

CAAT Pension Plan: Benefit Projections Summary

Presentation to the Nipissing
University Faculty Association

16 April 2018

Required Readings

- Pension Discussion Paper #1 (June 2016)
- Pension Discussion Paper #2 (August 2016)
- Presentation by Larry Patriquin to NUFA Members (September 2016)
- Presentation by Derek Dobson, CEO of CAAT, to NUFA Members (October 2016)
- Benefit Projections Summary: CAAT and the Nipissing University Pension Plan (January 2018)

Benefit Projections Summary

- Prepared by the CAAT Pension Plan at the request of the Nipissing University Faculty Association (NUFA)
- Research on how:
 - (i) three sample NUFA-FASBU members might fare under
 - (ii) five retirement scenarios at
 - (iii) three retirement ages.

Benefit Projections Summary

- This research gives us 45 permutations (or 45 benefit projections):

(i) three sample members multiplied by

(i) five retirement scenarios multiplied by

(i) three retirement ages (55, 60, and 65).

Note that “sample” members are based on *real* NUFA members, with real account balances.

Sample NUFA-FASBU Member

- This presentation will focus on one of the three sample NUFA members, and how she would fare under five retirement scenarios and three retirement ages (so, 15 benefit projections in total).
- Our sample member is age 50, with 14 years of service (that is, she began work at age 36).
- She is able to use her balance in the Nipissing University Pension Plan (“NUPP”) to purchase her 14 years of past service in the CAAT plan.

Note re: Purchasing Service

- Note that some NUFA members may not have enough money to purchase their full years of past service in the CAAT Plan.
- Note also that if NUFA entered the CAAT Plan, members would not be obligated to use their NUPP balances to purchase past years of service in CAAT.

Five Retirement Scenarios: Summary

	Going Forward	NUPP Balance
1	CAAT	CAAT
2	CAAT	NUPP Average Rate of Return (4.9%)
3	CAAT	NUPP Low Rate of Return (3.0%)
4	NUPP Average Rate of Return (4.9%)	NUPP Average Rate of Return (4.9%)
5	NUPP Low Rate of Return (3.0%)	NUPP Low Rate of Return (3.0%)

Five Retirement Scenarios

- (1) All CAAT: The member joins the CAAT plan going forward. In addition, she uses her NUPP balance to purchase years of past service in the CAAT plan.
- (2) CAAT + NUPP at 4.9%: The member joins the CAAT plan going forward. However, she continues to invest her current NUPP balance in the NUPP plan, with net earnings going forward of 4.9% per year.

Question: Why 4.9%?

Assumptions

- The net average annual rate of return of NUPP members over ten years was 5.7%.
- The net average annual rate of return for the CAAT Plan over ten years was 6.6%. (CAAT outperformed NUPP by 0.9%)
- CAAT's projected long-term average rate of return is 5.6%.
- Because DB plans outperform DC plans by 0.7% annually on average, CAAT assumed that NUPP members will have a net average annual rate of return going forward of 4.9% (which is 5.6% minus 0.7%).
- All sample members are expected to live to age 89.

Five Retirement Scenarios (continued)

- (3) CAAT + NUPP at 3.0%

Question: Why 3.0%?

- (4) All NUPP at 4.9%: NUFA does not join the CAAT plan and so the member continues to invest her current and future NUPP balance in the NUPP plan, with net earnings going forward of 4.9% per year.
- (5) All NUPP at 3.0%

Table 1
Rates of Return (ROR) for NUPP Members, 10 Years

Quintile	Lowest ROR (%)	Highest ROR (%)	Average ROR (%)
First	1.32	4.72	3.33
Second	4.74	5.49	5.10
Third	5.50	6.41	5.97
Fourth	6.43	6.98	6.80
Fifth	6.98	8.51	7.14

Table 2

Expected Total Lifetime Retirement Incomes

(15 benefit projections, rounded to the nearest \$10,000)

#	Description	Retire at 55	Retire at 60	Retire at 65
1	All CAAT	1,790,000	2,380,000	2,480,000
2	CAAT + NUPP at 4.9%	1,560,000	2,280,000	2,800,000
3	CAAT + NUPP at 3.0%	1,470,000	2,070,000	2,440,000
4	All NUPP at 4.9%	1,300,000	1,760,000	2,280,000
5	All NUPP at 3.0%	1,200,000	1,500,000	1,820,000
	Years of service →	19	24	29

Table 3

**Expected Difference in Total Lifetime Retirement Incomes,
Compared to “All CAAT”**

#	Description	Retire at 55	Retire at 60	Retire at 65
1	All CAAT			
2	CAAT + NUPP at 4.9%	- 230,000	- 100,000	+ 320,000
3	CAAT + NUPP at 3.0%	- 320,000	- 310,000	- 40,000
4	All NUPP at 4.9%	- 490,000	- 620,000	- 200,000
5	All NUPP at 3.0%	- 590,000	- 880,000	- 660,000
	Years of service →	19	24	29

Summary of the Data

- In the benefit projections, our sample member earns more retirement income if she moves into the CAAT Plan and uses her NUPP amount to purchase years of service in CAAT, with one exception (contained inside the black border).
- Her next best options are to go forward in the CAAT Plan and continue investing her money (and the higher her returns, the better off she will be).

