

TEACHERS RETIREMENT ALLOWANCE BOARD

COLA AND ASSOCIATED ISSUES

Prepared by Tim Sale
October 2007



Mandate

In March of 2007, I was requested by the Manitoba Government to attempt to assist the Manitoba Teachers' Society (MTS), The Retired Teachers of Manitoba (RTAM) and the Labour Relations Division, Treasury Board Secretariat to reach some consensus on measures that might be taken to address the inadequate capacity of the current Pension Adjustment Account. (PAA) This \$145M fund provides the teachers portion of the Teachers' Retirement Allowances Fund (TRAF) the ability to adjust for cost-of-living increases (COLA). I was guided in my work by the briefing notes prepared by Labour Relations staff, and other background materials provided by TRAF staff. The group met five times, and additional private meetings and conversations were held with MTS and RTAM. All of the participants were gracious and helpful, and the meetings were productive and frank. I believe that the advice and recommendations which follow at the end of this report will strengthen the future COLA capacity of the PAA, as well as recognizing the priority of fully funding Account A which provides for the payment of basic pensions to retired teachers.

Background

It is important to understand the factors which led to the current difficulties with both the PAA and Account A. During the 1980s and to the middle of the 1990s, with the consent of both government and MTS, certain changes were made to the main plan, most costly and chief among which were the early retirement provisions. These provisions massively increased the future liabilities of the plan, but were granted without the required increases in contributions. Beginning in 1984, COLA payouts rose sharply and this pattern continued until 1998, with increases of 100% of COLA in all but three of those years when the rate was between 96.7% and 99%. The then Actuary, Turnbull and Turnbull began voicing concerns about this practice in 1986, repeating these concerns every year until 1996, stating that the PAA was designed to pay approximately 2/3rds COLA, and that the new practice was using funds which would be needed in the future. (see sample letter from the Annual Report by the Actuary, appendix 1). For ten years, the Actuary repeated these concerns, even going so far as to box them in the annual transmittal letter. The response of the TRAF Board was to ask the Actuary to stop raising these concerns, because they were upsetting to the members. (letter, appendix 2) Shortly afterwards, the Fund changed actuaries to the present company, AON.

As part of our work, the present Actuary, AON, was asked to model the PAA on the assumption that it adhered to the plan's actuarial design assumptions, and was used to pay no more than 2/3rds COLA every year. The result is shown in Appendix 3. At the end of 2006, 66% COLA would have been paid every year, and the PAA would have a current surplus of \$38M. Clearly, the Plan was well designed and would have performed well had the design parameters been adhered to.

Account A has been saved from the effects of actuarial under-funding by the sterling performance of the TRAF investment policies and actions. (Appendix 4) However this performance has not been fully available to the PAA. This is because under the current policy the PAA is limited to the fixed income portion of the TRAF returns. In recent years, fixed income returns have fallen sharply while equity returns have been very strong. TRAF and the current Actuary, (AON) provided summary tables showing what the effects of this policy have been. (Appendix 4)

The result is that while Account A is still actuarially under-funded in a long-term projection, the under-funding does not begin to affect Account A's capacity to fully meet its present and future obligations until after 2017 because of the strong earnings of the Fund. However, the same cannot be said for the PAA, which can generate only very partial COLAs in the range of 25-40% of current CPI. This weak capacity is actually much more serious than it presently appears, because current inflation is so low. Were inflation to return to historic levels of 3%, the PAA would have, for all practical purposes, no ability to sustain the purchasing power of retiree's pensions.

In recent years, officers of MTS have invested a great deal of energy in assisting active teachers to understand the under-funding problems facing Account A and the weakness of the PAA. As a result, MTS sought a 2% increase in contributions. Government agreed to a 1.1% increase which was then approved by active teachers in 2005. MTS officers have also made it clear that under the current plan, no COLAs are guaranteed, in spite of the existence of the PAA, to which 16.7% of active members' plan contributions are allocated annually. I believe that these officials, including the current and past-presidents have done much to help active teachers understand the critical issues faced by both Account A and the PAA.

RTAM officials, faced with the dilemma of a weak PAA have taken a militant stand that this problem must be resolved, and have sought 100% COLA guarantees. Retired teachers have adopted the position that "we have paid for COLA and we should get it". Unfortunately, this is not completely accurate. The COLA plan provides for a Fund, the PAA, which was initially established by capital payments in the 1970s, and the earnings of which are used to pay *past* COLAs. If there are excess earnings above what is needed for past COLAs, these earnings can be combined with current 16.6% of current contributions to make each year's new COLA award. Thus, retired members' contributions have not actually built up funds for new COLAs. Rather, they have paid (actually, they have underpaid) for COLAs now in force.

This may be somewhat understandable, given that full COLAs were paid until 1998, in spite of the former Actuary's warnings that this payout level was not sustainable. Most retired teachers would not likely have seen these warnings. While RTAM's position may be recognized as a bargaining stance, it is simply not realistic given the weak state of the PAA. In fact, no teachers' retirement plan in Canada provides unlimited 100% COLA guarantees. However, it is also clear that the current PAA COLA capacity places Manitoba far down in inter-provincial comparisons (Appendix 5). I believe that all parties to the present discussions agree that it is desirable to improve this situation incrementally, and then to put in place policies that will ensure that past problems do not reoccur.

Throughout the two mandates of the current Provincial Government, strong action has been taken to address the unfunded liability of two of the three major pension funds for which it is responsible, the Superannuation Fund and the TRAF. In early 2007, the Government set aside \$1.5B, or about 75% of the current unfunded liability of the TRAF. As well, since April 2000 all new hires have had their pension contributions funded by the province, and recently, this policy has been extended to require that contributions for all active teachers be fully funded from this date forward. These funds are now under the management of TRAF, and it is expected that over the next period of years, the Provincial share will move significantly closer to full funding, eliminating the current unfunded liability to TRAF. The stellar performance of the Fund will now also accrue to the Provincial TRAF account. Thus, while borrowing at a cost of less than 5%, the Province hopes to realize the historic TRAF rate of return of 10%.

It is the intention of the Province to now charge all annual TRAF pension and COLA expenditures to its account and to track the performance of the account

over time to ascertain whether any additional actions will be needed to enable the fund to fully meet its current and future obligations.

