

# Highlights<sup>1</sup>

## As at July 1, 2008

### With Comparative Figures at July 1, 2007

At July 1, 2008 (millions of dollars)			
	<u>Accrued Liabilities</u>	<u>Market Value of Assets</u>	<u>Market surplus (deficit)</u>
<b>University of Toronto Pension Plan (RPP)</b>			
Going concern actuarial valuation	2,889.6	2,724.2	(165.4)
Solvency actuarial valuation <sup>2</sup>	2,788.7	2,723.2	(65.5)
Hypothetical wind-up actuarial valuation <sup>2</sup>	3,862.2	2,723.2	(1,139.0)
<b>University of Toronto (OISE) Pension Plan - RPP(OISE)</b>			
Going concern actuarial valuation	104.2	105.9	1.7
Solvency actuarial valuation <sup>2</sup>	102.3	105.5	3.2
Hypothetical wind-up actuarial valuation <sup>2</sup>	140.6	105.5	(35.1)
<b>Supplemental Retirement Arrangement (SRA)</b>			
Going concern actuarial valuation	139.8	174.2	34.4

At July 1, 2007 (millions of dollars)			
	<u>Accrued Liabilities</u>	<u>Market Value of Assets</u>	<u>Market surplus (deficit)</u>
<b>University of Toronto Pension Plan (RPP)</b>			
Going concern actuarial valuation	2,745.8	2,929.7	183.9
Solvency actuarial valuation <sup>2</sup>	2,628.4	2,928.7	300.3
Hypothetical wind-up actuarial valuation <sup>2</sup>	3,441.6	2,928.7	(512.9)
<b>University of Toronto (OISE) Pension Plan - RPP(OISE) - including partial wind-up</b>			
Going concern actuarial valuation	115.3	131.6	16.3
Solvency actuarial valuation <sup>2</sup>	113.9	131.2	17.3
Hypothetical wind-up actuarial valuation <sup>2</sup>	142.9	131.2	(11.7)
<b>Supplemental Retirement Arrangement (SRA)</b>			
Going concern actuarial valuation	145.4	170.0	24.6

Going Concern Key Actuarial Assumptions	July 1, 2008	July 1, 2007
Increase in consumer price index (CPI)	2.5%	2.5%
Increase in salaries	4.5%	4.5%
Discount rate on liabilities	6.5%	6.5%

<sup>1</sup> Going concern valuations assume that the plan is continuing to operate for the foreseeable future. Solvency and hypothetical wind-up valuations assume that the plan will be wound-up as at the valuation date. See pages 10 and 11 for a full discussion of the different types of valuations.

<sup>2</sup> The market value of assets are net of wind-up expenses which are estimated to be \$1.0 million for the RPP and \$0.4 million for the RPP(OISE).

