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To: Ministry of Finance, - Public Sector Pension Plan Solvency Relief, - Pension Policy Branch
- Sent via email to pension.feedback@ontario.ca

From: George Luste, President, University of Toronto Faculty Association (UTFA)
and Professor, Physics Department, University of Toronto

Re: Comments on:- Proposed Amendments to Regulation 909, the PBA – Temporary Solvency Funding Relief for Certain Pension Plans in the Broader Public Sector

About the University of Toronto pension plan.

As of July 1, 2010, in round numbers, the UofT Registered Pension Plan (RPP) has –

- \$2 billion in assets, at market value
- \$1 billion going concern deficit (without actuarial smoothing)
- \$1 billion *solvency* deficit (without 75% pension indexation)
- \$2 billion wind-up deficit (with 75% pension indexation)
- \$0.7 billion, total annual salary base (all 8,600 active faculty and support staff, w \$150k cap)
- \$0.11 billion, total current annual service cost (16% of salary base, w \$150k cap)
- 16,000 total count of plan participants (8,600 active, 4,700 retired and 2,800 others)

UTFA represents faculty and librarians. Again in round numbers:

- 6,000 total faculty and librarians in RPP, including active, retired and other plan members
- \$0.35 billion, subset salary base for 3,000 active faculty and librarians (w \$150k salary cap)
- 62% (or \$1.9 billion) of the accrued going concern liability is for the 6,000 faculty

Comments regarding the proposed amendments to regulation 909 document¹

- (i) UTFA welcomes the possibility of additional solvency relief for the University of Toronto defined benefit pension plan. As the above numbers attest, our pension plan has a serious going concern deficit, an equally serious *solvency* deficit and an even more serious wind-up deficit. Some form of pension relief is necessary.
- (ii) UTFA also appreciates that the Ministry needs evidence that the deficit problem will be addressed in a meaningful manner by the plan sponsor and administrator in order to receive the benefit of an extended time period in which to amortize the solvency deficit.

¹The 15-page document is posted on the web at
<http://www.ontariocanada.com/registry/showAttachment.do?postingId=5662&attachmentId=8084>

- (iii) UTFA notes that there are two distinct pension funding issues. One is the go-forward sustainability of the current pension plan via the annual funding of the annual service cost by both the sponsor and the plan members. The second issue is the accumulated legacy deficit and the question of who funds it and over what time period. These are two distinct funding issues and they should be treated as such. UTFA strongly opposes the conflation of the two issues into one.
- (iv) UTFA requests that the ‘Savings Targets for a DB plan’ and their implementation, as described in the 909 regulation document, be interpreted broadly and flexibly (or modified) in order to properly address the two distinct funding issues.
- (v) UTFA strongly opposes an increase in ‘the normal cost going forward’ that would require its members to fund the RPP legacy deficit at the University of Toronto. There is absolutely no evidence that in the absence of the current deficit the pension plan would not be sustainable. The attached 7-page article² substantiates this statement. It is authored by the five UTFA members who sit on the recently created Pension Committee of Governing Council.
- (vi) UTFA notes that our RPP would have a solvency excess today, instead of a solvency deficit, if the plan sponsor and administrator (UofT) had not taken 18 years of various contribution holidays since 1987. The attached article shows that today’s value of the past contribution holidays total \$1.2 billion (\$1.06 billion for the employer plus \$0.14 billion for the employees, as shown in the table on page 6). This missing \$1.2 billion exceeds the \$1 billion solvency deficit.
- (vii) UTFA notes that at UofT the service cost contribution ratio of employer to member has been about 2:1 (two to one) for decades. This is far more equitable and equal than is the case for the vast majority of DB plans in Ontario. The following two tables illustrate this observation with Financial Services Commission of Ontario (FSCO)³ data. ,
- the contribution ratio is about 4:1 for DB plans with a ‘Solvency Excess’
 - the contribution ratio is 6:1 and higher for DB plans with a ‘Solvency Deficit’

| Ontario Estimated DB Funding in 2009* (\$ Millions) - by FSCO | | | | |
|---|---------------------------------------|----------------------------|-----------------------------|----------------|
| | | Plans with Solvency Excess | Plans with Solvency Deficit | All Plans |
| 1 | Number of Plans | 330 | 1,209 | 1,539 |
| 2 | Employer Normal Cost Contributions | \$1,123 | \$2,265 | \$3,388 |
| 3 | Member Required Contributions | \$281 | \$265 | \$546 |
| 4 | Sub-Total | \$1,404 | \$2,530 | \$3,934 |
| 5 | Special Payments | \$68 | \$2,711 | \$2,779 |
| 6 | Total | \$1,472 | \$5,241 | \$6,713 |
| 7 | Contribution ratio (#2 / #3) | 4.0 | 8.5 | 6.2 |
| | * from FSCO March 2010 report | | | |