At present, the Province simply matches the COLA benefits which are annually agreed upon, on a "pay-go" basis. Given that the Province has now expressed its intent to move towards full funding of the entire pension entitlement for all teachers and has deposited about \$1.8B with TRAF towards this objective, it is appropriate to ask how the Province will fund its COLA obligations in future. I will make some recommendations in this regard at the conclusion of my report.

Options for addressing COLA issues

COLA benefits are somewhat unique in that, in most cases, they are compounded for the life of the retiree. That is, the COLA is usually on the full pension benefit, and each year's COLA builds upon the previous adjustments. While this obviously provides the best protection against eroding existing pensions, its costs are highly dependent on three related major factors, age of retirement, life expectancy and inflation expectations. Both parties to the Fund agree that COLAs must be improved, and understand that any such improvement will trigger some increased liabilities for the Government and active teachers.

The MTS retirement plan is by no means alone in facing COLA adequacy issues. Many plans in both the United States and Canada have had to address these issues in recent years, and a wide variety of measures have been employed in this process.

When the early retirement benefits were implemented in the 1980s, no changes were made to the existing COLA arrangements. The current average age at retirement is approximately 58. Obviously, when as many as seven or eight years are added to pension entitlements, both the basic pension and any COLA adjustments become significantly more costly. Life expectancy has also increased, especially for females who comprise the majority of teachers, further straining the PAA capacity. Finally, because the PAA is limited to the fixed income return of the Fund, investment returns in recent years have fallen sharply, as interest rates have declined and the high fixed income yields of the 1980s have disappeared from the portfolio. (Appendix 4) A positive factor has been the 2005 increase in contributions of 1.1%, of which about ten basis points accrue to the PAA. However, in practical terms this does little to strengthen the

PAA's capacity. Fortunately for the past five years, inflation has been historically low and hence the demand on the PAA has been moderated. Were inflation to return to historic levels of 3% or more, the current situation would be much worse.

Options for improving the capacity of the PAA are of three types, and all three have been discussed during our meetings. Generically, the options are: increased contributions to the fund, changes to the benefit provision and adjustments to the investment earnings crediting provisions.

Option 1: Increasing active members' contributions to the PAA

The MTS has ruled out dedicating all or most of their currently requested 1% increase in contributions to the PAA. MTS believes that any such increase should go to address the actuarial under funding of Account A which supports the basic entitlement. MTS stated that they have done a great deal of work to inform active teachers about the needs of Account A, and have warned them that they cannot and should not count on the PAA for significant COLA protection.

We did examine the possibility of moving immediately to increase the proportion of current contributions from active teachers to the PAA from 16.6% to 17%, which is being gradually implemented in any case. However, the effect of this increased support to the PAA was so marginal that this option was discarded.

Option 2: Changing the nature of the benefit

There are countless changes that could be made to the COLA provision. For example, the age of entitlement could be separated from the age of retirement. Alternatively, COLA could only kick in after some basic level of inflation, such as 1% occurs. COLA could be capped at a maximum of some fixed percent, say 5%. COLA could be on the basic benefit only, and not compounded. While all of these options could lower the demand on the PAA, only one was discussed at any length, namely the age of entitlement to COLA.

Our meetings discussed the suggestion that if the date of COLA entitlement were separated from the date of retirement to some fixed date such as age 65, 63, or 60, COLA requirements would be much lower, and more able to be clearly calculated. The demand on COLA is significantly lessened, as Appendix 6

shows. In the current year, a full COLA could be allocated at age 65, and 2/3 COLA at age 63. However, MTS has committed to their members that there would be no reduction in benefits. MTS has stated that COLAs should be improved, but not with any reduction in current benefits and hence rejected this option.

Nevertheless, I believe that this option and other options could be carefully examined in the future. If retirees understood that they would get a more significant COLA at a specific age, they could then plan their retirement accordingly and augment their income in their early years of retirement.

Option 3: Change the investment rules for the PAA

The bulk of our discussions centered on changes to the investment policies affecting the PAA. The three alternatives to the investment policy are: a) status quo; b) portfolio return; and c) greater of fixed income and total fund return.

To reduce volatility, the PAA earns only the fixed income rate of the Fund, which currently is expected to return about 2% lower than the total return of the Fund. An argument can be made that particularly in recent years, the PAA has been disadvantaged by this policy. However, it should be noted that in the years 2000, 2001 and 2002, the PAA did receive a larger amount on funding based on the return on fixed income investments than it would have received based on the fund rate of return. Upon review by the committee, there was agreement that this policy should be changed.

RTAM proposed that, given the history of the PAA being limited to the rate of the fixed income portion of the portfolio, this could be corrected by granting the PAA the better of the equity or the fixed income returns to the main fund for at least a period of time. The effects of the three alternatives modeled can be seen in Appendix 7. Alternative (c) would increase the capacity of the PAA by about 50 basis points, while the portfolio approach would provide about 18 basis points improvement.

After considerable discussion, agreement among the parties has been reached to endorse alternative (c). I believe that this shows considerable good faith on MTS part, given that this option will modestly reduce the earnings of Account A for the ten year span. This agreement is conditional on an agreement that for ten years, COLAs be limited to no more than 2/3rds CPI, thus returning to the original design parameters for the COLA Plan.

Depending on the accounting approach used by the Province, this decision will also impact on the speed with which full funding of all current and future benefits will be reached by the Provincial portion of the Fund.

It would also be possible to develop a one-time actuarial surplus in the PAA by changing the discount rate for the PAA fund from 4.5% to 6.25%, which is the rate used for the main fund and has been used by the Fund Actuary in determining the Provincial liability. This would be consistent with changing the investment provisions noted above. During our discussions, we examined the option of using this surplus over a defined period of time to augment COLA benefits. However, when the Actuary was asked to comment, his reply was to caution against amortizing the surplus, because at the end of the amortization, the PAA's capacity would again be reduced by the amount of the annual amortization.