Summary of the Data

- The worst options involve moving forward completely in the NUPP, particularly if she is a cautious/conservative/inattentive investor.
- In the worst-case scenario (3.0% returns in NUPP, retiring at age 60), she would end up with just 63% of the money she could have earned if she had gone “all CAAT” (or **\$880,000** less lifetime income).
- The bottom 20% of NUPP members (30 people in total) will almost certainly face stressful financial challenges in retirement, which we can avoid by joining CAAT.

Summary of the Data

- The good news: If we exclude the conservative “all NUPP” investor (at 3%), we can say that our members will do reasonably well under any of the other (12) benefit projections.
- However, with the *one* exception (contained inside the black border), she will *still* do better moving forward “all CAAT.”
- If she retired at age 60 in “all CAAT,” she would earn **\$620,000** more lifetime income than an average “all NUPP” (at 4.9%) investor.

We have equal pay for equal work ... but not equal pensions for equal pension contributions

- Let's take two Associate Professors at Step 5 on the salary grid. Both do “substantially the same work” (which may have included pay increases “based on a system that objectively measures merit”). And both receive the same salary.
- They also make the same pension contributions, yet they may end up receiving radically different pensions.
- Is this equitable?

“All CAAT” vs. “All NUPP”

- The “all NUPP” member at 4.9% who came closest to earning the same amount of lifetime income as the “all CAAT” option (with both earning roughly \$3 million) was someone with the following characteristics:
 - (i) he started work at age 27;
 - (ii) he will earn the average rate of return (4.9%) (that is, he is a decent investor);
 - (iii) he retires at age 65; and
 - (iv) he works for 38 years.

“All CAAT” vs. “All NUPP”

- *This suggests that the likelihood of an “all NUPP” investor earning more lifetime income than an “all CAAT” member depends on a combination of four factors:*
- *(1) starting work younger than age 30 (that is, younger than 90% of NUFA members do);*

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- *(1) starting work younger than age 30 (that is, younger than 90% of NUFA members do);*
- *(2) investing well (average or above average returns);*

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- *(1) starting work younger than age 30 (that is, younger than 90% of NUFA members do);*
- *(2) investing well (average or above average returns);*
- *(3) not taking early retirement (< age 65); and*

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- *(2) investing well (average or above average returns);*
- *(3) not taking early retirement (< age 65); and*
- *(4) working for roughly four decades.*

Early Retirement?

For members hoping to retire between ages 55 and 60, after roughly 20 to 25 years of work, ...

... the “all CAAT” pension would be notably better than the “CAAT + NUPP” options and it would be vastly superior to the “all NUPP” options.

“All NUPP” vs. CAAT + NUPP

We use each NUPP member’s personal rate of return,
and continue using it going forward.

Retire at age ...	Total members	Better off “All NUPP” (number)	Better off “All NUPP” (percent)
55	103		
60	123		
65	133		
70	143		

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60	123	0	0%
65	133	13	10%
70	143	55	38%

Planning Your Retirement: NUPP vs. CAAT

- Can you plan for when you will retire? Note the difference between ...
 - I *think* I can retire.
 - I *know* I can retire.
- Can you plan your spending, including any “extra” funds you may have from downsizing your house, Tax-Free Savings Accounts, etc.? Note the difference between ...
 - I *think* I can spend my money.
 - I *know* I can spend my money.

Reducing Risk

- Even if you are a NUPP investor who is doing reasonably well, it should be noted that you are doing so while placing all of the downside risks on your own shoulders.
- These risks include ...

Reducing Risk

- (i) managing your investments while working (the “accumulation phase”);
- (ii) facing market-timing risks (such as a market “crash”) close to your retirement date;
- (iii) managing your investments in a Life Income Fund (LIF) while retired (the “decumulation phase”) (unless you purchase an annuity); and
- (iv) the possibility of outliving your retirement “nest egg” (unless you purchase an annuity).

Reducing Risk

- NUFA members can greatly minimize these risks by joining CAAT. The CAAT plan would provide members with:
 - (1) predictable incomes for as long as they live;
 - (2) incomes which are (mostly) inflation-protected;
 - (3) “bridging,” supplementary pensions for early retirees;
 - (4) pensions for any surviving spouses.