² This article as well as other pension articles and memos are posted at the UTFA pensions webpage at <http://www.utfa.org/content/pension-issues>

³ “Funding of Defined Benefit Pension Plans in Ontario Seventh Annual Report” (March 2011), page 29, at <http://www.fSCO.gov.on.ca/english/pensions/DBFundRep11.pdf>

| Ontario Estimated DB Funding in 2010* (\$ Millions) - by FSCO | | | | |
|---|---------------------------------------|----------------------------|-----------------------------|----------------|
| | | Plans with Solvency Excess | Plans with Solvency Deficit | All Plans |
| 1 | Number of Plans | 241 | 1,265 | 1,506 |
| 2 | Employer Normal Cost Contributions | \$699 | \$2,558 | \$3,257 |
| 3 | Member Required Contributions | \$181 | \$409 | \$590 |
| 4 | Sub-Total | \$880 | \$2,967 | 3847 |
| 5 | Special Payments | \$42 | \$4,242 | \$4,283 |
| 6 | Total | \$922 | \$7,208 | \$8,130 |
| 7 | Contribution ratio (#2 / #3) | 3.9 | 6.3 | 5.5 |
| | * FSCO March 2011 report | | | |

The above data suggest that the solvency deficit issue may be correlated with very minimal member contributions; hence the Ministry is justified in focusing on the contribution ratio issue in such cases.

But that is not the situation at UofT where plan members make significant contributions, and where the current contribution ratio reflects an explicit negotiated commitment made by the university administration in return for the right to access plan surplus and to take contribution holidays. Correlation does not necessarily imply causation for every plan and a one size solution is not appropriate for all plans. Different pension plans in the province have different histories, different governance issues, different benefits and use different actuarial assumptions. Reasons for the solvency problem can vary from plan to plan.

- (viii) UTFA is also concerned that lowering the 2:1 pension contribution ratio for faculty would put UofT at a hiring disadvantage relative to other major universities, such as UBC⁴ where the pension contribution ratio is 2:1 with no salary cap. UofT must also compete for hiring with major US universities. Most of the latter have pension funding ratios for faculty that are 2:1 or higher. This includes Michigan, Iowa, Utah, Minnesota, Colorado, Princeton, Yale, Purdue, Harvard, Maine, Vermont and others.
- (ix) UTFA understands that the UofT administration has made preliminary plans⁵ to fund most (if not all) of the \$1 billion solvency deficit over the proposed 10 year amortization period proposed for Stage 2. UTFA believes this would be a major step towards making the plan sustainable in the long term and therefore in compliance with the spirit of proposed amendments to Regulation 909. Therefore UTFA must assume that this substantial infusion of funds would satisfy the Ministry's criteria of an acceptable "Savings Target" – even if the 'normal cost going forward' as represented by the sharing of the service cost in the approximate 2:1 ratio for employer to faculty remains unchanged.
- (x) UTFA is prepared to discuss the possibility of converting to joint sponsorship, but only for future service costs. In order to change the sponsorship for future service and to differentiate it from past service there would need to be clear accounting guidelines and perhaps two distinct actuarial reports. It bears repeating that prior to 1987 there was a joint funding arrangement; this was changed to the current funding agreement in the 1987 settlement.