Summary:

It is clear from the above history that the present problems facing the PAA were caused by questionable decisions which were made many years ago which weakened the PAA's capacity to sustain reasonable COLAs. The recent sharp decline in the returns from the fixed-income portion of the Fund made this problem more severe. It is also clear that all parties wish that a long-term solution with sustainable measures be developed.

The recommendations which follow should be seen as a package that I believe will materially improve the PAA's capacity, both in the near term and over the longer term.

Implementation of these recommendations in 2008 would allow COLAs to immediately reach the proposed ceiling of 2/3rds CPI in 2008, assuming that CPI remains below 3%. At the same time, they will begin the process of slowly rebuilding the PAA over a ten year time frame so that further improvements may be discussed at that time.

Recommendations:

1. All future benefit changes must be actuarially sound:

The basic pension benefit and COLA formula are currently set out in legislation. For this reason all changes to these benefits must be approved by the Province and the legislature. Government and The Manitoba Teachers Society should agree that any proposed changes to either the basic benefit or the PAA/COLA account must be actuarially sound and properly funded. While I believe that the current parties to the TRAF agree that this must be a binding policy, there is no present mechanism for making this policy binding on the TRAF Board.

2. The current contribution level may not be sufficient to sustain the basic benefit

The next full review of the Fund is in January 2009. The parties should agree that at this time they will carefully examine the adequacy of current contribution levels which are required to sustain the basic benefit.

3. The appropriate goal for COLA is 2/3 CPI, capped at 8% CPI. Indeed, this is what the PAA was designed to provide in the first place. This will largely mirror the Civil Service Superannuation Plan which currently provides for COLA of up to 2/3 of CPI, subject to available funding.

While the position of the RTAM in regard to COLA of 100% is understandable, it is both unrealistic and unachievable with the current level of contributions. Accordingly, I recommend that COLA be capped at a maximum of 2/3 for a ten year period, commencing in 2008, with a ceiling based on CPI of 8%, which would require a maximum COLA of 5.33%

4. The current level of the PAA is insufficient to provide meaningful COLAs

I believe that it is important to increase the size of the PAA through the creation of a reserve account whose earnings may be used, but whose capital cannot be drawn down. This account should be created through annual commitments, which will be described below. The level of the total PAA should be sufficient to provide 2/3rds COLA to a ceiling of 8% CPI, or 5.33%. It is important to note that the size of such a fund would be well in excess of \$300M, based on a 6.25% discount rate.

5. A ten-year catch-up for the PAA in earnings credited to the PAA

There are two reasons that in recent years the PAA has been unable to provide meaningful COLAs. The first has been documented above in Appendices 1 and 2. This has been made worse by the sharp decline in the fixed income yields which go to the PAA, while equity yields which the PAA does not receive, have accelerated since 2001. In order to balance out the PAA earnings attribution, I recommend that the both parties agree that for ten years beginning in 2008, the PAA be credited with the better of either the fixed income or the equity income rates on both parties investments averaged over a rolling three year period, using 2005, 2006 and 2007 as the initial base years, and adding 2008 in 2009, then adding and deleting one year until the ten year period is concluded in 2018. Because this is a relatively long period of time, I also recommend that this policy be reviewed in 2013 to assess the scale of the effects on Account A or to the Province's equivalent account.

At the conclusion of the ten year period, the PAA should then be credited annually with the total Fund earnings comprised of the income from both fixed and equity investments, smoothed over the same three year period.

6. Creation of a larger PAA, comprised of the current PAA and a reserve account.

Current modeling suggests that the above proposed change in earnings attribution policies to the PAA may in some years provide revenues which exceed the ceiling of 2/3rds COLA. I strongly recommend that should such excess earnings occur, they be used to create a PAA reserve, from which earnings may be used, but not capital until a full review of the adequacy of the PAA is completed following the ten year period noted above.

The goal of these two policies is to create a larger PAA account, and pro-rata, a similar amount in the Provincial account. which could then assist the ability of the PAA to continue to pay more adequate COLAs in future.

7. Creating a PAA in the Provincial share of the Fund.

The Province has signaled that it intends to pay all future pension costs from its account which is currently invested with TRAF, including COLA matching payments. It may then be prudent for the province to establish a PAA account within its share of the Fund, in order that it can clearly identify and track the performance of the portion of the Fund which supports the annual COLA awards, especially during the 10 year period noted in this report.

8. Streamlining the process of amending the TRAF Act

Currently, all changes to the Plan must have the approval of the Legislative Assembly. The Act has had to be opened in recent years for some changes were very minor, but nevertheless took up needed legislative time. When the amendments required above are drafted, consideration should be given to amendments which would allow for some minor changes to be done by regulation. There are precedents for such changes in pension legislation and I believe the TRAF Board could be asked to make recommendations to the Plan's sponsors, MTS and government in this regard.

Conclusion:

I want to thank all parties to these discussions for their frankness, and particularly the staff of TRAF who provided sound and clear advice and were patient with my many questions. Manitoba Teachers, active and retired are fortunate indeed to have been well served over many years by the staff and Board of TRAF.

Tim Sale
Winnipeg
October, 2007

10. RECOMMENDATIONS

It is our recommendation that the pension adjustment which becomes effective July 1st, 1993 be made equal to the full change in the CPI or equivalently 2.14% of the monthly pension which would be received currently if the normal form of pension had been elected plus any previously granted adjustments in that pension.

Granting an increase of less than 100% of the change in the cost of living would help to ensure that there are additional amounts available for future increases.

Our calculations and recommendations are made in accordance with the Teachers' Pension Act.

The pension adjustments granted since 1984 have been at or near the full increase in the cost of living. For a number of years, we have commented on the consequence of granting pension adjustments based on all of the increase in the cost of living. The objective of the present rate of contribution is to finance pension adjustments which would reflect two-thirds of the increase in the cost of living in a year up to 9.00%. Each decision to grant full increases uses amounts that would be needed in the future. As a result, the amounts available to finance future pension adjustments may not be sufficient to permit this objective to be realized in future.

We will be pleased to discuss this Report at your convenience.

DATED at Winnipeg this 4TH day of June, 1993.

Respectfully submitted,

Dennis Ellement

Dennis Ellement, F.S.A., F.C.I.A.

