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Session 3PD
Fixing the Canadian Pension Plan

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Moderator: CLAUDE GARCIA
Panelists: ROBERT L. BROWN
BERNARD DUSSAULT
MALCOLM P. HAMILTON
Recorder: ANDREE CHAREST

Summary: There are major concerns about the long-term viability of the Canadian pension plan (CPP). Many changes have been proposed, and there is considerable debate on new directions. During this session, attendees will be given an update on the financial aspects of the system and hear a discussion by experts on the issues and alternatives under consideration. Attendees will learn about the challenges facing the system and possible long-term solutions.

Mr. Claude Garcia: When asked to chair this meeting about nine months ago, I certainly did not expect that by June the federal and provincial governments would have agreed on the revision of the Canada and Québec pension plans. It's a surprise. Normally these things do take a bit longer in our country. There is an agreement but, of course, it has not yet passed into legislation. As I told the speakers, there's still time to influence legislation.

The first speaker is Bernard Dussault from the Office of the Superintendent of Financial Institutions, Canada. He has been involved in the behind-the-scenes work, which helped ministers reach their decision. Being a civil servant, Bernard is somewhat restricted by the political comments that he can make, but don't worry, we have two speakers after him who will certainly have much to say, who are not constrained in any fashion.

The next speaker will be Rob Brown, who will be talking about a different approach to funding the CPP and the Québec pension plan (QPP). I won't tell you which one

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I favor, but I'm much more in line with Rob than what has been agreed to. I don't personally believe that governments should have large amounts of money to invest in the economy. It's not good for the economy. Finally, we'll have Malcolm Hamilton, who will be talking about the Seniors Benefit (SB) and the impact it could have on the private funding for registered retirement savings plans (RRSPs) and registered pension plans (RPPs).

Mr. Bernard Dussault: While preparing for this panel discussion, Claude Garcia had read my presentation paper and asked what brought about the recent revisions to the CPP. This required me to go further into some historical aspects of the CPP but, considering our time constraints here, I have decided to start my short retrospective back to early 1994. In accordance with the CPP Act, I then had to prepare an actuarial report as of December 31, 1993, to serve as a basis for the prescribed quinquennial review of the program by the eleven federal-provincial Ministers of Finance. The resulting fifteenth actuarial report was released in early 1995, at which time the ministers could rely on it for their CPP review. These reviews specifically outline the level of future contribution rates of the plan, but this inevitably also leads into looking at the level of benefits.

The main finding outlined in the fifteenth report is that the annual contribution rate increases the 25-year schedule, which has already shown some deficiencies in the previous fourteenth report as of December 31, 1991, and needs to be accelerated, otherwise, the fund will be depleted in 2015. This deficiency had emerged because the current 25-year (1991–2016) schedule had been designed before the early 1990s recession. As we now know, the economic downturn restrained appreciably the increase in employment earnings on which rests the CPP contributory base, and it could also be associated with the unexpected increase in the number of CPP disability benefits experienced from 1991–94. Since then, the economy has recovered more slowly than projected in the fifteenth report. Fortunately, however, the number of new disability cases has dropped substantially compared to the projections of that report.

The Ministers of Finance have now completed their CPP quinquennial review. The most critical change on which they agree is to replace the 5-year renewable 25-year schedule of contribution rates with a 9.9% steady-state contribution rate for 2003 and later years, preceded by an accelerated increase in the 1996 contribution rate of 5.6%.

Before I provide more details on the agreed upon changes, I would like to describe briefly the legislative process involved in their implementation. The main rule governing CPP changes is the same as those governing the Canadian Constitution. Indeed, unanimity is not required. Rather, the contemplated changes must receive

the approval of the Ministers of Finance of at least two-thirds (i.e., seven) of the provinces (including Québec) covering at least two-thirds of the Canadian population.

The federal Minister of Finance accordingly released on February 14, 1997, a communiqué in which he indicated that eight of the ten provinces had agreed to a series of changes to the CPP. Still, once such an agreement is reached, the legislative process is not yet over. An amending bill must be introduced in the federal House of Commons and go through the regular three-reading process. Moreover, as the CPP is a federal-provincial plan, the consent of the governor in council is required of each province having agreed with the contemplated changes. All of this could theoretically have taken place relatively soon after the February 14 release. However, a federal summer election was called soon after the release. This slowed down the legislative process as the House of Commons was then to recess until fall, at which time it is expected that the CPP amending bill will be introduced and that the provinces that have agreed to the changes will provide the consent of their governor in council.

The ministerial reviews of CPP contribution rates will now take place every three years instead of five. The actuarial reports used in the process of these reviews will accordingly be required every three rather than five years. Along with the sixteenth actuarial report that will have to be prepared in connection with the amending bill, the next actuarial reviews are prescribed as due by December 31, 1997, and every three years thereafter. Once the seventeenth report due December 31, 1997, is released, likely in the fall of 1998, the Ministers of Finance will be in a position to launch the first triennial review for eventual further revisions to the CPP to become effective January 1, 2000. However, future federal reviews might be easier, as with the recent agreement. A steady-state contribution rate is contemplated for the next century.

Let's now move back to the description of the agreed-upon changes. In the fifteenth actuarial report, the long-term contribution rate was projected close to 13.9% for years after 2030. I refer to the ultimate pay-as-you-go rate of about 14.2%, but I will refer to the ultimate contribution rate of 13.9% for greater consistency in cost comparisons. The set of agreed-upon changes would reduce the ultimate rate by 4.3%, to 9.9%. However, the ultimate period would start in 2003 rather than 2030. The annual rate increases from 1997–2003 are accordingly sizeably higher than under the existing 25-year schedule of contribution rates.

The agreed upon changes may be grouped into two major categories: financing and benefits. The changes in CPP financing provisions account for about three-fourths

of the 4% reduction in the ultimate contribution rate. This means that benefit changes account for only 1% of the 4% reduction in the contribution rate.

FINANCING CHANGES

The federal-provincial agreement contemplates the following three financing changes, each of them expected to decrease the ultimate contribution rate of 13.9% by about 1%, to bring it down to about 10.9%.

First, net cash flows of the CPP are to be directed into a diversified investment portfolio rather than exclusively loaned to provinces. Loans will continue to be made to provinces, but at provincial rather than federal market rates, and in a proportion (no longer 100%) of the available cash flows, comparable to private pension plan investments into provincial bonds. A CPP Investment Board will be set up to administer CPP investments at arms length from government.

Second, the CPP presently prescribes a target fund/benefit ratio (FBR) of 2. There would no longer be such a target with the contemplated changes in financing provisions; however, a higher fund/benefit ratio of about 5 is envisioned. This will increase the funded ratio to a level that can be assessed by using a simple formula developed by Pierre Treuil, a former long-standing CPP actuary. Indeed, the FBR under stabilized conditions for a fully funded earnings-related pension plan may be simply expressed as follows:

$FBR = (\ln PGR - \ln FCR) / \ln [(1+I)/(1+r)]$ where
PGR = pay-as-you-go rate
FCR = full-cost rate
I = assumed interest rate
r = assumed increase in total employment earnings (not average earnings)

Obviously, the financial status of the CPP is not and will never be stabilized, but the above formula appears to be the best toll to assess its funded ratio under the existing plan. Calculations made using this formula indicate that increasing the FBR from 2 to 5 would increase the degree of funding of the plan from about 6% to 18%.

The third financing change, which also reduces the ultimate contribution rate by about 1%, is the freezing of the year's basic exemption (YBE) at its 1996 value of $3,500. If the YBE were fully removed rather than just frozen, the effect on the contribution rate would be even larger (possibly 1.5% instead of 1%), but this approach was considered too drastic.

The last series of changes concern the benefit design. I have grouped them into three categories: disability, retirement, and limits on combined benefits.

Regarding disability, the eligibility rules have been somewhat strengthened. To be entitled to a disability benefit, a CPP contributor deemed disabled must have contributed to the plan for at least two of the last three years or five of the last ten years. This will be changed to four of the last six years.

The second disability-related change concerns administrative procedures. Over the years, there had been some liberalization in the adjudication rules. Adjudication rules have been revitalized, and this is expected to reduce the disability incidence rate from 5.5 to 5.0 per 1,000 of eligible contributors. Further recent analyses indicate that for reasons not necessarily related to adjudication rules, the CPP disability incidence rate could eventually be assumed at an even lower level of four rather than five.

