Régie des rentes Québec

ADAPTING THE PENSION PLAN TO QUÉBEC'S NEW REALITIES

Study on the Impacts
of Proposed Changes on the Pensions
of Future Beneficiaries

Service de l'évaluation
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PREFACE

A working paper entitled *Adapting the Pension Plan to Québec's New Realities* was tabled in the Québec National Assembly on 23 October 2003 by Mr. Claude Béchard, Minister of Employment, Social Solidarity and Family Welfare.

Thereafter, the Régie des rentes du Québec carried out an information campaign on the changes proposed in the working paper and met with several groups and the representatives of several organizations. They expressed a desire to have a more detailed description of the impacts of the proposed changes.

This document is the response to that desire. We hope that it will facilitate informed debate during the parliamentary hearings on the working paper, which will begin on 24 February 2004.

1. THE QUÉBEC CONTEXT

1.1 The new realities of the labour force

The working paper *Adapting the Pension Plan to Québec's New Realities*, tabled in the Québec National Assembly on 23 October 2003, explains that population aging will have significant repercussions on the size and composition of the working-age population. Québec, where aging will be more significant than elsewhere in North America, will be faced with a reduction in its population aged 20 to 64. Parallel to the aging of the population and to an increase in the life expectancy of retirees, workers have tended, in the last several decades, to retire from the labour force earlier and earlier, and this tendency is even more pronounced in Québec. These realities exert an upward pressure on the costs of the Pension Plan.

The labour force is changing in several ways and conditions are currently becoming more favourable for the employment of older workers. The transition mechanisms from work to retirement provided for by the Québec Pension Plan do not fit these realities because they do not provide enough flexibility in the different forms of retirement. The working paper proposes several changes that would increase flexibility and make working after retirement age more attractive.

The new provisions are intended to allow individuals to decide for themselves their form of retirement, without one approach being more advantageous than another. In every case, the retirement pension will be calculated according to the same rules, and all earnings on which the worker has made contributions will serve to increase his or her pension, up to the maximum allowed.

1.2 The new family realities

The working paper also describes how life as a couple and family realities have changed since the Québec Pension Plan was created. Life together is now based on the economic interdependence of the spouses rather than the dependence of the person who stays at home on the one with paid employment. Both parents contribute to the Plan and save for retirement. The death of a worker no longer has the same impact; the survivor is less affected financially, or rather, is not affected in a permanent way. In addition, because of the instability of unions, the surviving partner is not necessarily the other parent of the deceased person's children.

The working paper shows that the principles that guided the lawmakers in 1966 are no longer appropriate. Protection in the event of death should provide better financial protection for children and indirectly to those responsible for the children. This protection should also support the surviving spouse in the period following the death, without necessarily providing for a pension payable for life in every case.

1.3 The impact of the proposed changes

This study is meant to be a complement to the working paper. It is intended to explain the impact of the proposed changes on the pensions of future beneficiaries. In addition, it provides the reader with tools which make it possible to judge whether the proposed changes submitted for consultation achieve the desired goals, namely:

– provide more flexibility in the forms of retirement available;
– make working after the age of retirement more attractive;
– channel financial support following the death of a worker to those who need it most.

The approach used to estimate the impact of the proposals has two components:

1) a "micro approach" compares the pension that a beneficiary with a particular career profile would receive before and after adoption of the proposed changes;
2) a "macro approach" makes it possible to simulate the overall impact of the proposals on all beneficiaries. The data used in the macro study are those from the actuarial report as at 31 December 2000.

The career profiles of workers who contribute to the Québec Pension Plan vary greatly. It would be difficult to choose just one profile that reflects the reality of a majority of contributors. The profiles of Pierre and Marie, shown below, are plausible, but a multitude of other profiles would also be possible.

	Career Earnings	
Age	**Pierre**	**Marie**
18-24	10 000 $	5 000 $
25-34	30 000 $	15 000 $
35-41	35 000 $	8 000 $*
42-54	35 000 $	20 000 $
55-59	25 000 $	15 000 $
60-64	16 000 $	10 000 $

* The period during which Julie was under age 7.

Marie has lower career earnings than her spouse Pierre. Furthermore, she worked part-time with an annual salary of 8 000 $ from the time her daughter Julie was born until her daughter turned 7.

Pierre's and Marie's earnings are expressed in 2003 dollars, which means that they are already adjusted according to changes in the Maximum Pensionable Earnings (MPE)[1]. In addition, to make them easier to understand, calculations in the appendix and results shown in the tables of this study are all expressed in 2003 dollars.

The data relating to Pierre and Marie in the "micro approach" are presented to clearly show the impact of the proposed changes in a particular case. The considerations relative to all beneficiaries (the "macro approach") are explained in the sections focusing on the overall impacts of the proposals.

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[1] The adjustment of the earnings entered in the Record of Earnings for the purposes of calculating pensions is made by multiplying the earnings for each year between age 18 and the time of the calculation by:

$$\frac{\text{AMPE (average of the MPE of the year of the calculation and those of the 4 previous years)}}{\text{MPE(year of earnings)}}$$

This method of adjusting earnings will continue to be used after the adoption of the proposed changes.

2. BENEFICIARIES OF A RETIREMENT PENSION

2.1 Transitional measures

In general, the proposed changes that are accepted following the consultation will come into force as of 1 January 2008. Pensions already in payment at that time will not be affected by the new measures; they will continue to be paid and will not be recalculated. In the case of retirement pensions, the new rules for calculation will be introduced gradually so that they will not be fully effective until 2012.

2.2 Calculation of the retirement pension[2]

Table 1 shows the monthly retirement pensions of Pierre and Marie, according to the age when the pension begins and the current and proposed provisions. Pensions beginning at age 60 are shown before actuarial adjustment in order to highlight the impact of the proposed changes. To obtain the amount of the pension that will actually be paid, the amount shown in the table must be reduced by 30% (applicable actuarial adjustment).

Table 1: Retirement pensions of Pierre and Marie (before actuarial adjustment)

	Pierre		**Marie**	
	Current Plan	Proposed Plan	Current Plan	Proposed Plan
	$	**$**	**$**	**$**
Pension starting at age 60:				
- initial amount	661	622	346	325
- amount at age 65	663	664	352	351
Pension starting at age 65	628	664	331	349

Observations:

Current Plan:

- The pension starting at age 60 is higher than the pension starting at age 65. Why? Because the retirement pension is calculated on the basis of the contributor's average career earnings. The individual who continues to work after age 60 at a salary lower than his or her average career salary makes contributions that lower the average earnings, thus leading to a reduction in the pension.
- The increase in the pension, for each year worked after age 60, is small relative to the contributions made.