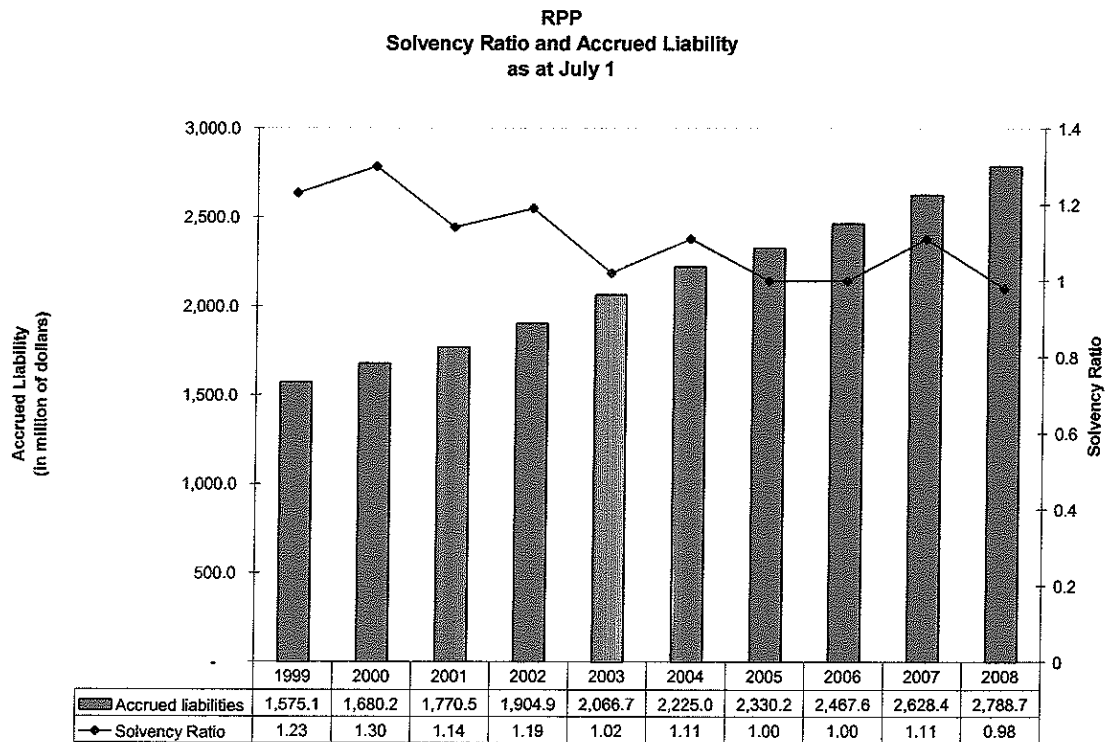
## **The Role of Solvency and Hypothetical Wind-up Valuations**

As noted earlier, we are legally required to do 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 on a hypothetical wind-up basis 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) worsened from 1.11 at July 1 2007 to 0.98 at July 1, 2008. As of July 1, 2008, the plan had a solvency deficit of \$65.5 million versus a solvency excess of \$300.2 million as of July 1, 2007. The main reason for the drop in the solvency position of the RPP is the investment losses during the year. The University will be filing the July 1, 2008 actuarial valuation, and is required to make annual special payments of \$5.0 million over 5 years (the statutory amortization period). This is in addition to the going concern special payments of \$9.8 million.

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 would be \$1,139.0 million.

The RPP(OISE) solvency ratio was 1.03 at July 1, 2008 as compared to 1.17 at July 1, 2007 on the same basis, excluding the impact of the partial wind-up members.



It is necessary to maintain a solvency ratio of at least 1.00 to avoid triggering the 5 year deficit elimination requirement. Until 2008, this ratio has been maintained for the RPP, with higher special payments funding than required under regulation for 2004, 2005 and 2006, in addition to full current service contributions from members and from the University.

The SRA has a market reserve of \$34.4 million. As noted earlier, these funds represent a reserve to deal with investment volatility, solvency funding issues and other uncertainties and would be available to be deposited into the RPP should the need arise.

The RPP solvency ratio, which is a measure of the assets' market value as compared to the solvency liability of the RPP (before indexing), was 0.98 at July 1, 2008. It has decreased from 1.11 at July 1, 2007. On a hypothetical wind-up basis (after indexing and incorporating early retirement windows), the deficit would be \$1,139.0 million.

As stated previously in the section on solvency, special solvency payments are necessary, since the RPP solvency ratio has dropped below 1.0.

The Council of Ontario Universities' brief to the Expert Commission on Pensions in the fall of 2007 recommended that University pension plans be exempted from solvency valuation requirements in Ontario, as they have been in some other provinces. The release of the Report of the Expert Commission on Pensions is expected in November.

#### **RPP(OISE):**

When the pension contribution strategy was formulated in January 2004, it projected a market surplus for the RPP(OISE). It also seemed unlikely at the time that the University would have to make current service contributions in the near future. At July 1, 2003, the market surplus was \$7.1 million.