Regarding retirement, the major change concerns the final, average-wage-indexing factor involved in the calculation of the initial pension benefit rate. Currently, this factor involves a three-year average of the year's maximum pensionable earnings (YMPE). The three-year average would now be changed to a five-year average. A second retirement-related benefit change covers disability pensioners. Automatically, when they reach age 65, the disability flat-rate benefit is discontinued and the earnings-related portion, equivalent to 75% of a retirement benefit, is increased to 100% on the basis of the current three-year average YMPE. Not only will the three-year average be replaced by a five-year average, but it will refer to the year of disablement instead of the year during which age 65 is reached.

Regarding limits on combined pensions, three existing restrictions will be strengthened. They pertain to combined survivor-retirement pensions, combined survivor-disability pensions, and to the lump-sum death benefit. Limits on the two types of combined pensions are quite complex, but they will basically be reinforced back to their pre-1987 status. The lump-sum death benefit corresponds to six months of retirement pension, but is limited to 10% of the YMPE, which is currently $3,500. This limit will be reduced and frozen at $2,500.

Mr. Robert L. Brown: I just want to ask one technical thing here. Is the YMPE indexed to the cost of living now?

Mr. Dussault: No. The YMPE indexing has not changed. It is still indexed in line with wages.

Mr. Brown: In terms of the YMPE at disablement, does that mean if someone’s disabled at age 31 it's the 1970 YMPE, or is there any indexing for cost of living between disablement and calculation at retirement?

Mr. Dussault: The 1970 three-year-average YMPE applies, but price indexing also applies from 1970 to age 65.

Mr. Brown: First, I want to say it always surprises me how little interest there is in social security at these actuarial meetings. Malcolm and I get invited to go to all kinds of wonderful places to speak, and usually mom shows up and a couple of my cousins. I see a University of Waterloo graduate, three academics, and so there are about seven people here. This is important stuff. This is where actuaries get into public policy, and I think it's really too bad we don't get more actuaries here.

Bernard is now almost as good as a politician in presenting the major changes to the CPP. The contribution rate in Bernard's presentation is going down from 14.2% to 9.9%, true statement, except that we thought we were paying 5.8%, and it's going up to 9.9. Changes in the benefits reduce the contribution rate by 1.1%; again another true statement. What you don't see is that the value of the benefits has been reduced by 9.3%. So the total CPP has shrunk by 9.3%. Bernard, you've been in Ottawa long enough. You're getting really good at this.

If somebody wants to come back, it turns out there's some really important public policy issues around freezing the YBE, and Louis Adam who's here with us today has done some work that shows that for retired Canadians their longevity is related to income. In fact, data from Americans, OASDI show the same thing. There is a very strong correlation between income levels and longevity. So rich people live longer.

This is a system that requires relatively level contributions from workers and that pays the largest benefits to rich people. If you think about that for a minute, that is a regressive tax regime. What has saved OASDI from being regressive is your very strange Primary Insurance Amount formula. What had saved CPP/QPP from being regressive was the YBE. We do not contribute on any monies up to the YBE, which at the moment is $3,500. So if you earn $3,600 this year, you contribute on $100, but if you earn $35,000 this year, you will contribute on $31,500. You can see that the ratio of contributions to the benefits accrued is then skewed very subtly because of the YBE. The person contributing on $100 gets benefits on $3,600 and the person contributing on $31,500 gets benefits on $35,000. It was the YBE that made the CPP progressive in a very subtle way and we're now freezing it. There are some really important public policy issues there, and we can come back to that if somebody wants to.

But I don't want to talk about that at all. I want to talk about this idea of funding of social security because it's also an issue for OASDI. You have three proposals from the Social Security Advisory Committee talking about some privatization of OASDI,

some side funds, individual retirement accounts, or prefunding. The same type of thing that has been going on around the world, precipitated somewhat by a World Bank report called "Averting the Crisis" which, in fact, had nothing to do with Canada and the U.S. But it has been used by people in favor of privatization in Canada and the U.S. to try to create stories that say we need to do these things.

What are the issues around prefunding of social security? We really have to look at why we would want to do this. The reason is that we want to increase wealth because social security is not a large, private pension plan. It's a macroeconomic system of wealth transfer. Before you can transfer wealth, you have to have wealth. The real argument in favor of privatization, if I can use that term, or prefunding, is to create more wealth. To be able to prove that prefunding will create more wealth, there are actually three things that are critical. If any one link of this critical path is missing, then the whole argument disintegrates.

First, by prefunding of social security, you must increase the nation's savings. Second, those savings must increase productivity. Third, you could increase savings, but it could be misused. This has to be the best way to do it as opposed to providing tax incentives for individuals to save for retirement or for employers to sponsor pension plans. We already have some tax incentives, but in both Canada and the U.S. those tax incentives are being more vigorously limited with each passing year. Furthermore, there are all kinds of administrative baloney that get in the way of individual retirement savings and employer-sponsored pension plans.

Given that what is needed is a healthy economy and that the three steps are essential, then we need to start to look at the creation of the side fund that Bernard has talked about. The first step is to ask the question, “Does prefunding increase national savings?” If you go to the experience of the world, it's sort of all over the place. The literature is inconclusive. This is really a difficult question. It really involves reading a lot of macroeconomic theory, and for every author who says yes there's another author who says no. They even go back and forth at each other. There are even authors who have gone from yes to no in their own careers.

One of the difficulties is defining what is savings. For example, right now most countries define savings by looking at gross national income and subtracting gross national consumption. Whatever you don't consume, ergo, is saved. But they are all kinds of other things that can be going on inside those figures; for instance, something as crazy as the accounting entry for depreciation can have an impact on gross national savings. You can miss some savings. If somebody goes out and pays off a mortgage for their house, aren't they saving? Of course they are, but that doesn't show up in gross national savings the way it’s now calculated.

It is extremely difficult to prove what gross national savings are. Nobody really knows exactly what the savings rate is in the U.S. I have articles that say it's perfectly healthy, and I have articles that say it's way too low. So does prefunding increase gross national savings? We can't prove it, that's for sure. Intuitively it's obvious but, in fact, you have to factor in behavioral response. One of the things we've done to create the side fund is we've increased the contribution rate. That means everybody has less money when they go home. As a result, they have less money to save for themselves. Therefore, by putting more money into savings in social security you might just decrease the savings that people put into their own accounts because they have less money to begin with. So it could be a zero-sum game.

There will be other behavioral responses. For example, when you look at what happened when pay-go social security came in, which are fairly significant retirement benefits, intuitively you would have expected gross national savings to go down. In fact, they didn't because people responded. There was a behavioral response. First, they said, I really can actually retire now. Not at age 75 or 73 or 70, but maybe at age 65 if I also save a little bit myself. They added to social security so they could retire comfortably. Plus, they said now that the government will give me social security, I can leave a bequest to my kids, and I really like that idea. Isn't it interesting that there's always this intergenerational argument that you're expecting your kids to pay for social security but, in fact, because of social security those same kids end up getting larger bequests. That intergenerational transfer or societal transfer also turns out to be regressive in that it's the rich who get to really benefit in this way more than the poor. That's another interesting public policy question.

Chile is the example of how it works. In 1980 when Chile’s system was pay-go it had gross national savings of 21%. In 1989, it had gross national savings under a fully funded individual retirement account scheme of 20%. Now other authors have gone into Chile and argued that, in fact, savings rates have gone up. The latest paper I read came from Robert Holtzmann of the World Bank. He argued that savings had gone up a tiny bit in Chile but that it had nothing to do with the fact that social security was funded. It had to do with their healthy economy. That puts us into a really interesting circle. To have savings you have to have a healthy economy. To have a healthy economy you have to have savings. What Chile did was it showed the world that it was going to make a number of important economic reforms and clean up its act. Part of that process was getting rid of a bankrupt social security system. But the actual funding of social security in and of itself did not increase gross national savings in Chile. There's no proof of that whatsoever.