⁴ UBC faculty pension plan see <http://www.pensions.ubc.ca/faculty/glance.html>

⁵ See "Ensuring a Sustainable Pension Plan for the University of Toronto", January 2011, at <http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Boards+and+Committees/Business+Board/2010-2011+Academic+Year/a0131-7ii.pdf>

The Administration's Proposed Increase in U of T's Pension Contributions is based on Misleading Information

Laurence Booth, Ettore Damiano, Tom Finlay, George Luste, Helen Rosenthal¹

March 15, 2011

The University of Toronto administration has recently distributed a 16-page document entitled "Frequently Asked Questions (FAQ) about the Sustainability of the University of Toronto Pension Plan."² It presents the administration's view of the pension problem and its causes. It argues further that employees should contribute substantially more to help solve the problem. In this reply we show how the administration's overall characterization of the pension problem in the FAQ is misleading. There is no evidence that the current pension plan service cost³ is not sustainable at current rates of contribution and the administration must not be allowed to use an increase in employee contributions to fund the deficit reduction, as it effectively proposes despite the FAQ claim to the contrary. We fundamentally disagree with the administration on the following three key questions: the problem, the cause of the problem and the inappropriateness of increased employee contributions as the solution.

What is the problem?

The administration's FAQ claims that our pension plan faces two separate and independent problems: the deficit in the plan and the sustainability of the plan (apart from the deficit) at current contribution rates.

- It is undeniable that the plan currently has a very large deficit. It is the result of two principal causes: 18 years of missing contributions⁴ when times were "good," and the exceedingly poor performance of the plan's investment strategy since the creation of the University of Toronto Asset Management Corporation (UTAM) in 2000.
- The problem of the '*long term sustainability of the pension plan*' is more debatable. The FAQ reader is encouraged to think that, even in the absence of the current deficit, the pension plan is not sustainable. However, the administration's FAQ offers no evidence to support this assertion, and in fact, its argument and the data point to a very different conclusion.

Could the University afford the existing pension plan but for the deficit? The administration acknowledges that the current service cost for all our pension plans for the year 2009-2010 was \$109.8 million.⁵ This is the amount of money the plan needed last year to pay for the pension promises that accrued at that time, - that is, the cost of the pension plan last year, whether or not the

¹ The five persons listed are the UTFA representatives on the new Pension Committee of Governing Council. Professor Booth holds the CIT chair in structured finance at the Rotman School of Management, Associate Professor Damiano is from the Economics Department, Tom Finlay is a Librarian in the Centre of Criminology, Professor Luste is from the Physics Department and is the current President of UTFA, and Helen Rosenthal is a retired Senior Lecturer in Mathematics.

² Available online at <http://www.finance.utoronto.ca/Page13.aspx>

³ The term "service cost" represents the cost of one year of pensionable service in the pension plan, independent of any pre-existing deficit or surplus.

⁴ Also referred to as "contribution holidays" in the lexicon of defined benefit pension plans.

⁵ From the University of Toronto Pension Plans Annual Financial Report for the year ended June 30, 2010, page 30.

plan was in surplus or deficit. Of this amount employees were contractually obliged to contribute \$36.5 million and the employer the balance of \$73.3 million. In fact the employer contributed \$100.9 million, that is, an additional \$27.6 million, in order to fund part of the accumulated deficit. This means that but for the pension deficit, for which the administration is responsible, there would have been \$27.6 million available to fund other university activities.

Further, in "Ensuring a Sustainable Pension Plan", a statement presented by the administration to Business Board last January, special payments into the plan were projected to increase by an additional \$35 million to a total of \$62 million, starting in 2011-2012. To fund these additional payments, the administration states that a "*30 million base budget is being allocated from new revenues anticipated next year.*" That is, the administration is committed to making very large additional payments into the pension plan while the current service cost of our pension is fully met. Again, if the administration's mismanagement had not resulted in the significant deficit in our pension plan, these funds would be available for our academic programs. However, the mere fact of such additional payments is hardly consistent with the claim that, independent of the deficit, our pension plan is not sustainable in the long term.

What the administration fails to acknowledge is that there have been no changes significant enough to justify a material change in contribution levels in respect of current service costs. For example, the administration points out that the long run rate of return on plan assets has remained 4% over the inflation rate and has not changed in recent years. Consequently the cost of the pension promise has not changed, nor the long term '*sustainability of the plan.*' Since 1991 the total current service cost of our pension has been stable at around 15% of the salary base with the employer's share around 10%.⁶ The administration may well claim or assert that some of the underlying assumptions are no longer valid: life expectancy for retirees, for example, may have increased, (although this, in turn, may be offset by increases in the retirement age following the ending of mandatory retirement). Until we have a comprehensive independent and external audit of the underlying assumptions of our pension plan we simply do not know whether the cost of our plan has increased or decreased. The administration has not agreed to such an audit, choosing to remain content with Hewitt's actuarial report. In view of the investment and management history of the plan, that is not acceptable in the circumstances.