Reducing Risk

Choosing the CAAT Plan involves choosing *security and peace-of-mind* over *uncertainty and heightened risk*.

Meanwhile, the NUPP gives you a relatively small probability of being marginally rewarded for having taken those risks.

Table 4

Employer & Member Contribution Rates: NUPP vs. Teachers' Pension Plan (TPP)

Plan	< YMPE *	> YMPE *
NUPP	5.7%	10.0%
TPP in 2017	11.5%	13.1%
TPP in 2018	10.4%	12.0%

* Canada Pension Plan maximum income for contributions in 2018 is \$55,900.

Employer Contribution Rates: NUPP vs. Teachers' Pension Plan (TPP)

- NUFA-NUPP average annual employer contributions per member = **\$8,150**.
- NUFA-TPP average annual employer contributions per member = **\$11,530**.
- Each year the employer adds, on average, *an additional \$3,380* into the pension contributions of NUFA-TPP members, compared to NUFA-NUPP members.

Employer Contribution Rates: NUPP vs. Teachers' Pension Plan (TPP)

- Over a 30-year career, TPP members receive *an additional \$100,000 in compensation* from the employer, compared to NUFA-NUPP members.
- What is the solution to this inequity?
The CAAT Pension Plan for NUPP members!

Costs to the Employer

- Assumptions: (1) We would enter the CAAT Plan in January 2020, and (2) CAAT's stability contributions will have fallen from 3% to 2% by January 2020.
- Annual additional cost of the CAAT Plan for FASBU members (*excluding* the potential savings of retirements) are **1.80%** of total FASBU compensation costs.
- Annual additional cost of the CAAT Plan for FASBU members (*including* the potential savings of retirements) are **1.55%** of total FASBU compensation costs.

Costs to the Employer

- Potential savings to Nipissing are associated with replacing the high salaries of retiring late-career faculty with the much lower salaries of early-career faculty.
- In 2019, a full Professor at Nipissing at the top of the salary scale will be earning almost 2.3 times an Assistant Professor at the base of the scale (\$172,600 vs. \$76,200).

Table 5

Rate of Increase of Total Compensation at Ontario Universities, 2018-19 and 2019-20

University	2018-19 (%)	2019-20 (%)		University	2018-19 (%)	2019-20 (%)
Brock	1.40	1.50		Queen's	1.75	?
Guelph	1.50	1.50		WATERLOO	2.80	2.15
Laurentian	1.60	1.70		Wilfrid Laurier	1.65	1.50
McMaster	1.70	?		Windsor	1.60	1.75
<i>Nipissing</i>	2.83	?		*****	*****	*****
					*	*
OCADU	3.02	3.02		<i>Weighted average</i>	1.89	1.79

Ontario Universities Negotiating in 2017-18 and 2018-19

Carleton	Toronto
Ottawa	Western
Ryerson	York

These six universities employ 7,500 of Ontario's 14,000 faculty (54%).

Table 6

Total FASBU Compensation Increases at Nipissing 2016-17 to 2018-19

Year	Base Salary	Salary (one additional step to all ranks)	PER	Benefits	Total
2016-17	1.50	0.00	0.10	0.14	1.74
2017-18	1.75	0.62	0.20	0.16	2.73
2018-19	1.75	0.71	0.20	0.17	2.83

CAAT Opt-Out for NUPP Members?

- If we get into CAAT, we can negotiate with the CAAT Board for an “opt-out” on a go-forward basis for current NUPP members who are ages 55 and over.
- Negotiations would take place after we apply to enter the CAAT Plan.
- Note that we may *not* be able to get an “opt-out,” but we would try to.

CAAT Valuation 2018

- CAAT Plan funding on a “going-concern” basis:

2015	107%
2016	110%
2017	113%
2018	118%

Contribution reductions are coming
... relatively soon?

Online Tools

- If we approve entering the CAAT Plan as part of our negotiations package, CAAT can design online tools to help members:
 - (i) project when they could retire,
 - (ii) estimate their future pension, and
 - (iii) estimate how many years of past service they could purchase in CAAT.

Presentation by CAAT

- Before we enter negotiations, we will have a final presentation by Derek Dobson, CEO of CAAT (perhaps in October).
- *What information would you like to see in this presentation? Contact Larry Patriquin with your requests. (NUFA will send you some reminders in late summer.)*

**Never forget that a pension is
*insurance against living a very long life.***

Montreal seniors' home holds birthday party for its 20 centenarians

The party at the Waldhorf seniors' residence was held to celebrate 20 of its oldest residents, who have lived a combined 2,030 years. Mike Levine, 101, and Irene Klein, 100, have passed the centennial mark (Radio-Canada).



Questions?