Proposals

- The pension is lower at age 60 but increases each year that the person continues to work.

[2] The details of the calculation of Pierre and Marie's pensions can be found in Appendix 2.

- The pension that a person receives at age 65 is basically the same (before actuarial adjustment) whether the pension starts at age 60 and the person continues to work or the pension does not start until age 65.

Years spent caring for young children

- The provisions (current and proposed) relating to the years spent caring for children under age 7 have similar effects: Marie's pension paid at age 60 is increased 28 \$ a month (from 318 \$ to 346 \$) in the current plan and 25 \$ a month (from 300 \$ to 325 \$) in the proposed plan.

2.3 Overall impact of the new rules for calculating retirement pensions

2.3.1 Age when the pension begins

- The worker will no longer be required to have stopped working or to have made a phased retirement agreement in order to be eligible for a retirement pension at age 60. This measure will be advantageous to anyone who wishes to work reduced hours or in a less demanding job and receive their pension to compensate for part of the loss in income.
- The overall impact of the new rules for calculating retirement pensions will be limited. In the long run, pensions will be reduced an average of 1%. The average pension for men will not be affected while the average pension for women will be reduced by 2%.
- In general, the new rules will have the effect of reducing the pensions of individuals who start their pension at age 60. On average, pensions will be reduced by 5% for men and 7% for women (see table 2). The maximum reduction could reach 11% if a person has spent less than 36 years of active participation in the labour force. Individuals applying for their pension at age 60 who have worked continuously since their 18th birthday will benefit from the maximum increase of 5%.
- Furthermore, individuals who retire after age 62 will, on average, find the new calculation rules to their advantage. The average pension of men who retire at age 65 will be increased by 6%. Pensions of women who retire at that age will be increased on average by 8% (table 2). The maximum increase in pensions beginning at age 65 will be 17,5%.
- On average, the pensions of men retiring after age 65 will by increased by 19% and those for women by 22% (table 2).
- Individuals who retire at age 70 will benefit from a pension increase of at least 9% and possibly reaching 42%. According to the current provisions, an individual is entitled to a retirement pension calculated on the basis of the average of the 44 best years of earnings when the pension begins at age 70. If the proposals are accepted, all earnings since the 18th birthday will be taken into account in the pension calculation, that is, the possibility of 52 years of earnings. In addition, the actuarial adjustment factor (AAF) applicable when an individual applies for his or her pension after age 65 will be increased from 0,5% for each month that retirement is delayed to 0,7%.

Table 2: Average impact* of the new method of calculating the retirement pension according to sex and age when the pension begins

Age when pension begins	Men %	Women %
60	-5	-7
61	-1	-4
62	1	-1
63	2	1
64	4	4
65	6	8
66 or over	19	22
Total	**0**	**-2**

* This impact includes the effect on the pensions of contributions made after the pension begins.

2.3.2 Other sources of change

- Other factors, including the maturity of the Plan, general economic growth and changes in the labour force, will also have an impact on the pensions of future retirees. Taking into account these other factors, the pensions payable to retirees in 2030 will be, by and large, higher than those paid to new retirees in 2003. In constant dollars, the average pension for men will increase by 18% and the average for women will increase by 45%. The greater increase in women's pensions is explained principally by their increased participation in the labour force (table 3).

Table 3: Net change in the average pension (in constant dollars) between 2003 et 2030*, according to sex and age when the pension begins

Age when pension begins	Men %	Women %
60	13	40
61	17	43
62	19	46
63	20	48
64	22	51
65	24	55
66 or over	37	69
Total	**18**	**45**

* On the basis of accepted assumptions, average salaries will increase by 37% during this period.

3. BENEFICIARIES OF A DISABILITY PENSION

3.1 Calculation of the disability pension

Table 4 shows the amounts of the disability pensions payable to Pierre and Marie if they become disabled at age 55. The disability pension is converted into a retirement pension when they turn 65.

Table 4: Disability pension and retirement pension at age 65*

Type of pension	Pierre Current Plan	Pierre Proposed Plan	Marie Current Plan	Marie Proposed Plan
	$	$	$	$
Disability pension	875	896	629	680
Retirement pension at 65 (including actuarial adjustment)	471	443	242	227
Income at 65 (including the Old Age Security pension)	924	896	695	680

*The results are all expressed in 2003 dollars and, for this reason, do not take into account the effect of wage indexation on pensions.

Observations:

- The proposed changes have the effect of increasing the pension payable at the time the worker becomes disabled and reducing the retirement pension payable at age 65.
- The proposals are more advantageous for Marie. Her disability pension will increase by 8% while Pierre's will increase by 2%. The increase in the fixed portion of the pension (which will go from 370 $ to 453 $) has a greater impact on workers with low incomes.
- The proposed changes strengthen coherence with regard to the Old Age Security pension and assure disabled individuals of a more stable income throughout their lives.

3.2 Overall impact of the new rules for calculating disability pensions

- The new calculation method would have the effect of increasing disability pensions an average of 4%, that is, an increase of approximately 30 $, on the basis of average monthly pensions paid in 2003. Three factors contribute to explain this change:
  (a) the increase in the fixed portion of the pension, which will rise from 370 $ to 453 $ a month;
  (b) the new methods for calculating the retirement pension;
  (c) the actuarial adjustment factor which is applied to the variable portion of the disability pension in place of the factor 75%.
- Furthermore, the retirement pension of a disabled person turning 65 will be lower than the one currently paid since the variable portion of the disability pension will simply continue to be paid and indexed to inflation. Currently, the retirement pension payable at age 65 is recalculated to take into account changes in salaries from the date on which the worker became disabled until the 65th birthday.

- In the long term, changes affecting the retirement pensions of disabled persons who turn 65 will have the effect of reducing women's pensions by an average of 17% and those of men by 12%. On the basis of the current amounts, this corresponds to a reduction of approximately 64 $, for both men and women.
- This reduction is relatively more significant than the increase in the pension paid at the time the disability occurs. However, since the retirement pension is often paid for a shorter period of time, the changes will not have much of an impact on the overall amounts that a worker can expect to receive. This is illustrated in table 5. According to the proposals, a man who becomes disabled at age 45 can expect to receive benefits of an overall value of 97 786 $, that is, 2% less than what he would have received under the current plan. A woman who becomes disabled at the same age can expect to receive benefits with a value of 78 957 $, that is, 4% more that what is payable under the current plan.