Does prefunding increase worker productivity? Let's assume that you do get more gross national savings. Do those savings translate into worker productivity? Again, the literature is inconclusive. The reason for this is there are all kinds of terrible things that can happen when the government gets hold of your money. It can be used to prop up unsuccessful industries. It can be spent in the area where the minister resides. It can actually go to fraudulent uses in some developing nations. That, of course, could never happen in Canada or the U.S. When you start to get hundreds of millions and billions of dollars of side funds, there will also be pressure to increase benefits. And there is the concern that, having this fund, you'll start to use it for non-social security programs. Unemployment is high. Let's use the social security fund. Inflation is high. Let's use the social security fund. We'll use it for monetary policy. We'll use it for fiscal policy. And it's going to start to become everybody's favorite animal. Its use for social security could be lost in the shuffle.

If you do pre-fund, you create some of the issues that go with a pre-funded plan.

- You now have issues about inflation because the dollars come in, and then there's 40–50 years before they go out. Today, the dollars come in Thursday morning and they go out Thursday afternoon, so you can have an indexed social security system.
- As mentioned, there could be pressure to enhance benefits.
- We will hike our contribution rate from 6% to 9% at a time when we have 10.5% unemployment. Payroll taxes are not job creators. Wouldn't we be better to hold off and raise the contribution rate when the baby boom is retiring? It might be easier.
- If we are looking at sound economic policy, are we better to take $105–110 billion out of Canadian taxpayers' pockets and create a side fund for social security? Or would we be better to take $110 billion from Canadians and pay down the debt?
- There's a maximum amount the government can pull in. OASDI contributions, Federal Insurance Contributions Act taxes and CPP/QPP contributions are taxes. Is this the best public policy? Have we investigated better ways to increase savings, such as more incentives for private saving or employer-sponsored pension plans, or less disincentives to these plans?

Malcolm will show you some really interesting disincentives in some other parts of social security.

What will you do with the money? If you put it all in government bonds, then what is the difference between government bonds funding social security and pay-as-you-go? That is an interesting thing. There is this sort of fallacy of composition. If I'm saving for retirement, then I have to take money out of consumption today, set it aside, put it in a bank account, and then live on that consumption when I retire.

One of the things I could do is buy a government bond. If I buy a government bond, it's a real asset. I can buy it, sell it, trade it, and then I can consume that money when I turn 65. But if all 30 million Canadians buy government bonds to fund social security, or all 300 million Americans buy government bonds to fund OASDI, then what do you have? You have a claim on the productivity of the next generation of workers.

What is the difference between that and pay-as-you-go? There is no difference, except you have moved from taxation to contributions, and in both Canada and the U.S. you have increased the ability of some governments to run deficits. In the U.S., you do it because OASDI is part of the combined budget, and OASDI assets make the government deficit smaller—an accounting entry. In Canada this money has been, and for a long time yet to come will be, available to the provinces. That will allow them to run their own operations at a deficit.

We can get around that. Let's invest it all in the private sector. It could still be a zero-sum game. Federal bond rates will go up. Corporations will buy more federal bonds. Pension funds will buy more federal bonds. Have you done anything in the long run? Is your economy undercapitalized? What will you do about foreign investment? For the CPP they say they will allow foreign investment. But can you imagine the Minister of Finance going around saying we will create $110 billion of assets, and we will not invest it in Canada? It will be interesting when they start to invest offshore. Of course, it will be subject to political influence. There is a lot of evidence of that. Not to the point of fraud, but when there will be a failing industry in a minister's home region, you wait to see what happens. I have been given assurances that this will never happen, but I have had those assurances before.

This is one that I'm really concerned about. Given the democratic environment, I think we are condemning ourselves to the inevitability of having bought high and selling low. Let me show you why. Let me also point out to you that this should be a concern to you if you are a private-sector pension fund person.

The baby boomers are now saving, and they will continue to save for a while. In fact, these net cash flows will go into the economy from the private sector savings of the baby boomers as they save for retirement. But what happens when the boomers cash out? Keep in mind that you will be adding $110 billion of CPP investments into this marketplace. We are now running a seven-year bull stock market. Why have we had a seven-year bull stock market? It must have something to do with the baby boom. It must have something to do with these pension funds. What happens after 2020 is they want to disinvest, and they want to consume. What will happen when the baby boomers want to liquidate their assets and consume? Are we creating an environment where inevitably we will be buying high and selling low?

I'm really not opposed to this. Academically, I'm saying these are the questions that need to be answered, and they have not been yet. No one has answered these questions in the move to the prefunding of social security in either Canada or the U.S. They need to be asked by actuaries, and they need to be answered. I will turn it over to Malcolm now who will be talking about the other major change to Canadian social security, namely, the SB.

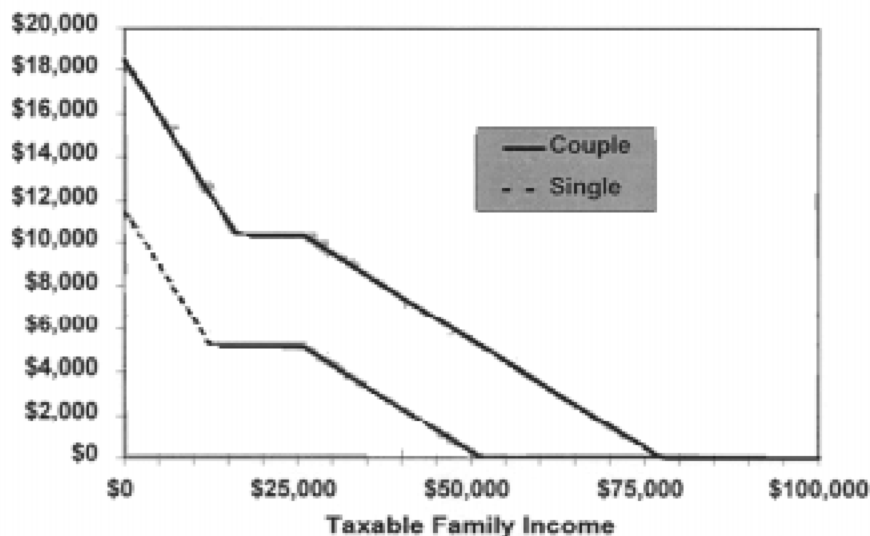
Mr. Malcolm P. Hamilton: Of the people in the audience, how many are Americans? Two people. Before starting, let me explain that I'm talking about the SB and not about the CPP. That does not mean that I am in agreement with Rob's analysis of the CPP issues, and if time permits later, I will take on some of his points. For the benefit of the Americans, in Canada, our counterpart to OASDI is really two separate things. We have the CPP and we also have had something called the Old-Age Security Act (OAS), which gave every Canadian over age 65 about $5,000 a year. So a couple would get about $10,000 a year. Rob talked about the CPP. I will be talking about how the federal government is proposing to restructure the OAS and the welfare for senior citizens, which we now call Guaranteed Income Supplement (GIS), and turn those things into what they call the SB.

The SB has not been passed yet. The Canadian government introduced this about two years ago and it was in the 1996 budget. While the government said it was going to do this, the legislation has never been introduced into the House. So although this still isn't law, people expect that it will become law. One reason there's no hurry to do this is it was delayed until 2001. They announced in 1996 a change that will happen five years later because they thought that would soften public resistance to some of the ideas in it. The idea is to give all single seniors $11,400 and senior couples $18,400. This is an annual amount, it is tax-exempt, and it is CPI indexed, but it is income tested. Income tested means the more money you have from other sources, such as the CPP or private pensions, the less money you get from the SB. It replaces the OAS, the GIS, and a couple of tax credits the federal government now has for senior citizens.

The controversial aspect of it is the income testing. Chart 1 shows what happens to your SB as your taxable family income from other sources increases. The top line shows the payment to a senior couple, and the bottom line, the payment to an unattached or single senior. You can see that the benefit drops at about a 50% rate. So for every dollar you have from some other sources, you lose 50 cents of SB, and that goes until about $15,000 or so of family income. Then there is a brief hiatus where you're allowed to have other income without any further drop or reduction in your SB. Finally, you go into the second tier of this clawback mechanism where you lose 20 cents of SB for every dollar of other income. The SB is eliminated in

the case of a single senior at an income of about $51,000 per annum and in the case of a couple at a combined income of about $78,000 per annum.

