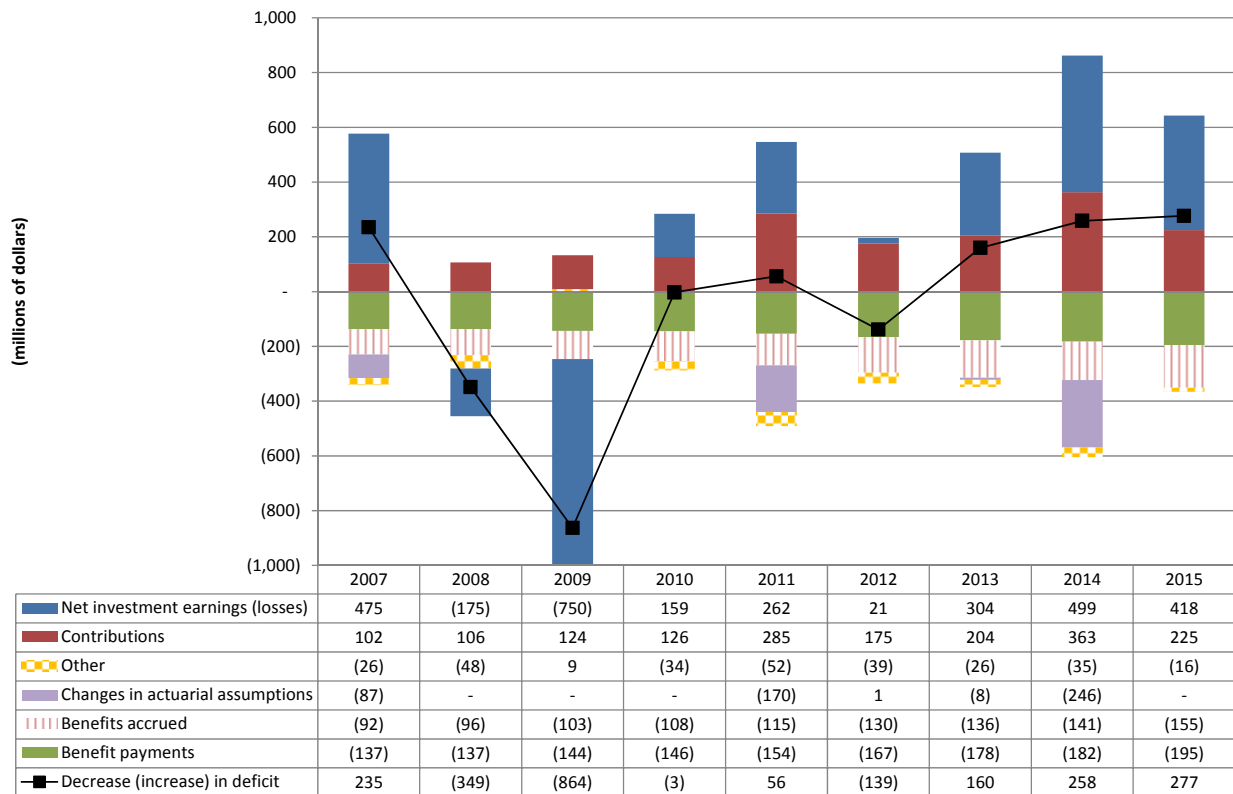
During the same period from July 1, 2006 to July 1, 2015, **contributions** totalled just over \$1.7 billion, which included \$719 million of employer current service contributions, \$392 million of employee current service contributions, just under \$300 million in required special payments, and \$300 million in additional lump sum payments.

The **benefit payments** made from the plan during the period totalled \$1.44 billion.

In addition to the above inflows and outflows of pension assets, the pension status is also impacted by changes to pension liabilities. During the above period, the pension deficit increased by \$1.85 billion for these items. This increase in the deficit was comprised of \$510 million related to **changes in actuarial assumptions**, \$1.1 billion of **benefits accrued**, and \$266 million of **other changes** (i.e. interest on accrued benefits net of actual benefit payments, experience gains/losses, plan amendments, and transfers from other plans).