Table 5: Present value of disability and retirement pensions payable to a disabled person

	Men			Women		
Age when disability occurs	Current Plan	Proposed Plan	Change	Current Plan	Proposed Plan	Change
	$	$		$	$	
35	94 115	95 472	+ 1 %	82 489	87 711	+ 6 %
45	99 617	97 786	- 2 %	75 828	78 957	+ 4 %
55	89 410	86 165	- 4 %	69 567	69 928	+ 1 %
62	87 286	89 093	+ 2 %	59 916	61 898	+ 3 %

3.3 Impact of eliminating the relaxed definition of disability

- In addition to modifying the calculation of a disabled beneficiary's pension, it is proposed to provide protection in the event of a severe and permanent disability to all workers under age 65 and to remove the relaxed definition of disability for workers aged 60 to 64 who are no longer able to perform their usual work.
- This measure would reduce the number of beneficiaries of a disability pension by 16% 5 years after being implemented and by 18% in the long term, taking into account the effect of the aging of the population. The projected number of beneficiaries in 2025 would decrease from 83 000 to 67 800 (table 6). Individuals affected by this change will be able to apply for their retirement pension in the same way as other workers. They will also have the option of increasing their pension if they find a job other than their usual one.

Table 6: Projection of the number of beneficiaries of a disability pension in 2025

	Age 20 to 59	Age 60 to 64	Age 20 to 64
Current Plan			
Men	19 900	26 100	46 000
Women	18 700	18 300	37 000
Total	38 600	44 400	83 000
Proposed Plan			
Men	19 900	16 200	36 100
Women	18 700	13 000	31 700
Total	38 600	29 200	67 800

- In 2003, the average pension beginning at age 60 was 763 $ for the beneficiary of a disability pension and 341 $ for the beneficiary of a retirement pension. Individuals affected by the removal of the relaxed definition of disability will experience a reduction of their pension for a maximum of 5 years, that is, for the period from age 60 to age 65.

4. SURVIVING SPOUSES WHO ARE NOT RETIRED AT THE TIME OF THE DEATH

4.1 Transitional measures

We have already mentioned that the proposed changes that are accepted following the consultation will come into force as of 1 January 2008 and that pensions already in payment on that date will not be affected by the new measures. Furthermore, individuals aged 50 or over on 1 January 2003 who, after that date, become surviving spouses, will be entitled, until age 65, to a pension calculated according to the provisions currently in force. As of age 65, they will be entitled to a pension equal to 60% of the retirement pension of the deceased contributor.

4.2 Calculation of the temporary pension of the surviving spouse

Table 7 shows the pensions payable to Marie if Pierre died at age 55.

Table 7: Pension paid to Marie, surviving spouse of Pierre who dies at age 55

	Current Plan	Proposals
SSP* at age 55	652 $	896 $
Paid until	Age 65	Age 58

*Surviving Spouse's Pension

Observations:

- The proposed pension is higher at the time of the death, but is paid for a shorter period of time.
- The pension paid to Marie is exactly what Pierre would have received if he had become disabled.

4.3 Effect of the transfer of earnings on the spouse's retirement pension

In addition to the temporary pension, Marie also benefits from the transfer to her name of 60% of the earnings entered under Pierre's name during the period of their life together. The transfer of earnings is similar to the partition of earnings that takes place at the time of the breakdown of a union resulting from divorce or legal separation.

Table 8 illustrates the impact of the transfer of earnings on Marie's retirement pension by comparing the amounts of the pensions payable before and after transfer. Table 8 also indicates the amounts of the pensions payable to Marie if the couple's union ended in divorce rather than by Pierre's death and if there is a partition of earnings. In this example, Marie decides not to reduce her participation in the labour force after Pierre's death (or a divorce) and continues to have earnings of 20 000 $ a year, from age 55 to age 64.

Career earnings:	Age 18-24: 7 years at 5 000 $
	Age 25-34: 10 years at 15 000 $
	Age 35-41: 7 years at 8 000 $ (Julie is under age 7)
	Age 42-64: 23 years at 20 000 $

This change in Marie's behaviour is proposed to illustrate how a person can adjust to a new situation in order to avoid a significant drop in the standard of living.

Table 8: Marie's retirement pension before and after transfer and after partition of earnings

	Retirement pension		
	Before transfer of earnings	**After transfer of earnings*** (death)	**After partition of earnings*** (divorce)
	$	**$**	**$**
Retirement at age 60	238	426	316
Retirement at age 65	395	660	504
Combined retirement/survivors' pension at age 65 (current plan): 630 $			

* To calculate the earnings to be transferred or partitioned, it is assumed that Pierre and Marie are the same age and that they began living together at age 25.

Observations:

- The transfer of earnings has a significant impact on Marie's retirement pension. Her pension will go from 238 $ to 426 $ (an increase of almost 80%) if she retires at age 60 and from 395 $ to 660 $ (an increase of 67%) if she retires at age 65.
- By maintaining her earnings until age 65 at the level they were at the time of Pierre's death, Marie will be entitled, at age 65, to a pension of 660 $. This pension is higher than the combined retirement/survivors' pension of the current plan.
- The provisions in the event of death are more generous than those applicable following a divorce.

4.4 Present value of the benefits

Before looking at the present values of the benefits, it is interesting to know who benefits from pensions paid under the Plan following a contributor's death. Table A-1 in Appendix 1 provides interesting information on the beneficiaries of survivors' benefits. The majority of surviving spouses under age 45 at the time of the contributor's death have dependent children. Conversely, a minority of those aged 45 to 54 have dependent children. Surviving spouses over age 55 rarely have children under age 18 at the time the death occurs. Furthermore, because of the instability of couples, it is possible that the surviving spouse and the orphans live in different households. Finally, among the deceased contributors with dependent children, one out of three had children under age 18 but did not have a spouse able to qualify for a surviving spouse's pension.

Tables 9 and 10 show the present value of benefits payable to the family of a contributor who dies and whose earnings profile is comparable to that of Pierre. The value of the benefits according to the proposals is shown in 2003 dollars and in proportion to the value of the benefits currently paid.