So what is the conclusion? In our judgement the elephant in the room is obviously the deficit. The administration has not provided any factual evidence to support the notion that our pension plan has otherwise become any more or less expensive over the last 20 years or so. In fact what information they have provided indicates "no change." Absent the deficit, there is no evidence that our pension plan is not sustainable in the long term, at the historic contribution rates assumed for both the University and employees.

Of course there is an obvious motivation for the administration to assert that there are two separate problems. This is because if, as the record demonstrates, the pension problem **arises solely from** the deficit, the argument for any increase in employee contributions is weak or non-existent. Notably, during the "good" years of pension contribution holidays, the administration reminded us that:

Under the University of Toronto Pension Plan, the pension promise is funded by both the participants and the University. The participant contributions are determined by a specific

⁶ The table on page 5 of the AON Hewitt Actuarial Report as of July 1, 2010 shows that the University share of service costs was 10.48% in 1994 and is 10.98% in 2010.

formula. The balance of the cost of funding the pension promise is the sole responsibility of the University. In other words, the University bears the risk of fulfilling that pension promise and must manage that risk prudently.

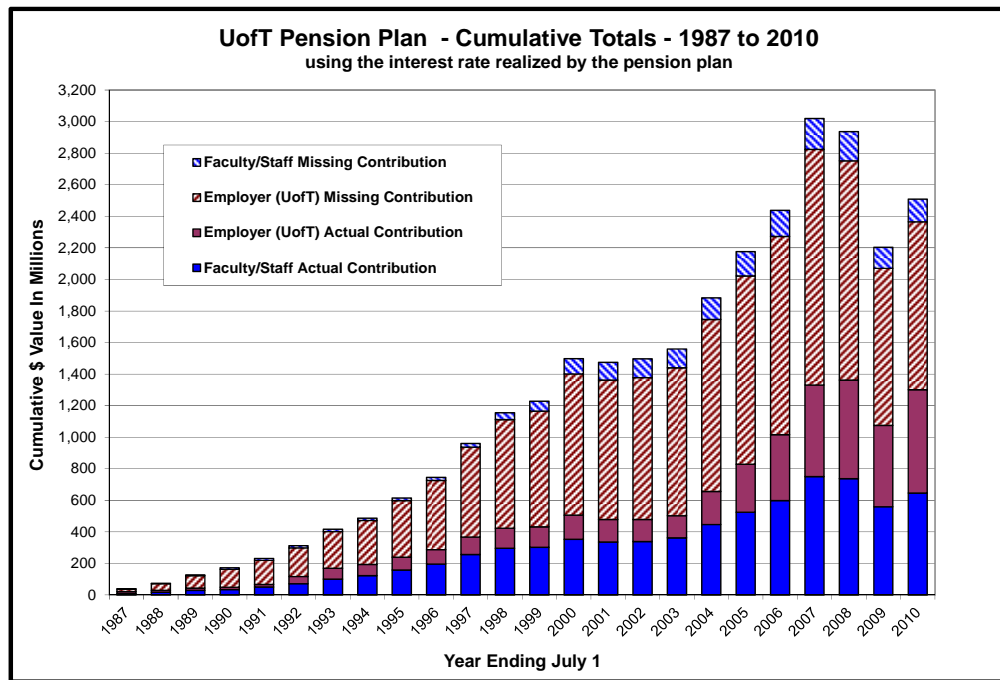
The pension promise has a very long time horizon. At various times over that time horizon, due to economic and demographic circumstances, the university's funding to meet the pension promise may be quite high – as it was for the period prior to 1987 when the University contributions were 2 -2½ times participant contributions. At other times, the economic and demographic circumstances may result in lower contribution levels, as has been the case since 1987. The pendulum can easily swing either way....

Whatever the funding level, the pension promise does not change."⁷

How did the deficit get so large?