Within the past four years, the same changes have occurred to the RPP(OISE) as to the RPP. In addition, an actuarial report for partial plan wind-up was filed with the Superintendent of Financial Services of Ontario. With good investment returns between 2004 and 2007, combined with the various changes to the plan, the market surplus had increased to \$16.3 million at July 1, 2007. The solvency ratio was 1.15 at July 1, 2007. During 2008, the RPP(OISE) market surplus decreased to \$1.7 million and the solvency ratio decreased to 1.03 as at July 1, 2008.

**Overall conclusion:**

The result for 2008 was a \$165.4 million market deficit for the RPP, a \$1.7 million market surplus for RPP(OISE), and a \$34.4 million SRA market reserve (excess of SRA assets over SRA liabilities). The \$34.4 million SRA market reserve represents University assets that are available to be deposited into the RPP or RPP(OISE) should that be required. However, there cannot be any transfers of funds between the RPP and the RPP(OISE) or from either the RPP or RPP(OISE) to the SRA.

The unfunded position has deteriorated during the past year. There is a small deficit, as well as a number of issues that continue to cause concern, including the fall in market indices worldwide during the latter half of 2008 and expected volatility in investment returns over the coming years, the potential need to make payments into the RPP(OISE) and whether we will meet the long-term return expectations given financial market trends.

We are continuing to review the pension contribution strategy and will continue to monitor the impact of the financial crisis on the pension plans to determine whether changes are needed.

## Summary

(Thousands of Dollars)	As of July 1, 2007 <sup>1</sup>	As of July 1, 2008
<b>Going Concern Valuation Results</b>		
<b>Past Service</b>		
Actuarial Value of Assets	\$ 2,690,046	\$ 2,797,128
Less: Accrued Liability	<u>2,745,819</u>	<u>2,889,572</u>
Surplus (Unfunded Accrued Liability)	\$ (55,773)	\$ (92,444)
As a % of Accrued Liability	(2.0%)	(3.2%)
Market Value of Assets	\$ 2,929,659	\$ 2,724,186
Deferred Asset Gain (Loss)	\$ 239,613	\$ (72,942)
<b>Current Service</b>		
Total Current Service Cost	\$ 96,754	\$ 102,885
Less: Required Participant Contributions <sup>2</sup>	<u>32,017</u>	<u>33,896</u>
Remaining Current Service Cost	\$ 64,737	\$ 68,989
As a % of Participant Salary Base (Capped at \$150,000)	10.67%	10.77%
Participant Salary Base (Capped at \$150,000)	\$ 606,887	\$ 640,837
<b>Solvency Valuation Results</b>		
Solvency Assets <sup>3</sup>	\$ 2,928,659	\$ 2,723,186
Solvency Liability – Without Escalated Adjustments <sup>4</sup>	<u>2,628,435</u>	<u>2,788,727</u>
Solvency Excess/(Deficit)	\$ 300,224	\$ (65,541)
Solvency Ratio	>1.00	0.98
<b>Hypothetical Wind-Up Valuation Results</b>		
Wind-Up Assets <sup>3</sup>	\$ 2,928,659	\$ 2,723,186
Wind-Up Liability—With Escalated Adjustments <sup>4</sup>	<u>3,441,589</u>	<u>3,862,179</u>
Wind-Up Excess/(Deficit)	\$ (512,930)	\$ (1,138,993)
Transfer Ratio	0.85	0.71

<sup>1</sup> Reflects change in assumptions (mortality rates; retirement rates for Academic Staff and Librarians) and pensioner augmentation

<sup>2</sup> Includes participant contributions made by University on behalf of disabled participants

<sup>3</sup> Net of provision of \$1,000,000 for estimated wind-up expenses

<sup>4</sup> The Solvency Liability excludes the liabilities associated with future escalated adjustments (indexing) pursuant to the Regulations to the *Pension Benefits Act* (Ontario). The Wind-Up Liability is calculated including the value of future escalated adjustments, as well as the value of the temporary early retirement windows for those members who would be retirement age eligible before the end of the window period