In Table 9, the present value of the benefits is estimated **until the surviving spouse turns 65**. According to the proposed changes, a surviving spouse aged 55 at the time of the contributor's death would receive financial assistance totalling 29 695 $. This amount corresponds to 50% of the value of the pension that he or she would receive under the current plan. Furthermore, a surviving spouse aged 45 with one child would receive financial assistance (temporary pension and orphan's pension) totalling 36 626 $, that is 38% of the benefits payable under to the current plan.

Because of the increase in the monthly orphan's pension, which would go from 59 $ to 187 $ per child, the value of the benefits paid to single-parent families would triple relative to the value of benefits currently being paid.

Table 9: Present value of benefits payables until age 65, to the surviving spouse and to children

Age of the spouses at the time of the death[a]	Family status at the time of the death								
	Without children	Two-parent family, number of children[b]				Single-parent family[c], number of children[b]			
		1	2	3[d]	4[d]	1	2	3[d]	4[d]
Age 35									
Proposed value $	26 063	45 215	66 945	91 032	117 275	19 152	40 882	64 969	91 212
% of current value	32%	40%	56%	72%	87%	315%			
Age 45									
Proposed value $	28 551	36 626	48 226	63 051	80 825	8 074	19 675	34 500	52 274
% of current value	30%	38%	48%	60%	73%	315%			
Age 55									
Proposed value $	29 695	35 884	38 040	47 916	61 165	6 189	8 345	18 222	31 471
% of current value	50%	59%	61%	74%	88 %	315%			

[a] According to the assumptions, the surviving spouse and the deceased contributor are the same age.
[b] The assumptions concerning the age of the children are specified in Appendix 2
[c] A single-parent family is a family in which the children are entitled to a orphan's pension even if the parent who lives with them does not qualify for a surviving spouse's pension.
[d] Very few families include more than 2 children, especially when the death occurs after age 45.

Table 10 provides more information concerning the benefits payable to two-parent families. The present value of the benefits is estimated **until all the children turn 18**. The table shows, for example, that a surviving spouse age 45 with one child would receive, until the child turns 18, financial assistance whose total value represents 128% of the assistance payable under the current plan.

In the event of the a worker's death, the new provisions are intended to provide better protection for the children and indirectly to the persons who are responsible for them. Consequently, the financial assistance is concentrated in the years when the children are present. As a result, the benefits payable until the youngest child of the family reaches majority are, in general, higher in the proposed plan than in the current plan (table 10).

Table 10: Present value of the benefits payable to the surviving spouse and to the children until the youngest turns 18

Age of the surviving spouse at the time of the death	Two-parent family			
	1 child	2 children	3 children	4 children
35				
Proposed Plan/Current Plan	75%	89%	101%	112%
45				
Proposed Plan/Current Plan	128%	110%	107%	109%
55				
Proposed Plan/Current Plan	159%	163 %	124%	113%

4.5 Overall impact of the new provisions

- The new provisions will improve the protection provided to children. The significant increase in the orphan's pension, to compensate for the temporary pension paid to the spouse, makes it possible to direct financial support toward the children, who are the primary dependents. At present, the protection provided to orphans is limited, particularly in cases where the contributor dies without a spouse or when the spouse is not the other parent of the children.
- The temporary pension will be higher than the pension currently paid to a spouse under age 65. On average, it will be 50% higher for men and 54% greater for women. However, the pension will be paid only for a limited period of time, and it will not necessarily be paid until retirement. This measure will ensure better financial support for the years immediately following the death, a period when the needs of the survivor are presumably greater.
- The transfer of earnings that goes along with the temporary pension will entitle some surviving spouses to new benefits, making them eligible for a disability pension, for example. In addition, the transfer will make it possible for spouses to increase their own pension once they are retired.

5. SURVIVING SPOUSES WHO ARE RETIRED AT THE TIME OF THE DEATH

5.1 Calculation of the surviving spouse's pension

Table 11 shows the pension paid to Marie if Pierre died at age 65. In this example, Pierre and Marie have the career profiles described in section 1. Both applied for their retirement pensions at age 62 while continuing to work.

Table 11: Pension paid to Marie, surviving spouse of Pierre who dies at age 65

	Current Plan	Proposals
	$	$
SSP at age 65	389	327
Combined pension at age 65	558	614

Observations:

- The proposals will have the effect of reducing Marie's surviving spouse's pension (SSP) which will be equal to 60% of the retirement pension that Pierre was receiving at the time of his death. Currently, the surviving spouse's pension is equal to 60% of Pierre's pension before application of the actuarial adjustment factor.
- Rather than combine the pensions as is done under the rules presently in force, the new provisions will make it possible to simultaneously receive both a retirement pension and a surviving spouse's pension, up to a maximum amount. On the whole, Marie will receive 10% more in benefits.

5.2 Overall impact of the new provisions

- Becoming a widow or widower is an event that occurs relatively late in life and especially affects women. In 2002, 4 out of 5 new beneficiaries of a surviving spouse's pension were aged 55 or over and 4 out of 5 were women (table A-2 in Appendix 1). Consequently, the proposed changes primarily affect women.
- The surviving spouse's pension will be reduced for the majority of spouses who are retired at the time of the death. Under the proposed changes, the pension will be equal to 60% of the retirement pension that was actually being received by the deceased contributor. Presently, surviving spouses are entitled to 60% of the deceased contributor's basic retirement pension, that is, the pension the deceased contributor would have received upon retirement at age 65.
- However, because of their increased presence in the labour force, more women will have both a retirement pension and a surviving spouse's pension. Table A-3 of Appendix 1 shows that the proportion of women in this situation will increase in coming generations. Near 2030, more than 95% of women aged 65 or over who become widowed will receive 2 pensions from the Plan. Currently, when a beneficiary is entitled to 2 pensions, the applicable rules reduce the amount of the surviving spouse's pension. The new provisions will eliminate

these difficult-to-justify rules for combining pensions. The surviving spouse will simply receive both pensions up to the maximum retirement pension payable.

- In 2003, the combined retirement/surviving spouse's pension paid to a widow is 499 $ a month, on average. In 2030, under the current provisions, the average retirement/surviving spouse's pension would be 698 $. Under the proposed changes, the average pension paid to a widow would be 655 $ (table 12).