CHART 1
THE SENIORS BENEFIT IN 2001



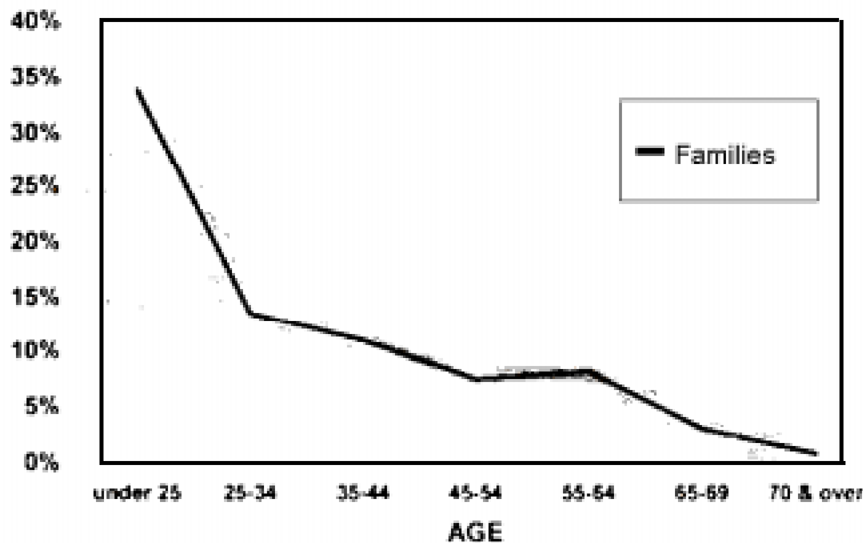
The current system we have is really up to the end of this first clawback, which is roughly the same. We currently have a GIS benefit that claws back at a 50% rate until it disappears. The real change here is coming for family incomes over $26,000. If you'd chart the current system after tax, you'd see a slow tailing off of the benefit as income pushed beyond $26,000 of family income. The SB is taking that support away from middle-class people when they retire. Low-income people are just as well off, maybe slightly better off, than they ever were. Extremely high-income people didn't get anything anyway. This is about the middle class losing part or all of their OAS benefit. Those who turn 65 before 2001 and those whose spouses turn 65 before 2001 can elect to keep their OAS benefits, but they still lose the Old Age Tax Credit and the $1,000 Pension Income Tax Credit.

In addition to deferring it for five years, the other thing the government said is that even five years from now anybody who's over 65 at the time can continue in the existing OAS program for the remainder of their life. So there would be no loss of OAS benefits for people who are seniors at the time. Anybody who becomes a senior after 2001 goes into the new system. The existing seniors do lose some of the tax credits, but the annual cost of that is, at most, $1,000 a year. Whereas for people who aren't seniors, the loss can be as much as $7,000 of after-tax dollars per year per family.

I think one of the sad things about this whole process is the difficulty that governments have in Canada and in the U.S. of taking anything away from existing

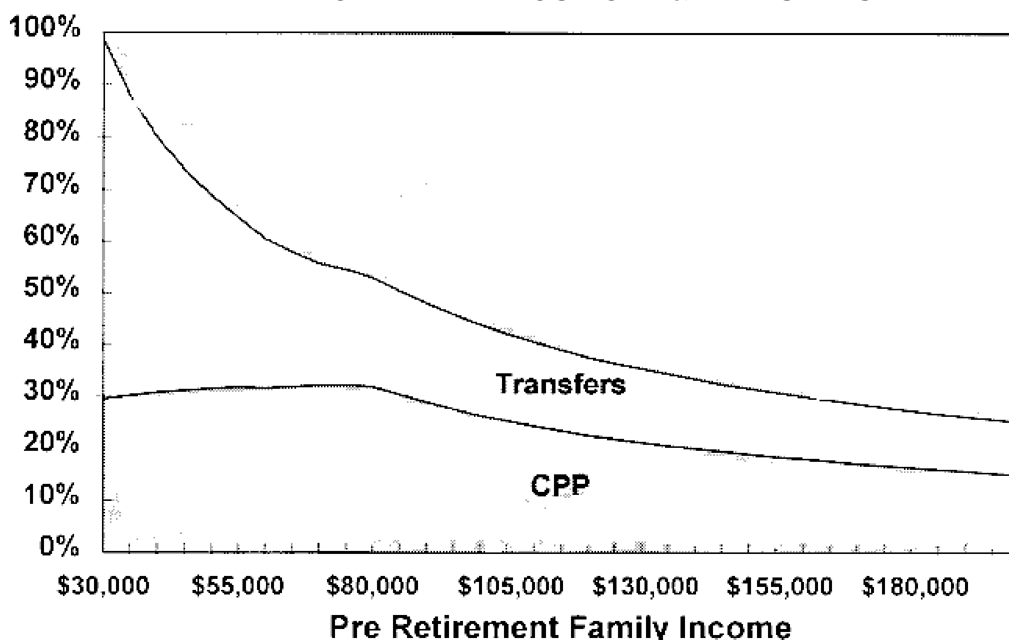
senior citizens. The sad fact is, in Canada, if you look at the incidence of low income after tax, if you try to ask where the low-income people are in Canada, you will see that low income and poverty is largely a phenomena of young families. Statistics Canada tabulates that, and you see the kind of picture shown on Chart 2. When you get up to our senior citizens there is virtually no poverty at all, no low income at all, and yet public policy continues to do things like preserve all of the SB and raise payroll taxes on working families. It is a bit of a travesty, and I would hope that some day it would stop, but there's no sign of that yet.

CHART 2
INCIDENCE OF LOW INCOME, AFTER TAX BY AGE



One of the things it produces is the following situation. Chart 3 shows a family with two equal incomes. The axis on the bottom is preretirement income. Suppose that family doesn't save anything for retirement at all, no RRSPs, no pension plans. All they have is SB and CPP. In this instance I have used an Ontario couple. They have a couple of other Ontario-based programs that would support them. You work out the ratio of what their after-tax income is, postretirement, to what their after-tax income was, preretirement. What you'd see is Chart 3, which shows a \$30,000-a-year family's net replacement ratios. So a low-income family at age 65 will get 100% income replacement without saving a penny or having any pension at all. Then as you move up the income band, if you don't save anything, the government programs will replace less and less of your income.

CHART 3
NET REPLACEMENT RATIOS—CPP & TRANSFERS



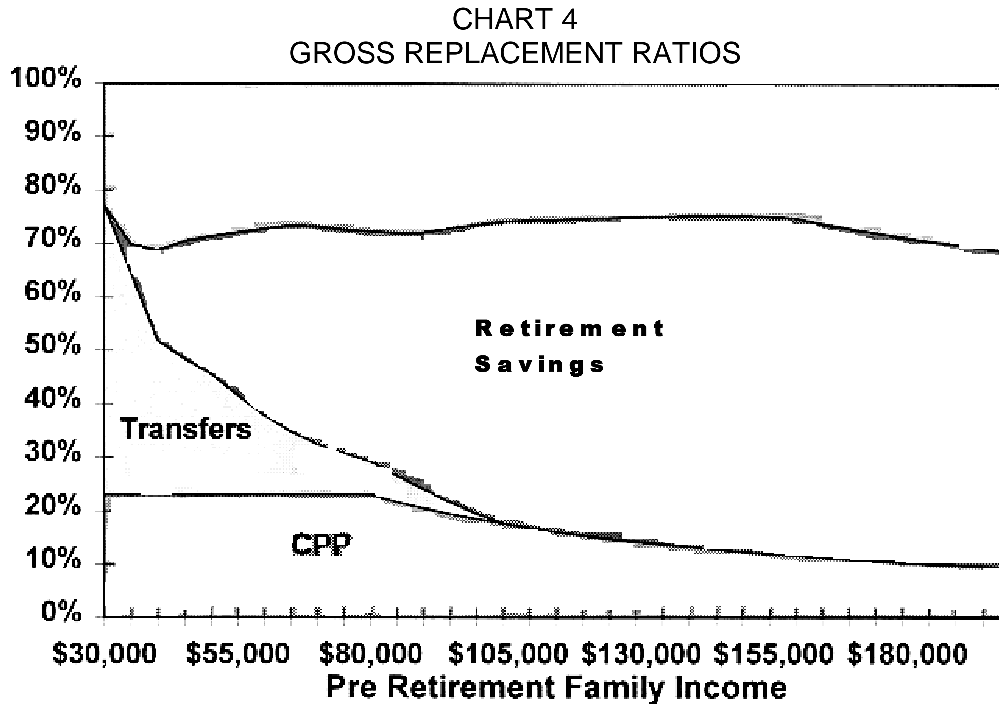
One of the things you have to recognize is the average Canadian family's income is about $60,000. Therefore, below-average-income Canadians are looking at somewhere between 60–100% of after-tax net income replacement without any retirement savings at all. As for Canadians with above-average income, if they don't save, they are looking at substantially less government support.