John A. Turnbull

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*Approved by Board
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Mr. John Turnbull
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June 29, 1994

Dear Mr. Turnbull:

I am writing to you at the request of the members of the Board to advise that your Actuarial Report on the Pension Adjustment Account at December 31, 1993 was received by the Board at the June 20, 1994 meeting.

At that meeting subsequent to the departure of Mr. Ellement, the members discussed the Pension Adjustment Account Report and specifically the boxed paragraph in the recommendation section on page 13.

The members were of the opinion that the sentence in that section which states "The objectives of the present rate of contributions is to finance pension adjustments which would reflect two-thirds of the increase in the cost of living in a year up to 9.00%" does not reflect the actual legislation or the current agreement between the Government and The Manitoba Teachers' Society as developed through the Task Force. The statement states a position or objective which is only one of a number of positions or objectives which could be agreed to at the political level.

The purpose of this letter is to inform you of the concern this statement has raised with the members.

Yours very truly,

Anne Monk
Acting Chairperson

AM/km

Year	Assets					Liability					Valuation Rate (previous year)	Percentage of Change in CPI Granted	2/3CPI	Percentage of Change in CPI Granted	Valuation Year	
	Notional Account Balance Jan. 1	Contributions	Interest Credits	Pension Adjustment Account Payments	Special Allocations From Account A	Notional Account Balance Dec. 31	New Liability from Special Allocations	Benefit Payment	Expected Interest	New Liability for COLAs granted for following year						Residual Liability
1977	\$ 3,998,900	\$711,238	\$178,531	(\$182,869)	\$3,232,000	\$3,998,900	\$0	(\$182,869)	\$113,769	\$1,344,482	(\$2,300)	\$3,831,082	98.10%	98.10%	1977	
1978	6,948,943	1,451,666	532,777	(596,340)	1,562,000	6,948,943	3,851,082	(596,340)	\$471,218	\$1,371,130	202,528	\$6,706,905	74.00%	66.67%	1978	
1979	10,134,343	2,270,271	1,193,913	(1,049,436)	1,816,200	10,134,343	6,706,905	(1,049,436)	\$747,519	\$1,909,931	(157,632)	\$9,843,722	71.80%	66.67%	1979	
1980	16,611,545	3,378,791	1,667,123	(1,897,640)	1,334,000	16,611,545	9,843,722	(1,897,640)	\$1,018,695	\$4,201,614	(655,552)	\$14,553,139	55.10%	66.67%	1980	
1981	20,414,385	4,320,344	2,228,168	(2,889,601)	0	20,414,385	14,553,139	(2,889,601)	\$1,394,443	\$4,878,234	461,175	\$19,389,551	49.20%	66.67%	1981	
1982	24,567,296	4,505,815	3,258,632	(3,398,007)	0	24,567,296	19,389,551	(3,398,007)	\$2,382,875	\$2,131,973	632,902	\$22,521,426	45.60%	66.67%	1982	
1983	28,913,736	4,654,338	3,769,429	(4,208,127)	0	28,913,736	22,521,426	(4,208,127)	\$2,728,769	\$2,962,281	383,404	\$26,697,729	78.90%	66.67%	1983	
1984	33,576,226	5,145,611	4,375,479	(4,729,886)	0	33,576,226	26,697,729	(4,729,886)	\$2,856,136	\$3,608,114	1,767,432	\$30,926,308	100.00%	66.67%	1984	
1985	38,563,706	5,694,364	4,763,724	(5,276,437)	0	38,563,706	30,926,308	(5,276,437)	\$3,099,514	\$4,040,802	638,167	\$36,990,149	100.00%	66.67%	1985	
1986	43,354,910	5,994,500	5,421,442	(5,901,633)	0	43,354,910	34,428,103	(5,901,633)	\$3,229,597	\$5,804,624	848,636	\$40,951,712	9.50%	66.67%	1986	
1987	48,536,870	6,213,334	6,377,810	(6,698,087)	0	48,536,870	36,950,149	(6,698,087)	\$3,476,999	\$6,591,596	483,795	\$44,785,413	9.25%	66.67%	1987	
1988	59,943,927	7,258,332	7,029,984	(7,689,769)	0	59,943,927	40,931,712	(7,689,769)	\$3,786,999	\$6,676,928	179,899	\$47,739,471	100.00%	66.67%	1988	
1989	66,542,474	8,197,736	7,106,386	(8,624,076)	0	66,542,474	44,785,413	(8,624,076)	\$4,017,038	\$4,133,140	1,239,277	\$48,504,849	96.70%	66.67%	1989	
1990	71,844,500	7,292,692	7,485,872	(8,302,657)	0	71,844,500	47,739,471	(8,302,657)	\$3,837,183	\$3,792,917	2,384,761	\$49,217,053	8.75%	66.67%	1990	
1991	77,320,427	7,335,322	7,169,728	(8,745,706)	0	77,320,427	49,217,053	(8,745,706)	\$3,769,237	\$6,000,363	(59,912)	\$43,781,055	99.00%	66.67%	1991	
1992	82,679,771	6,860,914	7,261,157	(9,768,265)	0	82,679,771	43,781,055	(9,768,265)	\$3,306,238	\$5,380,127	1,353,267	\$44,052,422	100.00%	66.67%	1992	
1993	91,060,507	7,015,241	6,397,402	(10,452,027)	0	91,060,507	44,052,422	(10,452,027)	\$3,129,564	\$7,407,283	1,447,685	\$46,171,216	8.00%	66.67%	1993	
1994	93,198,340	7,023,158	6,870,344	(10,882,414)	0	93,198,340	46,171,216	(10,882,414)	\$2,532,104	\$2,924,167	1,424,342	\$42,816,437	7.25%	66.67%	1994	
1995	99,198,300	7,398,553	11,540,593	(10,692,686)	0	99,198,300	42,816,437	(10,692,686)	\$2,525,104	\$4,682,688	2,198,534	\$41,407,806	6.00%	66.67%	1995	
1996	101,444,760	7,398,553	10,346,078	(12,874,140)	17,596,502	101,444,760	41,407,806	(12,874,140)	\$1,639,685	\$3,756,478	(8,963)	\$32,674,426	6.00%	66.67%	1996	
1997	123,908,484	8,334,324	11,500,766	(12,742,777)	293,163	123,908,484	60,485,113	(12,742,777)	\$3,242,883	\$4,318,124	526,704	\$55,698,832	6.00%	66.67%	1997	
1998	130,944,160	7,129,723	8,741,673	(13,338,799)	0	130,944,160	55,698,832	(13,338,799)	\$3,848,890	\$2,454,273	147,743	\$60,209,652	6.00%	66.67%	1998	
1999	133,476,257	8,195,423	10,074,306	(13,802,504)	0	133,476,257	70,817,570	(13,802,504)	\$3,861,948	\$17,300,619	3,673,760	\$88,154,310	43.30%	66.67%	1999	
2000	137,943,984	8,872,146	9,295,308	(13,735,234)	0	137,943,984	88,154,310	(13,735,234)	\$3,861,118	\$19,633,752	2,106,358	\$100,220,304	19.00%	66.67%	2000	
2001	142,376,204	9,790,534	7,314,444	(13,837,578)	0	142,376,204	100,220,304	(13,837,578)	\$4,198,588	\$15,569,306	\$1,237,873	\$107,588,474	29.40%	66.67%	2001	
2002																
2003																
2004																
2005																
2006																