The following shows graphically the components of the changes in the market deficit for the RPP from July 1, 2006 to July 1, 2015:

**University of Toronto Pension Plan (RPP)
Components of Changes in Pension Deficit for year ending July 1**



The following table shows which components have an impact on the pension deficit of both registered plans for the year ended July 1, 2015; it should be noted that whenever the change to both assets and liabilities is equal, there is no impact on the deficit:

Reconciliation of Funded Status - July 1, 2014 to July 1, 2015		
University of Toronto Pension Plans ¹		
(millions of dollars)		
	Assets ²	Liabilities
July 1, 2014	3,618.8	4,348.2
University Current Service Cost	98.6	98.6
Member Contributions	60.2	60.2
University Special Payments *	66.6	-
Benefit Payments	(203.3)	(203.3)
Assets Transferred In	3.6	3.6
Net Investment Return / Interest *	428.9	248.9
Liability (Gain) / Loss *	-	(36.9)
Assumption Changes *	-	-
July 1, 2015	4,073.4	4,519.3

¹ Both U of T Plan and U of T (OISE) Pension Plan
² Market Value of Assets
* Impacts the pension deficit

Conclusion

The pension deficit at July 1, 2015 has improved significantly over the last year primarily to very good investment returns of 11.9%, exceeding the target investment return of 5.0% (4.0% plus CPI), and to significant pension special payments into the RPP of \$66.6 million. The going concern deficit for the two registered pension plans, and including the pension reserve, has decreased from 16.6% of liabilities at July 1, 2014 to 9.6% of liabilities at July 1, 2015. Investment returns and special payments also had a positive impact on the solvency ratio. Even with prescribed rates that fell from 3.1% in 2014 to 2.6% in 2015, these other factors also resulted in slight improvement to the RPP solvency ratio, from 0.78 at July 1, 2014 to 0.79 at July 1, 2015.

However, the overall climate for defined benefit pension plans has not improved. Interest rates continue to be at historic lows, and longevity continues to increase, both of which contribute to an increased cost of providing the same pension benefit.

Discussions continue within the University regarding a possible jointly sponsored pension plan for the University, and also at the provincial level regarding a possible multi-employer jointly sponsored defined benefit pension plan for interested Ontario universities.

Appendix 1

Links to Other Pension Documents

Pension Contribution Strategy

The pension contribution strategy approved by the Business Board on May 3, 2012 may be found at the following link:

<http://www.governingcouncil.utoronto.ca/AssetFactory.aspx?did=8516>

Pension Fund Master Trust – Statement of Policies & Procedures

The Pension Fund Master Trust Statement of Policies and Procedures approved by the Pension Committee on June 1, 2015 may be found at the following link:

<http://www.finance.utoronto.ca/Assets/Finance+Digital+Assets/policies/PFMTSIPG.pdf>

Actuarial Reports for the Pension Plans

The full actuarial reports for each of the University of Toronto Pension Plan, the University of Toronto (OISE) Pension Plan, and the Supplemental Retirement Arrangement can be found at the following link:

<http://www.finance.utoronto.ca/alerts/pensionrpts.htm>

Audited Financial Statement for the Registered Pension Plans

The audited financial statements for the University of Toronto Pension Plan and the University of Toronto (OISE) Pension Plan can be found at the following link:

<http://www.finance.utoronto.ca/alerts/pensionrpts.htm>

Appendix 2

Supplemental Retirement Arrangement

The Supplemental Retirement Arrangement (SRA), an unregistered arrangement, provides coverage for all members whose salary exceeds the Income Tax Act maximum pension, regardless of whether they have service in the RPP or the RPP(OISE). The SRA provides defined benefits for members with salaries in excess of the highest average salary at which the Income Tax Act maximum pension is reached to a capped maximum salary of \$150,000 per year. For many years, the Income Tax Act maximum pension was fixed, resulting in growing membership in the SRA. Beginning in 2004, the Income Tax Act maximum pension started to increase at a fixed rate through 2009 and then, in 2010, at the rate of increase in national real wages. Therefore, beginning in 2004, participation in the SRA fluctuated depending upon the relationship between salary increases for member plan participants and the increase in the Income Tax Act maximum pension. Beginning in 2014, the Income Tax Act maximum pension exceeded the capped maximum salary of \$150,000.

Beginning with its establishment effective July 1, 1996, assets were set aside in support of SRA liabilities. However, such assets were not held in trust. For financial reporting purposes the University from time to time appropriated funds which were set aside as a "fund for specific purpose" in respect of the obligations under the SRA. In accordance with an Advance Income Tax Ruling, which the University had received, such assets do not constitute trust property, are available to satisfy University creditors, may be applied to any other purpose that the University may determine from time to time, are commingled with other assets of the University, and are not subject to the direct claim of any members.

During 2014, the assets that had been set aside for the SRA were transferred to the RPP, with the SRA liabilities (\$140.2 million as at July 1, 2014) to be funded in future on an annual basis via an annual base budget allocation in the operating fund as part of the Pension Special Payments budget. In 2015, the SRA liability decreased to \$136.2 million.