One of the things Rob was commenting on earlier was the regressiveness or the loss of progressiveness of the CPP. Nobody should fool themselves that the Canadian retirement income system is enormously progressive. Low-income people don't need to save anything. All they need to do is contribute to the CPP. It's the only thing asked of them. To maintain standard of living, high-income Canadians need to set aside large amounts of money. You can look at the CPP in isolation and ignore income taxes, ignore the SB, ignore caps on retirement savings, and try to figure out whether this is progressive or not. I submit that is the wrong way to look at anything.

If you look at it you will find that low-income Canadians get full-income replacement largely based on income taxes paid by high-income Canadians. As for high-income Canadians, if they want to maintain their retirement standard of living, they have to save a lot of money. Because the transfers are income tested, when the higher-income Canadians start saving for their retirement, what they get out of the government programs drops. The average Canadian couple, if they save nothing, gets 60% net income replacement from government programs. But if they save to

maintain their standard of living, the government programs pay them less, so they have to save more on their own. On Chart 4, you can see the retirement savings area. The amount that you have to do for yourself thickens very rapidly as your income grows. To me that's not a sign of being extremely progressive.

CHART 4
GROSS REPLACEMENT RATIOS



Scenario 1—Without Pension

Suppose you run three scenarios with a two-income, $60,000-a-year couple as shown in Table 1. We look at what would happen to this couple if they didn't have to put any money in the CPP and if they would never save a nickel for their own retirement. They would end up with no income from pensions, but they would get:

- $18,400 from the SB;
- $2,000 from another Ontario program;
- $1,100 from the Ontario tax credit; and
- a $700 rental subsidy, for a total of $22,200. In addition, they would not pay any income tax. So their after-tax income for doing nothing would be $22,200.

Scenario 2—CPP Only

You put them in the CPP, and you make them and their employer each contribute 10% of pay for their whole life. Ultimately they would get $13,900 from the CPP. All of those income-tested transfers start drawing up at a very rapid clip. They would get $26,300 net of taxes. So you pay 10% your whole life to get $13,900 from the CPP. That was a bad deal to start. That's a 2% real rate of return. Of that,

only a third of it really goes to your bottom line. So the CPP isn't about economic return; the CPP is about taxation. It's just making the SB affordable. It is about taxing the people who benefit from the programs as opposed to the people who don't. I don't view that as, in any way, regressive.

TABLE 1
EXAMPLE—TWO-INCOME COUPLE EARNING $60,000

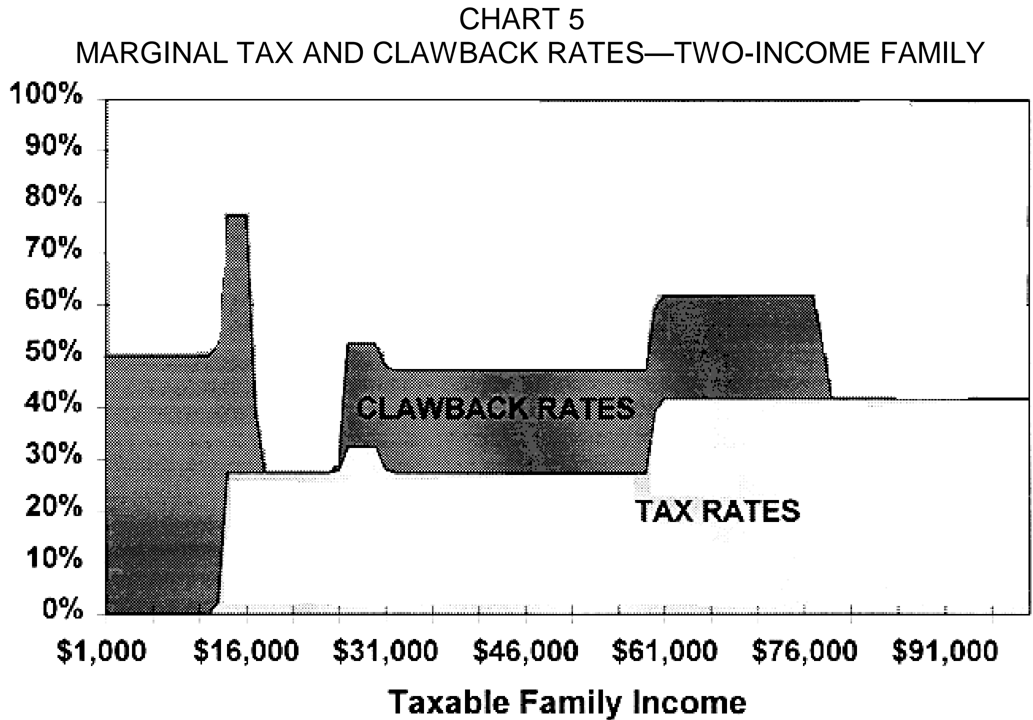
	Without Pension ($)	CPP only ($)	"Full" Replacement ($)
CPP	0	13,900	13,900
Other Pension	0	0	21,000
Total Pension	**0**	**13,900**	**34,900**
Seniors	18,400	11,500	8,500
Gains	2,000	0	0
Tax Credits	1,100	1,100	300
Rental Subsidy	700	0	0
Total Transfers	22,200	12,600	8,800
Income Tax	(0)	(200)	(6,000)
Income After Tax and Transfers	**22,200**	**26,300**	**37,700**

Scenario 3—"Full" Replacement

You can suppose this couple wanted to maintain their standard of living when they retire. They would need an income of $37,000. You can solve back. They need $21,000 from a pension, in addition to their CPP benefit. Between CPP and other pensions, they generate $34,900 of income for themselves, but they only take their bottom line up by about 40% of that. If somebody can find a way to cast that particular system as anything but extremely progressive, I think they're probably missing the story.

Marginal tax and clawback rates are about taxing seniors at very high, marginal rates. Chart 5 shows the current marginal tax rates in Canada. If you look you can see what percentage of each additional dollar goes to income tax for various taxable family income levels post-age 65. On top of that, you see the percentage of each additional dollar of taxable income that is clawed out of things like the SB. Adding the two up, you can see the total for each additional dollar of pension or savings that you generate for yourself or what you get to keep. It is about 50% with some interesting hills and valleys. These are rather high rates relative to the tax rates people have before age 65. If you start doing the arithmetic, the question becomes,

how does the tax rate on what comes out of your pension plan compare to the tax rate on the income you contributed to it?



Most Canadians think the way these tax shelters work is you put money in when your tax rates are high and you get a tax deduction. That's worth a lot because your tax rate is high when you are employed. Then, when you retire you take the money out, and because you're retired and your income is lower, your tax rate is lower. So you get an advantage out of that. I did the calculations under this new system.

Chart 6 shows two-income couples at all sorts of different income levels. For each of those couples, I identified how much they need to save to maintain their standard of living when they retire at 65. Having done that calculation, we look at what tax refund they get on their contributions given their income level. If you have a low income, your tax deduction is not worth as much because your tax rate is low. As your income goes up, your tax deductions get more valuable to you. The dotted line represents the money that comes out of your retirement savings plan, the percentage of the total coming out that is either taxed away or clawed out of government benefits you otherwise would have received. You can see the enormous gap for people at the lowest tax bracket. On average, they are putting money in and getting 27 cents back on the dollar. When the money comes out at the other end, they're losing about 50 cents on the dollar. That's not how they think it works. That has some interesting consequences.

If you're a good actuary and do the arithmetic and say: "What are the economics? What actual after-tax rate of return do you get on your savings if they're saved in a tax shelter but the tax rate or the tax deduction you get on your contribution is less valuable than the tax rate you're paying on the withdrawals?" Here's an example in a 7% environment.