Original Case	Percentage of Change in CPI Granted	2/3CPI	Percentage of Change in CPI Granted	Valuation Year
	98.10%		66.67%	1977
	74.00%		66.67%	1978
	71.80%		66.67%	1979
	55.10%		66.67%	1980
	49.20%		66.67%	1981
	45.60%		66.67%	1982
	78.90%		66.67%	1983
	96.70%		66.67%	1984
	100.00%		66.67%	1985
	100.00%		66.67%	1986
	100.00%		66.67%	1987
	100.00%		66.67%	1988
	100.00%		66.67%	1989
	100.00%		66.67%	1990
	100.00%		66.67%	1991
	96.70%		66.67%	1992
	99.00%		66.67%	1993
	100.00%		66.67%	1994
	100.00%		66.67%	1995
	100.00%		66.67%	1996
	100.00%		66.67%	1997
	100.00%		66.67%	1998
	100.00%		66.67%	1999
	77.50%		66.67%	2000
	54.80%		66.67%	2001
	100.00%		66.67%	2002
	43.30%		66.67%	2003
	19.00%		66.67%	2004
	29.10%		66.67%	2005
	39.40%		66.67%	2006

Surplus	Valuation Rate (previous year)
\$147,818	9.50%
\$448,438	9.50%
\$280,821	9.50%
(\$1,089,868)	10.25%
(\$2,777,806)	10.75%
(\$612,390)	11.00%
\$2,236,007	11.00%
\$4,585,519	11.00%
\$7,637,398	10.50%
\$8,926,807	10.00%
\$11,986,412	9.75%
\$13,119,158	9.50%
\$15,158,514	9.25%
\$18,033,003	9.25%
\$23,339,671	8.75%
\$28,103,674	8.50%
\$38,898,716	8.50%
\$42,981,155	8.00%
\$44,888,289	8.00%
\$50,999,753	7.25%
\$57,801,184	7.25%
\$60,523,874	6.00%
\$58,559,715	6.00%
\$68,209,652	6.00%
\$60,126,580	6.00%
\$56,339,671	6.00%
\$56,339,671	6.00%
\$49,789,674	5.50%
\$42,155,900	4.50%
\$38,255,130	4.50%

Opening Liab.	New Liability from Special Allocations	Benefit Payment	Expected Interest	New Liability for COLAs granted for following year	Residual Liability	Closing Liab.
\$0	\$2,578,000	(\$182,869)	\$113,769	\$1,344,482	(\$2,300)	\$3,831,082
3,851,082	\$1,407,278	(596,340)	\$471,218	\$1,371,130	202,528	\$6,706,905
6,706,905	\$1,686,433	(1,049,436)	\$747,519	\$1,909,931	(157,632)	\$9,843,722
9,843,722	\$1,614,116	(1,469,456)	\$1,018,695	\$4,201,614	(655,552)	\$14,553,139
14,553,139	\$0	(2,349,769)	\$1,394,443	\$4,878,234	461,175	\$19,389,551
19,389,551	\$0	(2,889,601)	\$1,958,055	\$3,841,596	83,946	\$22,921,426
22,921,426	\$0	(3,398,007)	\$2,382,875	\$2,131,973	201,202	\$26,697,729
26,697,729	\$0	(3,781,477)	\$2,728,769	\$2,962,281	383,404	\$28,913,736
28,913,736	\$0	(4,208,127)	\$2,856,136	\$3,608,114	1,767,432	\$30,926,308
30,926,308	\$0	(4,729,886)	\$2,856,136	\$3,608,114	1,767,432	\$34,428,103
34,428,103	\$0	(5,276,437)	\$3,099,514	\$4,040,802	638,167	\$36,990,149
36,990,149	\$0	(5,901,633)	\$3,229,597	\$5,804,624	848,636	\$40,951,712
40,931,712	\$0	(6,698,087)	\$3,476,999	\$6,591,596	483,795	\$44,785,413
44,785,413	\$0	(7,689,769)	\$3,786,999	\$6,676,928	179,899	\$47,739,471
47,739,471	\$0	(8,624,076)	\$4,017,038	\$4,133,140	1,239,277	\$48,504,849
48,504,849	\$0	(9,302,657)	\$3,837,183	\$3,792,917	2,384,761	\$49,217,053
49,217,053	\$0	(9,745,706)	\$3,769,237	\$6,000,363	(59,912)	\$43,781,055
43,781,055	\$0	(9,768,265)	\$3,306,238	\$5,380,127	1,353,267	\$44,052,422
44,052,422	\$0	(9,865,736)	\$3,129,564	\$7,407,283	1,447,685	\$46,171,216
46,171,216	(\$204,933)	(10,452,027)	\$2,953,670	\$2,924,167	1,424,342	\$42,816,437
42,816,437	\$0	(10,814,977)	\$2,532,104	\$4,682,688	2,198,534	\$41,407,806
41,407,806	\$0	(10,882,414)	\$2,525,104	\$0	(8,963)	\$32,674,426
32,674,426	\$0	(10,692,686)	\$1,639,685	\$3,756,478	107,211	\$60,485,113
60,485,113	\$0	(12,874,140)	\$3,242,883	\$4,318,124	526,704	\$55,698,832
55,698,832	\$0	(12,742,777)	\$2,959,647	\$2,454,273	147,743	\$60,209,652
70,817,570	\$0	(13,338,799)	\$3,848,890	\$14,380,956	1,409,860	\$77,118,487
77,118,487	\$0	(13,802,504)	\$3,861,948	\$17,300,619	3,673,760	\$88,154,310
88,154,310	\$0	(13,735,234)	\$3,861,118	\$19,633,752	2,106,358	\$100,220,304
100,220,304	\$0	(13,837,578)	\$4,198,588	\$15,569,306	\$1,237,873	\$107,588,474