Table 12: Average pension (retirement/survivors') paid at age 65, (2003 constant dollars)

	2003	2030	
	Current Plan	Status quo	Proposal
Women	499 $	698 $	655 $
Men	576 $	734 $	718 $

6- OVERALL IMPACTS

6.1 Impact of the proposed changes

When all is said and done, the proposals will have a limited impact on future pensions. In the long-term, benefits will be reduced by almost 4%. Table 13 shows the impact of the proposed changes on the balanced contribution rate.[3]

Table 13: Impact of the proposed changes on the balanced contribution rate

	Balanced contribution rate
Before changes	10,25%
Transition work/retirement	
- Retirement pension	-0,07
- Disability pension	-0,08
Survivors' pensions	
- Surviving spouse and orphan	-0,15
After changes	**9,95%**

6.2 Analysis broken down by sex

This study has attempted to present the specific impacts of the proposed changes on the pensions of future beneficiaries, both for women and for men. The changes to the calculation of retirement pensions will affect men and women in a similar manner. On the whole, pensions would be reduced by less than 1%. Changes proposed to disability pensions would primarily affect men since they are more often the beneficiaries of these pensions, while women would be more affected by changes to surviving spouse's pensions.

However, we should not look only at the impact of the changes in judging the general performance of the Plan and its ability to protect the well-being of the most vulnerable groups. The Québec Pension Plan is a public social insurance plan that ensures, for the worker who has reached retirement, a pension determined on the basis of the wages earned during his or her working life.

Contrary to a private pension plan, under which the benefits paid are directly related to the contributions made, the Québec Pension Plan has several provisions intended to ensure a certain redistribution from participants with higher incomes to those with lower incomes, from single people to couples, and from men to women. The proposed changes will have the effect of making the benefits paid at retirement more directly linked to the contributions made, while at the same time ensuring basic protection from the loss of income resulting from disability or

[3] The concept of balanced contribution rate is defined in the working paper, on pages 48 and 49.

death. In addition, several measures specifically affecting women will continue to be applied after the adoption of the proposed changes:

- men and women will continue to contribute at the same rate, even if the life expectancy of women is greater than that of men. Thus, on average, women's earnings have significantly more value than those of men;
- the provision relating to the years spent caring for children under age 7 is maintained;
- the partition of the earnings recorded for two ex-spouses remains in effect in the event of divorce or separation.

APPENDIX 1
THE BENEFICIARIES OF THE QUÉBEC PENSION PLAN

Table A-1: Contributors deceased in 2002 with a spouse eligible for a surviving spouse's pension or children eligible for an orphan's pension *

Type of family	Number of children in the family: 0		1		2		3 or more		Total	
	N	%	N	%	N	%	N	%	N	%
Contributor deceased without a spouse but with dependent children										
	0	0,0	394	66,8	156	26,4	40	6,8	590	100
Contributor deceased with a spouse, with or without dependent children										
Age of survivor										
Under 35	68	26,4	67	26,0	94	36,4	29	11,2	258	100
35-44	323	37,8	191	22,3	233	27,3	108	12,6	855	100
45-54	1 807	81,2	287	12,9	103	4,6	29	1,3	2 226	100
55-64	3 774	98,5	51	1,3	4	0,1	2	0,1	3 831	100
Under 65	5 972	83,3	596	8,3	434	6,1	168	2,3	7 170	100
65 and over	11 830	100,0	3	0,0	0	0,0	1	0,0	11 834	100
Total	17 802	93,7	599	3,2	434	2,3	169	0,9	19 004	100

*Because of the instability of unions, the surviving spouse and the orphans may live in different households.

Table A-2: New beneficiaries of a surviving spouse's pension, 2002

	Men		Women		Total	
Age group	Number	%	Number	%	Number	%
Under 35	43	1,2	215	1,4	258	1,4
35-44	264	7,5	591	3,8	855	4,5
45-54	626	17,7	1 600	10,3	2 226	11,7
55-64	808	22,9	3 023	19,5	3 831	20,2
Under 65	1 741	49,3	5 429	35,1	7 170	37,7
65 and over	1 793	50,7	10 041	64,9	11 834	62,3
Total	3 534	100,0	15 470	100,0	19 004	100,0

Table A-3: Proportion of women aged 65 or over, beneficiaries of a surviving spouse's pension and a retirement pension, 2002

Age	Beneficiaries, surviving spouse's pension	Beneficiaries, retirement/ survivors	%
65-69	31 257	24 131	77,2
70-74	44 528	30 655	68,8
75-79	52 217	30 769	58,9
80 and over	85 061	36 214	42,6
Total	213 063	121 769	57,2

APPENDIX 2
CALCULATION OF PIERRE AND MARIE'S PENSIONS

1 PIERRE'S RETIREMENT PENSION

1.1 Current Plan

1st case: ***Pierre applies for his pension at age 60***

- ***Step 1*** : Determination of Pierre's contributory period

  It begins on his 18th birthday and ends on the date his pension begins.
  Thus, the contributory period is 60 – 18 = 42 years.

- ***Step 2:*** Exclusion of 15% of the years in which the earnings were lowest

  15% of 42 years = 6,3; thus 6,3 years of earnings at 10 000 $ can be excluded, that is, 6,3 of the 7 years between ages 18 and 24.

- ***Step 3 :*** Calculation of the average career earnings

$$\frac{(0{,}7 \text{ X } 10\ 000\ \$) + (10 \text{ X } 30\ 000\ \$) + (20 \text{ X } 35\ 000\ \$) + (5 \text{ X } 25\ 000\ \$)}{35{,}7} = 31\ 709\ \$$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 60 before actuarial adjustment

  Annual pension: 25% X 31 709 $ = 7 927 $
  Monthly pension: 7 927 $ / 12 = 661 $

- ***Later step:*** Increase of the pension due to earnings made after the beginning of payment

  For each year that Pierre works after age 60, the pension is recalculated by replacing the lowest earnings between ages 18 and 60 by the additional earnings, if they are higher. However, the additional earnings cannot increase the pension if they are still among the 15% of years in which earnings were lowest. This is what occurs in Pierre's case: all the additional earnings between ages 60 and 65 have a very small impact on the amount of pension payable.

$$\frac{(0{,}7 \text{ X } 16\ 000\ \$) + (10 \text{ X } 30\ 000\ \$) + (20 \text{ X } 35\ 000\ \$) + (5 \text{ X } 25\ 000\ \$)}{35{,}7} = 31\ 826\ \$$$

  Annual pension: 25% X 31 826 $ = 7 957 $
  Monthly pension: 7 957 $ / 12 = 663 $

2nd case: ***Pierre applies for his pension at age 65***

- ***Step 1:*** Determination of Pierre's contributory period

  It begins on his 18th birthday and ends on the date his pension begins.
  Thus, the contributory period is 65 - 18 = 47 years.