CHART 6
TREATMENT OF CONTRIBUTIONS AND BENEFITS
TWO-INCOME FAMILY

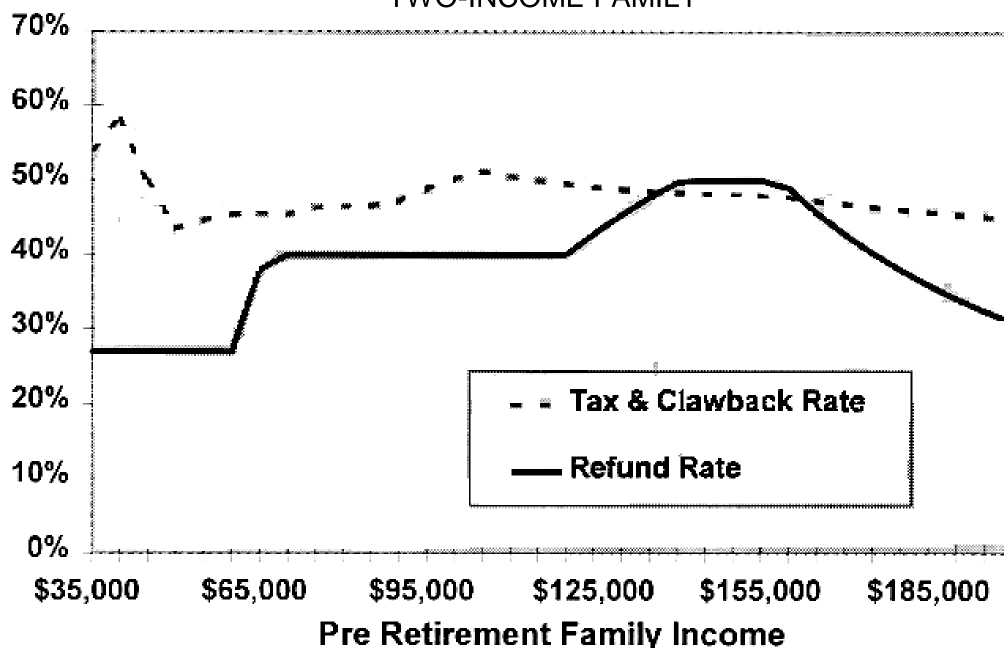


TABLE 2
CONSIDER THE IMPACT ON AFTER-TAX ROI

If —marginal rate = 27% when money contributed
—marginal rate = 47% when withdrawn
—rate of return = 7%
—savings period=20 years

After-tax rate of return $= [(1 - .47)(1.07)^{20}/(1 - .27)]^{.05} - 1$
$= (1.07)[1 - .47/ 1 - .27]^{.05} - 1$
$= 1.07 \times .984 - 1$
$= 5.3\%$

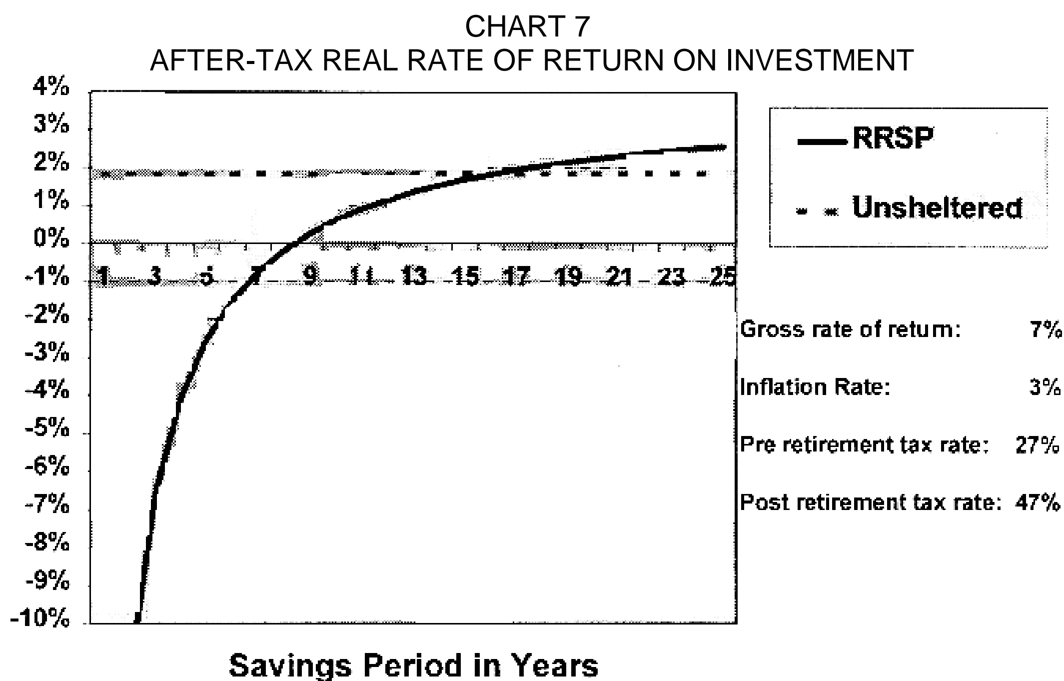
Doing the arithmetic, you find your return really consists of two things. One thing is the tax-free compounding in the RRSP. In this case it is worth 7%. But if you are putting money in, and getting a 27-cent tax deduction, that means for every dollar you put in it costs you 73 cents after tax. For every dollar you take out in this example you are only getting 53 cents after tax. So your 73 turns into 53. You must

factor that in. If over 20 years you are losing 30% or 40% of your savings, your after-tax return, instead of being 7%, is 5.3%. So for people at the low-income level who save in RRSPs, their returns are quite a bit lower than the return that the market provides. In this example, the 20% clawback is equivalent to taxing 24% of the annual investment income, taxing 1.7% of the assets each year, or taxing 27.4% of the amounts contributed.

You could get that same answer a number of different ways. If we said that we will take 24% of the annual investment income that person earned out of the RRSP, we would get the same rate of return after tax. If we said we will take 1.7% of the assets each year, we would get the same answer. If we said we will take 27% of the amount they contributed, again we would get the same answer. There are all sorts of ways you can tax retirement savings that come down to this answer. I think the government is very smart because if it said any of those things, I think they would have a riot. But if they say, we will claw it out of your government entitlement at the time you retire, people have much harder time figuring out what it means.

Chart 7 shows the after-tax real rate of return on investment. We have the same example: 7% return, 3% inflation rate, 27% tax going in, 47% tax coming out. The solid line shows the rate of return in an RRSP. The dotted line is the rate of return outside an RRSP. You can see what happens if there is a differential in the tax rates. In this instance, it takes about 15–17 years to do as well in the RRSP as one did outside. That is how long it takes that tax-free compounding to compensate for the fact that you get a low deduction going in and a high tax coming out. I could show you other pictures of this. If 7% turns out to be a 5% rate, which is about the current Canadian interest rates, it takes about 25 years to turn it around.

With this SB program, we have created a situation where not only below-average-income Canadian families have little reason to save because the government programs provide them so much, they also have very little incentive to save because the more they save, the less they get out of the government programs. The tax shelters are not providing them any particular incentive. Personally, I am very uncomfortable with that system because the retirement savings system in this country is repeatedly criticized for the fact that only people with above-average incomes use it. Yet we have set it up to be a system that only people with above-average incomes either need or have an incentive to use. We criticize it because it is used by the only people who need it and have a reason to use it. That is, I think, quite a sick situation. If we are going to have this system, we will have to work very hard to make sure people understand that RRSPs are for people with above-average income, because we expect people with above-average incomes to provide gratis pensions to Canadians with below-average incomes.



Mr. Marc Marois: Mr. Hamilton, I found your presentation very interesting. Particularly the chart showing the level of taxation going up to 80% for those with little income. What surprises me the most is after having seen the program at the beginning, I was expecting it to be modified thereafter because it removes all incentive to save. Nowadays, we can read newspaper articles, and I personally know, about people who have started to save a little after having been made aware of the need to take care of oneself. These people want to take the little savings they had and spend it totally prior to age 65. They think they will be heavily penalized after that. I understand where the system comes from. It is simply the combination of the GIS and OAS. But they have reproduced that. They haven't created a new plan.

It is almost unthinkable to send such a message and encourage people not to save. I suppose that at one point, they will do a uniform clawback at a certain level, even if it starts at a lower one.

I am surprised that this seems to continue on that route because I had the same conclusion as you. Wasn't there any opposition to the government to push for a change? Is it really true that this will happen? Wasn't there any pressure for that to be changed?

Mr. Dussault: Is Malcolm Hamilton the only person in Canada opposing the SB?