The administration's FAQ identifies many reasons for the deficit shortfall – spreading the blame in order to divert focus away from any one particular reason. However, the first important reason offered is that "during times of significant surplus both the University and members took contribution holidays."

This statement is deliberately misleading. It implies shared responsibility by both the administration and the employees for the deficit. A different picture emerges when one tracks the actual history of contribution holidays for both employees and the employer. The following chart for the registered plan (RPP) shows both the cumulative value of actual as well as missing contributions for both employees and the employer for each year from 1987 to 2010: (Further details are in the Appendix.)



A number of interesting observations follow from the chart:

⁷ Quoted from the text in the administration's Reply Brief in the 1996-97 Salary, Benefits and Pension negotiations, page 28. The same argument is repeated in the administration's Brief during the SB&P negotiations in 2002-03.

- (i) The value of employer contributions to the plan over the 24 years (solid red) is almost the same as that for the employees (solid blue), only because of the recent special contributions by the employer. This contradicts the administration's account in the FAQ question #10 where they state "*this ratio of slightly more than 1:2 has been in place for many years*". The administration fails to account for the timing of the contributions and "the time value of money".
- (ii) Over the past 24 years the cumulative value of the employer's missing contributions (hatched red) exceed the value of the employer's actual contributions (solid red) by about \$400 million.
- (iii) The chart also shows that the impact of the employer's contribution holidays is far greater than the impact of the employees (hatched red versus hatched blue).

Apart from the factual record it must be emphasized that the nature of the employer contribution holidays and those of employees are different. The employee contribution holidays were negotiated as part of the negotiation of benefits and wages, and therefore involved trade-offs; that is, other increases were sacrificed in order to get the contribution holidays. In contrast, the employer's contribution holidays were unilaterally decided by the administration without seeking input from or the consent of faculty or staff. Neither the Faculty Association nor any staff union participated in the administration's decision to take 18 years of pension holidays, contrary to what is implied by the administration's FAQ:

"We emphasize that the relevant decisions throughout that period involved governors, administrators, and UTFA and union representatives, over many years. It is unfair to look back and second-guess all those individuals with the easy wisdom of hindsight."

Until very recently the administration repeatedly maintained that the nature of the University sponsored pension plan was such that the employer assumed all risk. This meant the employer was entitled to appropriate any surplus in the pension plan and was solely responsible for funding any deficit.

It is true that under the Income Tax Act there is a restriction in funding pension plans if they exceed a given level of surplus. However, the Income Tax Act does not prohibit using more conservative (and safer) assumptions to ensure that employer contributions can still be made. Further, even in a situation of surplus, contributions could have been made to a special reserve accounts as a hedge against the poorer market returns that inevitably recur. The administration did none of that; instead it appropriated the surpluses from the plan, with the result that the plan never had the benefit of the missing employer contributions.

The University's extremely poor investment performance since the creation of UTAM in 2000 is a key reason for the accumulated deficit. Over its first ten years (2000-2009), UTAM management yielded a 0% real rate of return for the pension and endowment assets. Obviously no pension plan has done particularly well during this period, which includes the 2008 financial crisis. However, a standard 60:40 fund (60% in Canadian equities and 40% in Canadian bonds) earned about 4.0% as a real return over the same period: blaming UTAM's 0% real rate of return on the stock market crash of 2008-9 is, therefore, misleading. Indeed it is difficult to find a university pension plan that has performed as poorly as ours. If UTAM had simply matched the performance of the Canadian markets we would have a far less serious deficit problem.

Moreover, while earning a 0% real rate of return, the asset management fees increased from \$4.9 million in 2000 to \$28.1 million in 2009. This is a five-fold increase during the same ten year period of zero real returns. It is hard not to conclude that UTAM, on behalf of the administration, adopted aggressive investment tactics in the hope of allowing the employer to continue to take contribution holidays. This policy failed disastrously. Employees are now being asked to pay part of the bill.

Looking ahead, the FAQ mentions a change in UTAM's governance structure, which is intended to reassure us that today's problems will not reoccur in the future. But the administration refuses to acknowledge the root cause of the problem. When times are good and a defined benefit pension such as ours is in surplus, the plan sponsor, i.e. the administration, has an incentive to take contribution holidays and use the surplus for non pension expenses. In contrast, when there is a serious deficit, the administration has an incentive to "share the pain" and ask for an increase in employee contributions. This is a far more basic governance structural deficiency, which preceded the abysmal investment performance of UTAM, and which continues today.