Year	Notional Account Balance Jan. 1	Contributions	Interest Credits	Pension Adjustment Account Payments	Special Allocations From Account A	Notional Account Balance Dec. 31	Account Receivable
1977	\$ 3,998,900	\$711,238	\$178,531	(\$182,869)	\$3,232,000	\$3,998,900	\$206,400
1978	6,948,943	1,451,666	532,777	(596,340)	1,562,000	6,948,943	
1979	10,134,343	2,270,271	1,193,913	(1,049,436)	1,816,200	10,134,343	
1980	16,611,545	3,378,791	1,667,123	(1,897,640)	1,334,000	13,462,271	
1981	20,414,385	4,320,344	2,228,168	(2,889,601)	0	20,414,385	
1982	24,567,296	4,505,815	3,258,632	(3,398,007)	0	24,567,296	
1983	28,913,736	4,654,338	3,769,429	(4,208,127)	0	28,913,736	
1984	33,576,226	5,145,611	4,375,479	(4,729,886)	0	33,576,226	
1985	38,563,706	5,694,364	4,763,724	(5,276,437)	0	38,563,706	
1986	43,354,910	5,994,500	5,421,442	(5,901,633)	0	43,354,910	
1987	48,536,870	6,213,334	6,377,810	(6,698,087)	0		

Teachers' Retirement Allowances Fund
Pension Adjustment Account and Fund Information

	Year	Fund Rate of Return	Rate Credited To the Pension Adjustment Account
1	2006	15.60%	5.23%
2	2005	14.77%	6.88%
3	2004	12.10%	7.72%
4	2003	13.00%	6.82%
5	2002	-2.10%	9.16%
6	2001	2.30%	8.92%
7	2000	11.00%	12.65%
8	1999	10.70%	-2.23%
9	1998	7.70%	9.44%
10	1997	11.10%	7.07%
11	1996	14.90%	7.84%
12	1995	13.20%	8.78%
13	1994	5.77%	10.00%
14	1993	9.85%	10.35%
15	1992	7.96%	10.60%
16	1991	9.63%	11.55%
17	1990	9.80%	11.60%
18	1989	11.45%	10.95%
19	1988	10.00%	10.75%
20	1987	9.90%	11.10%
21	1986	11.25%	12.67%
22	1985	10.85%	12.60%
23	1984	8.86%	12.75%
24	1983	10.45%	12.70%
25	1982	11.96%	12.50%
26	1981	14.02%	11.70%
27	1980	10.53%	10.75%
28	1979	10.60%	10.33%
29	1978	9.91%	10.25%
30	1977	8.91%	10.50%
AVERAGE		10.20%	9.73%

B. INDEXING PROVISIONS

Prov./Plan	Current Benefits Indexed	Deferred Benefits Indexed	Rate of Indexing	Funding	Notes
B.C.	All	Yes	Up to CPI, provided funding is available in the Inflation Adjustment Account (IAA)	Separate fund made up of EE contributions of 2.0%, ER contributions of 1.13% minus the cost of health benefits, and excess interest earnings	When the Basic Account is fully funded the ER will increase contribution to IAA to 2.13% less the cost of health benefits
ALTA	All	Yes	Service before Jan. 1/93 - 60% of Alta. CPI Service after Dec. 31/92 - 70% of Alta CPI	No separate fund	
SASK. (old plan) (new plan)	All	No	80% of CPI	No separate fund	
	All	No	Automatic Lesser of 3% and 80% of CPI Ad Hoc At discretion of Federation, provided total of automatic and ad hoc does not exceed 80% of CPI	No separate fund	
MAN.	All	Yes	Based on CPI but limited to amount separate adjustment account can pay	Half COLA cost funded by separate adjustment fund (to which 16.6% (Sept. 1/05) of gross teacher contributions directed) Province funds the other half from current revenues	Survivor receives 2/3 of adjustment which member would have received
ONT.	All	Yes	CPI to 8% with carry forward of excess	Funding integrated with main plan	
QUE. (RREGOP)	All	Yes	Current Benefits CPI before July 1/82 CPI less 3% July/82 to Jan. 1/00. Better of CPI-3% or 50% of CPI as of Jan. 1/00 Deferred Benefits Full CPI during period of deferment	No separate fund	
N.B.	All	Yes	CPI to 4.75%	No separate fund	
N.S.	All	No	CPI less 1% before Aug. 1/06. After July 31/06, tied to Plan's funded status; below 90%=0 indexing; 90%-99%=50% of CPI; 100%+=full CPI	No separate fund	
P.E.I.	All	Yes	60% of CPI, to a maximum increase of 4%	No separate fund	
N.L.	All (for members whose benefits are integrated with CPP, and have reached age 65 by Sept.)	Yes (Same as for current benefits)	60% of CPI to maximum 1.2% (limited to extent separate fund can pay)	1.7% of salary and allowances placed in separate indexing account (IA)	
CANADA	All	Yes	CPI	No separate fund Accounts amalgamated in 1992	



May 24, 2007

PRIVATE & CONFIDENTIAL

Mr. Jeff Norton
President & CEO
Teachers' Retirement Allowances Fund
330-25 Forks Market Road
Winnipeg, Manitoba R3C 4S8

**RE: TEACHERS' RETIREMENT ALLOWANCES FUND
VARIOUS COLA SCENARIOS**

Dear Jeff:

As requested we are pleased to provide the following information:

1. A summary of the percentage and value of full CPI granted by the PAA to pensioners by year of retirement from 1977 through 2007. Please see the attached Appendix for this information.
2. Assuming the July, 2007 pension adjustments were granted on only the normal form pension, plus the supplemental pension granted to 1976 (in other words, if no pension adjustment was granted on previously granted COLAs) the July, 2007 COLA would have been 0.70%. This is an increase of 0.07% from the actual July, 2007 pension adjustment of 0.63%.
3. The following table indicates the age above which a pension adjustment of 100%, 66.67%, and 50% of CPI could be granted effective July, 2007.