- ***Step 2:*** Exclusion of 15% of the years in which earnings were lowest
  15% of 47 years = 7; thus 7 years of earnings at 10 000 $.

- ***Step 3:*** Calculation of average career earnings

$$\frac{(10 \text{ X } 30\,000 \text{ \$}) + (20 \text{ X } 35\,000 \text{ \$}) + (5 \text{ X } 25\,000 \text{ \$}) + (5 \text{ X } 16\,000 \text{ \$})}{40} = 30\,125 \text{ \$}$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 65

  Annual pension: 25% X 30 125 $ = 7 531 $
  Monthly pension: 7 531 $ / 12 = 628 $

1.2 <u>Proposals</u>

1st case: Pierre applies for his pension at age 60

- ***Step 1:*** Calculation of average career earnings: $\frac{\text{Total of all Pierre's earnings}}{40}$

$$\frac{(7 \text{ X } 10\,000 \text{ \$}) + (10 \text{ X } 30\,000 \text{ \$}) + (20 \text{ X } 35\,000 \text{ \$}) + (5 \text{ X } 25\,000 \text{ \$})}{40} = 29\,875 \text{ \$}$$

- ***Step 2:*** Calculation of the retirement pension beginning at age 60 before actuarial adjustment

  Annual pension: 25% X 29 875 $ = 7 469 $
  Monthly pension: 7 469 $ / 12 = 622 $

- ***Later step:*** Adjustment of the pension due to earnings made after payment begins

  Each year after age 60, Pierre's pension is recalculated to take into account additional employment earnings which are simply added to the total. Pierre's pension at age 65 is equal to:

$$\frac{(7 \text{ X } 10\,000) + (10 \text{ X } 30\,000) + (20 \text{ X } 35\,000) + (5 \text{ X } 25\,000) + (5 \text{ X} 16\,000)}{40} = 31\,875 \text{ \$}$$

  Annual pension: 25% X 31 875 $ = 7 969 $
  Monthly pension: 7 969 $ / 12 = 664 $

2nd case: Pierre applies for his pension at age 65

- ***Step 1:*** Calculation of the average career earnings: $\frac{\text{Total of all Pierre's earnings}}{40}$

$$\frac{(7 \text{ X } 10\,000) + (10 \text{ X } 30\,000) + (20 \text{ X } 35\,000) + (5 \text{ X } 25\,000) + (5 \text{ X} 16\,000)}{40} = 31\,875 \text{ \$}$$

- ***Step 2:*** Calculation of the retirement pension beginning at age 65

  Annual pension: 25% X 31 875 $ = 7 969 $
  Monthly pension: 7 969 $ / 12 = 664 $

2- MARIE'S RETIREMENT PENSION

2.1 Current Plan

1st case: ***Marie applies for her pension at age 60***

- ***Step 1:*** Verification of Marie's earnings during the period in which Julie was under age 7. Are they lower than her average career earnings?

  Test: (Total of career earnings from ages 18 to 60) / 42 = 13 714 $;
  Thus, the 7 years at 8 000 $ during which Marie worked part-time in order to take care of Julie can be excluded from the calculation of average career earnings.

- ***Step 2:*** Of the remaining 35 years, exclusion of 15% of those in which earnings were lowest, that is, 5,3 years at 5 000 $.

- ***Step 3:*** Calculation of Marie's average career earnings

$$\frac{(1{,}7 \text{ X } 5\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$)}{29{,}7} = 16\,616\,\$$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 60, before actuarial adjustment

  Annual pension: 25% X 16 616 $ = 4 154 $
  Monthly pension: 4 154 $ / 12 = 346 $

- ***Later step:*** Increase of the pension due to earnings made after payment begins

  Each year that Marie works after age 60, the pension is recalculated by replacing the lowest earnings between ages 18 and 60 by the additional earnings, if they are higher. However, the additional earnings cannot increase the pension if they are among the 15% of years in which earnings were lowest. When Marie turns 65, even if 5 years of earnings are replaced, the following calculation shows that only 1,7 years serve to increase the pension.

$$\frac{(1{,}7 \text{ X } 10\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$)}{29{,}7} = 16\,902\,\$$$

  Annual pension: 25% X 16 902 $ = 4 226 $
  Monthly pension: 4 226 $ / 12 = 352 $

2nd case: ***Marie applies for her pension at age 65***

- ***Step 1:*** Verification of Marie's earnings during the period in which Julie was under age 7. Are they lower than her average career earnings?

  Test: (Total of career earnings from ages 18 to 65) / 47 = 13 319 $.
  Thus, the 7 years at 8 000 $ during which Marie worked part-time on order to take care of Julie can be excluded from the calculation of average career earnings.

- ***Step 2:*** Of the 40 remaining years, exclusion of 15% of those in which earnings were lowest, that is, 6 years of earnings at 5 000 $.

- ***Step 3:*** Calculation of average career earnings

$$\frac{(1 \text{ X } 5\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$) + (5 \text{ X } 10\,000\,\$)}{34} = 15\,882\,\$$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 65:

  Annual pension: 25% X 15 882 $ = 3 971 $
  Monthly pension: 3 971 $ / 12 = 331 $

2.2 Proposals

1st case: Marie applies for her pension at age 60

- ***Step 1:*** Verification of Marie's earnings during the period in which Julie was under age 7. Are they lower than her average career earnings?

  Test: (Total of career earnings from ages 18 to 60) / 42 = 13 714 $.
  The earnings of the 7 years at 8 000 $ during which Marie worked part-time to take care of Julie are in fact lower.

- ***Step 2:*** Calculation of the earnings credited during the period from ages 0 to 7

  Average career earnings excluding the years from ages 0 to7:

$$\frac{(7 \text{ X } 5\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$)}{35} = 14\,857\,\$$$

  Earnings credited: 7 X (14 857 $ - 8 000 $) = 48 000 $

- ***Step 3:*** Calculation of average career earnings:

$$\frac{\text{Total of career earnings + Earnings credited}}{40}$$

$$\frac{(7 \text{ X } 5\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (7 \text{ X } 8\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$) + 48\,000\,\$}{40}$$

$$\frac{576\,000\,\$ + 48\,000\,\$}{40} = 15\,600\,\$$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 60 before actuarial adjustment

  Annual pension: 25% X 15 600 $ = 3 900 $
  Monthly pension: 3 900 $ / 12 = 325 $

- ***Later step:*** Adjustment of the pension as a result of earnings made after payment begins
  Each year Marie works after age 60, the pension is recalculated by adding the new earnings to the total earnings. The new calculation at age 65 in this case is:

$$\frac{576\,000\,\$ + 48\,000\,\$ + (5 \text{ X} 10\,000)}{40} = 16\,850\,\$$$

Annual pension: 25% X 16 850 $ = 4 213 $
Monthly pension: 4 213 $ / 12 = 351 $

2nd case: Marie applies for her pension at age 65

- ***Step 1:*** Verification of Marie's earnings during the period in which Julie was under age 7. Are they lower than her average career earnings?