Mr. Hamilton: Well, almost.

Mr. Garcia: The questioner was commenting on the previous exposé and talking about the chart that showed an 80% clawback in taxation rate. He said that essentially provides no incentives to save, and there is now debate in the papers in Canada about whether or not it is in the best interest of people to use their retirement savings before they reach 65 and then, after 65, rely on the government. The question is, will this really happen?

Mr. Hamilton: I really don't know. There is very little public debate on the SB because it is hard to understand. It is being done in a way that the average Canadian has no hope at all of understanding what it means. Even well-intentioned, retirement-planning Canadians. I have addressed groups of retirement planners and it is way over their heads that if you are taxed at one rate going in and another coming out, and the two are different, you need a period of time to break even. And the period that you need depends on where interest rates are. It is just more than people can endure. I don't think there will be much public pressure.

I am hopeful that the politicians will have some second thoughts. They were supposed to have passed this before the election. They didn't. Maybe they are having second thoughts. If they don't, they'll ram it through. There'll be very little public discussion, and we'll turn around 20 years from now, and we'll have many unhappy people. We'll have low-income people who became confused, thought they should save, and saved money. At the end of the day they won't be able to find how it benefitted them one little bit. That just isn't right.

Mr. Louis Adam: I'd like to ask Malcolm Hamilton his view on the following. Because the government announced five years in advance that this program will begin, I thought that it was exactly to generate response, or hire some people and ask people, don't you see it's not right? React, tell us what you want, and then we'll modify it. As I understand it, we'll have the same government who proposed that for the next four or five years. If they are in place, they will do as they wish. They are on the cruise control, unless someone like the CIA tells them it is not a good thing. I'll let you comment on that and maybe other panelists could afterwards.

Mr. Hamilton: Obviously it is just speculation as to why they delayed the five years. My reading of that is all Canadians will remember when the Mulroney government tried to deindex OAS, and that turned out to be one of the great political disasters of recent Canadian history. The message the politicians took from that is you cannot take anything away from people who are already senior citizens. Now, what you are seeing here is a government that has decided we can't afford to give these benefits to the baby boom generation, and politically we can't take it away from anybody who's now retired, no matter how little they need it or deserve it. What we have to do is introduce it with a five-year lag and no coverage of seniors at the time. The only

people losing are people under 60, and what they are losing they don't understand and they can't figure out. So maybe we can take away SB if we do it that way. I believe it is an experiment.

Mr. Brown: I want to reinforce that. I think the five years was politically motivated. It wasn't there to allow time for full, public discussion. It was there so that, in fact, there would be no discussion because no one would complain about it after it was read in. Certainly, I opened up the newspapers after the SB was announced thinking it would be full of controversy. You could hardly find anything about it. It was reported with the high school volleyball scores.

What the government must be seeing in their clippings is what we are starting to see the *Financial Post* and *The Globe & Mail* report on business and a whole lot of other specialty areas talking about ways to get around the confiscation of the SB. "Take it out every second year. Do this before age 65. Give it to your kids." The government has to be reading those things, and has to know a couple of things. First, it will not save the money that it projected it would save. Second, it is going to lead to a whole lot of action that shouldn't be initiated by government. It is still my hope that by 2001 it won't happen.

Also they announced that anybody who was beyond age 60 the night of the announcement could choose between the old system or the new system, so don't worry about it if you're 60 or beyond. In my mind that just can't be true. After we will have the SB in place, and I would say relatively quickly, 2003, 2004, 2005, they will not be running two parallel systems. Politically, I just can't believe that. I mean, this would run on for another 45 years.

Mr. Marois: Following my question, whether it will happen or not and seeing that it might be, I'm asking: "Will the CIA take a position against that?" If not, I would suggest that the CIA takes a position because we are sending messages that are not right to people.

Mr. Adam: Or create a task force.

Mr. Marois: Yes. We should do something. We can't let Malcolm take this on by himself. We need support from the CIA to say that it won't work.

Mr. Brown: Turn around and tell Harry Panjer, the President of the CIA.

Mr. Marois: We must do something.

Mr. Brown: I know, in fact, the Public Relations Committee of the Canadian Institute and the Emerging Issues Committee of the Canadian Institute has that on their agendas. Did you want to comment further than that, Harry?

Mr. Harry H. Panjer: I might just add that it is on the hit list for the CIA, among the high-priority items. The CIA will be addressing it this year.

Mr. Garcia: Maybe another issue that should be taken into account, although it is not the view of my investment team at Standard Life, is that I believe that the federal government is likely to run a small surplus this year. So obviously the pressure to do the SB will not be as big as when it was introduced. The government has done much better in taking out this deficit.

Mr. Brown: The economy has done much better. Government hasn't done much at all.

Mr. Garcia: Well, you could argue that the reason the economy is doing better is because interest rates are down. The reason interest rates are down is because the government has tackled the deficit.

Mr. Hamilton: Just one thing about that. The SB was to save nothing measurable for about ten years. So they didn't do that to deal with the current fiscal problem. They have done it to deal with what they see is the aging problem. While I think they have done it wrong, they may not be overly influenced by the fact that they have the budget balanced.

Mr. Brown: You may want to tell people, though, how much the total percentage of benefit is down even in 2025 or 2030.

Mr. Hamilton: This whole, massive thing saves 10% off the cost of the program. In Canada, in today's dollars, this is equivalent to about three billion a year, which is about .3% of gross domestic product. It is, in my view, hardly worth creating all of that complication for that little bit of savings. Especially when it is savings 30-some years out. There must be 500 better ways for the government to find three billion of annual savings over the next 30 years than doing that.

Mr. Brown: And they probably won't realize that 10% with behavioral response.

Mr. Hamilton: Yes, they probably won't.

Mr. William J. Bugg, Jr: I have a question just to reveal my misunderstanding or ignorance of just what's happening. The SB, is that part of the CPP, or is that in addition to it?

Mr. Hamilton: It is in addition to the CPP.

Mr. Bugg: How does that work? You have an SB, and then you have the CPP on top of it? Is that the idea?

Mr. Hamilton: Yes, although on top of is a bit of a misnomer because for every dollar you get from the CPP, you lose 50 cents from the SB. It is sort of on top of it.

Mr. Bugg: It is integrated in a fashion.

Mr. Hamilton: Yes. In fact, the CPP becomes crucially important to the federal government because otherwise it can't afford the SB. That is why there will be no debate about whether we should get rid of the CPP. The CPP is the taxation device for paying for the SB. They put the money out through the CPP, collect it in, payroll tax, and then the cost of the SB is much less than it otherwise would have been.

Mr. Bugg: The SB, is that new?

Mr. Hamilton: Yes it is. It is replacing four other programs that are all different from CPP and all in existence. It is a very simple system, as you can see.

Mr. Brown: I think what might be interesting, though, would be to sit down and do a very good comparison between what we have in total and what you have in total. It may not be wildly different. Look at SB as a really big social security income (supplement) (SSI) that is paid right across the country. But for every dollar of OASDI you get, you lose SSI. Now, I know there are some other tests on SSI, not just income. But let's make SSI purely income tested. So you have a really big SSI, and for every dollar you get of OASDI what happens to your SSI? Then you add a really interesting, skewed PIA formula, which benefits lower-income people, multiples versus the upper-income people. And you start to figure out your effective marginal tax rates, and see whether they come out much differently. I am starting to be more and more in awe of Bob Myers and his colleagues back in the 1930s, who actually came up with a plan that really nobody can understand. Not even Course 200 actuarial science students understand OASDI. It does all of the things that are transparent or becoming transparent in Canada that we yell and scream about. I am not so sure that OASDI would stack up all that differently.

Mr. Garcia: The only thing to add is that the SB and the program it replaces are all financed by general taxation, and the CPP is financed by a specific payroll tax.

Mr. Brown: It is a large SSI. SSI is general tax.

Ms. Jennifer Null Hua: I was very interested in the Course 200 study note on the smart funding. I was wondering where the discussion on that had gone and why that was dropped.