The FAQ acknowledges that monies that should have gone into the pension plan were used to fund the SRA, student scholarships, and to satisfy the requirements of the social contract. However commendable these choices may have been, the fact remains that funds diverted from the pension plan represent deferred compensation for faculty and staff.⁸ Rather than being prudently administered on behalf of those faculty and staff, these funds were used for other university purposes.

The deficit and the disastrous performance of UTAM follow from the core problem of the university pension plan: the fundamental governance structure of the overall plan. The administration has repeatedly refused to separate the pension plan sponsor from the pension plan administrator. Without taking this basic corrective step, little of the distorted incentive structure existing in our plan can be changed. When the memory of today's deficit debacle has faded and the plan returned to surplus, the administration will still be able to appropriate the surplus, or create a surplus where none exists, to relieve the pressure on the operating budget. Inevitably the administration will then come back and plead to employees to pay for the cost of any resulting deficit. Not addressing this fundamental governance issue is what will leave our pension plan *"unsustainable in the long term"*.

Why should the employees pay more? We didn't cause the deficit problem?

The administration's FAQ states that employees are not being asked to pay for the pension plan deficit. Instead, it claims that employees are being asked to pay a larger share for their "excellent benefits" in order to ensure the "long term sustainability" of the pension plan. There is absolutely no evidence that in the absence of the current deficit the pension plan would not be sustainable. The pension plan is not sustainable solely due to mismanagement that has created a deficit so large that the administration cannot fund it from the operating budget.

Are employees being asked to pay for mismanagement that has created the deficit? The answer is clearly *yes*. Further, the perverse incentives that created the problem have not changed and, unless major changes in the pension plan are implemented, this crisis may not be the last.

⁸ In defined contribution (DC) plans the plan sponsor is not allowed to divert its contributions to other uses.

Appendix

(For the reader who wishes to better understand why we have the very serious pension deficit today.)