  Test: (Total of the career earnings from ages 18 to 65) / 47 = 13 319 $;
  The 7 years at 8 000 $ are in fact lower.

- ***Step 2:*** Calculation of the earnings credited during the period from ages 0 to 7

  Average career earnings excluding the years from ages 0 to 7:

$$\frac{(7 \text{ X } 5\,000\,\$) + (10 \text{ X } 15\,000\,\$) + (13 \text{ X } 20\,000\,\$) + (5 \text{ X } 15\,000\,\$) + (5 \text{ X } 10\,000\,\$)}{40} = 14\,250\,\$$$

  Earnings credited: 7 X (14 250 $ - 8 000 $) = 43 750 $

- ***Step 3:*** Calculation of average career earnings:

$$\frac{\text{Total of career earnings + Earnings credited}}{40}$$

$$\frac{576\,000\,\$ + (5 \text{ X} 10\,000) + 43\,750\,\$}{40} = 16\,744\,\$$$

- ***Step 4:*** Calculation of the retirement pension beginning at age 65

  Annual pension: 25% X 16 744 $ = 4 186 $
  Monthly pension: 4 186 $ / 12 = 349 $

3- PIERRE'S DISABILITY PENSION

3.1 Current Plan

- ***Step 1:*** Determination of Pierre's contributory period
  It begins on his 18th birthday and ends on the date his pension begins.
  Thus, the contributory period is 55 -18 = 37 years.

- ***Step 2:*** Exclusion of 15% of the years in which earnings were the lowest
  15% of 37 years = 5,6; thus 5,6 years of earnings at 10 000 $ can be excluded, that is, 5,6 of the 7 years between ages 18 and 24.

- ***Step 3:*** Calculation of the average career earnings

$$\frac{(1{,}4 \text{ X } 10\,000\ \$) + (10 \text{ X } 30\,000\ \$) + (20 \text{ X } 35\,000\ \$)}{31{,}4} = 32\,293\ \$$$

- ***Step 4:*** Calculation of the disability pension
  Basic retirement pension (BRP): 25% X 32 293 $ / 12 = 673 $
  Disability pension: Fixed portion (FP) + 75% X BRP
  370 $ + 75% X 673 $ = 875 $

- ***Later step:*** Calculation of the retirement pension at age 65 for the disabled person
  Retirement pension payable: BRP X AAF
  673 $ X 70% = 471 $

Note: In fact, the pension payable at age 65 also includes the increase in the AMPE since the beginning of the disability pension (age 55 in Pierre's case). This feature is not shown in the example since the pension amounts are in 2003 dollars.

3.2 Proposals

- ***Step 1:*** Calculation of average earnings from the 18th birthday until the date of the disability

$$\frac{(7 \text{ X } 10\,000\ \$) + (10 \text{ X } 30\,000\ \$) + (20 \text{ X } 35\,000\ \$)}{37} = 28\,919\ \$$$

- ***Step 2:*** Calculation of earnings credited from the date of the disability until the 60th birthday
  Earnings credited: 5 X 28 919 $ = 144 595 $

- ***Step 3:*** Calculation of average career earnings

$$\frac{\text{Earnings ages 18-55 + Earnings credited}}{40} = 30\,365\ \$$$

- ***Step 4:*** Calculation of the retirement pension at age 60 after actuarial adjustment

  Annual retirement pension: 25% X 30 365 \$ X 70 % = 5 314 \$
  Monthly retirement pension: 5 314 \$ / 12 = **443 \$**

- ***Step 5:*** Calculation of the disability pension
  DP: 453 \$ + Retirement pension
  DP: 453 \$ + 443 \$ = 896 \$

- ***Later step:*** Calculation of the retirement pension at age 65

  Retirement pension payable: Variable portion of the DP
  443 \$

Note: In fact, the pension payable at age 65 is also indexed according to inflation from the beginning of the disability pension (age 55 in Pierre's case). This feature is not shown in the example since the amounts of the pension are in 2003 dollars.

4- MARIE'S DISABILITY PENSION

4.1 Current Plan

- ***Step 1:*** Determination of Marie's contributory period

  It begins on her 18th birthday and ends on the date her pension begins.
  Thus, the contributory period is 55 - 18 = 37 years.

- ***Step 2:*** Exclusion of the years of low earnings from ages 0-7

- ***Step 3:*** Exclusion of 15% of the years in which earning were lowest

  15% of 30 years = 4,5; thus 4,5 years of earnings at 5 000 \$ can be excluded, that is, 4,5 of the 7 years between ages 18 and 24.

- ***Step 4:*** Calculation of average career earnings

$$\frac{(2{,}5 \text{ X } 5\,000\ \$) + (10 \text{ X } 15\,000\ \$) + (13 \text{ X } 20\,000\ \$)}{25{,}5} = 16\,569\ \$$$

- ***Step 5:*** Calculation of the disability pension

  Basic retirement pension (BRP): 25% X 16 569 \$ / 12 = 346 \$
  Disability pension: Fixed portion (FP)+ 75% X BRP
  370 \$ + 75% X 346 \$ = 629 \$

- ***Later step:*** Calculation of the retirement pension at age 65 for the disabled person

  Retirement pension payable: BRP X AAF
  346 \$ X 70% = 242 \$

Note: In fact, the pension payable at age 65 also includes the increase in the AMPE since the beginning of the disability pension (age 55 in Marie's case). This feature is not shown in the example since the pension amounts are in 2003 dollars.