Mr. Hamilton: It was a wonderful idea, the advantages of which will become clearer with the passage of time. That is all I can say. What it comes down to is politically, debate has to occur at a very low level. The debate in Canada is whether the CPP is bankrupt or not, whether it is safe or not, whether we should be saving or not. There are complicated stories like perhaps you should save when your real interest rates are high, but if your real interest rates crater, maybe you should stop saving. That's just a little too much for politicians to deal with. The way we'll have to do it is, if real interest rates are high, we will save more. Rob says we haven't proven we will save more. I just think in the absence of proof I would bet that we will end up saving more. If, when we save more, interest rates collapse in real terms, then I think there will have to be another debate about whether we should remain on that road given what has happened.

In Canada, the government's declining need for money is dramatic. Governments in Canada have cut their borrowing requirements by about $60 billion a year over the last five or ten years. So you have all this savings and no product coming out of government. The very real possibility both in Canada and the U.S. is that as baby boom retirement savings collide with government's declining need for money, if interest rates tank, if the stock markets get way too high, that smart funding debate will pick up again.

Mr. Brown: I will ask Bernard to jump in here. You may remember when Bernard asked why we came up with a funding equal to five times payroll. He said go back to Pierre Treuil's magical formula, that is the one that works. But then he quietly said, except, of course, you have to have all the assumptions of stability and long-term values, and that never happens in the real world. That perfect formula will not magically appear in the real world. I think one of the issues about smart funding that even the actuarial community was going to have trouble coming to grips with is the counterintuitive ways that contribution rates could go up and down depending on what happened in the rest of the economy.

There were some scenarios, and Bernard ran many of them. It could have been possible to have a year when interest rates went up, then smart funding would target

a bigger funding ratio 30 years out, and the contribution rate that would come back would actually be a little bit higher. It would be difficult to explain those sorts of situations to the average Joe Citizen, whom the politicians have to deal with. I think it was the right thing to do actuarially, and it was very sophisticated. But it was sophistication that was also its death knell. Is it true, though, that there were some counterintuitive results of smart funding?

Mr. Hamilton: For Joe Citizen, everything is counterintuitive. Why he has to pay more and more tax every year and the government gives him less and less is equally counterintuitive. I don't think it's dead yet. I disagree with you. I think if interest rates come down people are going to have second thoughts.

Mr. Dussault: Just a technical point to make sure that the smart-funding approach is well-understood. With a pure pay-as-you-go financing approach, the underlying internal rate of return corresponds to the rate of increase in employment earnings. While with full funding, as we know, the rate of return corresponds to the interest rate on investments. If employment earnings are at a given time expected to increase at a rate higher than the interest rate, then the smart-funding approach recommends applying the pay-as-you-go financing approach; otherwise, full funding is recommended.

Mr. Adam: Last comment, maybe on a lighter note. I think it was Winston Churchill who said that one of the best investments for society is to put milk into babies. I once thought that the big equation in social security is that either you create people or you have to put money aside. If the money saved could be saved on increasing the fertility rate or increasing the population, in fact, erasing the democratic structure of the baby boom, we could have a more sound system. So you either make babies or you pay more into the CPP/QPP. That's how I see it for the moment.

Mr. Hamilton: I just want to make one comment because I never get a chance to really discuss in public Rob's views versus mine. They are quite different. I think the worst mistake we make in looking at the issue of funding social security is to look at things like returns and real wage growth as exogenous.

If you are doing your own retirement plan and you save or don't save, that doesn't affect society. If you take something like the CPP or OASDI, the principal source of retirement income for most of the population, and you change how that is funded, rates of return aren't exogenous. In my view rates of return will drop. The supply of capital will be higher. I think real wage growth will grow. I don't think these are all independent variables unaffected by that decision because it is such a large decision. That is why I strongly believe that if we are going to have a system where public pensions for everyone with less-than-average income in Canada is supposed to

deliver a comfortable retirement, that better be funded in some way, shape, or form, as long as real interest rates are high. Part of the purpose of this whole societal system isn't just to get good returns. It is to drive down cost of capital. As actuaries, we tend to view taking the cost of capital down, that is, saving so much that returns are lower, we view that as a bad thing because you don't get as good a return on your savings.

Low, real cost of capital for business is great because people can go out, entrepreneurs can raise money, they don't go bankrupt in nearly the same numbers, they can do countless experiments in biotechnology or computers or high tech or whatever. So my view is, let's drive the savings rate up, not because it will produce great rates of return for everybody, but because it will produce low cost of capital for business and entrepreneurs. Let's see where that takes the economy. I think it will take it to a better place than we think.

Mr. Brown: I agree 100% with all of that, except I wouldn't do it by funding social security. I would find better ways to come up with those dollars. A good friend of mine who writes a lot about social security and wrote a monochart for Bernard's office says that the only thing that scares him more than pay-as-you-go social security is funded social security.

Mr. Garcia: Malcolm, do you really think that changing social security in Canada has a big influence on the rate of capital when we are moving toward a global economy? Don't you think that the weight of Canada in the world is so small that it doesn't really matter?

Mr. Hamilton: If Canada were alone, it wouldn't make any difference. If we were an open economy and didn't have a 20% foreign investment income limit, it wouldn't make a difference. But the fact is this isn't a Canadian issue. This is a worldwide issue. I just saw a report written by Goldman Sachs saying they were estimating that for the next five years there would be two trillion dollars flowing into equities globally as all of these industrialized countries start funding or preparing through savings for retirement. So it is not just Canada. I think if you do look at it globally, don't just look at Canada's impact on a world that's not changing, look at a changing world where everybody is faced with similar pressures. I think funding of national social security is a big enough thing that it will affect the return on capital for the whole world.

Mr. Andre Choquet: I am especially interested in design and funding of social security, so Rob's presentation was very eye-opening. I have two questions. Mr. Dussault talked about how the CPP would be invested in market securities through diversified investment portfolios. I was wondering whether one of the panelists

could talk about the experience of the QPP for the American audience. The QPP is the mirror image of the CPP, but its investments have been more market oriented than just invested in government securities. If the CPP becomes funded and we invest in equities, when all those baby boomers retire they'll want to capitalize those equities, but the market may drop. So we might end up buying high and selling low. I want to ask you what is the alternative scenario? What will happen when all the baby boomers retire if we go pay-as-you-go?

Mr. Dussault: Maybe I could just give a partial answer to your first question in comparison with the QPP. For those who don't know it, the QPP was implemented in 1966, like the CPP, but its monies have been invested in the private sector or through a private sector diversified portfolio, just like the CPP is intending now. The main point I wanted to raise is that the average real return on the QPP fund since 1966 has been about 3.8%, and of that the CPP has been about 2.8%, which would be a normal expectation, that investing in equities through private sectors, not through government bonds only, you should expect the return to be at least 1% higher. This is what seems to have happened. There has been criticism that the QPP money was not totally invested at arm's length from government, but this is something else. Does anyone want to talk about that one?

Mr. Brown: I think it's worth thinking about whether there has been any political influence on the investment of the QPP fund. That is a rhetorical question. I would also point out that the difference between 3.8% and 2.8% were subsidized partially, although relatively minor subsidies, to provincial bonds in the CPP funds that were then clearly savings to the taxpayers. I guess what you need to do when you start to talk about this made more and that made less, is find me somebody who is a taxpayer but not a member of the CPP or who is a member of the CPP but not a taxpayer, so I can see somebody whose left pocket didn't gain whatever his or her right pocket lost and vice versa.

In terms of the ultimate stability for pay-go funding, you use the age of entitlement as your controlling factor. You tell me any contribution rate you want. I will give you an age of entitlement that will get you that contribution rate. If we have higher productivity than we project, then that age of entitlement can come down. If we don't, it can go up. We also have to look at other aspects of what is going on around us. Health care has to be funded when the baby boomers retire. Health care costs more. We might have to move the age of entitlement. It's actually a way to reach an equilibrium for total wealth transfers, education, health, and retirement income security. The age of entitlement is almost as good as smart funding.

Mr. Hamilton: A concern I have with that is, it is easy to talk about pushing the age of entitlement up. But then you must talk about how you will keep 68-year-olds

productive in the workforce. I think that is a bigger challenge than actuaries are acknowledging right now. In 17 years of consulting when I look at my clients, I have seen virtually no instances of companies trying to, find ways to keep the 60-year-olds on the job. They all want the 60-year-olds out of the job, and the 60-year-olds by and large want to be gone. So when we go to people and say productivity is low, and the way we will solve the productivity problem is all those 60-year-olds pining to get out of the workforce are now going to work until age 69, and then wait for that to drive productivity up. I believe we will wait a very long time.