% of Full COLA to Be Granted,	% COLA to Be Granted ¹	COLA that can be Granted to Pensioners Equal to or Older Than Age ²	Percentage of Pensioners Who Would Receive No COLA ³
100%	1.60%	67	52%
66.67%	1.07%	63	33%
50.00%	0.80%	60	18%

1 Based on CPI of 1.6%
2 Based on ages rounded to the nearest integer
3 Based on 10,153 pensioners at December 31, 2006 eligible for a pension adjustment



Mr. Jeff Norton
May 24, 2007
Page 2

4. The following table indicates the pension adjustment that could be granted July, 2007 assuming that no pension adjustments will be granted to pensioners younger than the age in question.

COLA Granted to Pensioners Equal to or Older Than Age ¹	% COLA to Be Granted	% of Full COLA ²	Percentage of Pensioners Who Would Receive No COLA ³
60	0.80%	50.00%	18%
65	1.32%	82.50%	42%
70	2.58%	161.25%	63%

1 Based on ages rounded to the nearest integer
2 Based on CPI of 1.6%, assumes no limit under The Teachers' Pensions Act
3 Based on 10,153 pensioners at December 31, 2006 eligible for a pension adjustment

5. Assuming a full CPI was to be granted in 2007 the amount of pension on which a COLA could be granted would be limited to \$10,200. That is, any pension amounts in excess of \$10,200 would receive no COLA on the amounts above \$10,200. Under this scenario, 8,846 of the 10,153 pensioners would have their pension adjustment limited. For the individuals who have their pension adjustment limited, the average active service is 28.4 years, for the individuals who are not limited, the average active service is 12.4 years.

Please note that the above information is based on the data, methods and assumptions used in the December 31, 2006 actuarial valuation of the Pension Adjustment Account dated March 9, 2007. Please refer to this report for details on the data, methods, and assumptions used to produce the above results.



Mr. Jeff Norton
May 24, 2007
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In addition, note that under all scenarios the pensions eligible for a COLA were based on the sum of the: Normal Form pension + pre-1977 Supplement + post-76 supplement pensions, reduced to 2/3rds to account for beneficiary status, where appropriate.

Yours truly,

A handwritten signature in black ink that reads "Tim McGorman". The signature is written in a cursive style.

Tim McGorman, FSA, FCIA, CFA
Vice President
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APPENDIX - UPDATED TO 2007

Year	Relevant Increase in CPI	Actual COLA Granted	Actual % of CPI Granted	Dollar Value of Indexing if Full CPI Granted *	Dollar Value of Indexing of Actual COLA Granted **	% of Cumulative Full CPI Value Realized by Pensioner
1977	5.91%	5.80%	98.10%	\$47.40	\$31.62	66.70%
1978	9.46%	7.00%	74.00%	43.03	28.18	65.51%
1979	8.36%	6.00%	71.80%	36.71	24.38	66.40%
1980	9.80%	5.40%	55.10%	31.64	21.36	67.48%
1981	11.19%	5.51%	49.20%	26.32	18.83	71.53%
1982	12.10%	5.52%	45.60%	20.96	16.44	78.43%
1983	9.26%	7.10%	76.70%	15.89	14.22	89.49%
1984	4.55%	4.50%	98.90%	12.42	11.62	93.51%
1985	3.76%	3.76%	100.00%	10.84	10.08	93.04%
1986	4.35%	4.35%	100.00%	9.61	8.88	92.44%
1987	4.19%	4.19%	100.00%	8.29	7.60	91.60%
1988	4.15%	4.15%	100.00%	7.11	6.45	90.60%
1989	4.00%	4.00%	100.00%	6.03	5.39	89.36%
1990	5.13%	5.13%	100.00%	5.07	4.45	87.83%
1991	5.00%	5.00%	100.00%	3.95	3.36	85.12%
1992	3.78%	3.66%	96.70%	2.95	2.39	81.03%
1993	2.14%	2.14%	100.00%	2.26	1.74	77.08%
1994	1.70%	1.68%	99.00%	1.90	1.39	73.28%
1995	0.23%	0.23%	100.00%	1.63	1.14	69.60%
1996	1.75%	1.75%	100.00%	1.60	1.10	69.03%
1997	2.17%	2.17%	100.00%	1.36	0.88	64.35%
1998	0.73%	0.73%	100.00%	1.10	0.62	56.78%
1999	1.02%	0.78%	76.50%	1.02	0.55	53.71%
2000	2.58%	2.00%	77.50%	0.92	0.47	51.58%
2001	3.23%	1.77%	54.80%	0.69	0.31	44.32%
2002	0.70%	0.70%	100.00%	0.45	0.18	39.83%
2003	3.88%	1.68%	43.30%	0.41	0.14	33.69%
2004	2.00%	0.54%	27.00%	0.21	0.05	25.57%
2005	2.10%	0.40%	19.00%	0.12	0.03	25.03%
2006	2.20%	0.64%	29.10%	0.06	0.02	31.73%
2007	1.60%	0.63%	39.40%	0.02	0.01	39.40%

* Represents the additional amount the pensioner would have received above a basic pension of \$1/year from the year of retirement to 2007 if full CPI was granted in each year

** Represents the additional amount the pensioner actually received above a basic pension of \$1/year from the year of retirement to 2007 based on the actual COLAs granted in each year

Note: This Appendix is an update of information provided by Aon in a March 17, 2006 letter to TRAF titled "Teachers' Retirement Allowances Fund Historical PAA Indexing Percentages". Please refer to the aforementioned letter for additional description on how to interpret the above numbers.