## Summary (continued)

(Thousands of Dollars)	As of July 1, 2007	As of July 1, 2008
<b>Funding Requirements</b>		
Required Participant Contributions	\$ 32,017	\$ 33,896
Remaining Current Service Cost	64,737	68,989
Plus: Special Payments to Amortize Unfunded Liability	5,762	9,789
Plus: Special Payments to Amortize Solvency Deficiency	<u>0</u>	<u>5,006</u>
Minimum Required University Contributions	\$ 70,499	\$ 83,784
As a % of Participant Salary Base (Capped \$150,000)	11.62%	13.07%
<b>Personnel Data</b>		
Active and Disabled Participants	7,894	8,078
Retired Participants	4,421	4,514
Terminated Vested Participants	1,413	1,493
Suspended, Exempt or Pending Status	<u>999</u>	<u>1,168</u>
Total	14,727	15,253

## Assets and Liabilities (continued)

### SOLVENCY AND HYPOTHETICAL WIND-UP VALUATION RESULTS

(thousands of dollars)	Solvency Valuation	Hypothetical Wind-Up Valuation
(1) Market Value of Assets	\$ 2,724,186	\$ 2,724,186
(2) Less: Estimated Wind-Up Expenses	<u>1,000</u>	<u>1,000</u>
(3) Assets Net of Wind-Up Expenses	\$ 2,723,186	\$ 2,723,186
(4) Solvency/Wind-Up Liability		
Active and Disabled Participants	\$ 1,329,050	\$ 1,947,427
Retired Participants	1,337,527	1,745,956
Terminated Vested Participants	57,787	104,433
Suspended, Exempt or Pending Status	<u>64,363</u>	<u>64,363</u>
Total	<u>\$ 2,788,727</u>	<u>\$ 3,862,179</u>
(e) Surplus/(Deficiency), (3) - (4)	\$ (65,541)	\$ (1,138,993)
(f) Present Value of Existing Special Payments Over 5 Years	\$ 43,364	N/A
(g) Statutory Solvency Deficiency	(22,177)	N/A
(h) Transfer Ratio, (1)/(4)	N/A	71%

As permitted 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 \$1,073,452,000.

The assumptions used to determine the Solvency Liability are summarized on page 44 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 \$1,138,993,000 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.



## Summary (continued)

(Thousands of Dollars)	As of July 1, 2007	As of July 1, 2008
<b>Funding Requirements</b>		
Required Participant Contributions	\$ 595	\$ 550
Remaining Current Service Cost	\$ 1,523	\$ 1,302
Less: Permitted Application of Surplus	<u>(1,523)</u>	<u>(1,302)</u>
Minimum Required University Contributions	\$ 0	\$ 0
<b>Solvency Valuation Results</b>		
Solvency Assets <sup>1</sup>	\$ 116,508	\$ 105,456
Solvency Liability—Without Escalated Adjustments <sup>2</sup>	<u>99,280</u>	<u>102,327</u>
Solvency Excess/(Deficit)	\$ 17,228	\$ 3,129
Solvency Ratio	> 1.0	> 1.0
<b>Hypothetical Wind-Up Valuation Results</b>		
Wind-Up Assets <sup>1</sup>	\$ 116,508	\$ 105,456
Wind-Up Liability—With Escalated Adjustments <sup>2</sup>	<u>128,249</u>	<u>140,644</u>
Wind-Up Excess/(Deficit)	\$ (11,741)	\$ (35,188)
Transfer Ratio	0.91	0.75

<sup>1</sup> Net of provision of \$400,000 for estimated wind-up expenses

<sup>2</sup> The Solvency Liability excludes the liabilities associated with future escalated adjustments (indexing) pursuant to the Regulations to the *Pension Benefits Act (Ontario)*. The Wind-Up Liability is calculated including the value of future escalated adjustments