| March, 2011 | | | | | | | | | | | | | | |
|--|-----------------------------|--------------------------------|-----------------------------------|--------------------------------|------------------------------------|----------------------------------|--------------------------------------|---|-----------------------------------|--------------------------------|------------------------------------|----------------------------------|--------------------------------------|---------------------------|
| U of T RPP - Service Costs - Contributions - Holidays - Time Value of \$ - Summary Data | | | | | | | | | | | | | | |
| All numbers are totals for both faculty and staff (all employees) at U of T. | | | | | | | | | | | | | | |
| All numbers are directly from or computed from Hewitt Annual Actuarial Reports. | | | | | | | | | | | | | | |
| Columns [4], [6], [8], [10], [12], and [14] take onto account column [15], the pension plan time-value-of-money. | | | | | | | | | | | | | | |
| Faculty & Staff - Pension Plan Members | | | | | | | | Employer - U of T, Pension Plan Sponsor & Administrator | | | | | | |
| [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] |
| Academic Year to July 1 | Total Salary Base \$ in Mil | Pension Service Cost \$ in Mil | Cumulative Service Cost \$ in Mil | Actual Pension Input \$ in Mil | Cumulative Pension Input \$ in Mil | Yearly Pension Holiday \$ in Mil | Cumulative Pension Holiday \$ in Mil | Pension Service Cost \$ in Mil | Cumulative Service Cost \$ in Mil | Actual Pension Input \$ in Mil | Cumulative Pension Input \$ in Mil | Yearly Pension Holiday \$ in Mil | Cumulative Pension Holiday \$ in Mil | Actual Market Return Rate |
| 1987 | 251.9 | 8.9 | 10.1 | 6.9 | 7.8 | 2.0 | 2.3 | 24.8 | 28.1 | 11.1 | 12.6 | 13.7 | 15.5 | 13.2% |
| 1988 | 270.3 | 9.6 | 19.7 | 8.5 | 16.4 | 0.0 | 2.3 | 26.6 | 54.8 | 0.0 | 12.6 | 26.6 | 42.2 | 0.3% |
| 1989 | 290.1 | 10.4 | 34.0 | 8.8 | 28.4 | 1.6 | 4.4 | 28.5 | 94.0 | 0.0 | 14.2 | 28.5 | 79.8 | 12.8% |
| 1990 | 314.8 | 11.2 | 46.0 | 5.2 | 34.2 | 6.0 | 10.6 | 31.4 | 127.8 | 0.0 | 14.5 | 31.4 | 113.3 | 1.9% |
| 1991 | 339.3 | 12.2 | 63.0 | 12.2 | 50.2 | 0.0 | 11.4 | 28.6 | 169.2 | 0.0 | 15.7 | 28.6 | 153.5 | 8.2% |
| 1992 | 360.4 | 13.1 | 84.7 | 13.1 | 70.4 | 0.0 | 12.7 | 35.7 | 227.9 | 25.6 | 45.9 | 10.1 | 182.0 | 11.2% |
| 1993 | 358.6 | 17.2 | 116.1 | 17.6 | 100.3 | 0.0 | 14.5 | 36.4 | 301.3 | 14.7 | 69.1 | 21.7 | 232.2 | 14.0% |
| 1994 | 353.4 | 16.8 | 137.6 | 17.1 | 121.5 | 0.0 | 15.0 | 37.0 | 350.1 | 0.0 | 71.5 | 37.0 | 278.6 | 3.5% |
| 1995 | 345.7 | 16.0 | 175.1 | 16.4 | 157.3 | 0.0 | 17.1 | 35.8 | 439.9 | 0.0 | 81.5 | 35.8 | 358.4 | 14.0% |
| 1996 | 335.0 | 15.5 | 214.6 | 16.4 | 195.5 | 0.0 | 19.2 | 30.8 | 530.0 | 0.0 | 91.8 | 30.8 | 438.3 | 12.6% |
| 1997 | 339.7 | 16.1 | 279.8 | 15.7 | 256.2 | 0.0 | 23.3 | 30.6 | 680.0 | 0.0 | 111.3 | 30.6 | 568.7 | 21.3% |
| 1998 | 353.5 | 16.9 | 340.0 | 1.8 | 295.7 | 15.1 | 44.1 | 31.1 | 815.0 | 0.0 | 127.6 | 31.1 | 687.4 | 14.6% |
| 1999 | 362.2 | 18.0 | 365.2 | 0.0 | 301.6 | 18.0 | 63.3 | 30.9 | 862.8 | 0.0 | 130.1 | 30.9 | 732.7 | 2.0% |
| 2000 | 385.0 | 19.8 | 450.0 | 0.0 | 352.6 | 19.8 | 97.1 | 33.3 | 1,047.5 | 0.0 | 152.1 | 33.3 | 895.4 | 16.9% |
| 2001 | 403.2 | 20.7 | 446.7 | 0.0 | 334.6 | 20.7 | 111.8 | 34.7 | 1,027.0 | 0.0 | 144.4 | 34.7 | 882.7 | -5.1% |
| 2002 | 434.6 | 22.3 | 457.8 | 11.5 | 337.8 | 10.8 | 119.7 | 37.3 | 1,038.8 | 0.0 | 140.9 | 37.3 | 897.9 | -2.4% |
| 2003 | 462.5 | 24.4 | 480.7 | 24.4 | 361.1 | 0.0 | 119.3 | 42.9 | 1,078.5 | 0.0 | 140.5 | 42.9 | 938.0 | -0.3% |
| 2004 | 494.6 | 25.6 | 584.3 | 25.6 | 446.3 | 0.0 | 137.7 | 47.1 | 1,298.9 | 41.0 | 209.4 | 6.1 | 1,089.5 | 15.4% |
| 2005 | 511.3 | 26.7 | 677.6 | 26.7 | 524.5 | 0.0 | 152.7 | 51.6 | 1,497.7 | 64.1 | 303.3 | -12.4 | 1,194.5 | 10.9% |
| 2006 | 563.4 | 29.5 | 762.3 | 29.5 | 597.3 | 0.0 | 164.6 | 56.0 | 1,674.9 | 83.9 | 417.4 | -27.9 | 1,257.6 | 7.8% |
| 2007 | 606.9 | 32.0 | 946.8 | 32.0 | 750.1 | 0.0 | 196.2 | 64.7 | 2,073.6 | 69.4 | 580.3 | -4.7 | 1,493.4 | 19.2% |
| 2008 | 640.8 | 33.9 | 921.8 | 33.9 | 736.9 | 0.0 | 184.5 | 69.0 | 2,014.0 | 83.8 | 624.3 | -14.8 | 1,389.9 | -6.0% |
| 2009 | 668.1 | 35.2 | 692.9 | 35.2 | 559.0 | 0.0 | 133.6 | 73.1 | 1,511.1 | 86.7 | 514.7 | -13.6 | 996.4 | -27.6% |
| 2010 | 707.5 | 37.2 | 790.0 | 37.2 | 645.1 | 0.0 | 144.5 | 77.7 | 1,719.1 | 91.0 | 655.4 | -13.3 | 1,063.7 | 8.2% |
| Sum | 10,152.8 | 489.2 | 790.0 | 395.7 | 645.1 | 94.0 | 144.5 | 995.6 | 1,719.1 | 571.3 | 655.4 | 424.4 | 1,063.7 | |
| Percentile-A | | 4.8% | | 3.9% | | 0.9% | | 9.8% | | 5.6% | | 4.2% | | |
| Percentile-B | | | | 80.9% | 81.7% | 19.2% | 18.3% | | | 57.4% | 38.1% | 42.6% | 61.9% | |