THE FOLLOWING LETTER IS THAT
REFERRED TO IN THE "NOTE" AT THE
BOTTOM OF THE APPENDIX TO AON'S
LETTER OF MAY 24, 2007 REGARDING
"VARIOUS COLA SCENARIOS"



March 17, 2006

PRIVATE & CONFIDENTIAL

BY E-MAIL

Mr. Jeff Norton
President & Chief Executive Officer
Teachers' Retirement Allowances Fund
330 - 25 Forks Market Road
Winnipeg, MB R3C 4S8

**RE: TEACHERS' RETIREMENT ALLOWANCES FUND
HISTORICAL PAA INDEXING PERCENTAGES**

Dear Jeff:

Further to your request, we have determined the percentage of full CPI indexing that retired plan members have received under the PAA account from 1977 to 2005. The last column of the attached Appendix shows the percentage of full CPI indexing that has been granted to retired plan members depending on the year that their indexing commenced. For example:

- a member that retired and commenced receiving indexing in 1984 has received 95.99% of the amount that the member would have received had full CPI indexing been granted;
- a member that retired and commenced receiving indexing in 2004 has only received 24.13% of the full level of CPI indexing since that time.

We determined the value of a cost-of-living-adjustment (COLA) granted by calculating the amount the member would have received based on the actual COLAs granted and then subtracting off the amount the member would have received had no COLA been granted. For example, if indexing commenced in 2004, a member would have received \$1.0054 per dollar of basic pension and COLAs granted-to-date by 2004 and \$1.004 per dollar of basic pension and COLAs granted-to-date in 2005 given the actual COLA declared for those years. Thus, a member would have received in total \$2.0148 versus \$2.0 if no COLAs had been paid. The difference of \$.0148 per dollar of basic pension is the value of the COLA received. A similar analysis was performed assuming full CPI was granted. The amount of the additional benefit received from COLA increases was then divided by the additional benefit that would have been received if full CPI had been granted and the result is the percentage of full CPI that has been granted for that cohort of retirees.

Aon Consulting Inc.

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Mr. Jeff Norton
March 17, 2006
Page 2

Although contemplated, no additional refinements were made to the percentages to account for the time value of the COLAs granted. To make such an adjustment would have required an interest rate be determined for each applicable year. The difficulty in picking and justifying an appropriate interest rate for discounting was weighed against the additional value of adding in such an adjustment and it was felt that such an adjustment would not add materially to the information derived from the methodology identified above.

Please note that no adjustment was made to compensate for the fact that members do not receive indexing in the year of retirement, or to account for the timing of COLAs granted in the year.

Please call if you have any questions on the attached Appendix.

Yours truly,

Brad Prokop, ASA
Consultant
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APPENDIX

Year	Relevant Increase in CPI	Actual COLA Granted	Actual % of CPI Granted	Dollar Value of Indexing if Full CPI Granted*	Dollar Value of Indexing of Actual COLA Granted**	% of Cumulative Full CPI Value Realized by Pensioner
1977	5.91%	5.91%	100.00%	\$42.20	\$28.47	67.47%
1978	9.46%	7.00%	74.00%	38.23	25.27	66.09%
1979	8.36%	6.00%	71.80%	32.51	21.78	67.01%
1980	9.80%	5.40%	55.10%	27.92	19.02	68.13%
1981	11.19%	5.51%	49.20%	23.10	16.71	72.34%
1982	12.10%	5.52%	45.60%	18.26	14.54	79.60%
1983	9.26%	7.10%	76.70%	13.70	12.52	91.39%
1984	4.55%	4.50%	98.90%	10.59	10.17	95.99%
1985	3.76%	3.76%	100.00%	9.17	8.78	95.73%
1986	4.35%	4.35%	100.00%	8.08	7.70	95.33%
1987	4.19%	4.19%	100.00%	6.91	6.55	94.77%
1988	4.15%	4.15%	100.00%	5.87	5.52	94.09%
1989	4.00%	4.00%	100.00%	4.92	4.58	93.22%
1990	5.13%	5.13%	100.00%	4.07	3.75	92.13%
1991	5.00%	5.00%	100.00%	3.09	2.79	90.15%
1992	3.78%	3.78%	100.00%	2.23	1.94	86.99%
1993	2.14%	2.14%	100.00%	1.64	1.36	82.95%
1994	1.70%	1.68%	99.00%	1.33	1.06	79.47%
1995	0.23%	0.23%	100.00%	1.11	0.84	75.95%
1996	1.75%	1.75%	100.00%	1.08	0.82	75.39%
1997	2.17%	2.17%	100.00%	0.89	0.63	70.65%
1998	0.73%	0.73%	100.00%	0.68	0.43	62.43%
1999	1.02%	0.78%	76.50%	0.62	0.36	58.91%
2000	2.58%	2.00%	77.50%	0.54	0.31	56.75%
2001	3.23%	1.77%	54.80%	0.38	0.18	48.74%
2002	0.70%	0.70%	100.00%	0.21	0.09	44.84%
2003	3.88%	1.68%	43.30%	0.18	0.07	36.33%
2004	2.00%	0.54%	27.00%	0.06	0.01	24.13%
2005	2.10%	0.40%	19.05%	0.02	0.00	19.05%

* Represents the additional amount the pensioner would have received above a basic pension of \$1/year from the year of retirement to 2005 if full CPI was granted in each year

** Represents the additional amount the pensioner actually received above a basic pension of \$1/year from the year of retirement to 2005 based on the actual COLAs granted in each year

APPENDIX C

Summary of Various COLA Scenarios

- I. Future COLAs expected on average from PAA
 1. Assumes no change to PAA structure (see PAA projection valuation) 0.80%
- II. Additional Future COLA expected on average from moving to a portfolio type approach for interest crediting
 1. Adopting a portfolio approach 0.18%
 2. Assuming a greater of approach 0.50%
- III. Additional Future COLA expected on average from Contribution Increases to Account A (same PAA structure)

* Rough rule of thumb - if contributions increase by x%, additional COLA is approximately 10% of additional increase %

For example, assuming active teacher contributions to Account A increase by 0.9%, COLAs will increase by approximately 0.09%.