## Assets and Liabilities (continued)

### Solvency and Hypothetical Wind-Up Valuation Results

(thousands of dollars)	Solvency Valuation	Hypothetical Wind-Up Valuation
(1) Market Value of Assets	\$ 105,856	\$ 105,856
(2) Less: Estimated Wind-Up Expenses	<u>400</u>	<u>400</u>
(3) Assets Net of Wind-Up Expenses	\$ 105,456	\$ 105,456
(4) Solvency/Wind-Up Liability		
Active and Disabled Participants	\$ 48,651	\$ 69,093
Retired Participants	51,585	68,163
Terminated Vested Participants	1,601	2,898
Suspended Participants	<u>490</u>	<u>490</u>
Total	<u>\$ 102,327</u>	<u>\$ 140,644</u>
(5) Surplus/(Deficiency), (3) - (4)	\$ 3,129	\$ (35,188)
(6) Transfer Ratio, (1)/(4)	N/A	0.75

As permitted 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 \$38,317,000.

The assumptions used to determine the Solvency Liability are summarized on page 41 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 \$35,188,000, 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.

## **Guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations - February 2009**

The Committee on Pension Plan Financial Reporting (PPFRC) has completed its review of the 2008 group annuity purchase data submitted by various insurance carriers. The data revealed a significant change in the pricing basis from the 2007 calendar year. This change presumably reflects the dramatic increase during 2008 in the yield spreads for bonds other than Government of Canada bonds over Government of Canada bonds.

For immediate non-indexed annuities, the data indicate that an appropriate proxy for estimating the cost of purchasing a group of such annuities with a total premium in excess of \$15 million is 110 basis points added arithmetically to the unadjusted yield on Government of Canada long-term bonds (CANSIM series V39062) in conjunction with the UP94@2015 mortality tables. For purchases of immediate non-indexed annuities of less than \$15 million, the data indicate that the spread between the interest rate underlying the purchase and the yield on Government of Canada long-term bonds would grade linearly between 110 basis points and 70 basis points, based on total expected premium. As at December 31, 2008, the unadjusted CANSIM V39062 rate was 3.45%.

For deferred non-indexed annuities, the data suggest that, in most circumstances, an appropriate proxy for estimating the cost of purchasing a group annuity consisting of deferred non-indexed pensions would be 70 basis points above the yield on Government of Canada long-term bonds (series V39062).

The higher spreads over Government of Canada bond yields are shown by the insurer data beginning in February of 2008 and are fairly consistent from that point forward. Therefore, it would be reasonable to also apply the new indicated basis for valuations with effective dates on or after February 29, 2008 up to and including December 30, 2008.

For immediate or deferred indexed annuities, there continues to be insufficient data to provide credible guidance. However, based on the limited data that were received this year and in prior years, and considering discussions with representatives of the insurance carriers, an appropriate proxy for estimating the cost of purchasing a group annuity where pensions are fully indexed to the rate of change in the Consumer Price Index and with a total premium in excess of \$15 million, is the yield on Government of Canada real return long-term bonds (series V39057) in conjunction with the UP94@2015 mortality tables. For purchases of less than \$15 million, the spread between the interest rate underlying the purchase and the yield on Government of Canada real return long-term bonds would grade linearly between 0 basis points and -40 basis points, based on total expected premium. As at December 31, 2008, the unadjusted CANSIM V39057 rate was 2.10%.

The PPFRC is preparing its annual educational note on this topic reflecting the above analysis.

Given the significant change in annuity pricing that occurred in 2008, it is apparent that further significant change could occur at any time. The PPFRC is investigating whether more frequent data can be obtained with a view to adjusting the guidance on a more timely basis if the need arises. Actuaries may use the spreads indicated above based on the 2008 survey data for valuations with effective dates on and after December 31, 2008 up to December 30, 2009, pending such further guidance or other evidence of change in annuity pricing.

The PPFRC would like to express its gratitude to AIG, Desjardins, Industrial Alliance, Manulife, Standard Life and Sun Life for providing the committee with the data required to issue this guidance.

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