Background. The above table starts in 1987 because that was the year in which our pension plan underwent a significant change. Prior to 1987 the employer and employees shared the funding risk via a fixed contribution ratio. As a result of the 1987 agreement (mediated by Martin Teplitsky) the employee contribution rate was fixed at a percentage of salary and the employer assumed the balance of the funding responsibility.

Observations:

- 1) Since 1987 the employee RPP service cost average is **4.8%** of the salary base (percentile-A for column [3]).

- 2) Since 1987 the employer RPP service cost average is **9.8%** of the same salary base (percentile-A for column [9]).
- 3) Actual input to the pension plan is less than the above service cost due to contribution holidays. **Over the 24 years , 3.9%** of salary base was the actual input for employees and **5.6%** for the employer (shown as percentile-A for columns [5] and [11] in the table).
- 4) Due to the time value of money (using the actual annual investment returns for the RPP) the cumulative value of the actual inputs to the pension plan will not have the ratio of 3.9 to 5.6.
- 5) Columns [6] and [12] show that the value of the actual inputs are in the ratio of **645.1 to 655.4** or almost **1:1** over the 24 years since 1987.
- 6) Columns [6] and [12] are displayed in the chart shown earlier as solid blue and solid red.
- 7) Columns [5] and [11] show the 18 years, up to 2004, during which there were various contribution holidays, meaning there was either no pension contribution at all (represented by zeros in columns [5] and [14]) or only part of the service cost was input.
- 8) Columns [7] and [13] show the dollar amounts of the contribution holidays (missing inputs).
- 9) Columns [8] and [14] show the cumulative value today of the contribution holidays for the employee and the employer respectively. The corresponding cumulative dollar amounts in 2010, taking into account the actual return % for the RPP, for the contribution holidays are **144.5** million and **1,063.7** million for the employees and the employer, respectively.
- 10) Columns [8] and [14] are displayed in the chart shown earlier as hatched blue and hatched red.
- 11) Column [4] at 2010 indicates that **if** the employee's full service cost had been input each year, the cumulative value in 2010 would have been **790.0** million. Of this, **645.1** million, or **81.7%**, was actually put in.
- 12) Column [10] at 2010 indicates that **if** the employer's full service cost had been input each year, the cumulative value in 2010 would have been **1,719.1** million. Of this **655.4** million, or **38.1%**, was actually put in.
- 13) In both column [11] and [13] one sees that for the past six years, from 2005 to 2010, the employer has been contributing more than the employer's share of the service cost. But unfortunately the value of those recent extra dollar inputs is far less than if the same dollars had been contributed years ago, and in particular when the market had its great returns during the 1990s.
- 14) Note that all of the above charts and figures are based on the actual performance of the U of T pension plan (column 15). If the actual performance of the Canadian equity and bond markets were used in column 15 instead, there would not be a significant deficit in the pension plan.