4.2 Proposals

- ***Step 1:*** Calculation of earnings credited during the period from ages 0-7

  $$\frac{(7 \text{ X } 5\,000 \$) + (10 \text{ X } 15\,000 \$) + (13 \text{ X } 20\,000 \$)}{30} = 14\,833 \$$$

  Earnings credited: 7 X (14 833 \$ – 8 000 \$) = 47 833 \$

- ***Step 2:*** Calculation of average earnings from the 18th birthday until the date of the disability

  $$\frac{\text{Career earnings + Earnings credited (0-7ans)}}{37}$$

  $$\frac{(7 \text{ X } 5\,000 \$) + (10 \text{ X } 15\,000 \$) + (7 \text{ X } 8\,000 \$) + (13 \text{ X } 20\,000 \$) + 47\,833}{37} = 14\,833 \$$$

- ***Step 3:*** Calculation of earnings credited from the date of the disability until the 60th birthday

  Earnings credited: 5 X 14 833 \$ = 74 165 \$

- ***Step 4:*** Calculation of average career earnings

  $$\frac{\text{Earnings ages 18-55 + Earnings credited}}{40} = 15\,575 \$$$

- ***Step 5:*** Calculation of the retirement pension at age 60 after actuarial adjustment

  Annual retirement pension: 25% X 15 575 \$ X 70 % = 2 726 \$
  Monthly retirement pension: 2 726 \$ / 12 = **227 \$**

- ***Step 6:*** Calculation of the disability pension

  DP: 453 \$ + Retirement pension
  DP: 453 \$ + 227 \$ = 680 \$

- ***Later step:*** Calculation of the retirement pension at age 65 for the disabled person

  Retirement pension payable: Variable portion of the DP
  227 \$

Note: In fact, the pension payable at age 65 is also indexed according to inflation from the beginning of the disability pension (age 55 in Marie's case). This feature is not shown in the example since the pension amounts are in 2003 dollars.

5- TEMPORARY PENSION PAID TO MARIE, AGE 55 AT PIERRE'S DEATH

5.1 Current Plan

- ***Step 1:*** Determination of Pierre's contributory period

  It begins on his 18th birthday and ends on the date of his death.
  Thus, the contributory period is 55 -18 = 37 years.

- ***Step 2:*** Exclusion of 15% of the years in which earnings were lowest

  15% of 37 years = 5,6; thus 5,6 years of earnings at 10 000 $ can be excluded, that is, 5,6 of the 7 years between ages 18 and 24.

- ***Step 3:*** Calculation of average career earnings

  $$\frac{(1{,}4 \text{ X } 10\ 000\ \$) + (10 \text{ X } 30\ 000\ \$) + (20 \text{ X } 35\ 000\ \$)}{31{,}4} = 32\ 293\ \$$$

- ***Step 4:*** Calculation of the surviving spouse's pension paid until age 65

  Basic retirement pension (BRP): 25% X 32 293 $ / 12 = 673 $

  SSP: FP + (37,5% X BRP)
  400 $ + (37,5% X 673 $) = 652 $

5.2 Proposals

Temporary pension
The surviving spouse's pension paid to Marie is equal to the disability pension that would have been paid to Pierre if he had instead become disabled. It is paid for a period of three years.

Calculation of Pierre's disability pension (see section 3.2 of this appendix)
DP: 453 $ + Retirement pension
DP: 453 $ + 443 $ = 896 $
Temporary pension paid to Marie: 896 $ a month

Retirement pension beginning at age 65 after transfer of earnings

- ***Step 1:*** Determination of the earnings that can be transferred from the period of their life together

  Pierre's earnings that can be transferred: 60% of the earnings between ages 25 and 54
  Age 25-34: 10 years at (60% X 30 000 $); 10 years at 18 000 $
  Age 35-54: 20 years at (60% X 35 000 $); 20 years at 21 000 $

- ***Step 2:*** New record of earnings for Marie

  Age 18-24: 7 years at 5 000 $
  Age 25-34: 10 years at 33 000 $ (15 000 $ + 18 000 $)
  Age 35-41: 7 years at 29 000 $ (8 000 $ + 21 000 $)
  Age 42-54: 13 years at 38 460 $ Min.: (20 000 $ + 21 000 $) or AMPE
  Age 55-64: 10 years at 20 000 $

- ***Step 3:*** Verification of Marie's earnings during the period in which Julie was under age 7. Are they lower than her average career earnings?

  Test: (Total of career earnings from ages 18 to 65) / 47 = 26 978 $.
  The earnings of the 7 years following Julie's birth are, after transfer, established at 29 000 $.
  They are higher than 26 978 $, thus there are no earnings to credit.

- ***Step 4:*** Calculation of the retirement pension beginning at age 65

  $$\frac{25\% \text{ X Total career earnings}}{40}$$

  Annual pension: 25% X 31 700 $ = 7 925 $
  Monthly pension: 7 925 $ / 12 = 660 $

6- TOTAL PENSION PAID TO MARIE IF PIERRE DIES AT AGE 65

6.1 Current Plan

- ***Step 1:*** Calculation of Marie's retirement pension with the AAF

  The calculation rules are those used in section 2.1 of this appendix.

- ***Step 2:*** Calculation of Pierre's retirement pension before actuarial adjustment (BRP)

  The calculation rules are those used in section 1.1 of this appendix.

- ***Step 3:*** Combined pension

  The higher of:
  100% Marie's RP + 37,5% Pierre's BRP; or
  60% Marie's RP + 60% Pierre's BRP.
  In this case, the second is the better option.
  Combined monthly retirement/survivors' pension: 558 $

6.2 Proposals

- ***Step 1:*** Calculation of Marie's retirement pension with the AAF

  The calculation rules are those used in section 2.2 of the appendix.

- ***Step 2:*** Calculation of Pierre's retirement pension with the AAF

  The calculation rules are those used in section 1.2 of the appendix.

- ***Step 3:*** Total pension

  Marie's RP + 60% Pierre's RP
  Total pension paid: 614 $

APPENDIX 3
CALCULATION OF PRESENT VALUES

The present values indicated in tables 5, 9 and 10 were calculated using the following assumptions:

Long-term assumptions from the Québec Pension Plan's actuarial report as at 31 December 2000:

- Inflation rate: 2,7%
- Rate of increase in salaries: 3,9%
- Interest rate: 7,4%
- Cessation rates for disability pensions varying according to sex and age

Assumptions relative to the age of the children, according to the age of the contributor at death and the number of children in the family

Age of the contributor at death	Number of children in the family			
	1 child	2 children	3 children	4 children
35	Age 7	Ages 7 and 5	Ages 7, 5 and 3	Ages 7, 5, 3 and 1
45	Age 14	Ages 14 and 12	Ages 14, 12 and 10	Ages 14, 12, 10 and 8
55	Age 15	Ages 15 and 17	Ages 15, 17 and 13	Ages 15, 17, 13 and 11